# DISTRIBUTION STANDARD SYSTEM (DSS)

# EQUIPMENT CONTROL SYSTEM (ECS)

# SOFTWARE USER MANUAL (SUM)

(DI-IPSC-81443)

Revision 7/Change 16

U.S. DEPARTMENT OF DEFENSE
DEFENSE LOGISTICS AGENCY
September 16, 2004


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Official Signatures

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# 1.0 SCOPE

## 1.1 Identification

This document provides the Software User Manual (SUM) for operation of the Distribution Standard System - Equipment Control System (DSS-ECS). The DSS-ECS is the standard DSS interface to computerized material handling systems located within DLA's distribution warehouses/facilities. The ECS portion of DSS will be installed at sites identified by (DDSC-ES) as requiring interface from the DSS Distribution applications to material handling systems for material movement.

## 1.2 System Overview

The DSS-ECS consists of two parts. The first, are application programs residing within the DSS mainframe applications (Upper Tier programs) and the second, Programs residing on the ECS Windows NT platform (Lower Tier programs).

The Upper Tier ECS programs are any programs specifically required to support a unique physical storage, consolidation, or conveyance system and the Lower Tier applications are those programs that provide the direct interface to the Programmable Logic Controllers (PLC), PC or other computerized hardware controls. For purposes of this overview, the two parts will be referred to as UT (Upper Tier) and LT (Lower Tier).

All distribution application functionality will reside/remain in the UT of DSS. This includes all workload selection, sequencing, parameter and control files/records, and workload release. All screens used by functional DSS operators will reside in the UT. DSS UT processes will drive movement requests to the LT by means of a Standard Movement Message (SMM) created by the application when a product may need to be moved as a result of DSS activity, e.g. Receipt Induction (move a tote to storage), Pick Request (bring tray to workstation), or Pick Complete (return tray to storage). The UT functionality and SMM generation may be part of a fixed terminal (3270) screen, an RF screen, or a batch process.

The LT functions will fall into two basic categories. The first involves processing the SMM to the appropriate Material Handling Equipment (MHE) controller. This function may involve translation of the information into a format that is recognized by the MHE, controlling the release of SMMs to the MHE (buffering, if necessary), interacting with the MHE using all transactions that the MHE is currently programmed to send/receive, and reacting to error conditions. The second major function of the LT is to provide tracking and management/control of MHE conveyances where this functions as a requirement of current MHE design. This may involve queuing and release of conveyances, workload balancing across multiple lanes, and empty conveyance management/routing. These are functions that can be performed by the LT without the direct knowledge of the UT processes.

Where the UT user screens require inquiry information only maintained in the LT database, a reach through program will request the information from the LT, a LT program will access the LT database, retrieve the information, and return it to the UT for display. This capability is only available at sites that are provided an Oracle database on the ECS.

The UT ECS processes are an integrated part of the total DSS applications and the same program versions will operate at all DSS sites, regardless of ECS installation.

## 1.3 Document Overview

Section 2 outlines referenced documents. Section 3 provides the software summary. Section 4 provides information on access to the software. Section 5 provides the user with a processing reference guide. Section 6 lists any associated notes. Appendix A contains the Standard Movement Message format/rules. Appendix B contains ECS Internal Messages. Appendix C contains Hill Stacker Messages. Appendix D contains ECS Database table name and description. Appendix E contains Mechanicsburg AGV Messages. Appendix F contains User Interface Messages. Appendix G contains Mechanicsburg HPM Messages. Appendix H contains Richmond ABP Messages. Appendix I contains Carousel Messages. Appendix J contains San Diego Stackman Messages. Appendix K contains NISTARS Ministacker Controller (NMC) Messages. Appendix L contains V52 Stacker (V52) Messages. Appendix M contains Norfolk Stacker (NFS) Messages. Appendix N contains NISTARS Laser Scanner Controller (NLSC) Messages. Appendix O contains New Cumberland Sorter Messages. Appendix P contains New Cumberland Tote Conveyor Message. Appendix Q contains New Cumberland Pallet Conveyor Messages. Appendix R contains New Cumberland Empty Cart Manager Messages. Appendix S contains New Cumberland Keypad Messages. Appendix T contains New Cumberland Towline Messages. Appendix U contains AWOS Messages. Appendix V contains Traffic Messages. Appendix W contains Raymond Carousel Messages. Appendix X contains Stacker Error Messages. Appendix Y contains Norfolk HKS Crane Messages. The document generally describes the ECS UT functions and processes, but the specific details will be described in separate user specifications maintained in Mechanized Specification System (MSS) for DSS applications. Appendix Z contains Oklahoma City Tote Package Conveyor Messages. Appendix AA contains Puget PS Tote Conveyor Messages. Appendix BB contains DDJC Sorter Messages.

## 2.0 REFERENCED DOCUMENTS

KPMG Peat Marwick L.L.P report, subject "Lower Tier Standardization Evaluation"

Military Standard Software Development and Documentation Standards, MIL-STD-498

DSDC Project Guide for Implementing CMM Level 2, DSDC 8120.001

DSS Standards & Procedures (MSS/DS-XM0)

Borland C++ Documentation

Microsoft Developer Kit

Microsoft Windows NT Server Documentation

Microsoft SNA Server Documentation

Oracle8 Database and System Administration Guide

Advanced Windows. Jeffrey Richter. ISBN - 1-55615-677-4

Inside Windows NT: Helen Cluster. ISBN - 1-55615-481-X

Mastering Windows NT Programming. B. Myers, E. Hamer. ISBN - 0-7821-1264-1

Programming Windows. Charles Petzold. ISBN - 1-55615-395-3

Windows NT: A Developers Guide. Kevin Goodman. ISBN - 1-55851-306-X

Windows NT: Unleashed. Robert Cowart. ISBN - 0-672-30685-9

DDC Environmental Test Plan

ECS Project Management Plan, latest version

DSS INFO/MAN REFERENCE GUIDE for ENVIRONMENTAL TEST, IOC and PRODUCTION

DSS SECS Psuedocoding Standard

DSS ECS Software Development Plan (SDP), DI-IPSC-81427, archived version dated November 1, 1996

Operation Concept Description (OCD), DI-IPSC-81430, latest version

Interface Requirements Specifications (IRS), DI-IPSC-81434, archived version dated December 14, 2001

Interface Design Description (IDD), DI-IPSC-81436, latest version

Database Design Description (DBDD), DI-IPSC-81437, latest version

System/Subsystem Specification (SSS), DI-IPSC-81431, latest version

System/Subsystem Design Description (SSDD), DI-IPSC-81432, latest version

Software Design Description (SDD), DI-IPSC-81435, latest version

Software Requirements Specification (SRS), DI-IPSC-81433, latest version

Software Installation Plan (SIP), DI-IPSC-81428, latest version

Software Product Specification (SPS), DI-IPSC-81441, latest version

Software User Manual (SUM), DI-IPSC-81443, latest version

ECS Site Survey - Defense Distribution Depot Hill, UT - Memorandum for the Record, dated November 20, 1995

ECS Site Survey - Defense Distribution Depot San Diego, CA - Memorandum for the Record, dated November 20, 1995

ECS Site Survey - Defense Distribution Depot Jacksonville, FL - Memorandum for the Record, dated March 6, 1996

ECS Site Survey - Defense Distribution Depot Norfolk, VA - Memorandum for the Record, dated March 7, 1996

ECS Site Survey - Defense Distribution Depot Puget Sound, WA - Memorandum for the Record, dated March 15, 1996

ECS Site Survey - Defense Distribution Depot Richmond, VA - Memorandum for the Record, dated August 14, 1996

ECS Site Survey - Defense Distribution Depot Mechanicsburg, PA - Memorandum for the Record, dated August 29, 1996

Amendment to DSS-SP5-376, SCR Amendment for ECS Interface with IMC Walk & Pick

DDSP-D Memorandum for DSDC-MDL through DDRE-T, “Cart Flow Information for Standard ECS” with attachment

ECS Site Survey - Defense Distribution Depot New Cumberland, PA - Memorandum for the Record, April 28, 1998

ECS Site Survey - Defense Distribution Depot Tracy, CA - Memorandum for the Record, dated February 23, 1999

ECS Site Survey - Defense Distribution Depot Yokosuka, Japan - Memorandum for the Record

ECS Site Survey - Defense Distribution Depot Pearl Harbor, Hawaii - Memorandum for the Record

ECS Site Survey - Defense Distribution Depot Guam - Memorandum for the Record

ECS Site Survey - Defense Distribution Depot Oklahoma City, OK - Memorandum for the Record

ECS Site Survey - Defense Distribution Depot Warner Robins, GA - Memorandum for the Record

ECS Site Survey - Defense Distribution Depot Red River, TX - Memorandum for the record

ECS Design Requirement Criteria For Triax - Defense Distribution Depot Norfolk, VA – Design Meeting Minutes 05 December 2000

Technical Specification for Upgrade of TRIAX AS/RS, Bldg. W-143, DDNV - TRIAX Project #SP3100-00-C-0027 – Defense Distribution Depot Norfolk, VA

Technical Specification for Active Item Scanner System, Building 2001, DDSP - Defense Distribution Depot Susquehanna, PA

Technical Specification for Replace Tote Conveyor System, Floors 1-4, Building W-143 DDNV - Defense Distribution Depot Norfolk, VA

Technical Specification for Freight Terminal Mechanization System, Building Y-109, DDNV - Defense Distribution Depot Norfolk, VA

Technical Specification for Building 467 Vertical Tote Conveyor Replacement Project for DDPW dated July 16, 2002.

ECS Site Survey - Defense Distribution Depot Tracy - Memorandum for the record.

# 3.0 SOFTWARE SUMMARY

## 3.1 Software Application (LT only)

### 3.1.1 Operating Improvements

The mechanization of the warehouse processes has contributed significantly to our ability to speed the delivery of material to the customer, enhance visibility and accountability of the inventory and reduce manpower and operating costs at the same time.

Over the years, DLA and the military services have made a significant investment in facilities, equipment, and software to automate the distribution depots. However, as a result of differing needs and of changes in the state-of-the-art in MHE, we now have a variety of equipment types, provided by different equipment vendors, operating under differing control software, and integrated with the service-unique distribution management legacy systems.

The DSS will streamline and standardize the distribution management process. However, as it replaces the service-unique information systems, DSS must handle the interface with all of the automated MHE currently in place. The primary objectives of this LT application are to enhance warehouse productivity and to streamline and standardize the equipment interface.

### 3.1.2 Uses of the Software

To provide an information system that meets the needs of all DLA depots, DSS is designed as a two-tier system. The DSS UT is the information system that supports the management of distribution requirements, resources, inventory balances, and warehouse storage locations. This tier supports the operating requirements for all depots, whether they maintain automated warehouses or not. The UT will support automated facilities through the use of the following applications:

- Receiving
  - RF Stow Prep
  - Receiving Tote Load
- P&P
- Carousel Induction
- Module Load
- RF Module Management
- Carousel Queue Management
- Storage
  - Stow
  - Pick
  - RF Pick
  - Emergency Pick

- Support Activities
  - COSIS Inspection
  - Inventory
  - Location Survey
- Packing/Consolidation
- Small Parcel Costing
- Ad Hoc Move

The DSS LT is the DSS-ECS. This tier provides the common interface between the DSS UT software and any automated MHE within the depot. The LT will support automated facilities by interfacing into the following MHE controllers:

- NISTARS Laser Scanner Controller (NLSC),
- NISTARS Automated Storage and Retrieval System (ASRS) Controller (NMC),
- Navy STACKMAN Unit Loader,
- Navy and DLA Automated Guided Vehicle (AGV),
- DLA Consolidated Subsistence Facility (CSF),
- Navy and DLA Carousel Controllers,
- Navy and Air Force ASRS Controllers,
- Navy, Air Force and DLA Conveyors,
- DLA Allen-Bradley PLC,
- DLA Towline,
- DLA Pallet Conveyor,
- DLA Tote Conveyor,
- DLA Sorter,
- DLA Automated Weigh and Offer Systems (AWOS),
- Air Force Dimension and Weigh Systems (DAWS),
- DLA Active Item Scanner System
- DLA TRIAX Automated Storage and Retrieval System (ASRS) Controller (TRIAX) and
- communications interface with DSS (Upper Tier) functions.

The LT software modules consist of the Traffic Controller, User Interface (UI), and at least one Subcontroller to support the MHE controllers listed above. The Traffic Controller is the interface between DSS and the applicable Subcontroller. The UI provides the ECS Administrator operational control of the ECS software. The Subcontroller software provides instructional and routing information to the applicable MHE controller.

### 3.1.3 Expected Benefits

The DSS-ECS design and programming is based on state-of-the-art object-oriented (OO) techniques and tools. The software design concept emphasizes:

#### 3.1.3.1 Portability

The system is not restricted to a specific hardware platform. The programming language (C++) and the operating system (Windows NT) are available and can operate on most computers.

#### 3.1.3.2 Flexibility

The use of tables for major logic decisions within the system allows the system to interface with any MHE and to operate in any automated environment without change to the UT software and minimal change to the LT.

#### 3.1.3.3 Scalability

The processing power of the system can be scaled to meet site-specific requirements. The computer processors can be sized based on the depot workload, and additional processors can be added for increased volume or additional MHE.

#### 3.1.3.4 Maintainability

OO design allows maximum reuse of programming code and simplifies maintenance since changes to an object need only be made in one place. The system is also site configurable through the user interface to the system tables. The use of Windows NT provides a Graphical User Interface (GUI) for all screens.

## 3.2 Software Inventory

### 3.2.1 System Files

The files, which make up the ECS, will vary, depending on the MHE present at the installation site. The main files are:

- DRAGLIST.EXE
- ECSMAIN.EXE
- ECS_USER.EXE
- ECS.INI
- ECS.HLP
- ECSHELP.CNT
- NEWMAIN.EXE
- UPSMAIN.EXE
- QRY.EXE
- SMM.INI
- SITE_AWOS.INI

### 3.2.2 Database Files

Refer to Appendix D for Information pertaining to the ECS Database names and description.

## 3.3 Software Environment

Refer to the DSS-ECS Software Installation Plan (SIP), DI-IPSC-81428, for the resources and procedures needed for the user to install and run the ECS software.

Refer to the DSS-ECS System/Subsystem Design Description (SSDD), DI-IPSC-81432, for a detailed list of the computer hardware, system software, and communication equipment that will be present at each installation.

## 3.4 Software Organization and Overview of Operation

The files, which make up the ECS, are divided into two subdirectories (i.e., C:\Ecs and C:\Ecs_logs). ECS executables and dynamically linked files are located in C:\Ecs. Log files, data tables, and initialization files are located in C:\Ecs_logs. C:\Ecs is secured, granting the Systems Administrator update capability and all other users read only access. C:\Ecs_logs provides update capability to all users. The executables (*.EXE files) are 32-bit applications that will properly run only under the Windows NT Operating System.

### 3.4.1 ECSMAIN EXE

ECSMAIN.EXE is used to run all the subcontrollers in the system, except for the subcontrollers at New Cumberland depot. A subcontroller is ECS software that passes messages to the Programmable Logic Controller (PLC) or a controller of a particular piece of MHE hardware (example: Carousel, Stacker, etc.) present at the site. There is one instance of ECSMAIN that is called Traffic. Traffic does not pass messages to a PLC/MHE; it is necessary to connect to DSS and pass the SMM from DSS to another ECS Subcontroller.

### 3.4.2 DRAGLIST.EXE

DRAGLIST.EXE is used to support the Spur to Warehouse screen available only through the New Cumberland ecs_user.exe.

### 3.4.3 ECS_USER.EXE

ECS_USER.EXE is the User Interface where users of ECS can control the operation of the ECS System. There is a Help feature in the UI that describes the functionality of ECS_USER.EXE.

### 3.4.4 ECS.INI

ECS.INI is the initialization file for all ECS applications.

### 3.4.5 ECS.HLP

ECS.HLP is one of the ECS Help files.

### 3.4.6 ECSHELP.CNT

ECSHELP.CNT is one of the ECS Help files.

### 3.4.7 NEWMAIN.EXE

NEWMAIN.EXE is used to run all of the New Cumberland depot subcontrollers. A subcontroller is ECS software that passes messages to the Programmable Logic Controller (PLC) or a controller of a particular piece of MHE hardware (example: Carousel, Stacker, etc.) present at the site. There is one instance of NEWMAIN that is called Traffic. Traffic does not pass messages to a PLC/MHE; it is necessary to connect to DSS and pass the SMM from DSS to another ECS Subcontroller.

### 3.4.8 UPSMAIN.EXE

UPSMAIN.EXE is a background process that accepts a shutdown message from the Uninterruptable Power Supply (UPS) and forwards a shutdown message to the Traffic Controller.

### 3.4.9 QRY.EXE

QRY.EXE is a background process that accepts requests for database information from the upper tier, accesses the database and sends that information to the upper tier.

### 3.4.10 SMM.INI

SMM.INI is an ini file used for searching for SMM fields within log files.

### 3.4.11 SITE_AWOS.INI

The Site_awos.ini is a file specifying the characteristics of an Awos system at an ECS Awos Site. The true name of this file replaces the word "site" with the actual site ID. For example the Oklahoma City Awos has an ini file named Okla_awos.ini

### 3.4.12 LOGFILES

Logfiles are created by all ECSMAIN, NEWMAIN, and ECS_USER executables. They contain entries of all messages 'To' and 'From' each ECS Subcontroller or UI. There is also an error log.

Two naming conventions are used for the first type of logfile. The first is used if the logfile is created by a Subcontroller. The name will contain the Subcontroller process name, USE (indicating that the user can control activation), day of the month (numeric). (dot) LOG.

**Example:**

| | |
|---|---|
| CAR01USE14.LOG | Log of Carousel Subcontroller process 01 entries for the 14th day of the month |

The second convention is used if the logfile was created by the UI. This format is User (there can be only one instance of the UI on any one machine), LOG, day of the month (numeric). (dot) LOG

**Example:**

| | |
|---|---|
| USERLOG14.LOG | User log entries for the 14th day of the month |

The error logfiles use the convention: Subcontroller or User Name, ERR, day of the month (numeric) . (dot) LOG.

**Examples:**

| | |
|---|---|
| CAR01ERR14.LOG | Carousel Subcontroller process 01 error entries for the 14th day of the month |
| USERERR14.LOG | User error entries for the 14th day of the month |

## 3.5 Contingencies and Alternate States and Modes of Operation

### 3.5.1 Contingencies

Contingencies for ECS primarily involve hardware failures and power outages.

#### 3.5.1.1 Hardware Failure

To overcome a hardware failure, the ECS design allows for ECS subcontroller software modules to independently reside on any available ECS PC, with minimum modifications to the ECS.INI initialization file. The following are examples:

#### 3.5.1.1.1 Two PC Configuration Example

##### 3.5.1.1.1.1 MHE Subcontroller

If a MHE subcontroller PC fails, the MHE software module and the ECS.INI file will already be installed on the Traffic controller. A parameter 'Linknamex = Comx' located in the ECS.INI, will have previously been configured during the initial site installation so there is no need for any changes. This parameter designates the serial port the MHE module will use to address the MHE PLC or controller. The ECS.INI section **XXX01** (where 'XXX' is the MHE subcontroller name (e.g., **CAR01** is the Carousel subcontroller)) contains the ComputerName = parameter which requires modification. This parameter should contain the computer's network name which was defined during the Windows NT installation. The defining of this parameter was accomplished during the Software Install. Power down the CPU, in accordance with the procedure established in the PC User's Manual for turning off your system. The MHE PLC cable will need to be rerouted from the MHE subcontroller serial port to the Traffic controller serial port by switching the A/B switch to the appropriate side. Power up the CPU, then use System Functions to startup the MHE subcontroller software module.

##### 3.5.1.1.1.2 Traffic Controller

If the Traffic controller PC fails, the Traffic and UI software modules and the ECS.INI file will already be installed on the MHE subcontroller. The 'Linknamex = Comx'parameter located in the ECS.INI, will have previously been configured during the initial site installation so there is no need for any changes. This parameter designates the serial port the MHE module will use to address the MHE PLC or controller. The ECS.INI section **TRF01**, where TRF01 is the Traffic controller name, contains the 'ComputerName' and 'ServerName =' parameters which require modification. These parameters should contain the computer's network name which was defined during the Windows NT installation. The defining of these parameters were accomplished by utilizing the Software Install program (Configure ECS.INI only) as discussed in the SIP. Power down the CPU, in accordance with the procedure established in the PC User's Manual for turning off your system. The UPS cable and the LU6.2 cable will need to be rerouted from the Traffic controller ports to the MHE subcontroller ports by switching the A/B switches to the appropriate side. Power up the CPU, and the Traffic Controller and UI software modules will start automatically.

#### 3.5.1.1.2 More Than Two PC Configuration Example

##### 3.5.1.1.2.1 MHE Subcontroller/MHE Subcontroller

There will be some instances when an MHE subcontroller will be configured to back-up a like MHE subcontroller. An example of this would be the two Hewlett Packard (H-P) Controllers at Mechanicsburg depot: one supports the receiving function and the other packing.

If one of the MHE subcontroller PCs fail, the MHE software module and the ECS.INI file will already be installed on the other subcontroller. The ‘Linknamex = Comx’parameter located in the ECS.INI will have previously been configured during the initial site installation so there is no need for any changes. This parameter designates the serial port the MHE module will use to address the MHE PLC or controller. The ECS.INI section **XXX01** (where ‘XXX’ is the MHE subcontroller name (e.g., **HPM01** is the H-P receiving subcontroller)) contains the ‘ComputerName =’ parameter which requires modification. This parameter should contain the computer's network name which was defined during the Windows NT installation. The defining of this parameter was accomplished during the Software Install. Power down the CPU, in accordance with the procedure established in the PC User's Manual for turning off your system. The MHE PLC or controller cable will need to be rerouted from the failed MHE subcontroller serial port to the backup MHE subcontroller serial port by switching the A/B switch to the appropriate side. Power up the CPU, and then use System Functions to startup the MHE subcontroller software module.

#### 3.5.1.2 Power Outage

All ECS PCs will be plugged into a common UPS system which will provide emergency power, if necessary. When a power outage is sustained for more than the pre-configured UPS monitoring time period, an automatic shutdown of all ECS software modules will occur across all ECS PCs. After this automatic shutdown has occurred, all ECS PCs should then be powered off.

### 3.5.2 Alternate States & Modes

#### 3.5.2.1 Alternate States

Not Applicable.

#### 3.5.2.2 Modes of Operation

ECS processing will operate in an automatic mode of operation. Standard operating procedures will be maintained. In the event ECS becomes inoperable, a manual mode of operation will need to be implemented. The manual mode of operation description is not part of the ECS SUM. Refer to the sites' standard operating procedures for each specific MHE controller manual operation.

## 3.6 ECS SYSTEM RECOVERY PROCEDURES

### 3.6.1 Doctor Watson Recovery Procedures

If the Traffic Controller goes down, bring it back up. Notify DSIO of the problem.

If the error occurs on a Subcontroller execute the following steps:

1. Restart the subcontroller process.
2. On any Ministacker system, notify the floor operators to clear their workload via the DSS screens. Wait for all SMM's to be received from this step so that all Ministacker trays are returned to location.
3. Inform all opertors that the ECS subcontroller is now available.

### 3.6.2 Daily System Activity Procedures

1. At the end of each day insure the operators on the Ministackers have returned all trays and cleared their DSS workload. Shutdown all software on all computers and shutdown and power off the computers.
2. At the beginning of each day start all hardware, and start all software. Begin processing.
3. If a slowdown occurs on the SNA software;

    a. Insure the operators have returned all trays and cleared their DSS workload on any Ministacker subcontroller.
    b. Shutdown all software on the SNA computers then shutdown and power off the computers.
    c. Unplug and replug the LU 6.2 Codex units. Startup all hardware and software.
    d. Begin processing

### 3.6.3 Monthly Procedures

Near the end of each month copy the log files to another directory and delete them from the ECS_LOGS directory.

### 3.6.4 Message Announcement Procedures

As Subcontroller fault messages are displayed on the screen, click on the OK button to clear the **messages**

## 3.7 Security and Privacy

Security for the DSS-ECS will be provided by the Microsoft's Windows NT security model which includes the POSIX security layer. The Windows NT Logon Process provides for mandatory logon to identify users. Each user must have an account and must supply a password to access that account.

## 3.8 Assistance and Problem Solving

The site ECS Administrator will have the responsibility of receiving and responding to all ECS questions/concerns/problems applicable to that site. An operational procedure will need to be established by each site. The system administrator will have to make the first determination for the cause of the problem. If the system administrator can resolve the problem, he/she will complete the resolution. If the problem is hardware related and cannot be resolved by the system administrator, the site procedure for calling in hardware failures will need to be followed. If the problem is system or application software and cannot be resolved by the system administrator, a Problem Trouble Report (PTR) will need to be written. Refer to the DSS INFO/MAN REFERENCE GUIDE for ENVIRONMENTAL TEST, IOC and PRODUCTION, ATTACHMENT K-RULES AND PROCEDURES FOR Production PTR Procedures.

# 4.0 ACCESS TO THE SOFTWARE

## 4.1 First-Time User of the Software

### 4.1.1 Equipment Familiarization

Instructions on operating the computer, monitor, mouse, or keyboard can be found in the Owner's Manual(s) supplied with the hardware installed at each site.

### 4.1.2 Access control

a. The site ECS Administrator will provide user ID and passwords to access the NT server. In Windows NT Server, the User Manager for Domains software (refer to Figure 4.1.2-2) is the primary administrative tool for managing user accounts (create, modify, and delete), manage groups within the account, and manage user rights for domains and computers on the network. Security permissions on objects such as directories, files, and printers are managed by using Windows NT Explorer. The ECS Administrator will receive this information during the recommended vendor training (reference Software Installation Plan (SIP), Appendix C, and DSS-ECS Training Plan).

b. Changing your password.

To change a password:

1. **Go** to the Begin Logon Screen.
2. **Press** Ctrl + Alt + Delete to log on.
   **Receive** Message:
   *** NOTICE AND CONSENT LOG-ON BANNER***
3. **Click** the OK button.
   **Receive** Log Information Screen:

   - **Enter** Username,
   - **Enter** Current Password,
   - Use Default value for Domain, and
   - **Click** the OK button.

4. **Click** Start on Task Bar.

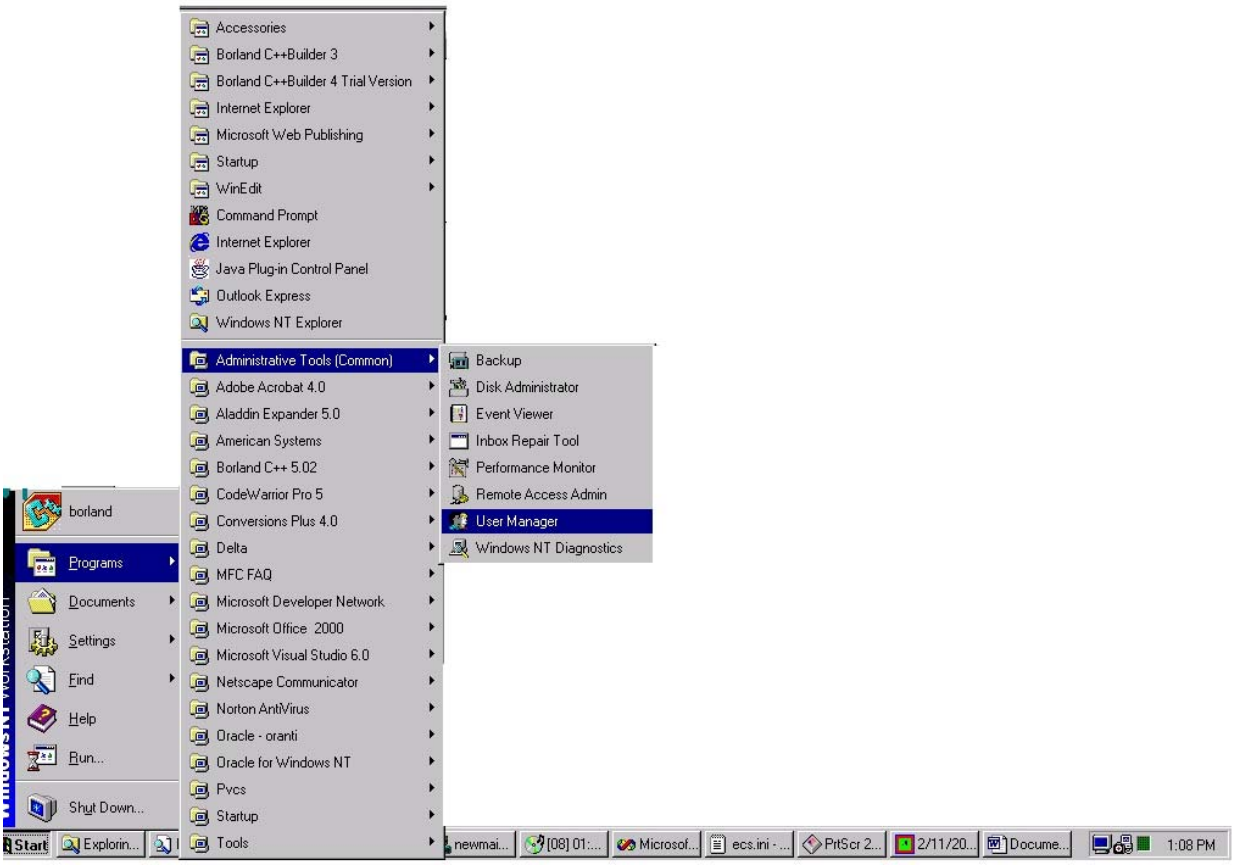



Figure 4.1.2-1 Select Programs

Refer to Figure 4.1.2-1 Select Programs for steps 5-7.

5. **Select** Programs.
6. **Select** Administrative Tools (Common).
7. **Select** User Manager for Domains.

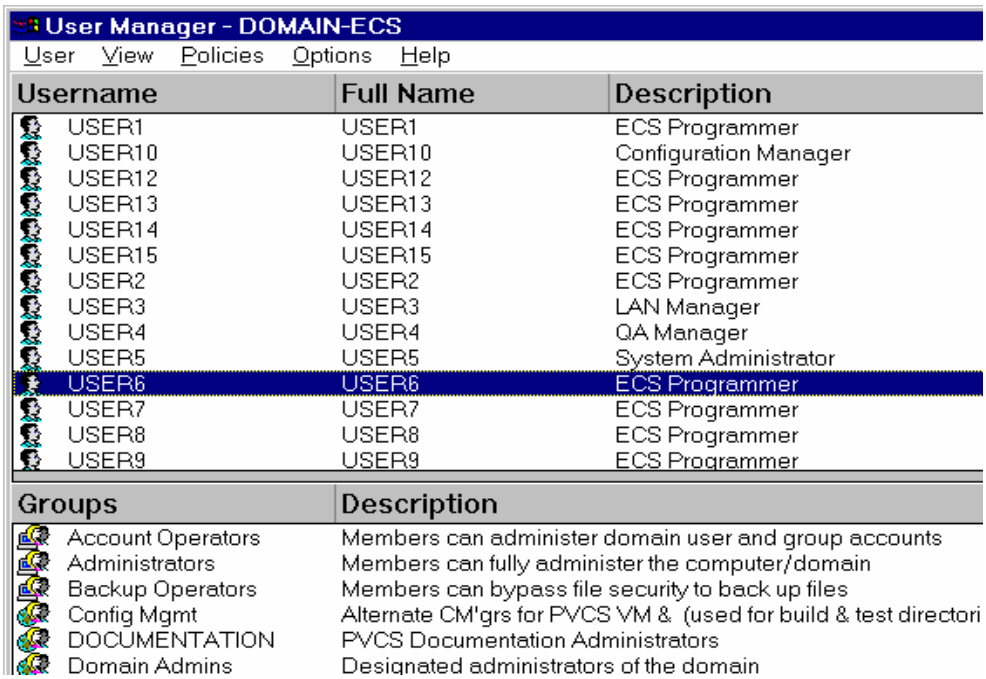



Figure 4.1.2-2 User Manager for Domains

Refer to Figure 4.1.2-2 User Manager for Domains step 8.

8. **Select** User by Double-clicking on Username.

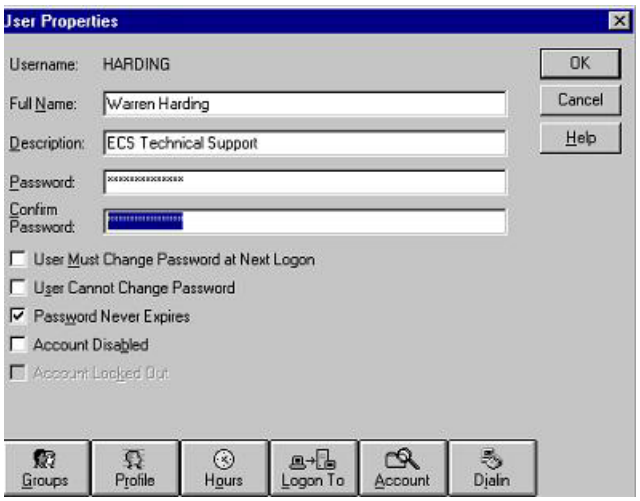



Figure 4.1.2-3 User Properties

Refer to Figure 4.1.2-3 User Properties for steps 9-11.

9. **Enter** new password in Password Block.
10. **Re-enter** new password in Confirm Password Block.
11. **Click** the OK button.
    **Password** has been changed.

c. Security and privacy considerations pertaining to the storage and marking of output reports will comply with DSS Standards & Procedures.

### 4.1.3 Installation and Setup

#### 4.1.3.1 Initial Installation

The ECS software will initially be installed and set-up by the developer. The user will provide assistance. Refer to the Software Installation Plan (SIP) DI-IPSC-81428.

#### 4.1.3.2 New Versions/Revisions

Install and set-up instructions for new ECS Versions/Revisions will be supplied with the new releases. Refer to the Software Product Specification (SPS) DI-IPSC-81441.

## 4.2 Initiating a Session

### 4.2.1 Logging on to Windows NT

ECS, configured for the current site, will start automatically after logon. Refer to Section 4.1.2, Access control, paragraph b., changing your password, for the procedure to log on if the automatic start feature fails. Follow steps 1-3, "**Go** to the Begin Logon Screen", to the end of the "**Receive** Log Information Screen".

## 4.3 Stopping and Suspending Work

ECS cannot be suspended, it is always running unless the user 'turns off' the subcontroller software from the UI, MHE/ Software Control/ Off. The UI can be stopped by selecting Exit from the Menu Bar. Refer to section 5.3.1, for information on Exit.

# 5.0 PROCESSING REFERENCE GUIDE

## 5.1 Capabilities

The ECS System is comprised of the following modules:

- User Interface,
- Traffic Controller, and
- at least one Subcontroller.

Of the three (or more) modules, the user can interact with only one, the UI. The modules pass information between each other using a feature called Named Pipes (see Microsoft Windows NT documentation).

## 5.2 Conventions

a. Menu, list box, and button selection method is a single click of the left mouse button. All selections are made with a single click of the mouse.
b. An audible tone is sounded and a screen box containing an error message is generated when an error condition is reached.
c. An audible tone is sounded and a 'Message Sent' message is generated and displayed.
d. All selections are accessed by a single mouse click and some require an additional click on the ‘OK’ screen button.

## 5.3 Processing Procedures

### 5.3.1 User Interface Main Menu - New Cumberland Only

Figure 5.3.1-1 User Interface Main Menu - New Cumberland Only

### 5.3.2 User Interface Main Menu - All Other Sites

Figure 5.3.2-1 User Interface Main Menu - All Other Sites

**Description**

The Menu Bar on the User Interface (UI) contains the following selections:

- Exit,
- File,
- MHE,
- System,
- Diagnostic,
- Inquiry,
- AWOS,
- Conveyor,
- Towline,
- Terminal,
- Start/Stop Convey,
- Fault Handling,
- Utilities, and
- Help

The UI provides local and operational control of the ECS software. The GUI allows ease of program operation via the mouse. For more information about GUI and mouse cursor, refer to the Microsoft Windows NT Documentation. Some of the available UI features are:

- Startup/Shutdown Subcontrollers,
- Turn Logging On/Off,
- View Logfiles,
- Turn Broadcast Messages On/Off,
- Request Status Messages from Subcontrollers in the system, and
- Run Diagnostic Software.

**Conversation Access**

After the completion of the logon process, the UI will start **automatically**.

**Data Entry Procedures**

**Selection;** made by placing the arrow cursor on the item.

1. **Single-click** the left mouse button.
2. A **drop-down** list of selections will appear.

**Messages**

1. Cannot access User name.
2. WIN.INI does not have a [ECS] Home= entry\nFATAL ERROR.
3. No [site] entry in ECS.INI\n FATAL ERROR.
4. Could not read ECS.INI value for [HPM01] Function \nCannot continue.
5. [HPM01] section in ECS.INI has value other than 'P' or 'R' \nCannot continue.
6. Could not read ECS.INI value for [HPM02] Function\nCannot continue.
7. [HPM02] section in ECS.INI has value other than 'P' or 'R' \nCannot continue.
8. ECS.INI path is invalid! Check [HOME] value in WIN.INI file\n FATAL ERROR.
9. Unable to create link thread.
10. Unable to create Listener Thread.
11. Unable to create Timer Thread.
12. Unable to create Timer Thread on Restore.
13. Unable to create Timer Thread on Maximize.
14. FATAL ERROR - No [TotalAWOSES] entries in AWOS.INI or AWOS.INI is missing. All AWOS menu items are disabled, all remaining menus work normally.

### 5.3.3 Exit

**Description**

Exits ECS UI. The Exit menu selection should be used to close the ECS UI.

**Conversation Access**

From the Menu Bar on the UI Select Exit.

**Data Entry Procedures**

1. **Click** on Exit of the drop-down list.

**Messages**

None

### 5.3.4 File

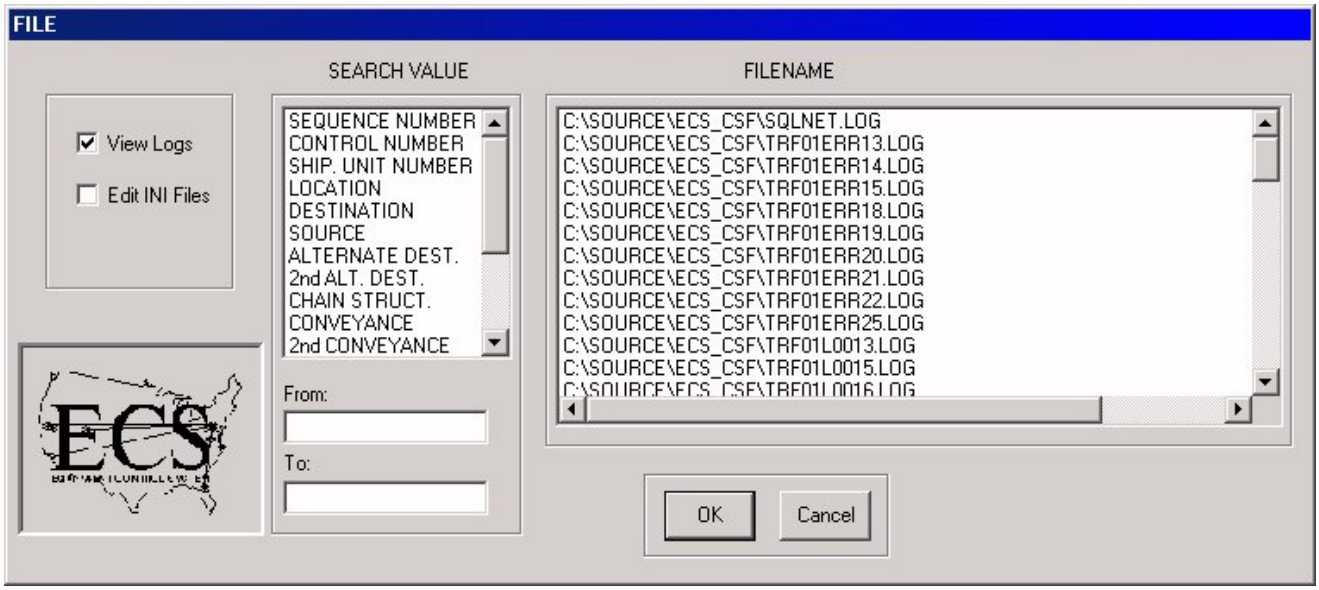



Figure 5.3.4-1 File-View Logs (Screen 1)

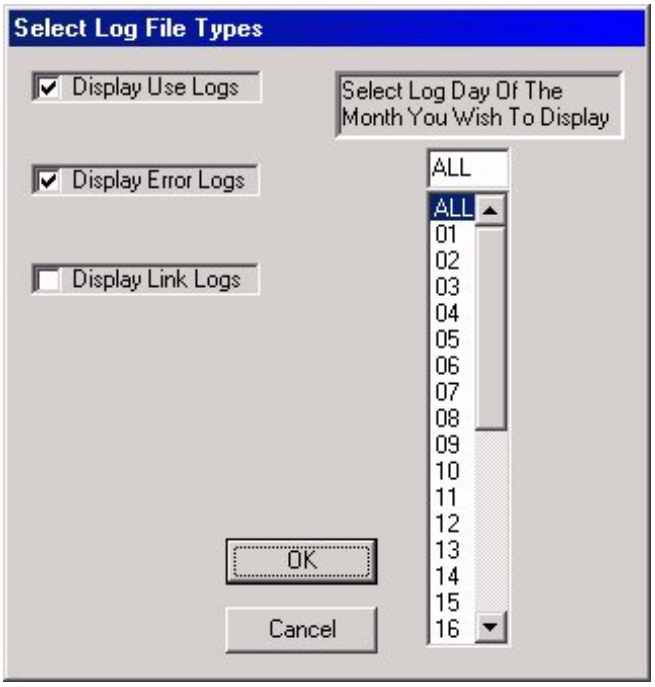



Figure 5.3.4-2 File-View Logs (Screen 2)

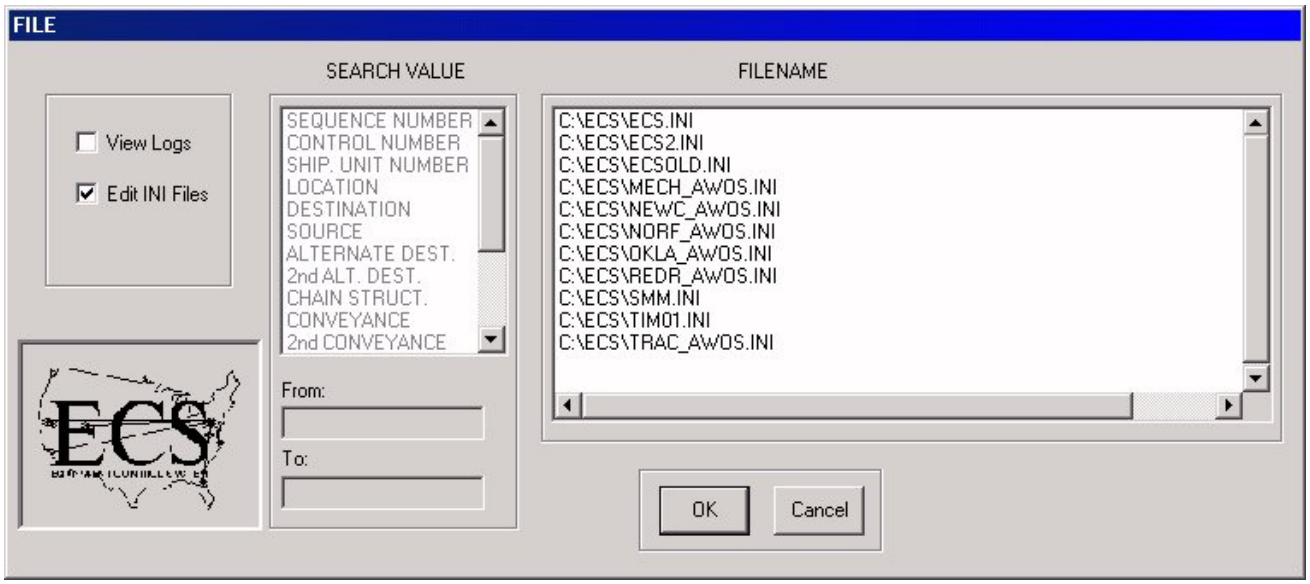



Figure 5.3.4-3 File-Edit INI

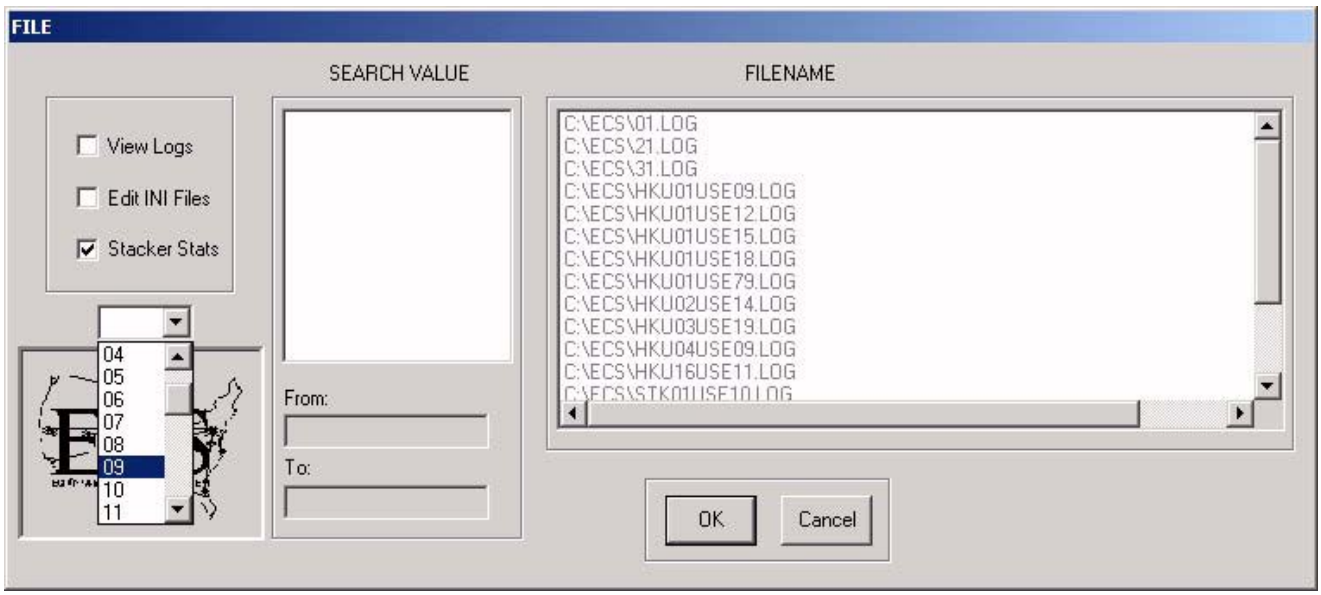



Figure 5.3.4-4 File-Stacker Stats (**Hill Only!**)

**Description**

The following actions can be performed from the **File** selection:

- View Logs
- Edit INI Files
- Stacker Stats (**Hill Only!**)

**Conversation Access**

From the Menu Bar on the UI select 'File'.

**Data Entry Procedures**

1. **Check** the View Logs checkbox.
1. **Select** All or any combination of checkboxes for the type logs to be displayed
2. **Select** All Or Day Of The Month you wish to display.
3. **Select** OK. File (Screen 2) disappears and list of appropriate logs appears in File (Screen 1) ListBox.
4. **Select** Cancel to exit File (Screen 2).

**To View Selected Logs:** Position the mouse button on the log file that is to be read and click the left mouse button to highlight the file then position the mouse pointer to 'OK' and click the left mouse button. **Select** Cancel exits to main menu.

**Search Value:** Select a log to be searched by following the procedure outlined above in the **view logs** section in order to select a log. However, do not complete the final step of pointing to the 'OK' button and clicking the left mouse button. Determine if you want to search within a specific field of an SMM or search for a pattern of characters anywhere in the log. For a pattern search anywhere in a log, **do not** select any of the SMM fields listed in the window directly below the heading "SEARCH VALUE". Instead, enter the word or sequence of characters into the next window down which is labeled "from:".

To search **within a specific field** of an SMM, first select the desired field from the list of SMM fields listed in the window directly below the heading "SEARCH VALUE", then enter either a specific value in the 'From' window or a range of values. To search for a range of values it is necessary to enter the beginning of the range in the 'From' window and the end of the range in the 'To' window. This type of search on SMMs fields applies only to logs that directly display SMMs such as the User Interface and Traffic logs. When you have successfully chosen the type of search you desire, select the file you are interested in searching, move the mouse pointer to the 'OK' button and press the left mouse button. A search will result in either a positive or negative response. A negative response will be indicated by an alert box indicating that no match was found for the given search criterion. A positive response will be indicated by a notepad window appearing on the desktop. The first line of this file will contain the name of the file being searched. The remaining lines of the file will contain every line in the chosen log that satisfied the search criterion. This file may be saved or printed using the notepad techniques. Finally, if viewing any given log in its entirety is desired, the contents of the 'From' and 'To' windows must be deleted and the instructions in the **view logs** section followed.

5. **Check** Edit INI Files checkbox.

   **Edit INI Files:** Position the mouse pointer on the check box next to **Edit INI Files**, then **Click** the left mouse button. Position the mouse button on the initialization (INI) file that is to be edited and **Click** the left mouse button to highlight the file, position the mouse pointer to 'OK' button and **Click** the mouse button. **Select** Cancel exits to main menu.

**Messages**

1. A **FILENAME** has not been selected
2. A filename has not been selected
3. From/To Fields are Empty
4. No matches for search xxxxxx
5. Nothing selected for search list
6. Please fill in both fields: **FROM**, **TO**
7. Search Index and From field values missing
8. Could not execute **NOTEPAD**
9. Cannot LB_GETTEXTLEN
10. You Must Select A Valid Date From The List Provided. Manual Entry Is Not Acceptable !!!

### 5.3.4.1 View Logs

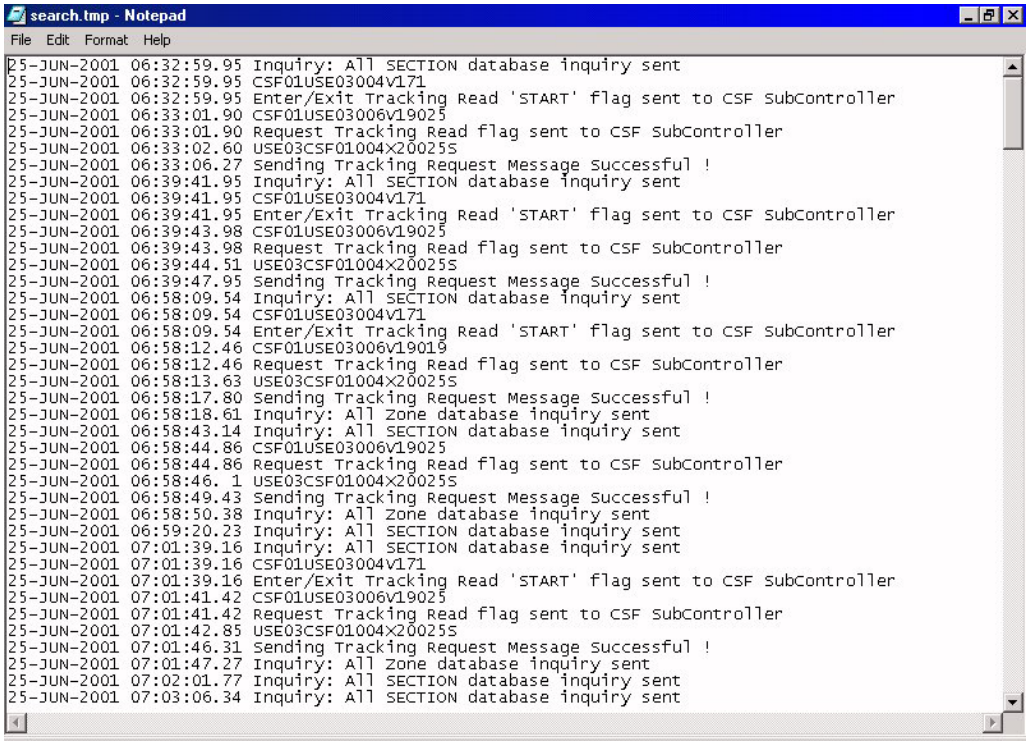



Figure 5.3.4.1-1 View Logs

**Description**

There is a USELOG and ERRLOG file for each process in ECS (i.e., UI, Traffic Controller, and various Subcontroller Processes). There will be from 28 to 31 (one for each day of the month) Logfiles and 28 to 31 Error Logfiles per month for each process. The files are now overwritten on a monthly basis. This eliminates the need to have an administrator delete log files. Logfiles are written to frequently, so when you view a logfile, you are actually viewing a copy or "snap shot" of the logfile, not the log itself. The log may be printed by using the File/Print function at the top of the screen. It is important to note, a complete log print may be lengthy.

**Conversation Access**

From the File screen **Check** View Logs

**Data Entry Procedures**

1. **Follow** NOTEPAD procedures as outlined in the online HELP for Windows NT

**Messages**

1. Standard Windows NT Notepad Messages.

### 5.3.4.2 Edit INI File

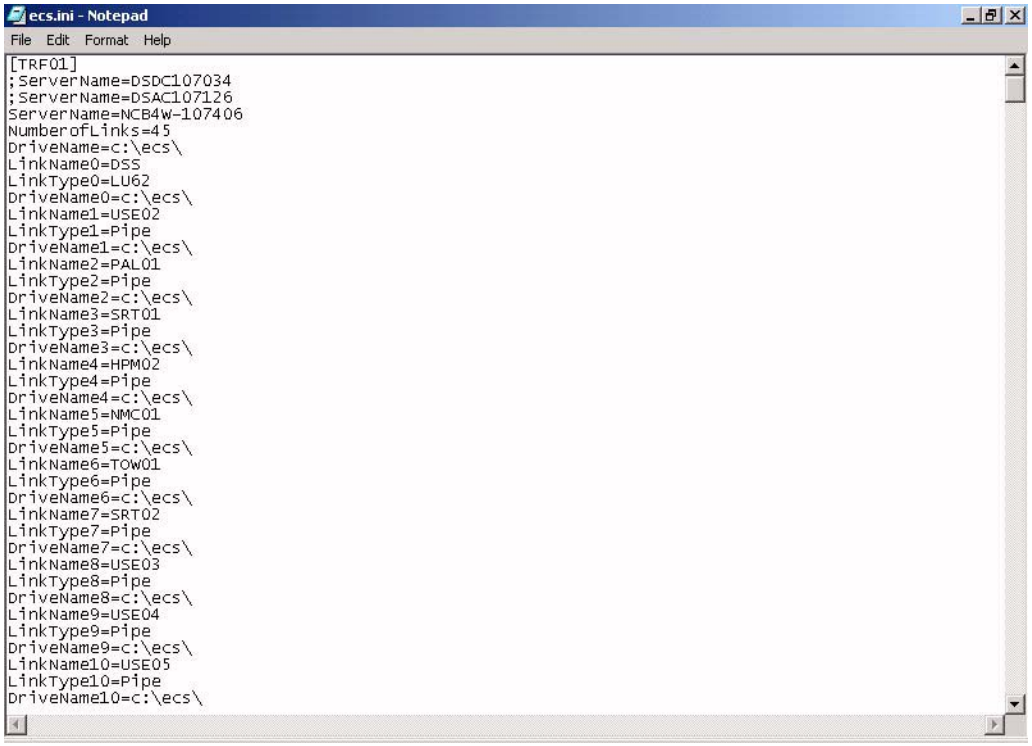



Figure 5.3.4.2-1 Edit INI Files

**Description**

There is a USELOG and ERRLOG file for each process in ECS (i.e., UI, Traffic Controller, and various Subcontroller Processes). There will be from 28 to 31 (one for each day of the month) Logfiles and 28 to 31 Error Logfiles per month for each process. The files are now overwritten on a monthly basis. This eliminates the need to have an administrator delete log files. Logfiles are written to frequently, so when you view a logfile, you are actually viewing a copy or "snap shot" of the logfile, not the log itself. The log may be printed by using the File/Print function at the top of the screen. It is important to note, a complete log print may be lengthy.

**Conversation Access**

From the File screen **Check** Edit INI Files.

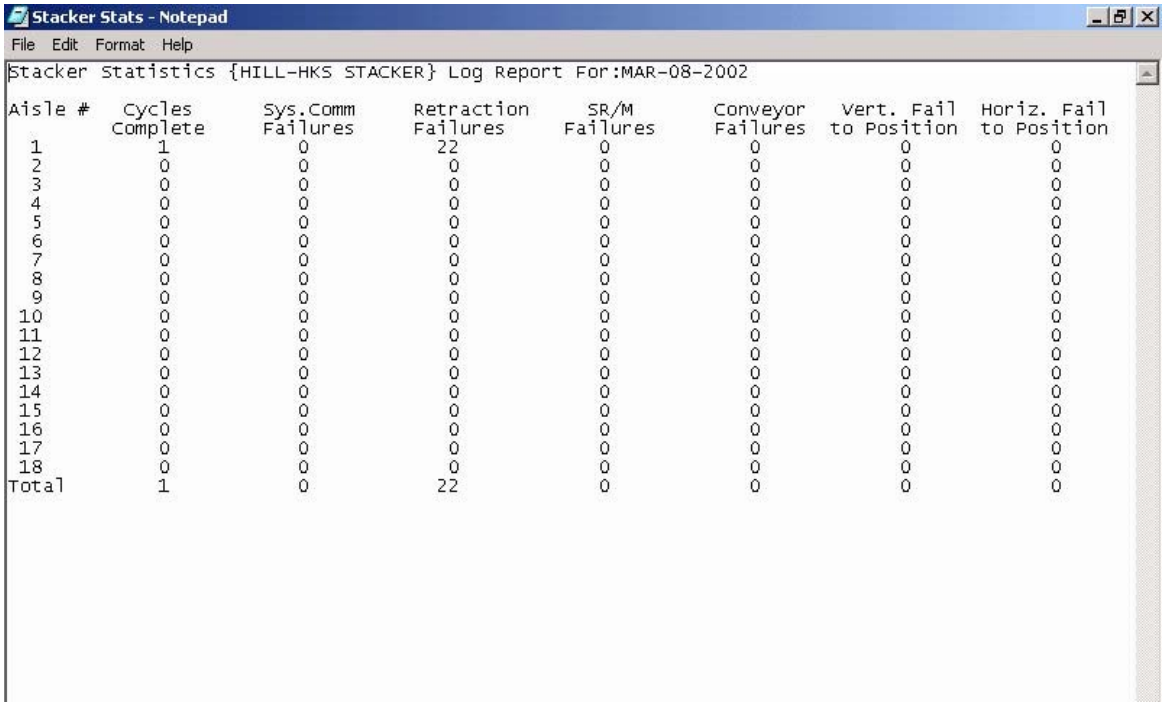
**Data Entry Procedures**

1. **Follow** NOTEPAD procedures as outlined in the online HELP for Windows NT.

**Messages**

1. Standard Windows NT Notepad Messages.

### 5.3.4.3 Stacker Stats – (Hill Only!)



Stacker Stats - Notepad

File Edit Format Help

Stacker Statistics {HILL-HKS STACKER} Log Report For:MAR-08-2002

| Aisle # | Cycles Complete | Sys.Comm Failures | Retraction Failures | SR/M Failures | Conveyor Failures | Vert. Fail to Position | Horiz. Fail to Position |
|---|---|---|---|---|---|---|---|
| 1 | 1 | 0 | 22 | 0 | 0 | 0 | 0 |
| 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 5 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 7 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 8 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 9 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 10 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 11 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 12 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 13 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 14 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 16 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 17 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 18 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total | 1 | 0 | 22 | 0 | 0 | 0 | 0 |

Figure 5.3.4.3-1 Stacker Stats (**Hill Only!**)

**Description**

This operation provides Stacker Statistical information to the Systems Administrator and Maintenance personnel. There are 18 aisles, 7 categories of failure groups and 1 category for Cycles Complete. All operational aisles for a selected day are displayed and Totals of all categories are provided.

**Conversation Access**

From the File screen **Check** Stacker Stats.

**Data Entry Procedures**

1. **Check** the Stacker Stats checkbox.
2. **Select** Day Of The Month you wish to display.
3. **Select** OK. File (Screen 2) disappears and all appropriate aisles and statuses are displayed for the selected day.
4. **Select** Cancel to exit Windows NT Notepad.

**Messages**

1. Standard Windows NT Notepad Messages.

### 5.3.5 MHE-All sites

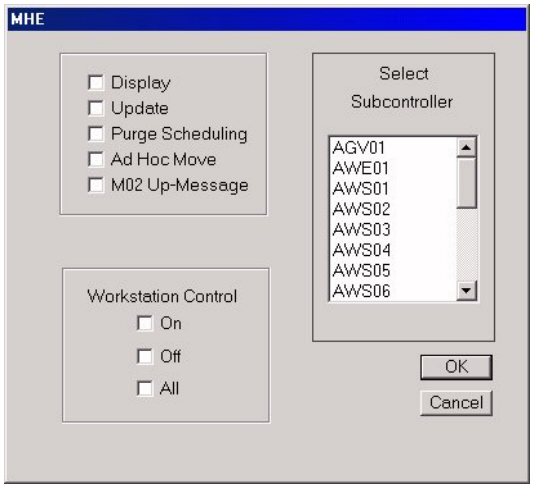



Figure 5.3.5-1 MHE Update

**Description**

This is the messaging center of the UI. Many inquiries can be performed here. Typically, an action and a Subcontroller are selected, the OK button is clicked, and the message is sent to the selected Subcontroller. The following actions may be performed from the **MHE Update** selection:

- Display
- Update
- Purge Scheduling
- Ad Hoc Move
- M02 Up-Message
- Workstation Control On/Off

**Note:** **Purge Scheduling** not utilized at New Cumberland Site

**Note:** The selection of the Display, Update, Purge Scheduling, Ad Hoc Move, M02 Up-Message and Workstation Control checkboxes sometimes will activate an intermediate dialog box, depending on which subcontroller is selected. If the action does not require an intermediate dialog, a message is automatically sent.

**Conversation Access**

From the Menu Bar on the UI **Select** MHE.

**Data Entry Procedures**

1. **Select** the MHE Functions
2. **Place** the mouse pointer on **MHE** on the menu bar and click the left mouse button. This will present a window that will allow a choice of Display, Update, Purge Scheduling, and Ad Hoc Move. Also, a second grouping for Workstation Control functions (see Figure 5.3.5-1).

**Messages**

1. A Subcontroller has not been selected.
2. No Action Selected.
3. Check either:

    - Display,
    - Update,
    - Purge,
    - Ad Hoc Move,
    - or M02 Up-Message.

4. No Status Request function for: Subcon [NumberOfSelection].
5. Only Numeric Values are valid.
6. Processing error in Lane Adjust.
7. Cannot send to: Subcon [NumberOfSelection].
8. No Lane ID data for: Subcon [NumberOfSelection] in ECS.INI.
9. Check On or Off, then click OK.
10. Message Sent.

### 5.3.5.1 Display-All sites

**Description**

Selecting **Display**, highlighting a subcontroller, and any subsequent dialog boxes enables the user to make status requests of the various subcontrollers.

**Display:** Position the mouse pointer on the check box next to **Display** then click the left mouse button. Position the mouse button on the name of the Subsystem and click the left mouse button to highlight the selected subsystem. Finally position the mouse pointer to OK and click the mouse button. A **Status Response Screen** will return. The normal starting status of the workstations is **Unknown** until the status is established using Workstation Control.

If Display is checked and a subcontroller selected, a message is sent to the selected controller requesting a status. The message is sent immediately unless the subcontroller is a CAR01, RAY01, NMC01, or SMN01. With these types of subcontrollers an intermediate dialog box is necessary.

**Conversation Access**

From the MHE Update screen **Check** Display.

**Data Entry Procedures**

N/A (will automatically send message or display the intermediate dialog box.).

**Note:** New Cumberland site will display an alert dialog box containing the appropriate information pertaining to TIM and KEY subcontrollers.

**Messages**

1. Message Sent

**Message Sent**

1. A **J01** Status Request message is sent for the appropriate Subcontroller.

**Response**

1. A **K02** Status Response message is returned from the appropriate Subcontroller to the UI.

### 5.3.5.1.1 Carousel Request Type-Carousel Sites Excluding Only Mechanicsburg

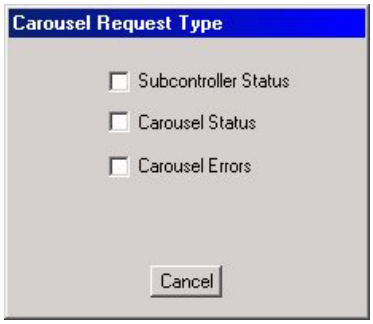



Figure 5.3.5.1.1-1 Carousel Request Type

**Description**

The **Carousel Request Type** dialog box is necessary before the message is sent to determine whether the request is being made for the Subcontroller or a workstation for status/errors.

**Conversation Access**

From the MHE Update screen **Check** Display.

**Data Entry Procedures**

1. **Check** Subcontroller Status, Carousel Status, or Carousel Errors.

**Messages**

1. Message Sent

**Message Sent**

1. A **J01** Status Request is sent to the Carousel Subcontroller in response to checking Subcontroller Status.

**Response**

1. A **K02** Status Response is returned from the Carousel Subcontroller to the UI.

### 5.3.5.1.2 Raymond Carousel Status- Carousel Sites Excluding Mechanicsburg and Tracy

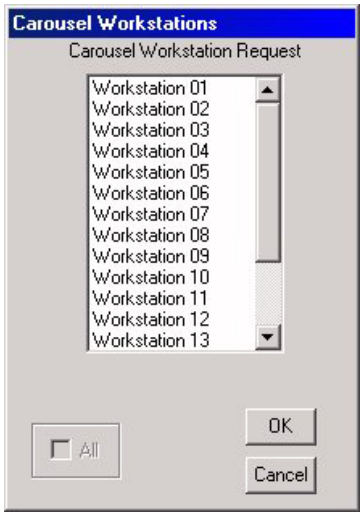



Figure 5.3.5.1.2-1 Carousel Status

**Description**

The **Carousel Status** dialog box is necessary to display individual Carousel workstation information. Refer to the appropriate Appendix for the Navy Carousel Message Formats (Carousel Status Response).

**Conversation Access**

From the Carousel Request Type screen **Check** Carousel Status.

**Data Entry Procedures**

1. **Select** Workstation.
2. **Click** the OK button.

**Messages**

1. Message Sent
2. Status Request without workstation selection.

**Message Sent**

1. A **J33** CAR Send Status message is sent to the Carousel Subcontroller.

**System Response**

1. A **K34** CAR Status Response is returned from the Carousel Subcontroller to the UI.

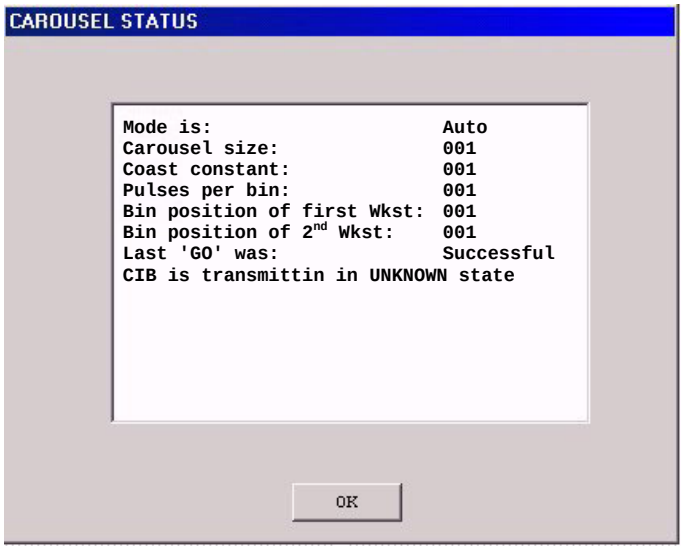



Figure 5.3.5.1.2-2 Carousel Status-System Response

### 5.3.5.1.3 Raymond Carousel Errors - Carousel Sites Excluding Mechanicsburg and Tracy

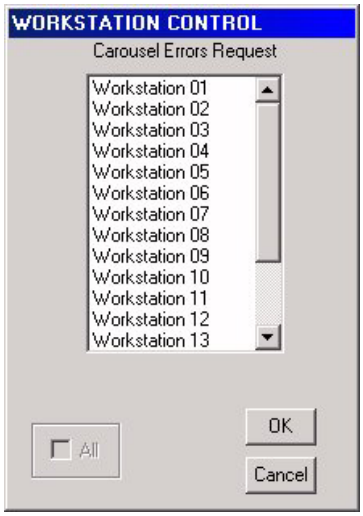



Figure 5.3.5.1.3-1 Carousel Errors

**Description**

The **Carousel Errors** dialog box is necessary to display individual Carousel error counter information. Refer to the appropriate Appendix for the Navy Carousel Message Formats (Send Carousel Errors).

**Conversation Access**

From the Carousel Request Type screen **Check** Carousel Errors.

**Data Entry Procedures**

1. **Select** Workstation.
2. **Click** the OK button.

**Messages**

1. Message Sent
2. Request without workstation selection

**Message Sent**

1. A **J31** CAR Errors Request message is sent to the Carousel Subcontroller.

**System Response**

1. A **K32** CAR Errors Response message is returned from the Carousel Subcontroller to the UI.

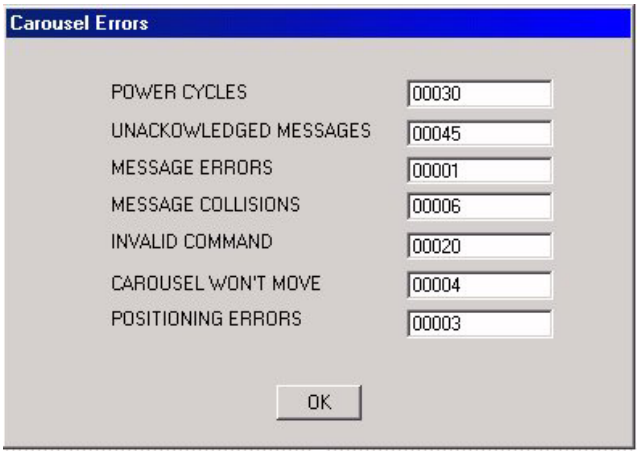



Figure 5.3.5.1.3-2 Carousel Errors-System Response

### 5.3.5.1.4 NMC Status- San Diego Only

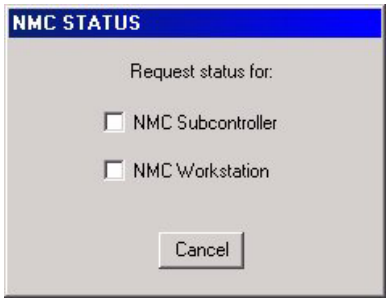



Figure 5.3.5.1.4-1 NMC Status

**Description**

The **NMC Status** dialog box is necessary before the message is sent to determine whether the request is being made for the subcontroller or a workstation status.

**Conversation Access**

From the MHE Update screen **Check** Display.

**Data Entry Procedures**

1. **Check** NMC Subcontroller Status or NMC Workstation.

**Messages**

1. Message Sent

**Message Sent**

1. A **J01** Status Request message is sent to the NMC Subcontroller.

**System Response**

1. A **K02** Status Response message is returned from the NMC Subcontroller to the UI.NMC Workstation

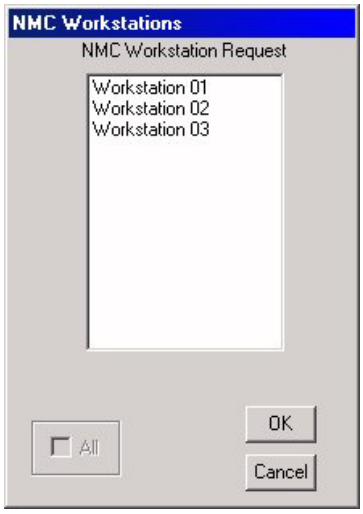



Figure 5.3.5.1.4-2 NMC Workstations

**Description**

The **NMC Workstation** dialog box is necessary to display individual NMC workstation information. Refer to the appropriate Appendix for the Navy NMC Message Formats.

**Conversation Access**

From the NMC Status screen **Check** NMC Workstation.

**Data Entry Procedures**

1. **Select** Workstation.
2. **Click** the OK button.

**Note: NMC Workstation** is not utilized at New Cumberland site.

**Messages**

1. Message Sent
2. Request without workstation selection

**Message Sent**

1. A **J41** NMC at Workstation Request is sent to the NMC Subcontroller.

**System Response**

1. A **K42** NMC at Workstation Response is returned from the NMC Subcontroller to the UI.

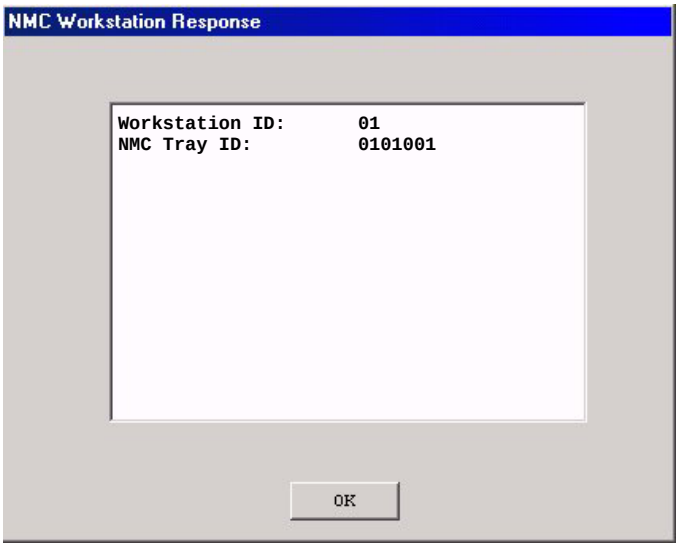



Figure 5.3.5.1.4-3 NMC Workstation Response

### 5.3.5.1.5 STACKMAN Status - San Diego Only

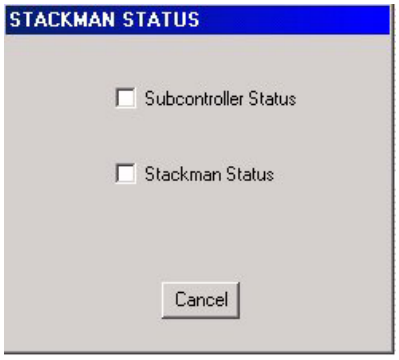



Figure 5.3.5.1.5-1 Stackman Status

**Description**

The **STACKMAN Status** dialog box is necessary before the message is sent to determine whether the request is being made for the subcontroller or the STACKMAN status.

**Conversation Access**

From the MHE Update screen **Check** Display.

**Data Entry Procedures**

1. **Check** Subcontroller Status or STACKMAN Status.

**Messages**

1. Message Sent

**Message Sent**

1. A **J01** Status Request message is sent for the STACKMAN Subcontroller.
2. A **J35** STACKMAN Status message is sent for the STACKMAN Controller.

**System Response**

1. A **K02** Status Response message is returned from the STACKMAN Subcontroller to the UI.
2. A **K36** STACKMAN Status Response message is returned from the STACKMAN Controller to the UI.

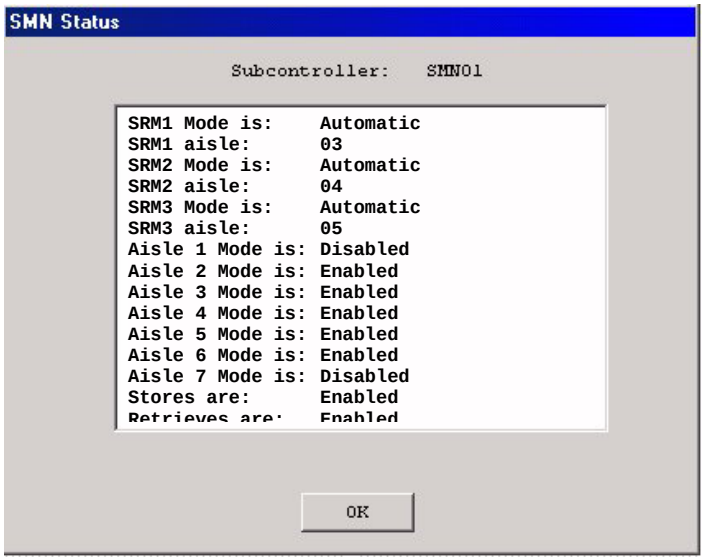



Figure 5.3.5.1.5-2 Stackman Status System Response

### 5.3.5.1.6 TIM/KEYPAD Status - New Cumberland only

**Description**

The **TIM/KEYPAD Status** will display an alert dialog box containing the appropriate information pertaining to TIM / KEYPAD subcontrollers.

**Conversation Access**

From the MHE Update screen **Check** Display.

**Data Entry Procedures**

N/A (will display an alert dialog box containing the appropriate information pertaining to TIM /KEY subcontrollers.).

**Messages**

1. Message Sent

**Message Sent**

1. A **J01** Status Request message is sent for the TIM /KEY Subcontroller.

### 5.3.5.2 Update-All sites

**Description**

The **Update** selection allows the user to update or initialize the subcontroller selected. If the subcontroller selected is the NMC01, HPM01, HPM02, AGV01, TIMxx, or KEYxx then an intermediate dialog box is displayed.

**Note:** There is no **Update** function for the Richmond site.

**Note:** **New Cumberland site only!!!** The **Update** selection allows the user to initialize TIMs or KEYPADs. The current code initializes addresses 65 through 80. Keypads are initialized through the intermediate Workstation Control dialog box .

**Conversation Access**

From the MHE Update screen **Check** Update

**Data Entry Procedures**

**N/A** Will automatically send message or display the intermediate dialog box.

**Note:** **New Cumberland site only! Check** the **Update** and Workstation Control **ON** selection to initialize Keypads.

**Constraints**

1. Update should only be utilized for recovery purposes. Movement functions will be deleted.

**Messages**

1. No Status Request function for: Subcon [NumberOfSelection].

**Message Sent**

1. **A21** Initialize Device message is sent for the appropriate Subcontroller.

### 5.3.5.2.1 NMC Update - San Diego Only

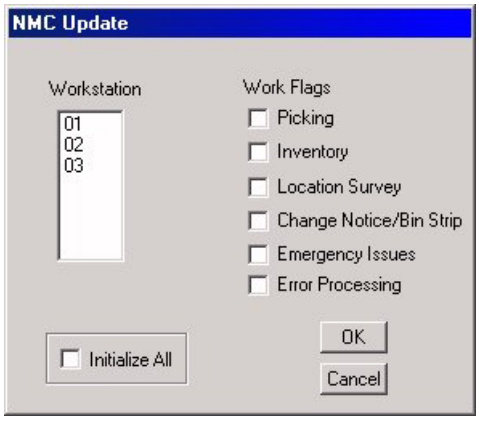



Figure 5.3.5.2.1-1 NMC Update

**Description**

The **NMC Update** dialog box is displayed to set workstation flags as well as initialize the NMC Controller. Initialize is the deletion of all pending workload on the NMC Controller based on the Work Flag selection.

**Conversation Access**

From the MHE Update screen **Check** Update.

**Data Entry Procedures**

1. **Select** Workstation.
2. **Select** the appropriate Work Flag or Flags.
3. **Click** the OK button.

**Note:** Initialize All can be utilized to delete all pending workload for all NMC workstations.

**Constraints**

1. Update should only be utilized for recovery purposes. Movement functions will be deleted.

**Messages**

1. A Subcontroller has not been selected.
2. No INI Workstation data for : Subcon [NumberOfSelection].

**Message Sent**

1. An **A21** Initialize Device message is sent for the NMC Subcontroller.
2. An **A41** NMC Workstation Assignment is returned from the NMC Subcontroller to the UI with the selected flags.

### 5.3.5.2.2 Stand Update-Mechanicsburg only

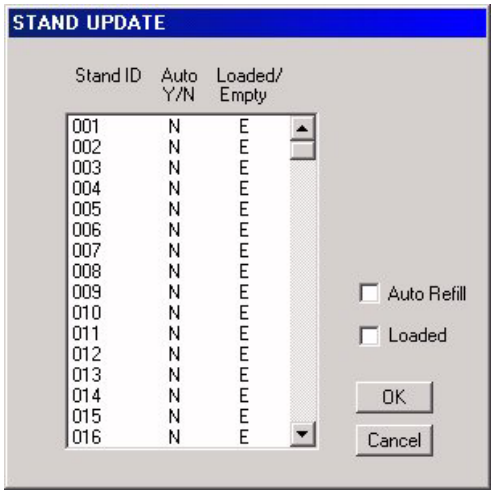



Figure 5.3.5.2.2-1 Stand Update

**Description**

The **Stand Update** dialog box is displayed to allow the system to automatically refill an AGV stand with loaded or empty modules. The update message is sent to the ECS database.

**Conversation Access**

From the MHE Update screen **Check** Update and **Select** Subcontroller AGV01

**Data Entry Procedures**

1. **Select** Stand ID.
2. **Check** Auto Refill to update to 'Y' or **Check** Auto Refill twice to update to 'N'.
3. **Check** Loaded to update to 'L' or **Check** Loaded twice to update to 'E'.
4. **Click** the OK button.

**Note:** A single or multiple stands can be selected. For multiple, contiguous Stand IDs, click the beginning ID, hold the Shift Key and click the last ID. For non-contiguous selections, hold down the Control Key while pointing Stand IDs with the mouse cursor and clicking.

**Message**

1. Message Sent
2. Nothing selected, to exit press Cancel.
3. Nothing selected.

**Message Sent**

1. A **J65** Stand Automatic Refill Setting message is sent to the AGV Subcontroller to modify the ECS database.

### 5.3.5.2.3 Lane Adjust-Mechanicsburg only

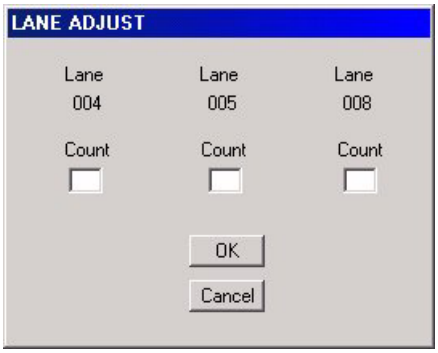



Figure 5.3.5.2.3-1 Lane Adjust

**Description**

The **Lane Adjust** dialog box is displayed to allow the resetting of the tote counts if required.

**Conversation Access**

From the MHE Update screen **Check** Update and **Select** Subcontroller HPM01 or HPM02.

**Data Entry Procedures**

1. **Enter** two-position count.
2. **Click** the OK button.

**Note:** Only one Lane can be adjusted per screen.

**Constraint**

There is only a capacity of 25 totes per lane. Entering a number greater than 25 will shutdown the lane and not allow any further totes to go into the selected lane.

**Messages**

1. Message Sent
2. Only Numeric Values are valid

**Message Sent**

1. A **J57** HPM Lane Adjust message is sent to the HP Subcontroller that will configure the ECS to the number of totes on the lane selected.

### 5.3.5.3 Purge Scheduling-Excludes Richmond and New Cumberland

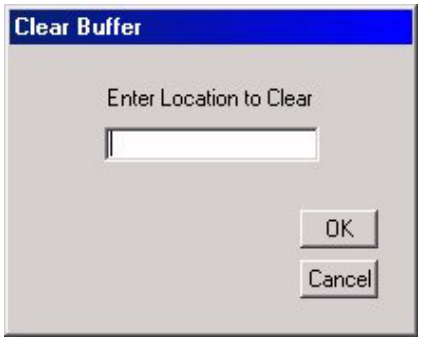



Figure 5.3.5.3-1 Purge Scheduling

**Description**

The **Purge Scheduling** selection allows the user to clear the buffers of workload for workstations/locations. The buffers are located at the subcontroller level.

**Note:** There is no **Purge Scheduling** function for the Richmond or New Cumberland site.

**Conversation Access**

From the MHE Update screen Check Purge Scheduling.

**Data Entry Procedures**

1. **Enter** valid location.
2. **Click** the OK button.

**Constraints**

Purge Scheduling should only be utilized for recovery purposes. Movement functions will be deleted.

**Messages**

1. Message Sent
2. Location must contain 9 characters. You entered, __ (# of characters).

**Message Sent**

1. An **A03** Clear Buffers message is sent to the selected Subcontroller, which causes the location to be logically cleared.

### 5.3.5.4 Ad Hoc Move-All sites

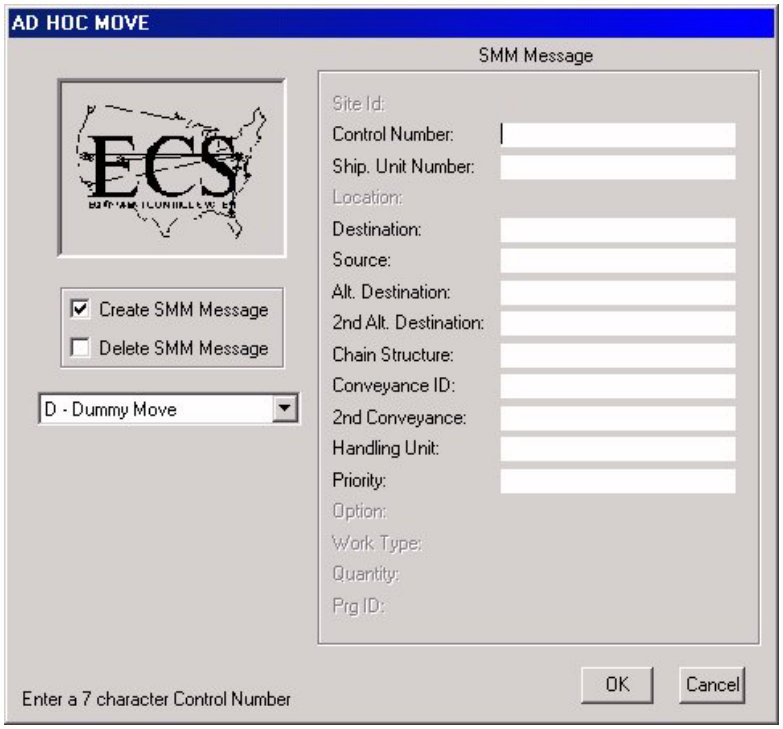



Figure 5.3.5.4-1 Ad Hoc Move

**Description**

SMMs can be generated by the user by using the **Ad Hoc Move** selection. The user enters data in the SMM Message fields and the message is sent to the selected subcontroller. SMM messages can be deleted or created using this selection.

The Ad Hoc Move dialog box allows users to change destination and other routing information. This message is sent to the selected subcontroller just as if it came from DSS. The delete function cancels a particular move if the material has not been totally processed. Control Number and/or Location are the only elements that can be utilized for the delete function.

**Conversation Access**

From the MHE Update screen **Check** Ad Hoc Move.

**Data Entry Procedures**

1. **AD Hoc Move:** Click on the check box next to **Ad Hoc Move** then click on ABP01. The Ad Hoc Move screen (see Figure 5.3.5.4-1) is primarily a development and testing tool. Data must be in the same format as SMMs from the upper tier. Refer to the upper tier documentation for appropriate data and formats.

   - **Click** on the scroll down bar,
   - **Select** a Flag from the list,
   - **Tab** to the enabled fields,
   - **Enter** 'valid data', and
   - **Click** the OK button.

   If Delete was selected,

   - **Fill-in** enabled fields, and
   - **Click** the OK button.

**Messages**

1. Cannot find AdHoc Section in ECS.INI.
2. A 'P' flag is invalid for NMC.
3. Invalid Flag . redo.
4. No Value for AdHocMove Flag.
5. Edit fields all blank.
6. Create/Delete Checkboxes not selected.

**Message Sent**

1. An **M01** User Initiated SMM message to the selected ECS Subcontroller for the Create.
2. An **A05** Delete Standard Movement Message to the selected ECS Subcontroller for the Delete.

### 5.3.5.5 M02-Up Message -All AWOS sites

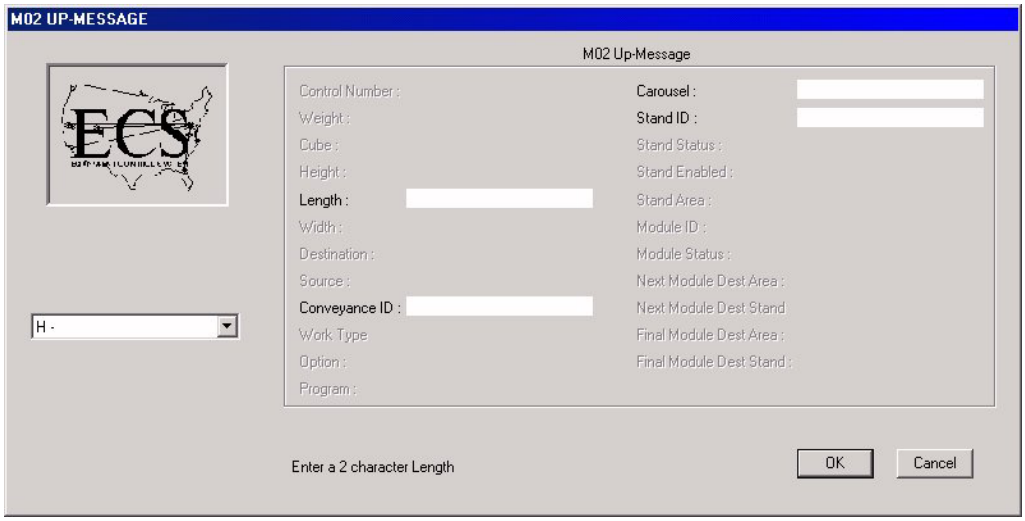



Figure 5.3.5.5-1 M02 Up-Message

**Description**

The user can generate Standard Up Messages (M02) by using the M02 Up-Message selection. The user enters data in the M02 Message fields and the message is sent to DSS on behalf of the selected subcontroller.

The M02 Up-Message dialog box allows users to change destination and other routing information. This message is sent to the selected subcontroller just as if it came from DSS.

**Conversation Access**

From the MHE Update screen **Check** M02 Up-Message.

**Data Entry Procedures**

1. **M02 Up-Message:** Click on the check box next to M02 Up-Message then click on AW0S01. The M02 Up-Message screen (see Figure 5.3.3.4-1) is primarily a development and testing tool. Data must be in the same format as M02 Up-Messages sent to the upper tier. Refer to the upper tier documentation for appropriate data and formats.

   - **Click** on the scroll down bar,
   - **Select** a Flag from the list,
   - **Tab** to the enabled fields,
   - **Enter** 'valid data', and
   - **Click** the OK button.

   If Delete was selected,

   - **Fill-in** enabled fields, and
   - **Click** the OK button.

**Messages**

1. Cannot find M02 Up-Message Section in ECS.INI.
2. Invalid Flag . redo.
3. No Value for M02 Up-Message Flag.
4. Edit fields all blank.

**Message Sent**

1. An **M02** User Initiated M02 Up-Message to the selected ECS Subcontroller for the Create.

### 5.3.5.6 Workstation Control

Figure 5.3.5.6-1 Workstation Control

**Description**

The **Workstation Control** dialog box is necessary before the message is sent to determine which workstation is requested to be turned On or Off for the selected Subcontroller.

**Note: New Cumberland site only!** The **Workstation Control** dialog box allows the user to initialize the KEYPAD function keys. The current code initializes addresses 65 through 80. Keypads are initialized through the intermediate Workstation Control dialog box .

**Conversation Access**

From the MHE Update screen **Check** Workstation Control On or Off

**Data Entry Procedures**

1. Workstation Control**, Click** the box next to **On** or **Off**
2. **Click** on ABP01 or any subcontroller. A Workstation Control screen will display.
3. **Click** on the Workstation you want to alter
4. **Click** OK (see Figure 5.3.5.6-1). Using this function with the HP subcontrollers will result in an Unknown Message Type [A01] message being placed in the USE and ERR logs.

**Note: New Cumberland site only! Click** OK (see Figure 5.3.5.6-1). Using this function with the TIMxx or KEYxx subcontrollers allows the user to Select the keypad to be loaded with function keys using the Workstation number (e.g., **Workstation01**) as keypad address and an offset of 64.

**Example:** Workstation01 + 64 = keypad address 65.

**Messages**

1. Message Sent
2. A Workstation has not been selected.

**Message Sent**

1. An **A01** Startup/Shutdown message is sent to the selected Subcontroller to either startup or shutdown a workstation or load the function keys.

### 5.3.6 System-All sites

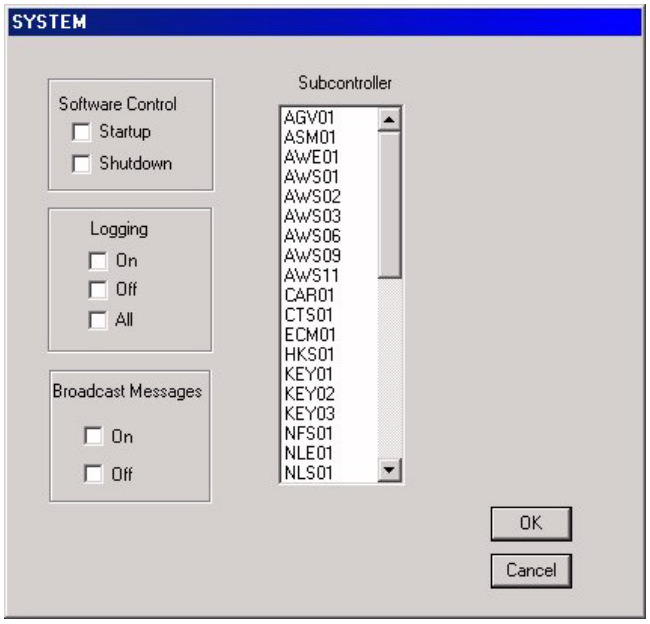



Figure 5.3.6-1 System Functions

**Description**

The following actions may be performed from the **System** selection:

- Startup/Shutdown Subcontrollers

  Allows the user to startup/shutdown the ECS Subcontroller software modules. If the Subcontroller to be started is on another machine there is at least a 65-second delay before the application starts.

- Logging On/Off

  Allows user to turn logging on/off for the appropriate Subcontroller.

**Note:** Startup/Shutdown and Logging cannot be performed at the same time.

- Broadcast Messages On/Off

  Allows the administrator/user to control broadcast messages being sent by ECS subcontrollers to display ECS system alert messages only at the appropriate User Interfaces. Default setting is **OFF**.

**Conversation Access**

From the Menu Bar on the UI **Select** System.

**Data Entry Procedures**

1. **Select** the System Functions
2. **Place** the mouse pointer on **System** on the menu bar and click the left mouse button. This will present a window that will allow a choice of **Software Control**, **Logging** or **Broadcast Messages.**

**Software Control**

1. **Software Control** allows you to start the subsystems from a copy of the User Interface.
2. **Click** on the Startup or Shutdown check box (see Figure 5.3.6-1),
3. **Click** on the subsystem you want to start or stop,
4. **Click** OK.

   **Note**: It may take up two minutes for the two subcontrollers to start when using this method.

**Logging**

1. **Logging,** each subcontroller can create 2 log files. These files are the ERR and USE logs. The ERR log cannot be turned off. The startup state of the USE log is determined by a setting in the ECS.INI file. The current state of the USE log can be modified by:
2. **Click** the On or Off check box (see Figure 5.3.6-1),
3. **Click** the subsystem to modify,
4. **Clicking** OK.
5. **Click** the All check box in addition to the **On** or **Off** will modify the state of the Use log within all subcontrollers (ABP01, HPM01, HPM02, etc.). The Traffic Controller USE log will remain on at all times.

**Broadcast Messages**

1. **Broadcast Messages** allows you to control broadcast messages being displayed at the appropriate User Interfaces. Default setting is OFF.
2. **Click ON** to display Broadcast Messages.
3. **Click OFF** to terminate Broadcast Messages.

   **Note:** The User Interface main window title bar will display the broadcast message state as being ON or OFF. The initial broadcast default state can be set to ON or OFF by locating the **Local** Profile Section in the ECS.INI file and add the statement **Broadcast = ON** or **Broadcast = OFF**. No entry in the INI file will default to **OFF**.

**Message Sent**

1. An **A07** Set Logging message is sent to the selected Subcontroller to turn logging on or off.
2. An **A09** Software Startup/Shutdown message is sent to the selected Subcontroller for a startup or shutdown.

## 5.3.7 Diagnostic-All sites

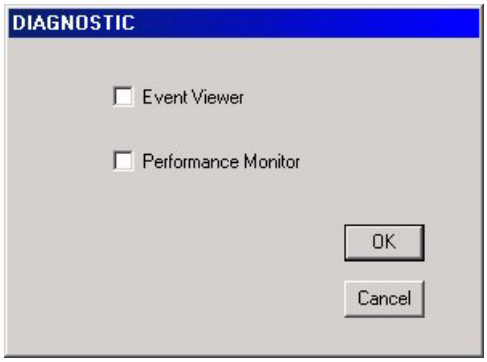



Figure 5.3.7-1 Diagnostic

**Description**

The following actions may be performed from the **Diagnostic** selection:

- Event Viewer

  The purpose is to display the system, security, and application logs.

- Performance Monitor

  The purpose is to measure your computer's efficiency, identify and troubleshoot possible problems, and plan for additional hardware needs.

**Conversation Access**

From the Menu Bar on the UI **Select** Diagnostic.

**Data Entry Procedures**

**Select** the Diagnostic Functions: This menu choice will be available only if you are in the group Domain Admin. **Place** the mouse pointer on Diagnostics on the menu bar and **click** the left mouse button. This will present a window that will allow a choice of Event Viewer or Performance Monitor.

**Event Viewer: Click** on the Event Viewer check box (see Figure 5.3.7-1) to run the Windows NT Event Viewer program. Procedures for using Event Viewer are part of vendor training and not included here.

**Performance Monitor: Click** on the Performance Monitor check box (see Figure 5.3.7-1) to run the Windows NT Performance Monitor program. Procedures for using Performance Monitor are part of vendor training and not included here.

**CAUTION:** Instructions for these utilities are in the Windows NT documentation and should be thoroughly studied before making the Diagnostic selection in the User Interface.

**Constraints**

The programs initiated by the Diagnostic Menu Selection should only be used by individuals **very** familiar with Windows NT. Casual users and non-qualified personnel should not use this Menu Selection.

Windows NT Event Viewer and Performance Monitor are two diagnostic utilities that should only be used by system administrators who understand the output these utilities provide.

**Messages**

None

**Message Sent**

N/A

**Response**

1. Runs the selected Windows NT utility application.

### 5.3.8 Inquiry (Module/All)-Mechanicsburg only

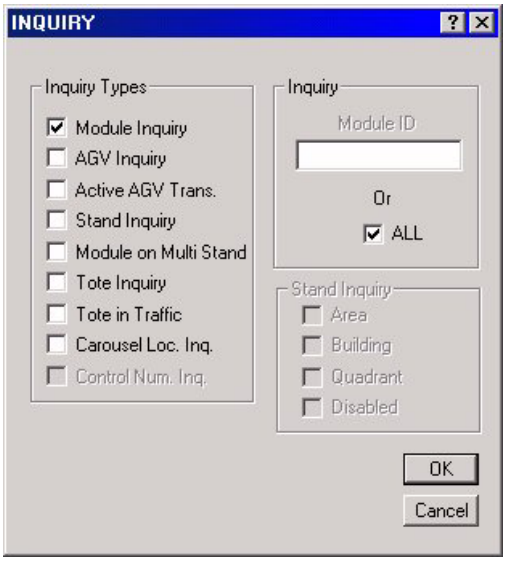



Figure 5.3.8-1 Inquiry (Module/All)

**Description**

The **Inquiry** (Module/All) dialog box queries the ECS Database for information concerning **All** Module IDs.

**Conversation Access**

From the Menu Bar on the UI **Select** Inquiry.

**Data Entry Procedures**

1. **Check** the Module Inquiry checkbox.
2. **Check** the All checkbox.
3. **Click** the OK button.

**Messages**

1. No Module Data Found For ….
2. Select an Inquiry Type
3. ‘Module ID’ value is missing

**Messages Sent**

None

**System Response**

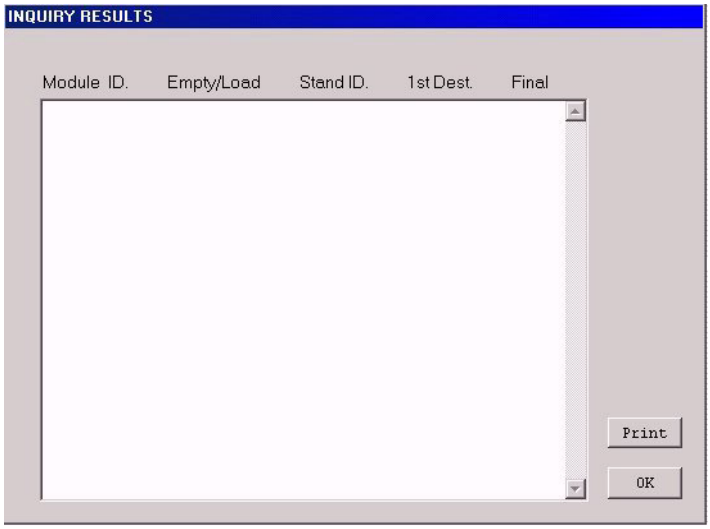



Figure 5.3.8-2 System Response (Module/All)

**Note:** Once the user has reviewed the information in the Module Inquiry Results dialog box, clicking the OK button returns to the Inquiry dialog box.

A printed report of the data displayed in the Module Inquiry Results dialog box can be made by clicking on the Print button. A system Print dialog box will appear to allow the user to select a printer to print the report. The default, system Printer is pre-selected; if this is the correct printer, click the OK button or press the <Enter Key>. The selected printer can be configured by clicking the Properties button. An alternate printer can be selected from a drop-down list of printers. For more information on printer selection and configuration consult your Windows NT Workstation manual.

### 5.3.9 Inquiry (Module/Module ID)-Mechanicsburg only

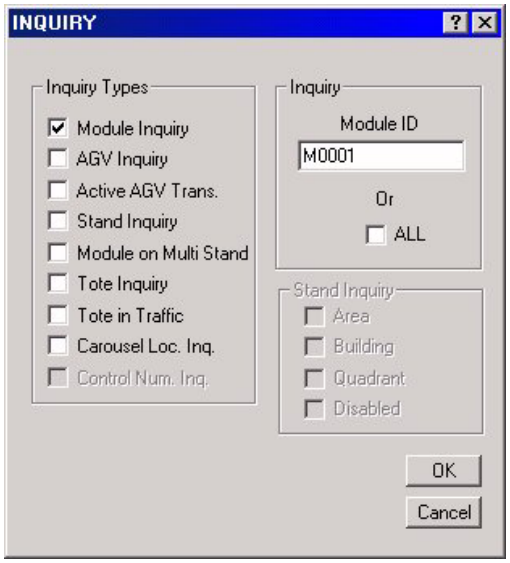



Figure 5.3.9-1 Inquiry (Module/Module ID)

**Description**

The **Inquiry** (Module/Module ID) dialog box queries the ECS Database for information concerning a single Module ID entered in the Module ID edit box.

**Conversation Access**

From the Menu Bar on the UI **Select** Inquiry.

**Data Entry Procedures**

1. **Check** the Module Inquiry checkbox.
2. **Enter** a Module ID in the Module ID edit box.
3. **Click** the OK button.

**Messages**

1. No Module Data Found For ….
2. Select an Inquiry Type
3. ‘Module ID’ value is missing

**Messages Sent**

None

**System Response**

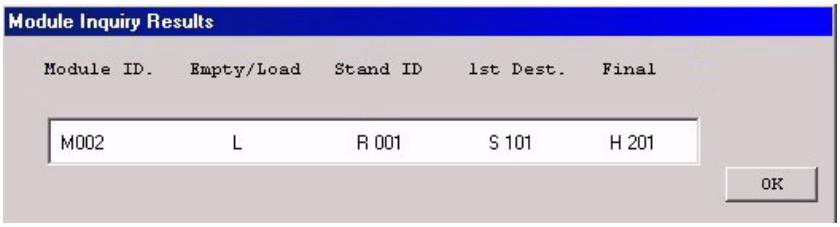



Figure 5.3.9-2 System Response (Module/Module ID)

**Note:** Once the user has reviewed the information in the Module Inquiry Results dialog box, clicking the OK button returns to the Inquiry dialog box.

### 5.3.10 Inquiry (AGV/All)-Mechanicsburg only

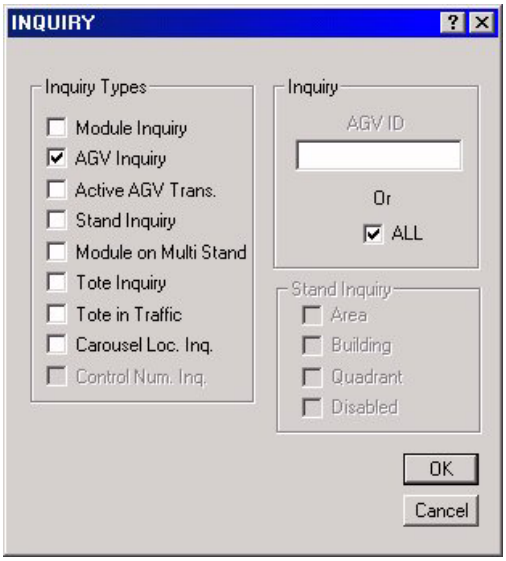



Figure 5.3.10-1 Inquiry (AGV/All)

**Description**

The **Inquiry** (AGV/All) dialog box queries the ECS Database for information concerning **All** AGV IDs.

**Conversation Access**

From the Menu Bar on the UI **Select** Inquiry.

**Data Entry Procedures**

1. **Check** the AGV Inquiry checkbox.
2. **Check** the All checkbox.
3. **Click** the OK button.

**Messages**

1. Message Sent
2. ‘ADV ID’ value is missing
3. ‘ value is missing
4. No Module data found for…

**Messages Sent**

None

**System Response**

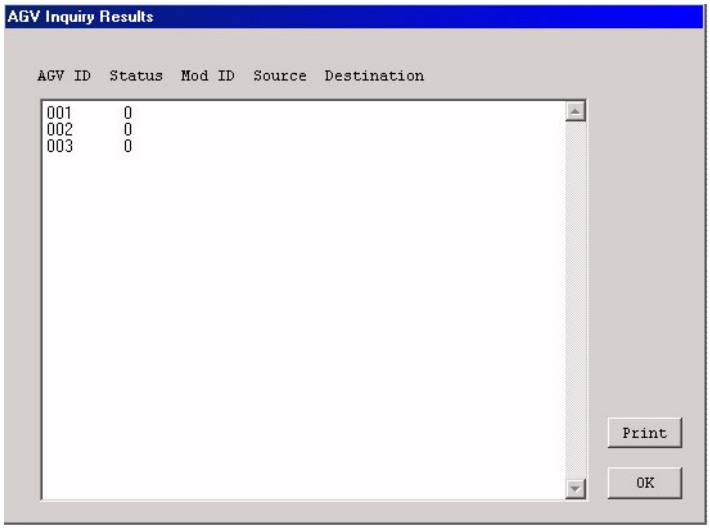



Figure 5.3.10-2 System Response (AGV/All)

**Note:** Once the user has reviewed the information in the AGV Inquiry Results dialog box, clicking the OK button returns to the Inquiry dialog box.

A printed report of the data displayed in the AGV Inquiry Results dialog box can be made by clicking on the Print button. A system Print dialog box will appear to allow the user to select a printer to print the report. The default, system Printer is pre-selected; if this is the correct printer, click the OK button or press the <Enter Key>. The selected printer can be configured by clicking the Properties button. An alternate printer can be selected from a drop-down list of printers. For more information on printer selection and configuration consult your Windows NT Workstation manual.

### 5.3.11 Inquiry (AGV/AGV ID)-Mechanicsburg only

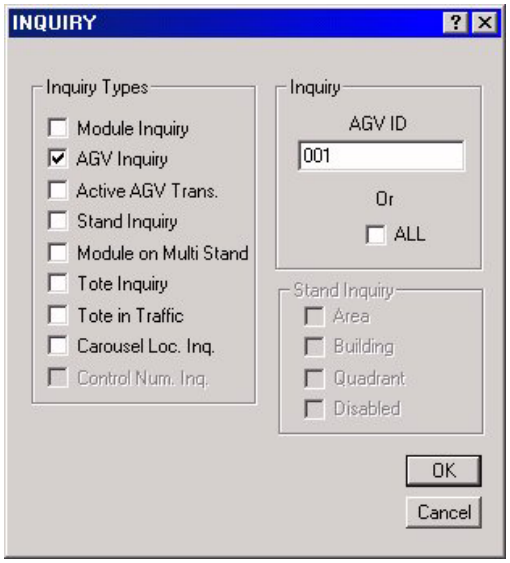



Figure 5.3.11-1 Inquiry (AGV/AGV ID)

**Description**

The **Inquiry** (AGV/AGV ID) dialog box sends an ECS message to the AGV Subcontroller for information concerning the entered AGV ID.

**Conversation Access**

From the Menu Bar on the UI **Select** Inquiry.

**Data Entry Procedures**

1. **Check** the AGV Inquiry checkbox.
2. **Enter** an AGV ID in the AGV ID edit box.
3. **Click** the OK button.

**Messages**

1. Message Sent
2. ‘ADV ID’ value is missing
3. No Module data found for…

**Messages Sent**

1. A **J61** AGV Status Inquiry message is sent to the AGV Subcontroller.

**System Response**

1. A **K62** AGV Inquiry Response is returned from the AGV Subcontroller to the UI.

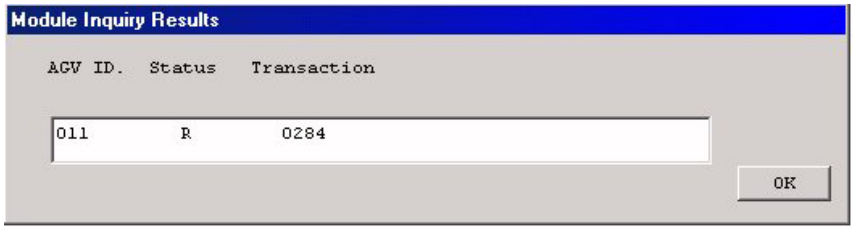



Figure 5.3.11-2 System Response (AGV/AGV ID)

**Note:** Once the user has reviewed the information in the AGV Inquiry Results dialog box, clicking the OK button returns to the Inquiry dialog box.

### 5.3.12 Inquiry (Active AGV Trans)-Mechanicsburg only

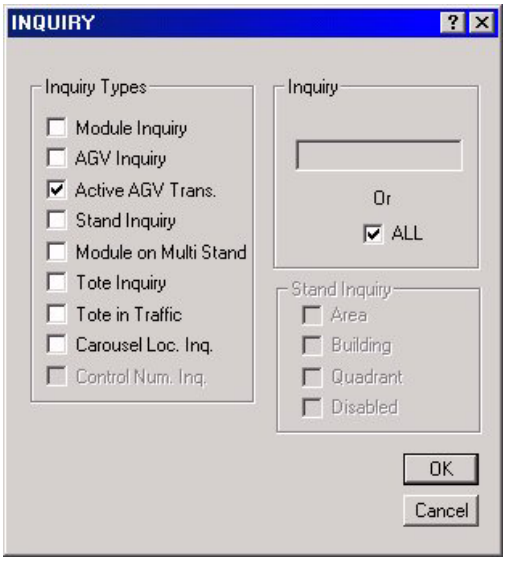



Figure 5.3.12-1 Inquiry (Active AGV Trans)

**Description**

The **Inquiry** (Active AGV Trans) dialog box queries the ECS Database for information concerning **All** Active AGV Trans IDs.

**Conversation Access**

From the Menu Bar on the UI **Select** Inquiry.

**Data Entry Procedures**

1. **Check** the Active AGV Trans Inquiry checkbox.
2. **The** All checkbox. is checked automatically
3. **Click** the OK button.

**Messages**

1. No Module data found for…

**Messages Sent**

None

**System Response**

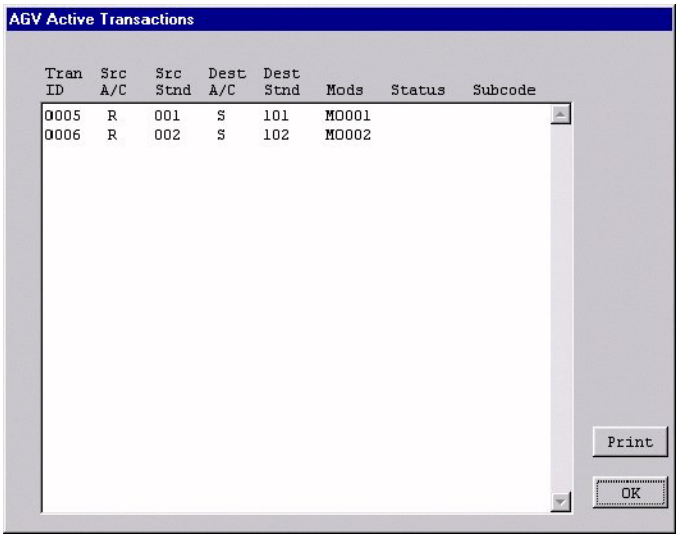



Figure 5.3.12-2 System Response (Active AGV Trans)

**Note:** Once the user has reviewed the information in the Active AGV Trans Inquiry Results dialog box, clicking the OK button returns to the Inquiry dialog box.

A printed report of the data displayed in the Active AGV Trans Inquiry Results dialog box can be made by clicking on the Print button. A system Print dialog box will appear to allow the user to select a printer to print the report. The default, system Printer is pre-selected; if this is the correct printer, click the OK button or press the <Enter Key>. The selected printer can be configured by clicking the Properties button. An alternate printer can be selected from a drop-down list of printers. For more information on printer selection and configuration consult your Windows NT Workstation manual.

### 5.3.13 Inquiry (Stand/All) -Mechanicsburg only

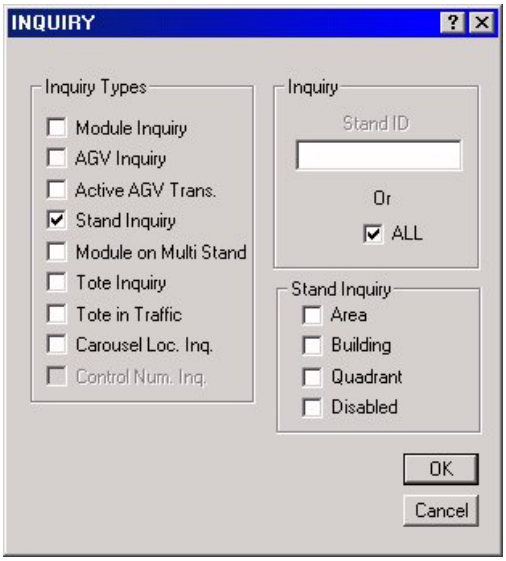



Figure 5.3.13-1 Inquiry (Stand/All)

**Description**

The **Inquiry** (Stand/All) dialog box queries the ECS Database for information concerning **All** Stand IDs.

**Conversation Access**

From the Menu Bar on the UI **Select** Inquiry.

**Data Entry Procedures**

1. **Check** the Stand Inquiry checkbox.
2. **Check** the All checkbox.
3. **Click** the OK button.

**Messages**

None

**Messages Sent**

N/A

**System Response**

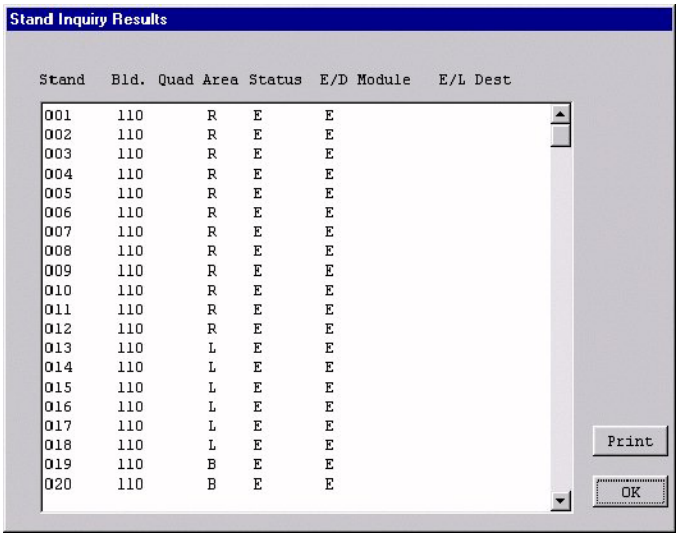



Figure 5.3.13-2 System Response-(Stand/All)

**Note:** Once the user has reviewed the information in the Stand Inquiry Results dialog box, clicking the OK button returns to the Inquiry dialog box.

A printed report of the data displayed in the Stand Inquiry Results dialog box can be made by clicking on the Print button. A system Print dialog box will appear to allow the user to select a printer to print the report. The default, system Printer is pre-selected; if this is the correct printer, click the OK button or press the <Enter Key>. The selected printer can be configured by clicking the Properties button. An alternate printer can be selected from a drop-down list of printers. For more information on printer selection and configuration consult your Windows NT Workstation manual.

### 5.3.14 Inquiry (Stand/Stand ID)-Mechanicsburg only

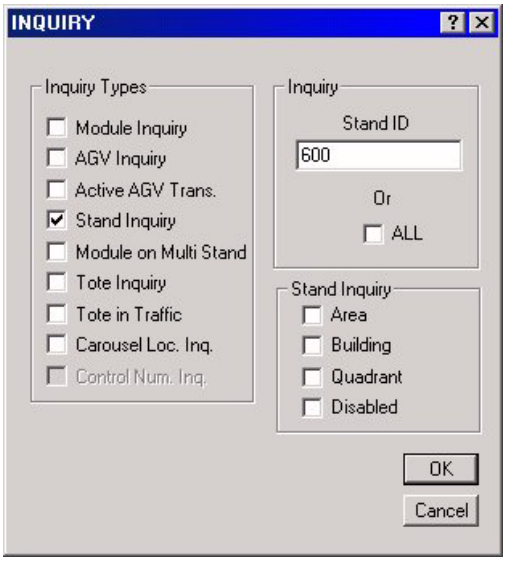



Figure 5.3.14-1 Inquiry (Stand/Stand ID)

**Description**

The **Inquiry** (Stand/Stand ID) dialog box sends an ECS message to the AGV Subcontroller for information concerning the entered Stand ID.

**Conversation Access**

From the Menu Bar on the UI **Select** Inquiry.

**Data Entry Procedures**

1. **Check** the Stand Inquiry checkbox.
2. **Enter** a Stand ID in the Stand ID edit box.
3. **Click** the OK button.

**Messages**

1. Message Sent
2. Stand ID value is missing.

**Messages Sent**

1. A **J63** Stand Status Inquiry message is sent to the AGV Subcontroller.

**System Response**

1. A **K64** Stand Inquiry Response is returned from the AGV Subcontroller to the UI.

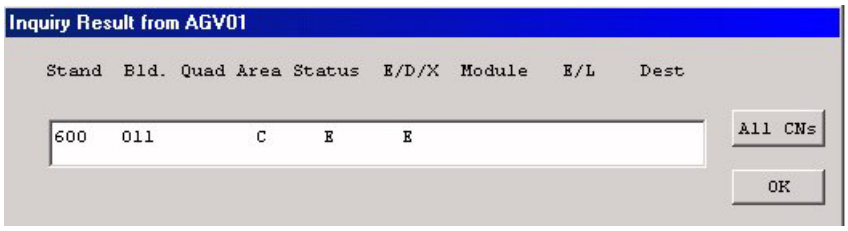



Figure 5.3.14-2 System Response (Stand/Stand ID)

**Note:** Once the user has reviewed the information in the Stand Inquiry Results dialog box, clicking the OK button returns to the Inquiry dialog box.

### 5.3.15 Inquiry (Stand/Area)-Mechanicsburg only

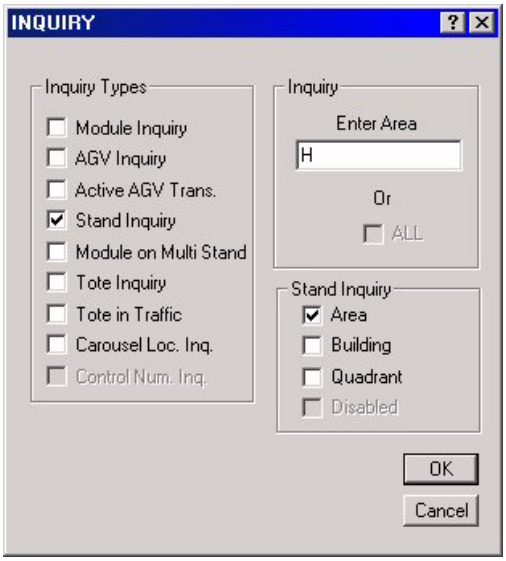



Figure 5.3.15-1 Inquiry (Stand/Area)

**Description**

The **Inquiry** (Stand/Area) dialog box queries the ECS Database for Stand information concerning a single Area entered in the Enter Area edit box.

**Conversation Access**

From the Menu Bar on the UI **Select** Inquiry.

**Data Entry Procedures**

1. **Check** the Stand Inquiry checkbox.
2. **Check** the Area checkbox.
3. **Enter** an Area code in the Enter Area edit box.
4. **Click** the OK button.

**Messages**

1. 'Enter Area' value is missing.

**Messages Sent**

None

**Note:** A list of valid Area Codes is available by **Clicking** the Context Help Icon ? ✕, Question Mark (?) to the left of the **Close** Icon (X) in the upper right corner of the screen. The cursor will become a QuestionMark/Arrow **?** , **Click** the cursor on the Area checkbox or the checkbox label (Area) and the following Help message box will appear.

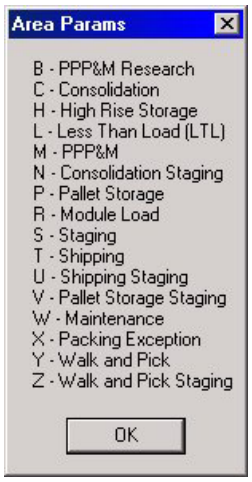



Figure 5.3.15-2 Help (Stand/Area)

**System Response**

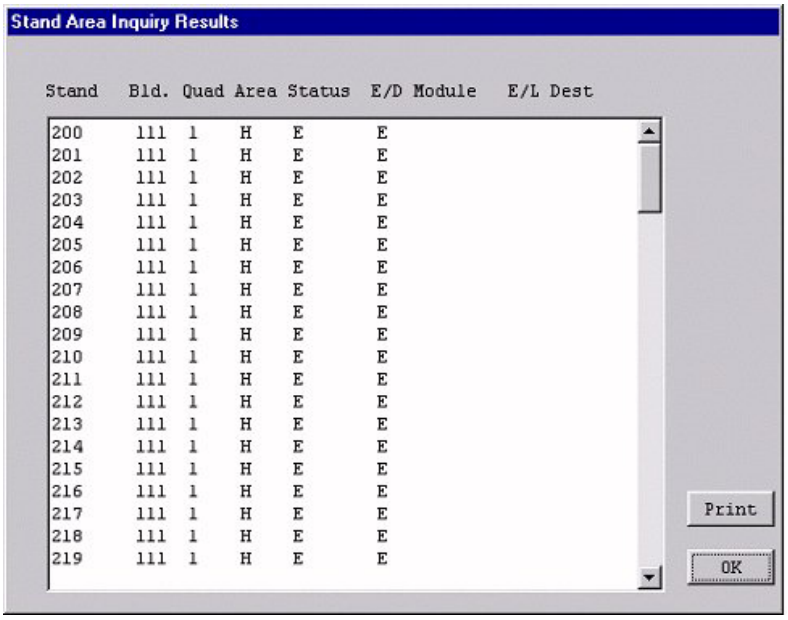



Figure 5.3.15-3 System Response-(Stand/Area)

**Note:** Once the user has reviewed the information in the Stand/Area Inquiry Results dialog box, clicking the OK button returns to the Inquiry dialog box.

A printed report of the data displayed in the Stand/Area Inquiry Results dialog box can be made by clicking on the Print button. A system Print dialog box will appear to allow the user to select a printer to print the report. The default, system Printer is pre-selected; if this is the correct printer, click the OK button or press the <Enter Key>. The selected printer can be configured by clicking the Properties button. An alternate printer can be selected from a drop-down list of printers. For more information on printer selection and configuration consult your Windows NT Workstation manual.

## 5.3.16 Inquiry (Stand/Building)-Mechanicsburg only

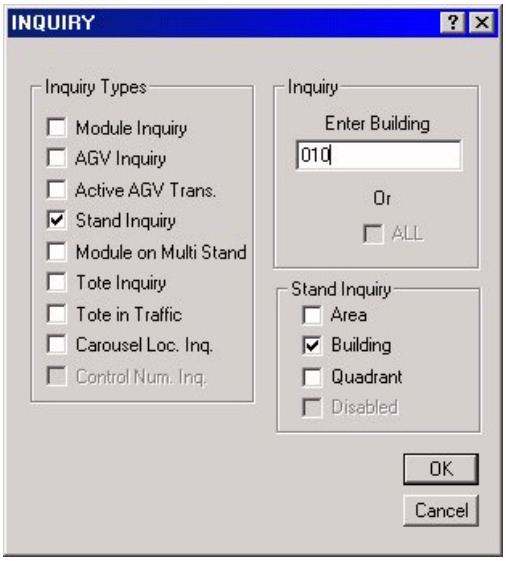



Figure 5.3.16-1 Inquiry (Stand/Building)

### Description

The **Inquiry** (Stand/Building) dialog box queries the ECS Database for Stand information concerning a single Building entered in the Enter Building edit box.

### Conversation Access

From the Menu Bar on the UI **Select** Inquiry.

### Data Entry Procedures

1. **Check** the Stand Inquiry checkbox.
2. **Check** the Building checkbox.
3. **Enter** a Building number in the Enter Building edit box.
4. **Click** the OK button.

### Messages

1. 'Enter Building' value is missing.

### Messages Sent

None

**Note:** A list of valid Building Numbers is available by **Clicking** the Context Help Icon [?][X], the Question Mark (?) to the left of the **Close** Icon (X) in the upper right corner of the screen. The cursor will become a QuestionMark/Arrow ?, **Click** the cursor on the Building checkbox or the checkbox label (Building) and the following Help message box will appear.

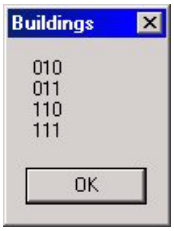



Figure 5.3.16-2 Help Message Box (Stand/Building)

**System Response**

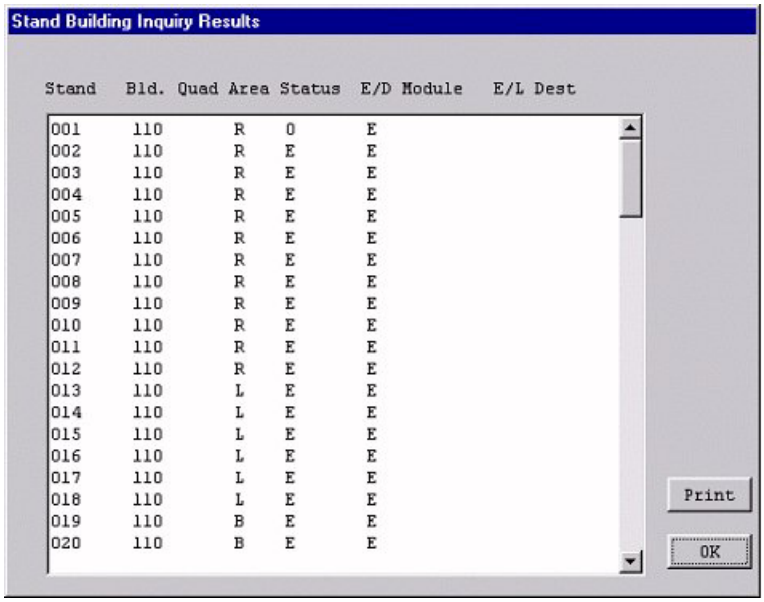



Figure 5.3.16-3 System Response (Stand/Building)

**Note:** Once the user has reviewed the information in the Stand/Building Inquiry Results dialog box, clicking the OK button returns to the Inquiry dialog box.

A printed report of the data displayed in the Stand/Building Inquiry Results dialog box can be made by clicking on the Print button. A system Print dialog box will appear to allow the user to select a printer to print the report. The default, system Printer is pre-selected; if this is the correct printer, click the OK button or press the <Enter Key>. The selected printer can be configured by clicking the Properties button. An alternate printer can be selected from a drop-down list of printers. For more information on printer selection and configuration consult your Windows NT Workstation manual.

### 5.3.17 Inquiry (Stand/Quad)-Mechanicsburg only

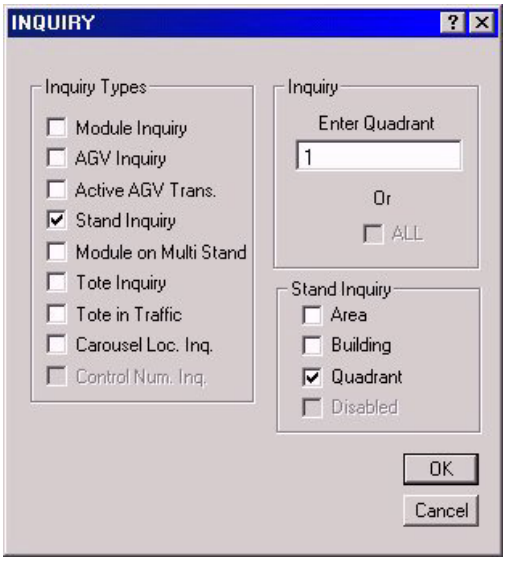



Figure 5.3.17-1 Inquiry (Stand/Quad)

**Description**

The **Inquiry** (Stand/Quad) dialog box queries the ECS Database for Quadrant information concerning a single Quad entered in the Enter Quad edit box.

**Conversation Access**

From the Menu Bar on the UI **Select** Inquiry.

**Data Entry Procedures**

1. **Check** the Stand Inquiry checkbox.
2. **Check** the Quad checkbox.
3. **Enter** a Quad number in the Enter Quad edit box.
4. **Click** the OK button.

**Messages**

1. 'Enter Quad' value is missing.

**Messages Sent**

None

**Note:** A list of valid Quad Numbers is available by **Clicking** the Context Help Icon [?][X] , the Question Mark (?) to the left of the **Close** Icon (X) in the upper right corner of the screen. The cursor will become a QuestionMark/Arrow ?, **Click** the cursor on the Quad checkbox or the checkbox label (Quad) and the following Help message box will appear.

Figure 5.3.17-2 Help Message Box (Stand/Quad)

**System Response**

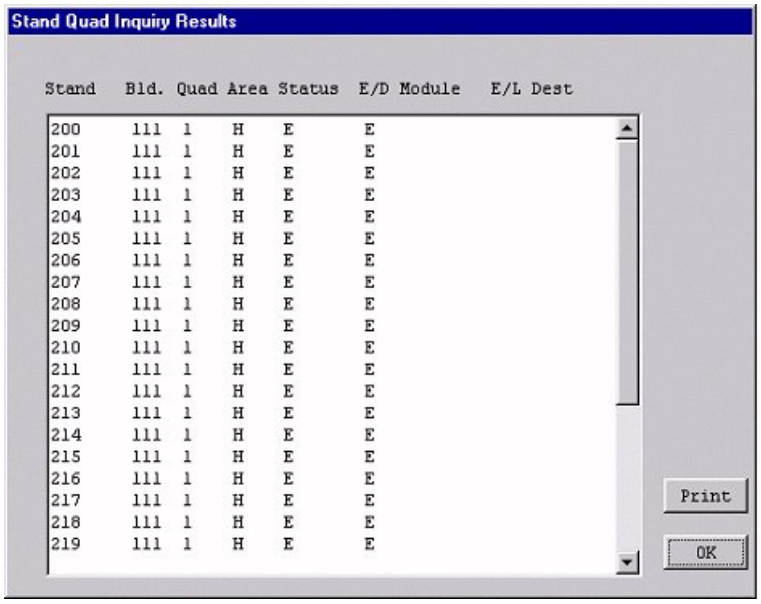



Figure 5.3.17-3 System Response-(Stand/Quad)

**Note:** Once the user has reviewed the information in the Stand/Quad Inquiry Results dialog box, clicking the OK button returns to the Inquiry dialog box.

A printed report of the data displayed in the Stand/Quad Inquiry Results dialog box can be made by clicking on the Print button. A system Print dialog box will appear to allow the user to select a printer to print the report. The default, system Printer is pre-selected; if this is the correct printer, click the OK button or press the <Enter Key>. The selected printer can be configured by clicking the Properties button. An alternate printer can be selected from a drop-down list of printers. For more information on printer selection and configuration consult your Windows NT Workstation manual.

### 5.3.18 Inquiry (Stand/Disabled)-Mechanicsburg only

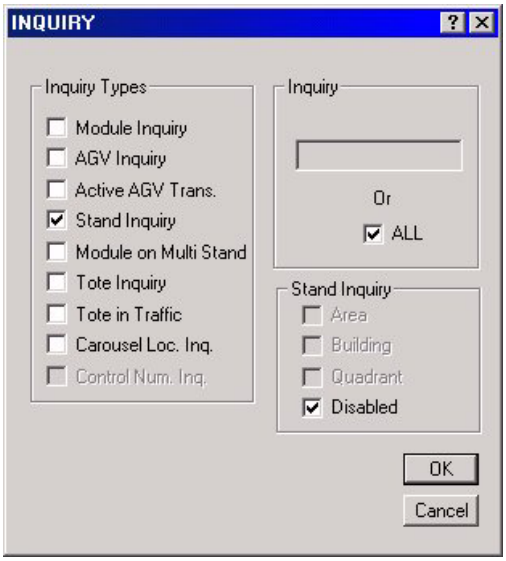



Figure 5.3.18-1 Inquiry (Stand/Disabled)

**Description**

The **Inquiry** (Stand/All) dialog box queries the ECS Database for information concerning **All** Stand IDs.

**Conversation Access**

From the Menu Bar on the UI **Select** Inquiry.

**Data Entry Procedures**

1. **Check** the Stand Inquiry checkbox.
2. **The** All checkbox. is checked automatically
3. **Click** the OK button.

**Messages**

None

**Messages Sent**

N/A

**System Response**

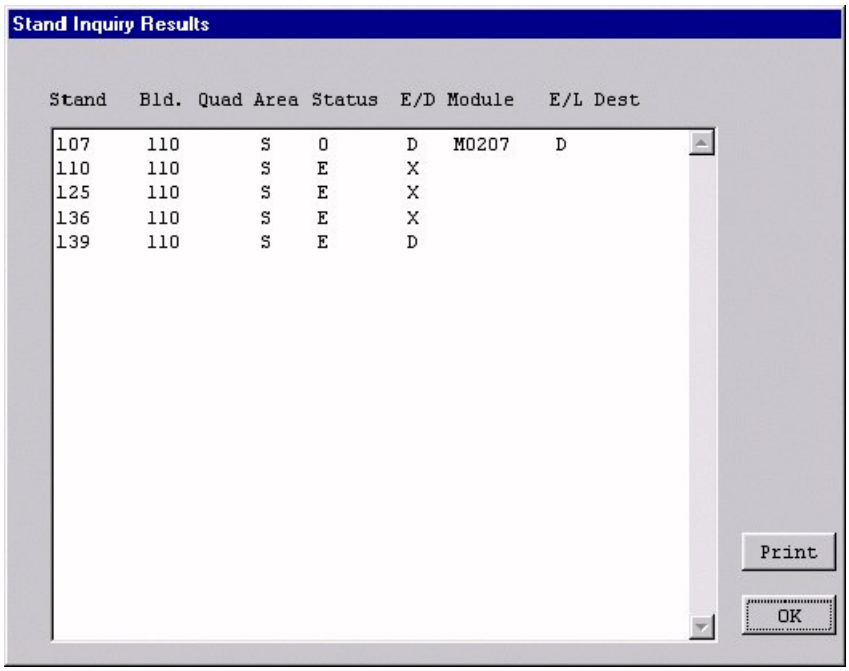



Figure 5.3.18-2 System Response-(Stand/Disabled)

**Note:** Once the user has reviewed the information in the Stand Inquiry Results dialog box, clicking the OK button returns to the Inquiry dialog box.

A printed report of the data displayed in the Stand Inquiry Results dialog box can be made by clicking on the Print button. A system Print dialog box will appear to allow the user to select a printer to print the report. The default, system Printer is pre-selected; if this is the correct printer, click the OK button or press the <Enter Key>. The selected printer can be configured by clicking the Properties button. An alternate printer can be selected from a drop-down list of printers. For more information on printer selection and configuration consult your Windows NT Workstation manual.

### 5.3.19 Inquiry (Module on Multi Stand)-Mechanicsburg only

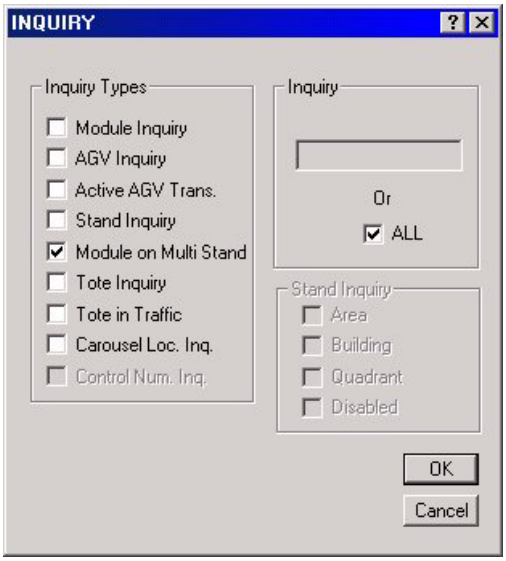



Figure 5.3.19-1 Inquiry (Module on Multi Stand)

**Description**

The **Inquiry** (Module on Multi Stand) dialog box queries the ECS Database for information concerning **All** Modules destined for more then one stand.

**Conversation Access**

From the Menu Bar on the UI **Select** Inquiry.

**Data Entry Procedures**

1. **Check** the Stand Inquiry checkbox.
2. **The** All checkbox. is checked automatically
3. **Click** the OK button.

**Messages**

None

**Messages Sent**

N/A

**System Response**

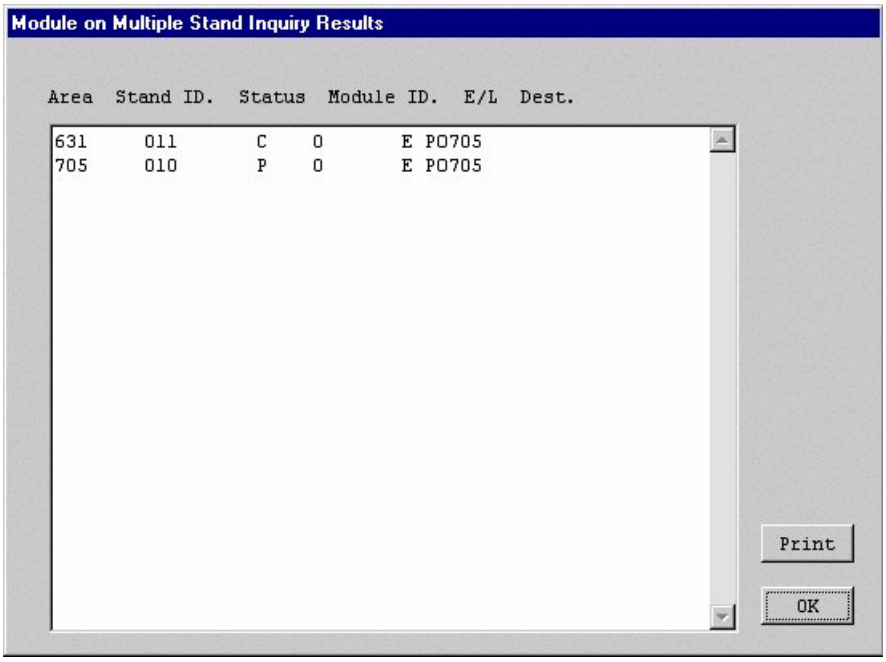



Figure 5.3.19-2 System Response-(Stand/Disabled)

**Note:** Once the user has reviewed the information in the Stand Inquiry Results dialog box, clicking the OK button returns to the Inquiry dialog box.

A printed report of the data displayed in the Stand Inquiry Results dialog box can be made by clicking on the Print button. A system Print dialog box will appear to allow the user to select a printer to print the report. The default, system Printer is pre-selected; if this is the correct printer, click the OK button or press the <Enter Key>. The selected printer can be configured by clicking the Properties button. An alternate printer can be selected from a drop-down list of printers. For more information on printer selection and configuration consult your Windows NT Workstation manual.

### 5.3.20 Inquiry (Tote/Tote ID)-Mechanicsburg only

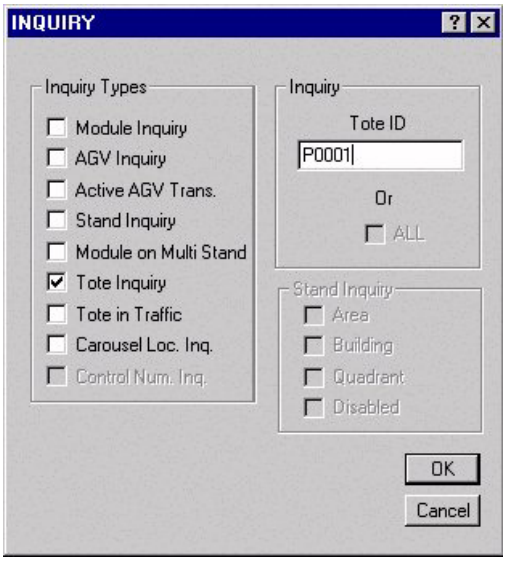



Figure 5.3.20-1 Inquiry (Tote/Tote ID)

**Description**

The **Inquiry** (Tote/Tote ID) dialog box sends an ECS message to the appropriate HPM Subcontroller for information concerning the entered Tote ID.

**Conversation Access**

From the Menu Bar on the UI **Select** Inquiry.

**Data Entry Procedures**

1. **Check** the Tote Inquiry checkbox.
2. **Enter** a Tote ID in the Tote ID edit box. Tote ID must begin with an 'R' for Receiving or a 'P' for Packing.
3. **Click** the OK button.

**Messages**

1. Message Sent
2. Tote ID value is missing.
3. Tote ID must start with P or R.

**Messages Sent**

1. A **J53** HPM Tote Inquiry message is sent to the appropriate HPM Subcontroller.

**System Response**

1. A **K54** HPM Tote Inquiry response message is returned from the HPM Subcontroller to the UI.

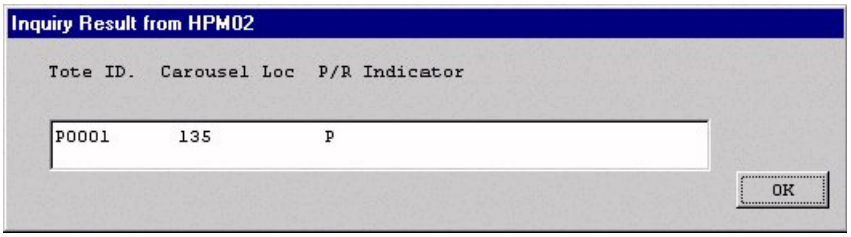



Figure 5.3.20-2 System Response (Tote/Tote ID)

**Note:** Once the user has reviewed the information in the Tote Inquiry Results dialog box, clicking the OK button returns to the Inquiry dialog box.

### 5.3.21 Inquiry (Tote in Traffic)-Mechanicsburg only

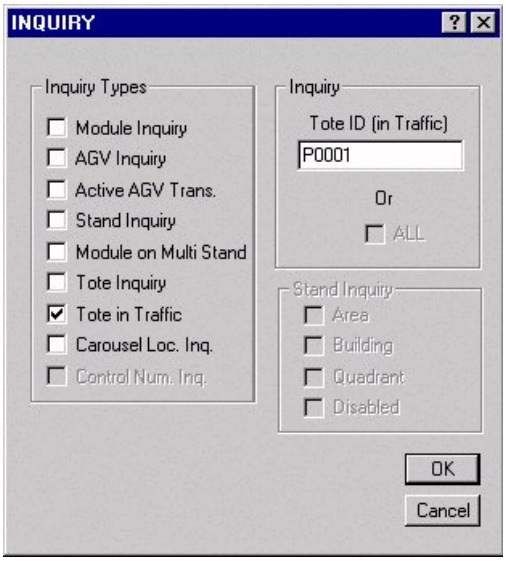



Figure 5.3.21-1 Inquiry (Tote in Traffic)

**Description**

The **Inquiry** (Tote in Traffic) dialog box sends an ECS message to the appropriate HPM Subcontroller for information concerning the entered Tote ID (in Traffic).

**Conversation Access**

From the Menu Bar on the UI **Select** Inquiry.

**Data Entry Procedures**

1. **Check** the Tote in Traffic checkbox.
2. **Enter** a Tote ID in the Tote ID (in Traffic) edit box. Tote ID must begin with an 'R' for Receiving or a 'P' for Packing.
3. **Click** the OK button.

**Messages**

1. Message Sent
2. Tote ID (in traffic) value is missing.
3. Tote ID must start with P or R.

**Messages Sent**

1. A **J55** HPM Tote in Traffic Inquiry message is sent to the HPM Subcontroller.

**System Response**

1. A **K56** HPM Tote in Traffic Inquiry response is returned from the HPM Subcontroller to the UI.

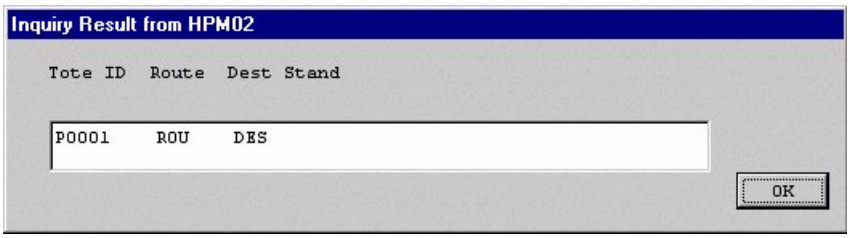



Figure 5.3.21-2 System Response (Tote in Traffic)

**Note:** Once the user has reviewed the information in the Tote in Traffic Results dialog box, clicking the OK button returns to the Inquiry dialog box.

### 5.3.22 Inquiry (Carousel Loc Inq./All)-Mechanicsburg only

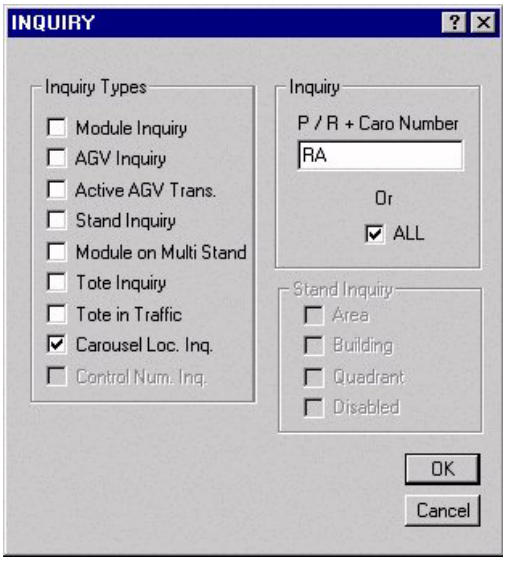



Figure 5.3.22-1 Inquiry (Carousel Loc Inq./All)

**Description**

The **Inquiry** (Carousel Loc Inq./All) dialog box queries the ECS Database for information concerning **All** Carousel Locations for the Carousel Number entered in the **P/R + Caro Number** edit box.

**Conversation Access**

From the Menu Bar on the UI **Select** Inquiry.

**Data Entry Procedures**

1. **Check** the Carousel Loc Inq. Checkbox.
2. **Check** the All checkbox.
3. **Enter** an 'R' (Receiving) or a 'P' (Packing) and a Carousel Identifier Number in the **P/R + Caro Number** Edit box.
4. **Click** the OK button.

**Messages**

1. Message Sent
2. P/R + Caro Loc value is missing.
3. Inquiry must begin with R or P.

**Messages Sent**

None

**System Response**

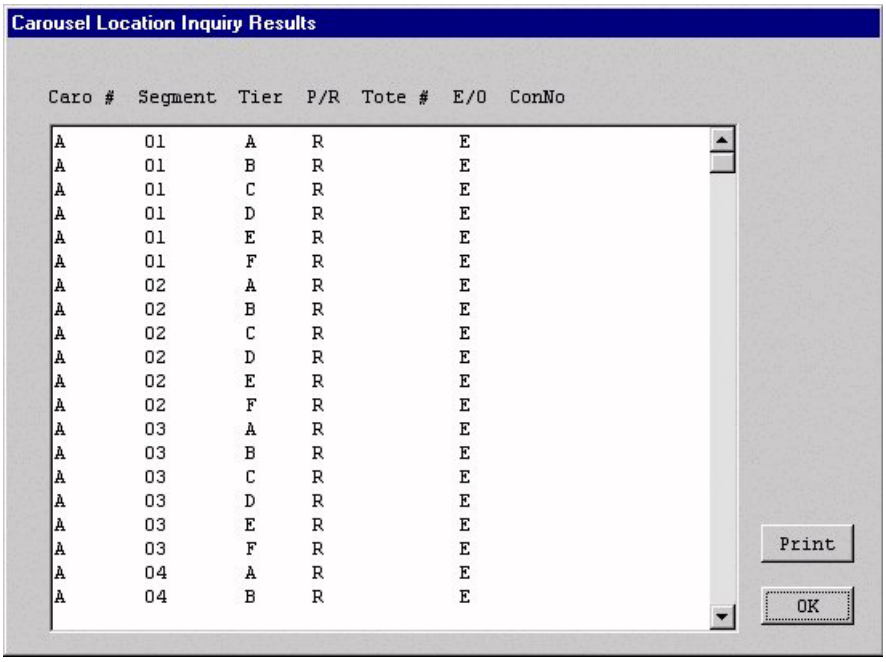



Figure 5.3.22-2 System Response (Carousel Location Inquiry)

**Note:** Once the user has reviewed the information in the Carousel Location Inquiry Results dialog box, clicking the OK button returns to the Inquiry dialog box.

A printed report of the data displayed in the Carousel Location Inquiry Results dialog box can be made by clicking on the Print button. A system Print dialog box will appear to allow the user to select a printer to print the report. The default, system Printer is pre-selected; if this is the correct printer, click the OK button or press the <Enter Key>. The selected printer can be configured by clicking the Properties button. An alternate printer can be selected from a drop-down list of printers. For more information on printer selection and configuration consult your Windows NT Workstation manual.

### 5.3.23 Inquiry (Carousel Loc Inq./P/R Caro Loc)-Mechanicsburg only

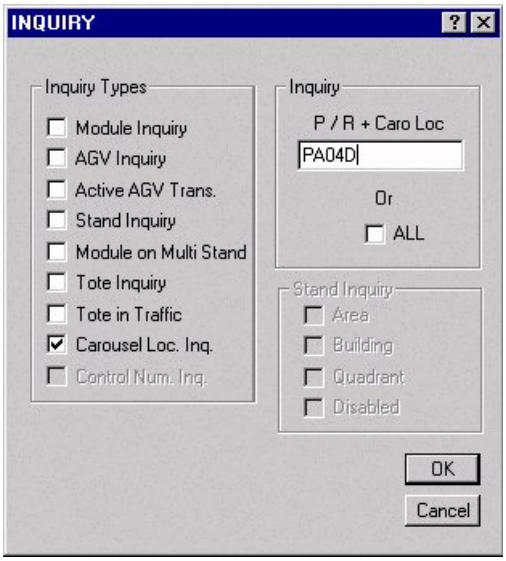



Figure 5.3.23-1 Inquiry (Carousel Loc Inq./P/R Caro Loc)

**Description**

The **Inquiry** (Carousel Loc Inq./ P/R Caro Loc) dialog box sends an ECS message to the appropriate HPM Subcontroller for information concerning the entered Carousel Location.

**Conversation Access**

From the Menu Bar on the UI **Select** Inquiry.

**Data Entry Procedures**

1. **Check** the Carousel Loc Inq. Checkbox.
2. **Enter** an 'R' or a 'P' and a Carousel Location (Carousel Identifier Number + Segment + Tier) in the P/R + Caro Loc edit box.
3. **Click** the OK button.

**Messages**

1. Message Sent
2. P/R + Caro Loc value is missing
3. Location must begin with R or P

**Messages Sent**

1. A **J51** HPM Location Inquiry message is sent to the appropriate HPM Subcontroller.

**System Response**

1. A **K52** HPM Location Inquiry Response is returned from the HPM Subcontroller to the UI.

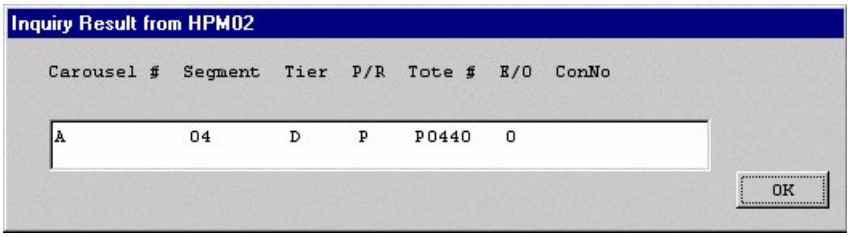



Figure 5.3.23-2 System Response (Location Inquiry)

**Note:** Once the user has reviewed the information in the Inquiry Results dialog box, clicking the OK button returns to the Inquiry dialog box.

### 5.3.24 Inquiry (Control Num. Inq.) - Richmond only

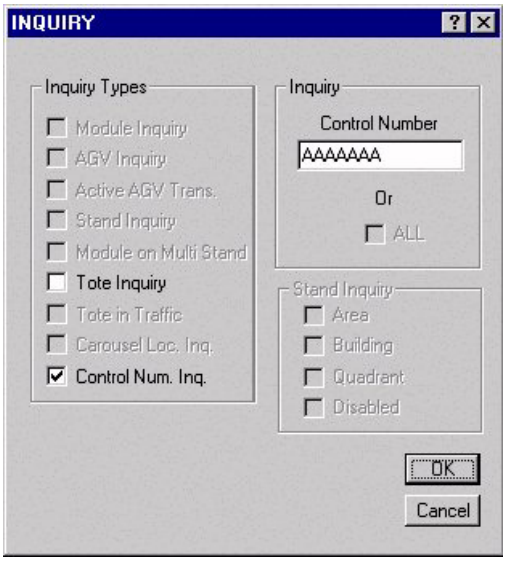



Figure 5.3.24-1 Inquiry (Control Number Inquiry)

**Description**

The **Inquiry** (Control Num. Inq.) dialog box queries the ECS Database for information concerning a single Control Number entered in the Control Number edit box.

**Conversation Access**

From the Menu Bar on the UI **Select** Inquiry.

**Data Entry Procedures**

1. **Check** the Control Num. Inq**.** Checkbox.
2. **Enter** a Control Number in the Control Number edit box.
3. **Click** the OK button.

**Messages**

1. Message Sent
2. Control Number value is missing.
3. No Move Data for Control Number: XXXXXXX

**Messages Sent**

N/A

**System Response**

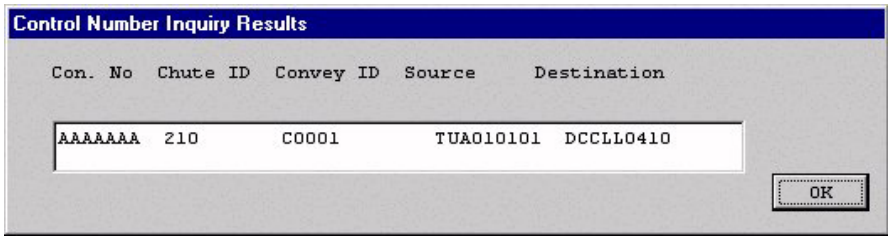



Figure 5.3.24-2 System Response (Control Number Inquiry)

**Note:** Once the user has reviewed the information in the Control Number Inquiry Results dialog box, clicking the OK button returns to the Inquiry dialog box.

### 5.3.25 AWOS System Menu

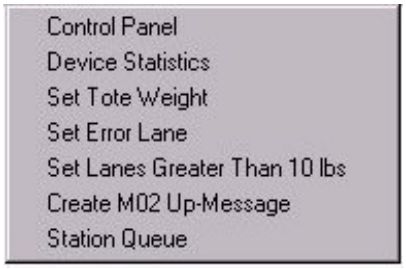



Figure 5.3.25-1 AWOS System Menu

The conversations on the AWOS System Menu are used to manage the movement of material transported on the AWOS conveyor system. Display conversations are used to monitor the activity of the AWOS devices e.g. Scanner, Scale & Tote Scanner. They display Real Time statuses and workloads. Data entry conversations are used to update the tote weight parameters that control tote tare weights. Set Error Lane allows the user to update which lane will be used for rejected items. Set Lanes Greater Than 10Lbs allows the user to update which lanes will be used for items weighing over 10lbs. M02 Up-Message see MHE menu. The Station Queue conversation is used to provide hand scanner input for its Awos subcontroller

| | |
|---|---|
| Control Panel | This process will display Real-time data for all AWOS Stations. |
| Device Statistics | This process is used to display the current device status (reads and faults) of all devices assigned to a specific AWOS Station. |
| Set Tote Weight | This process is used to set the tote weight for a selected AWOS station. |
| Set Error Lane | This process is used to update the logical status of the AWOS Error lanes. |
| Set Lanes Greater Than 10Lbs | This process is used to update the logical status of the AWOS Over 10Lbs lanes. |
| M02 Up-Message | Via an input from the user, input fields will enable the user to send a move request to the Subcontroller System, via the Traffic Subcontroller . |
| Station Queue | Allows control number scans to be entered, or, alternatively, deleted for an Oklahoma City AWOS |

### 5.3.25.1 AWOS System Menu (Control Panel)

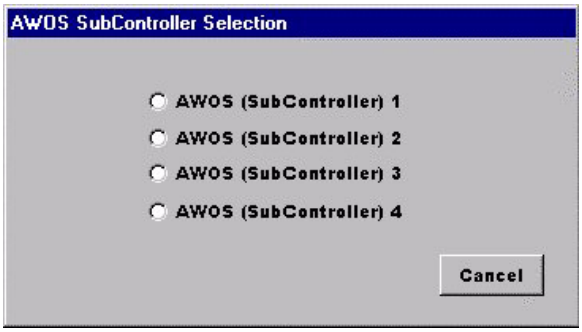



Figure 5.3.25.1-1 Subcontroller Selection Screen

**Description**

The User specifies the Subcontroller (AWOS 1, AWOS 2 , AWOS 3 or AWOS 4) to be selected from the AWOS Subcontroller Selection screen.

Control Panel displays Real-time data for all AWOS Station devices that are pertinent to the current AWOS Subcontroller.

The user can select two additional screens via the Transaction Browse or History Browse Button that provides database or log information.

**Conversation Access**

From the Menu Bar on the UI **Select** AWOS

**Data Entry Procedures**

1. **Check** AWOS
2. **Check** Control Panel
3. **Select** AWOS Subcontroller.
4. **Select** Transaction Button. Current Transaction Screen.
5. **Select** History Button. History Screen.
6. **Select** Cancel. Exits all screen levels.

**Messages**

1. Total transactions exceed maximum buffer size
2. Subcontroller Not Found
3. [Current Transaction] Cannot connect to the database - Contact your system administrator!
4. [History Transaction] Cannot connect to the database - Contact your system administrator!

**Messages Sent**

1. A **T30** Start/Stop message is sent to the appropriate AWOS Subcontroller.

**System Response**

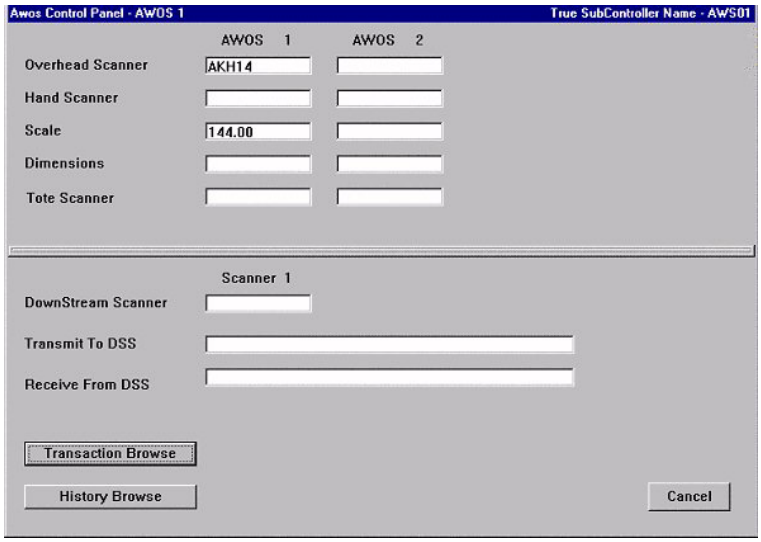



Figure 5.3.25.1-2 Control Panel (Screen 1)

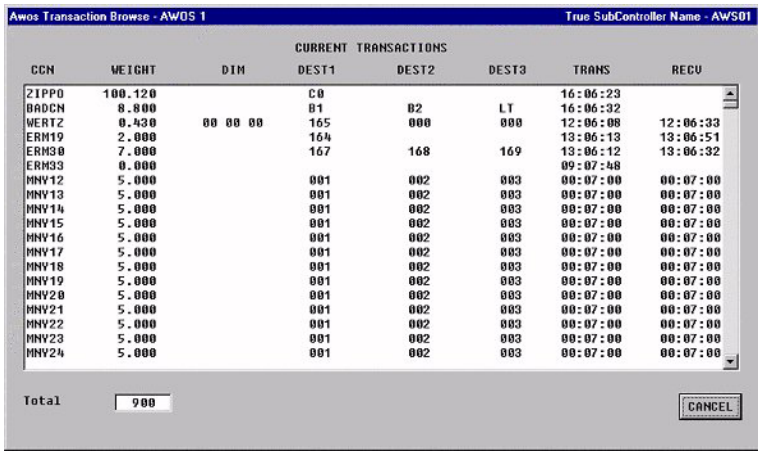



Figure 5.3.25.1-3 Current Transaction Panel (Screen 2)

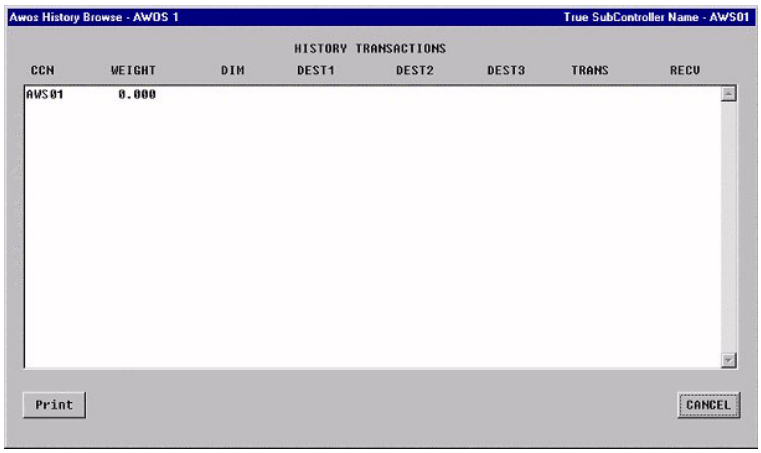



Figure 5.3.25.1-4 History Transaction Panel (Screen 1)

A printed report of the data displayed in the History Transaction dialog box can be made by clicking on the Print button. A system Print dialog box will appear to allow the user to select a printer to print the report. The default, system Printer is pre-selected; if this is the correct printer, click the OK button or press the <Enter Key>. The selected printer can be configured by clicking the Properties button. An alternate printer can be selected from a drop-down list of printers. To print All Information available on this screen user needs to select Landscape format from the Properties menu. For more information on printer selection and configuration consult your Windows NT Workstation manual.

### 5.3.25.2 AWOS System Menu (Device Statistics)

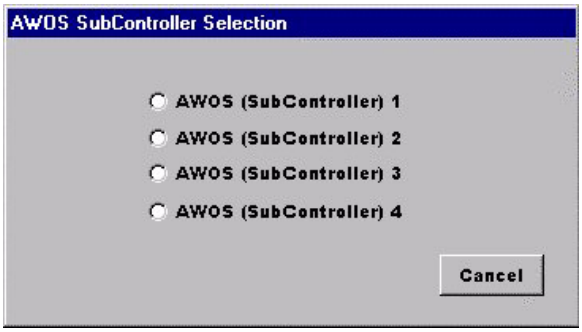



Figure 5.3.25.2-1 Subcontroller Selection Screen

**Description**

The User specifies the Subcontroller (AWOS 1, AWOS 2 , AWOS 3 or AWOS 4) to be selected from the AWOS Subcontroller Selection screen.

Device Statistics is used to provide maintenance personnel with a cumulative total of reads and faults occurrences for each device associated with a specific AWOS Subcontroller. User can reset the counts and the screen will reflect the time of the reset to aid in trouble shooting device failures.

**Conversation Access**

From the Menu Bar on the UI **Select** AWOS

**Data Entry Procedures**

1. **Check** AWOS
2. **Check** Device Statistics
3. **Select** AWOS Subcontroller
4. **Select** Reset. Resets to all zeroes and sets new current date/time.
5. **Select** Refresh Button. Displays current Screen Data.
6. **Select** OK. Exits.

**Messages**

None

**Messages Sent**

1. A **T34** Request for Device Statistics message is sent to the appropriate AWOS Subcontroller.
2. A **T36** Reset Device Statistics message is sent to the appropriate AWOS Subcontroller.

**System Response**

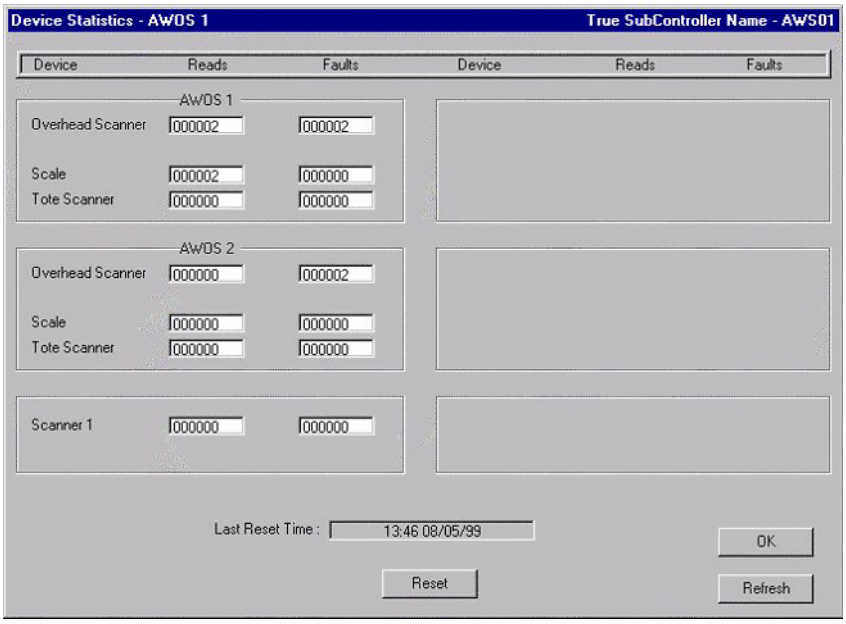



Figure 5.3.25.2-2 Device Statistics Selection Screen

### 5.3.25.3 AWOS System Menu (Set Tote Weight)

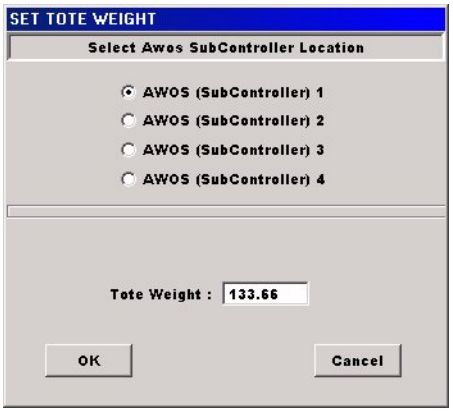



Figure 5.3.25.3-1 Subcontroller & Set Tote Weight Selection Screen

**Description**

The User specifies the Subcontroller (AWOS 1, AWOS 2 , AWOS 3 or AWOS 4) to be selected from the AWOS Subcontroller Selection portion of screen.

The User can change the Tote weight to assure accurate tare weights for a specific AWOS Subcontroller. When the ECS is started, the initial status of each AWOS Subcontroller Tote weight will reflect the same as it was when the ECS was last shut down.

**Conversation Access**

From the Menu Bar on the UI **Select** AWOS

**Data Entry Procedures**

1. **Check** AWOS
2. **Check** Set Tote Weight
3. **Select** AWOS Subcontroller
4. **Enter** Tote Weight. Enter a minimum of 5 digits.
5. **Select** OK. Send Message & Exits.
6. **Select** Cancel. Exits.

**Messages**

1. Invalid weight format – should be 000.00

**Messages Sent**

1. A T38 Update Tote Default Weight message is sent to the appropriate AWOS Subcontroller.

### 5.3.25.4 AWOS System Menu (Set Error Lane)

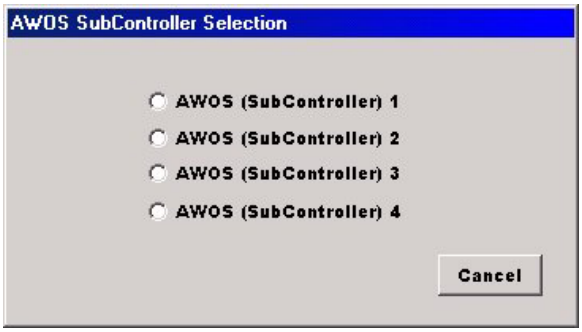



Figure 5.3.25.4-1 Subcontroller Selection Screen

**Description**

The User specifies the Subcontroller (AWOS 1, AWOS 2, AWOS 3 or AWOS 4) to be selected from the AWOS Subcontroller Selection screen.

The User can change the Error Lane to assure uniform flow of material through out the AWOS Subcontroller. When the ECS is started, the initial status of each AWOS Subcontroller Error Lane will reflect the same as it was when the ECS was last shut down.

**Conversation Access**

From the Menu Bar on the UI **Select** AWOS

**Data Entry Procedures**

1. **Check** AWOS
2. **Check** Set Error Lane
3. **Select** AWOS Subcontroller
4. **Select** Divert 1, 2 or 3. Divert1 is selected by default.
5. **Select** Error Lane to set. Highlights selection.
6. **Select** New Error Lane CheckBox to complete new Lane Selection.
7. **Select** OK. Message Sent appears.
8. **Select** Cancel. Exits.

**Messages**

1. Message sent
2. AWOS Subcontroller Does Not Have Lanes, Contact system administrator!
3. Cannot connect to the database
4. You can ONLY select 1 new error lane!!! Your 2nd selection, lane %s will be DELETED. You may select and deselect as many times as you wish, but ONLY 1 new lane may be assigned. Hit CANCEL button if you do not want to change the current lane.

**Messages Sent**

1. A **T40** Update Reject Lane message is sent to the appropriate AWOS Subcontroller.

**System Response**

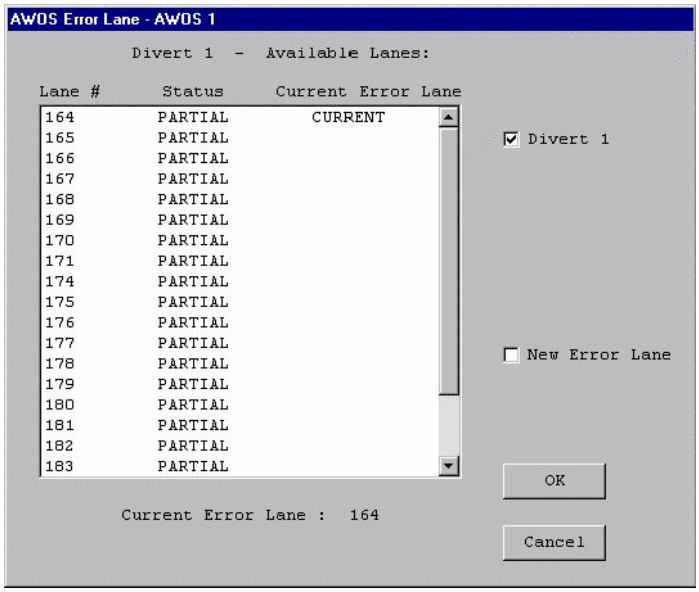



Figure 5.3.25.4-2 Set Error Lane Selection Screen

### 5.3.25.5 AWOS System Menu (Set Lanes Greater Than 10Lbs)

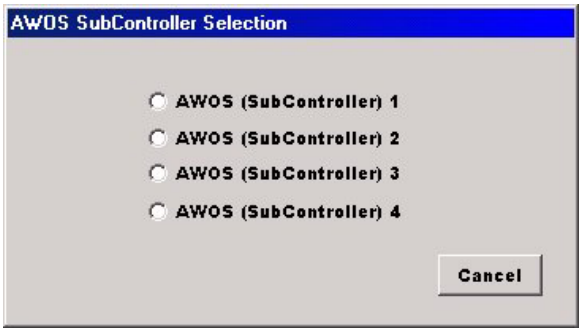



Figure 5.3.25.5-1 Subcontroller Selection Screen

**Description**

The User specifies the Subcontroller (AWOS 1, AWOS 2, AWOS 3 or AWOS 4) to be selected from the AWOS Subcontroller Selection screen.

The User can change the Greater Than 10Lbs to assure uniform flow of material through out the AWOS Subcontroller. When the ECS is started, the initial status of each AWOS Subcontroller Set Lanes Greater Than 10Lbs Lanes will reflect the same as it was when the ECS was last shut down.

**Conversation Access**

From the Menu Bar on the UI **Select** AWOS

**Data Entry Procedures**

1. **Check** AWOS
2. **Check** Set Lanes Greater Than 10Lbs
3. **Select** AWOS Subcontroller
4. **Select** Divert 1, 2 or 3. Divert1 is selected by default.
5. **Select** Lanes to set. Highlights selection.
6. **Select** New Or **DeSelect** Set Over 10Lbs Lanes CheckBox to complete new Lanes Selection.
7. **Select** OK. Message Sent appears.
8. **Select** Cancel. Exits.

**Messages**

1. Message sent
2. AWOS Subcontroller Does Not Have Lanes, Contact system administrator!
3. Cannot connect to the database
4. You can ONLY select 2 new Over 10Lbs lanes!!! Your 3rd selection, lane %s will be DELETED. You may select and deselect as many times as you wish, but ONLY 2 new lanes may be assigned. Hit CANCEL button if you do not want to change the current lane.
5. This lane currently is not available to be assigned as an Over 10Lbs lane.

**Messages Sent**

1. A **T50** Request: Clear Request for Over 10Lbs Lanes Buffer values.
2. A **T52** Update: Database Update sent for Over 10Lbs Lanes values

**System Response**

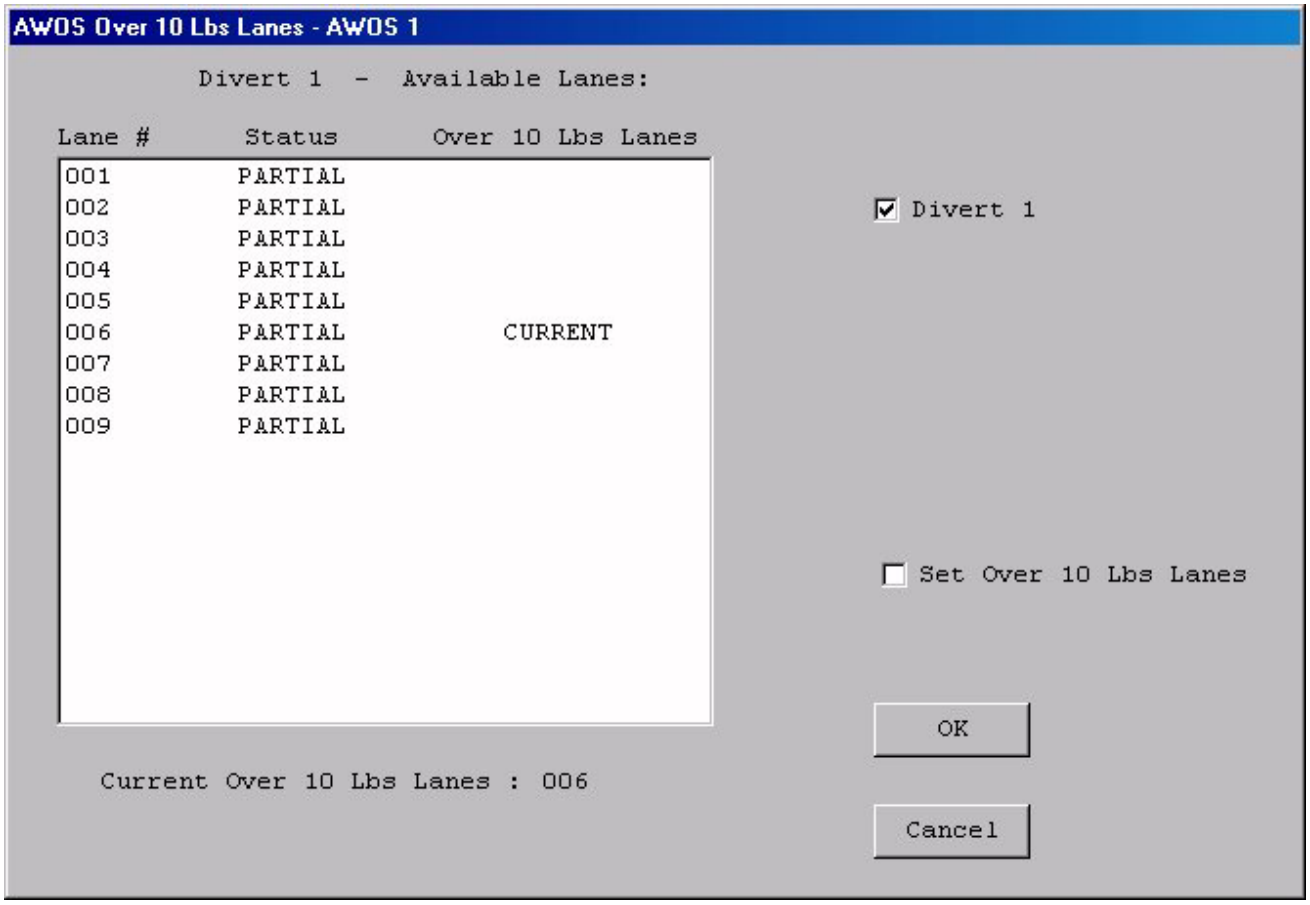



Figure 5.3.25.5-2 Set Lanes Greater Than 10Lbs Selection Screen

### 5.3.25.6 AWOS System Menu (M02-UpMessage)

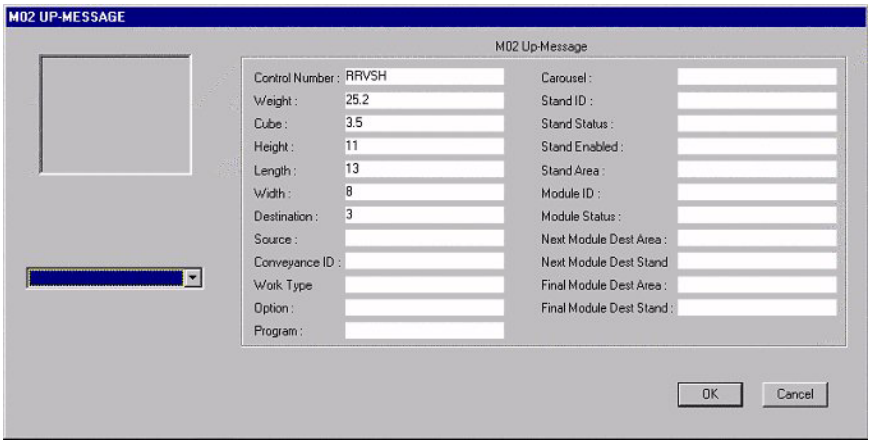



Figure 5.3.25.6-1 M02 Up-Message Function

**Description**

M02 Up-Message is used to send an AWOS Request for lane assignment update message to DSS. Only currently required data entry fields will be displayed for user input.

The user specifies the type of message by selecting the appropriate flag from the drop down listbox enter the pertinent data and click the **OK** button to send the message to the Traffic Controller.

**Conversation Access**

From the Menu Bar on the UI **Select** AWOS

**Data Entry Procedures**

1. **Check** AWOS
2. **Check** Create M02 Up-Message

**Note:** See MHE Menu Selection for further details.

### 5.3.25.7 AWOS System Menu (Station Queue)

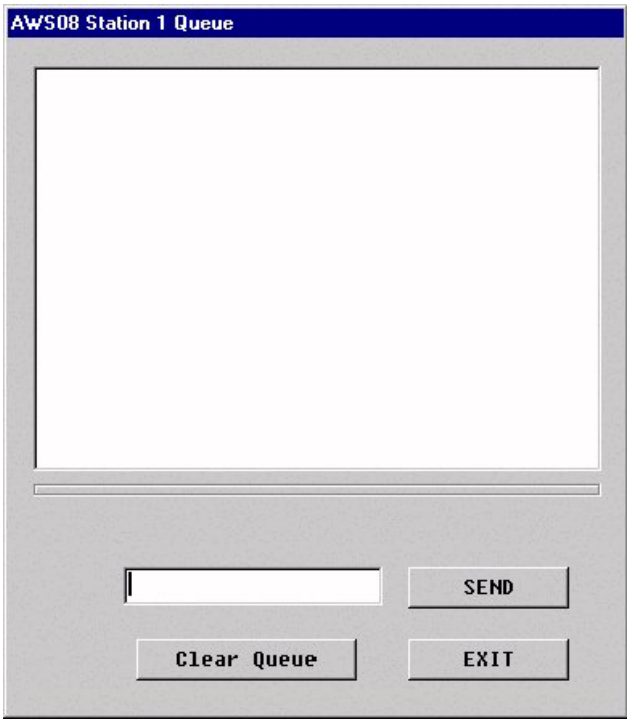



Figure 5.3.25.7-1 Station Queue Function

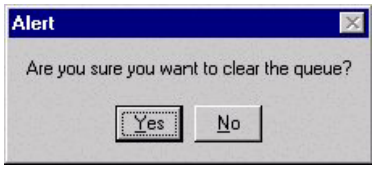



Figure 5.3.25.7-2 Secondary confirmation screen

**Description**

Station Queue is used to allow control number input at the Oklahoma City Awos only. The user enters control number input and then presses SEND to have the Awos subcontroller process this input. Control Numbers may also be deleted by pressing the Clear Queue button and selecting Yes in the secondary confirmation screen

**Conversation Access**

From the Menu Bar on the UI **Select** AWOS and click on the Station Queue menu item. Only one UI can access the Station Queue screen for each Station of a given Awos subcontroller. Setup is determined using the OKLA_Awos.ini file.

**Data Entry Procedures**

1. If system caret (a thin flashing line) appears in the Control Number entry box Scan or type in Control Number. Otherwise, left click on the mouse within the Control Number entry box to move to the system caret to this box. Then enter the Control Number
2. Presse Enter to Activate the Send Button. Message Sent appears.
3. Select Exit.

**Messages**

1. Message Sent
2. Waiting for authorization from subcontroller
3. Control Number must contain x characters, you entered y characters
4. Control Number must contain only alpha-numeric characters
5. This User Interface is not authorized to access the Queue screen - notify the administrator if access is desired
6. The Queue screen is only available at the Oklahoma site
7. Subcontroller Has Started Up
8. Access to this screen is denied!!
9. Subcontroller Has Shut Down

**Messages Sent**

1. A T42 Start or Stop Station Queue message is sent to the appropriate AWOS subcontroller
2. A T44 Clear Queue message is sent to the appropriate AWOS subcontroller
3. A T46 Hand Scan message is sent to the appropriate AWOS subcontroller

### 5.3.26 Automated Storage Retrieval System Menu - Tracy only

Figure 5.3.26-1 Conveyor System Menu

The conversations on the Automated Storage Retrieval System Menu (ASRS) are used to manage the movement of material within the Consolidated Subsistence Facility (CSF) located at DDJC, Tracy Calf. Conveyor conversations are used to control material movement activity of the ASRS conveyors. Display conversations are used to monitor the activity of the conveyors. They display both aisle and station statuses and workloads. Data entry (Edit) conversations are used to update conveyor parameters that control tote distribution and routing. They allow user to update the logical statuses of the conveyor lanes, and to change functions of workstations. Manual Stacker Control conversations are used to direct the storages retrieval machine movement in semi-automatic mode.

| | |
|---|---|
| Conveyor Messages | Sends conveyor conversations functions to PLC's, which provides load statuses and logistical movements within Automated Storage Retrieval System. |
| Display | Display aisle and station statuses, type of workload, functions, operation modes and several other types of pertinent information. |
| Edit | Update aisle and station statuses, type of workload, functions, operation modes and several other types of pertinent information. |
| Manual Stacker | Sends messages that directs the Storage Retrieval Machine (S/RM) movement in semi-automatic mode. |

### 5.3.26.1 (ASRS) Menu - Conveyor Messages

Figure 5.3.26.1-1 Conveyor Messages

#### 5.3.26.1.1 (ASRS) Menu - CSF Conveyor Messages Selection

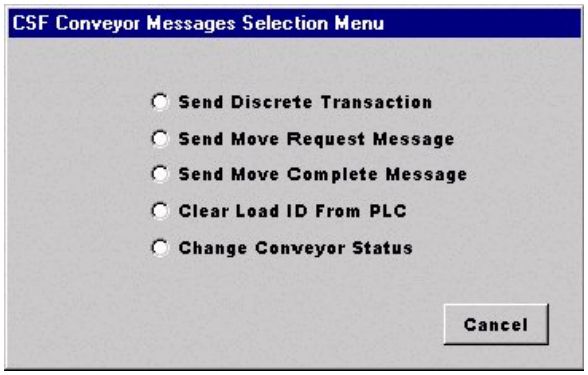



Figure 5.3.26.1.1-1 CSF Conveyor Messages Selection Menu

**Description**

The User specifies the message screen to be selected from the Conveyor Messages Selection screen.

**Conversation Access**

From the Menu Bar on the UI **Select** ASRS

**Data Entry Procedures**

1. **Select** CSF
2. **Select** Conveyor Messages. Displays The Conveyor Messages Selection Menu dialog box.
3. **Select** Cancel. Exits.

**Messages**

None

### 5.3.26.1.1.1 (ASRS) Menu - Conveyor Messages – Send Discrete Transaction

Figure 5.3.26.1.1.1-1 Send Discrete Transaction

**Description**

This process will send a Stand Name (Designated Pickup/Deposit stand or workstation) and a Stand State (Indicates if a container is present or not present at a workstation). Load present (H) or Load not present (L).

**Conversation Access**

From the Menu Bar on the UI **Select** ASRS

**Data Entry Procedures**

1. **Select** CSF
2. **Select** Conveyor Messages. Displays Conveyor Messages Selection Menu dialog box.
3. **Select** Send Discrete Transaction. Displays Send Discrete Transaction dialog box.
4. **Enter** Stand/Zone Name.
5. **Select** Load Present or Load Not Present Button.
6. Message Sent appears. Send Discrete Transaction dialog box prompting to enter another stand name reappears.
7. **Select** Cancel to exit.

**Messages**

1. Zone Name must contain 3 characters Stand Name must contain 4 characters. You entered __, __ characters.

**Messages Sent**

A **V05** CSF Send Discrete Transaction message is sent to the appropriate CSF Subcontroller.

### 5.3.26.1.1.2 (ASRS) Menu - Conveyor Messages – Send Move Request Message

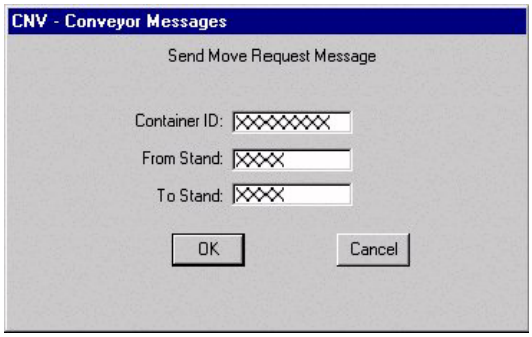



Figure 5.3.26.1.1.2-1 Send Move Request Message

**Description**

This process will move material from one P&D (Pickup/Deposit) stand to another via a Container ID (Bar code identification attached to a slave pallet) and a From Stand/To Stand entry.

**Conversation Access**

From the Menu Bar on the UI **Select** ASRS

**Data Entry Procedures**

1. **Select** CSF
2. **Select** Conveyor Messages. Conveyor Messages Selection Menu dialog box.
3. **Select** Send Move Request Message. Displays Send Move Request Message dialog box.
4. **Enter** Container ID.
5. **Enter** From Stand.
6. **Enter** To Stand.
7. **Select** OK. Message Sent appears. Send Move Request Message dialog box prompting to enter another container id reappears.
8. **Select** Cancel to exit.

**Messages**

1. Container Name must contain at least 1 character. You entered __, __ characters.
2. Zone Name must contain 3 characters Stand Name must contain 4 characters. You entered __, __ characters.

**Messages Sent**

A V07 CSF Send Move Request Message is sent to the appropriate CSF Subcontroller.

### 5.3.26.1.1.3 (ASRS) Menu - Conveyor Messages – Send Move Complete Message

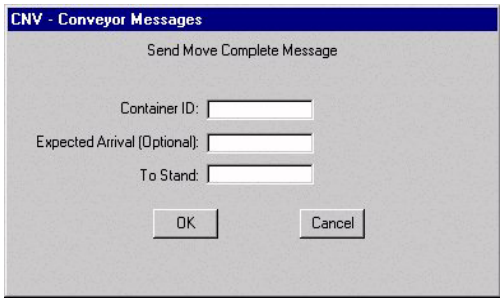



Figure 5.3.26.1.1.3-1Send Move Complete Message

**Description**

This process will send a move complete message to the Subcontroller via a Container ID (Bar code identification attached to a slave pallet), Expected Arrival (**Optional**) and To Stand entry.

**Conversation Access**

From the Menu Bar on the UI **Select** ASRS

**Data Entry Procedures**

1. **Select** CSF
2. **Select** Conveyor Messages. Displays Conveyor Messages Selection Menu dialog box.
3. **Select** Send Move Complete Message. Displays Send Move Complete Message dialog box.
4. **Enter** Container ID.
5. **Enter** Expected Arrival (**Optional**)
6. **Enter** To Stand.
7. **Select** OK. Message Sent appears. Send Move Complete Message dialog box prompting to enter another container id reappears.
8. **Select** Cancel to exit.

**Messages**

1. Container Name must contain at least 1 character. You entered __, __ characters.
2. Zone Name must contain 3 characters Stand Name must contain 4 characters. You entered __, __ characters.

**Messages Sent**

A **V09** CSF Send Move Complete Message is sent to the appropriate CSF Subcontroller.

### 5.3.26.1.1.4 (ASRS) Menu - Conveyor Messages – Clear Load ID From PLC

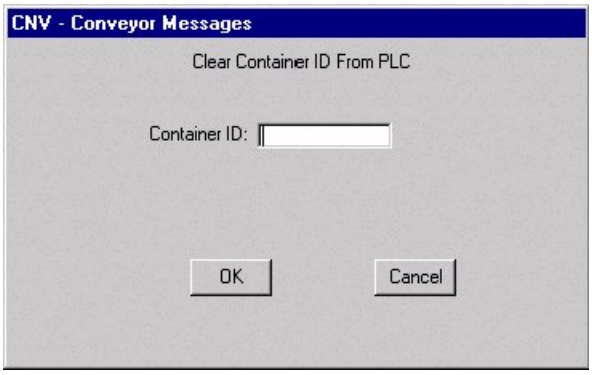



Figure 5.3.26.1.1.4-1 Clear Load ID From PLC

**Description**

This process will send a message to the PLC to remove slave pallet identification via a Container ID (Bar code identification attached to a slave pallet) entry.

**Conversation Access**

From the Menu Bar on the UI **Select** ASRS

**Data Entry Procedures**

1. **Select** CSF
2. **Select** Conveyor Messages. Displays Conveyor Messages Selection Menu dialog box.
3. **Select** Clear Load ID From PLC. Displays Clear Load ID From PLC dialog box.
4. **Enter** Container ID.
5. **Select** OK. Message Sent appears. Clear Load ID From PLC dialog box prompting to enter another container id reappears.
6. **Select** Cancel to exit.

**Messages**

1. Container Name must contain at least 1 character. You entered __, __ characters.

**Messages Sent**

A **V11** CSF Clear Load ID From PLC message is sent to the appropriate CSF Subcontroller.

### 5.3.26.1.1.5 (ASRS) Menu - Conveyor Messages – Change Conveyor Status

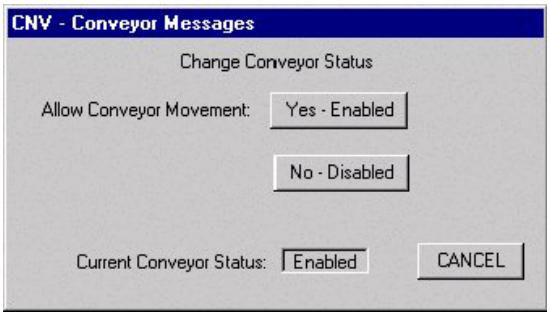



Figure 5.3.26.1.1.5-1 Change Conveyor Status

**Description**

This process sends a message to the PLC via ("Y" Yes / "N" No) entry, to Enable (START) or Disable (STOP) movement of the conveyor system.

**Conversation Access**

From the Menu Bar on the UI **Select** ASRS

**Data Entry Procedures**

1. **Select** CSF
2. **Select** Conveyor Messages. Displays Conveyor Messages Selection Menu dialog box.
3. **Select** Change Conveyor Status. Displays Change Conveyor Status dialog **box**.
4. **Enter** Stand/Zone Name.
5. **Select** Yes - Enabled or No Disabled Button.
6. Message Sent appears. Change Conveyor Status dialog box reappears.
7. **Select** Cancel to exit.

**Messages**

1. **Message** Sent

**Messages Sent**

A **V01** CSF Change Conveyor Status message is sent to the appropriate CSF Subcontroller.

### 5.3.26.2 (ASRS) Menu Display - CSF

Figure 5.3.26.2-1 Display

#### 5.3.26.2.1 (ASRS) Menu - CSF Display Selection Menu

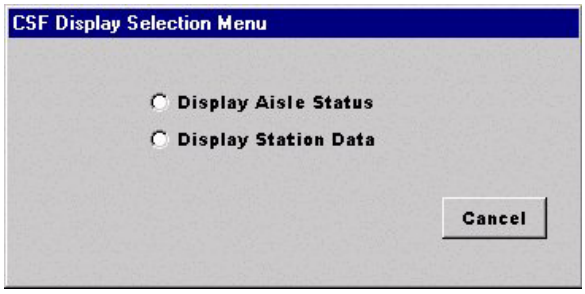



Figure 5.3.26.2.1-1 CSF Display Selection Menu

**Description**

The User specifies the message screen to be selected from the Display Selection screen.

**Conversation Access**

From the Menu Bar on the UI **Select** ASRS

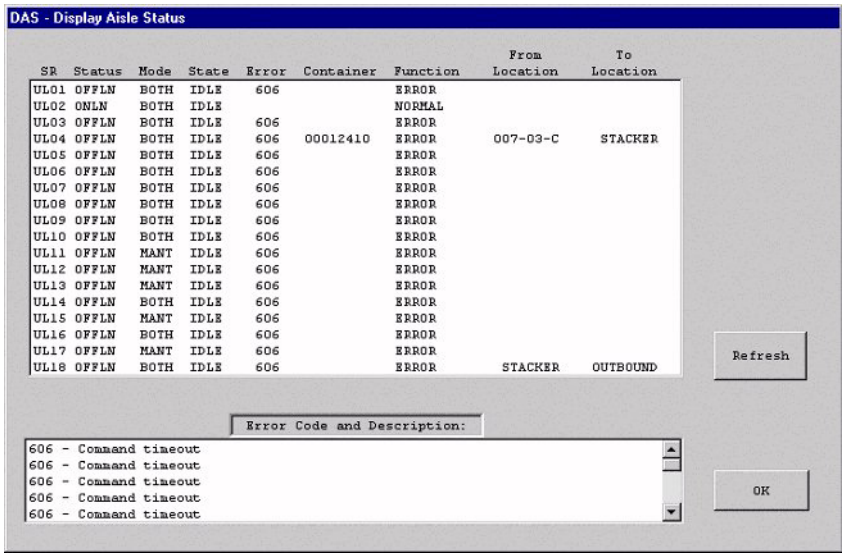
**Data Entry Procedures**

1. **Select** CSF
2. **Select** Display. Displays The Display Selection Menu dialog box.
3. **Select** Cancel. Exits.

**Messages**

None

### 5.3.26.2.1.1 (ASRS) Menu - Display Aisle Status




| SR | Status | Mode | State | Error | Container | Function | From Location | To Location |
|---|---|---|---|---|---|---|---|---|
| UL01 | OFFLN | BOTH | IDLE | 606 | | ERROR | | |
| UL02 | ONLN | BOTH | IDLE | | | NORMAL | | |
| UL03 | OFFLN | BOTH | IDLE | 606 | | ERROR | | |
| UL04 | OFFLN | BOTH | IDLE | 606 | 00012410 | ERROR | 007-03-C | STACKER |
| UL05 | OFFLN | BOTH | IDLE | 606 | | ERROR | | |
| UL06 | OFFLN | BOTH | IDLE | 606 | | ERROR | | |
| UL07 | OFFLN | BOTH | IDLE | 606 | | ERROR | | |
| UL08 | OFFLN | BOTH | IDLE | 606 | | ERROR | | |
| UL09 | OFFLN | BOTH | IDLE | 606 | | ERROR | | |
| UL10 | OFFLN | BOTH | IDLE | 606 | | ERROR | | |
| UL11 | OFFLN | MANT | IDLE | 606 | | ERROR | | |
| UL12 | OFFLN | MANT | IDLE | 606 | | ERROR | | |
| UL13 | OFFLN | MANT | IDLE | 606 | | ERROR | | |
| UL14 | OFFLN | BOTH | IDLE | 606 | | ERROR | | |
| UL15 | OFFLN | MANT | IDLE | 606 | | ERROR | | |
| UL16 | OFFLN | BOTH | IDLE | 606 | | ERROR | | |
| UL17 | OFFLN | MANT | IDLE | 606 | | ERROR | | |
| UL18 | OFFLN | BOTH | IDLE | 606 | | ERROR | STACKER | OUTBOUND |

Figure 5.3.26.2.1.1-1 Display Aisle Status

**Description**

This process is used to display current information about the S/R (Storage/Retrieval) Machine aisles. Information is dynamically updated every few seconds and can be displayed via a Refresh button. If an operational error occurs an error box provided at the bottom center of the screen will provide an error code reference table lookup number and a short error description for any S/RM 's currently in an error condition.

**Conversation Access**

From the Menu Bar on the UI **Select** ASRS

**Data Entry Procedures**

1. **Select** CSF
2. **Select** Display. Displays The Display Selection Menu dialog box.
3. **Select** Display Aisle Status. Displays The Display Aisle Status dialog box.
4. **Select** Refresh. Updates Display Aisle Status dialog box.
5. **Select** OK to exit.

**Messages**

None

**Messages Sent**

None

### 5.3.26.2.1.2 (ASRS) Menu - Display Station Data

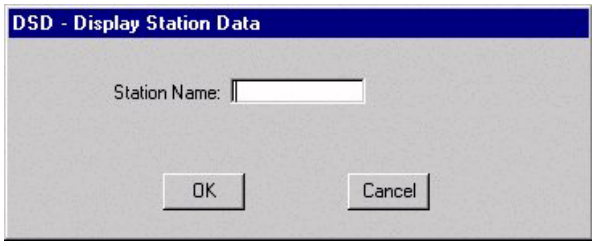
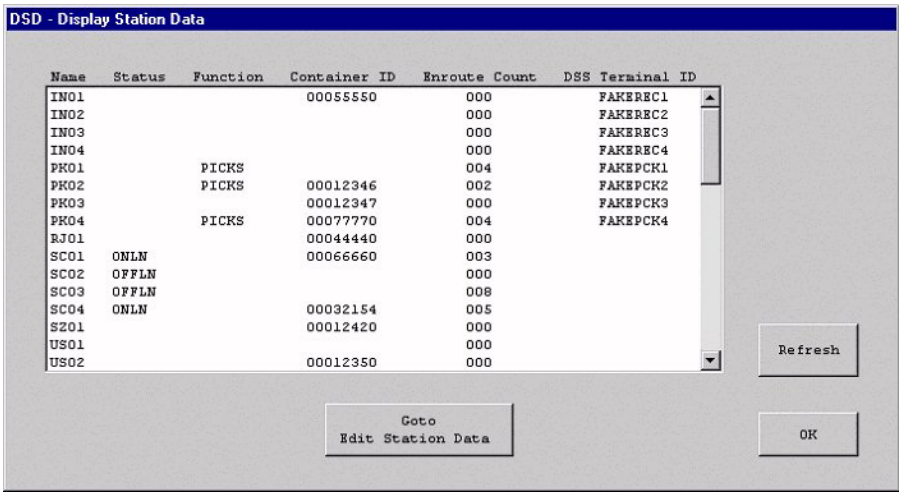



Figure 5.3.26.2.1.2-1 Display Station Data (Screen 1)




| Name | Status | Function | Container ID | Enroute Count | DSS Terminal ID |
|---|---|---|---|---|---|
| IN01 | | | 00055550 | 000 | FAKEREC1 |
| IN02 | | | | 000 | FAKEREC2 |
| IN03 | | | | 000 | FAKEREC3 |
| IN04 | | | | 000 | FAKEREC4 |
| PK01 | | PICKS | | 004 | FAKEPCK1 |
| PK02 | | PICKS | 00012346 | 002 | FAKEPCK2 |
| PK03 | | | 00012347 | 000 | FAKEPCK3 |
| PK04 | | PICKS | 00077770 | 004 | FAKEPCK4 |
| RJ01 | | | 00044440 | 000 | |
| SC01 | ONLN | | 00066660 | 003 | |
| SC02 | OFFLN | | | 000 | |
| SC03 | OFFLN | | | 008 | |
| SC04 | ONLN | | 00032154 | 005 | |
| SZ01 | | | 00012420 | 000 | |
| US01 | | | | 000 | |
| US02 | | | 00012350 | 000 | |

Figure 5.3.26.2.1.2-2 Display Station Data (Screen 2)

**Description**

This process is used to display current information about the P&D (Pickup/Deposit) stations. The first screen the operator enters the name of the station that is to be displayed or leaves entry blank to display all the stations. Information is dynamically updated every few seconds and can be displayed via a Refresh button.

**Conversation Access**

From the Menu Bar on the UI **Select** ASRS

**Data Entry Procedures**

1. **Select** CSF
2. **Select** Display. Displays The Display Selection Menu dialog box.
3. **Select** Display Station Data. Displays The Display Station Data entry dialog box.
4. **Enter** Station Name for single inquiry or leave blank to display All Stations.
5. **Select** Refresh. Updates Display Station Data dialog box.
6. **Select** Goto Edit Station Data. Displays The Edit Station Data dialog box to perform pertinent updates.
7. **Select** OK to exit.

**Messages**

1. Location must contain 4 characters or be left blank you entered. You entered __, __ characters.
2. No zone data found

**Messages Sent**

None

### 5.3.26.3 (ASRS) Menu - Edit

Figure 5.3.26.3-1 Edit

### 5.3.26.3.1 (ASRS) CSF Edit Selection Menu

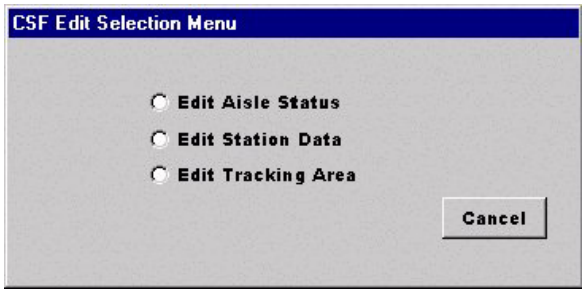



Figure 5.3.26.3.1-1 CSF Edit Selection Menu

**Description**

The User specifies the message screen to be selected from the Edit Selection screen.

**Conversation Access**

From the Menu Bar on the UI **Select** ASRS

**Data Entry Procedures**

1. **Select** CSF
2. **Select** Edit. Displays The Edit Selection Menu dialog box.
3. **Select** Cancel. Exits.

**Messages**

None

**Messages Sent**

None

### 5.3.26.3.1.1 (ASRS) Menu - Edit Aisle Status

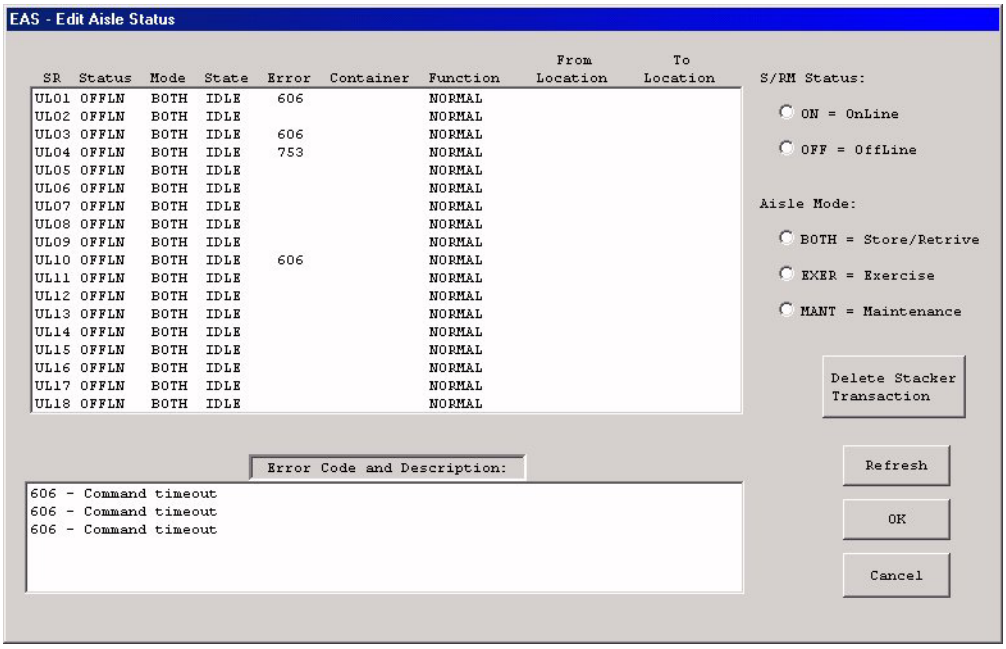



Figure 5.3.26.3.1.1-1 Edit Aisle Status (Screen 1)

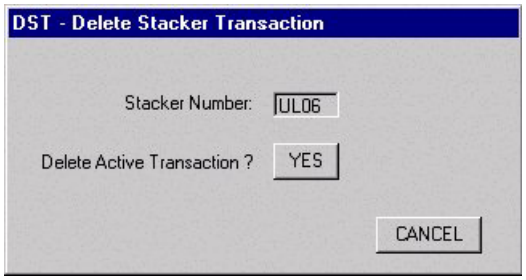



Figure 5.3.26.3.1.1-2 Edit Aisle Status - Delete Stacker Transaction (Screen 2)

**Description**

This process is used to edit information about the S/R (Storage/Retrieval) Machine aisles. If an operational error occurs an error box provided at the bottom center of the screen will provide an error code reference table lookup number and a short error description for any S/RM 's currently in an error condition. A Delete Stacker Transaction button is provided to allow an operator to delete an outstanding transaction for an S/RM currently selected.

**Conversation Access**

From the Menu Bar on the UI **Select** ASRS

**Data Entry Procedures**

1. **Select** CSF
2. **Select** Edit. Displays The Edit Selection Menu dialog box.
3. Screen 1
4. **Select** Edit Aisle Status. Displays The Edit Aisle Status dialog box.
5. **Select** aisle/aisles to change by clicking on the aisle to highlight one
6. Or more, if desired. Highlights aisles to change status/mode.
7. **Select** ON or OFF. Changes aisle status.
8. **Select** BOTH, EXER or MANT. Changes aisle Mode.
9. **Select** OK. Message Sent appears and beeps, screen will automatically be refreshed.
10. **Select** REFRESH, Updates Edit Aisle Status dialog box.

**NOTE: Only aisles that are highlighted will be sent to the subcontroller for updated.**

11. **Select** Cancel to exit.
12. **Screen** 2
13. **Select** aisle to Delete Transaction from by clicking on the aisle to highlight.
14. **Select** Cancel to exit, returns user to previous screen 1.
15. **Select** YES. Message Sent appears and beeps, returns user to previous screen 1.

**Messages**

1. Nothing selected, to exit press Cancel.
2. Message Sent.
3. Nothing selected.
4. You can only delete 1 stacker transaction at a time!

**Messages Sent**

A **V03** CSF Stacker Conveyor Change Status message is sent to the appropriate CSF Subcontroller.

A **V31** CSF Delete Active Transaction message is sent to the appropriate CSF Subcontroller.

### 5.3.26.3.1.2 **(ASRS) Menu - Edit Station Data**

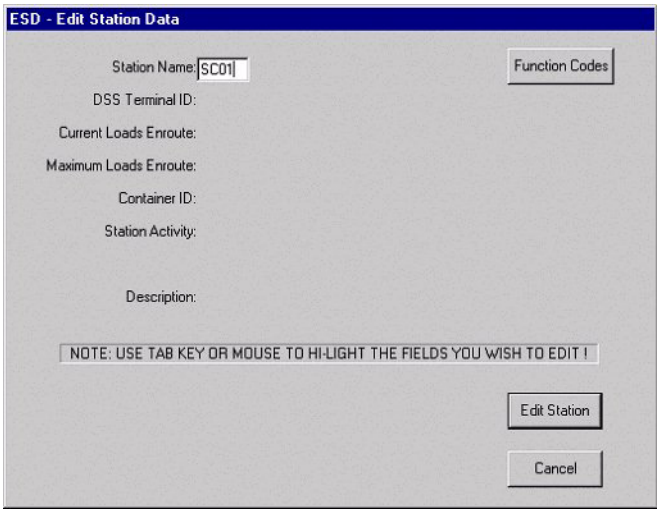



Figure 5.3.26.3.1.2-1 Edit Station Data (Screen 1)

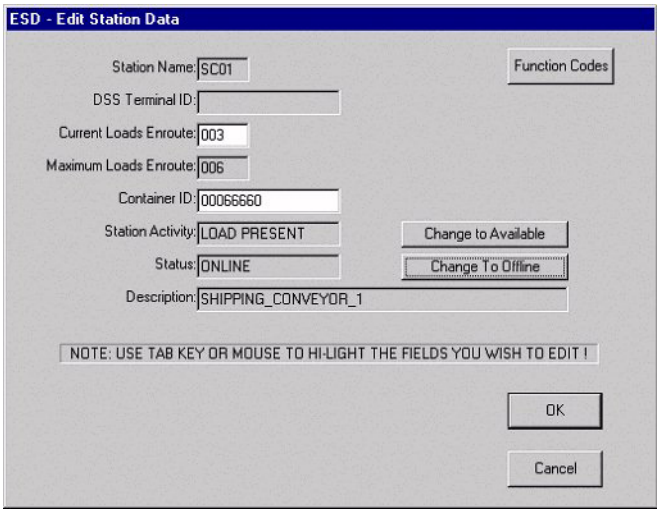



Figure 5.3.26.3.1.2-2 Edit Station Data (Screen 2)

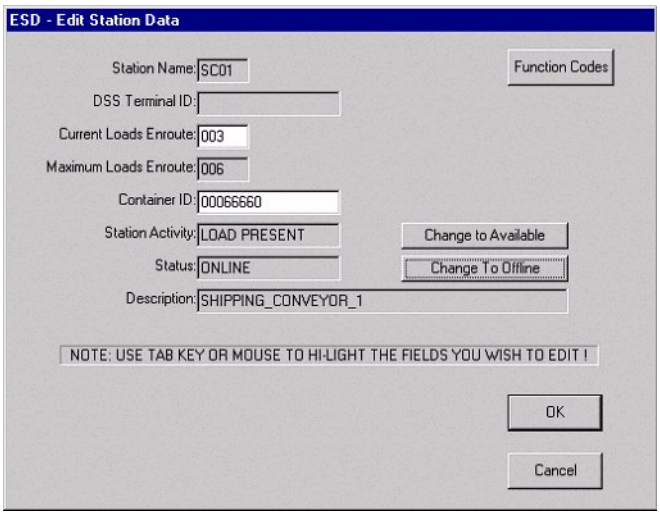



Figure 5.3.26.3.1.2-3 Edit Station Data Help (Screen 3)

**Description**

This process is used to edit current information about the P&D (Pickup/Deposit) stations. The operator enters the name of the station that is to be edited and the pertinent data fields are made available for input.

**Conversation Access**

From the Menu Bar on the UI **Select** ASRS

**Data Entry Procedures**

1. **Select** CSF
2. **Select** Edit. Displays The Edit Selection Menu dialog box.
3. **Screen** 1
4. **Select** Edit Station Data. Displays The Edit Station Data dialog box.
5. **Enter** Station Name.
6. **Select** Edit Station. Displays The Edit Station Data (Screen 2) dialog box.
7. **Select** Cancel to exit.
8. **Screen** 3
9. **Select** Function Codes. Displays The Function Codes Help dialog box.
10. **Select** OK to exit.
11. **Screen** 2
12. **Enter** appropriate station data into editable fields.
13. **Toggle** Station Activity button if available and Station Activity change is required.

14. **Toggle** Status button if available and Status change is required.
15. **Select** OK. Message Sent appears and beeps, returns user to previous screen 1.
16. **Select** Cancel to exit.
17. **Screen** 3
18. **Select** Function Codes. Displays The Function Codes Help dialog box.
19. **Select** OK to exit.

**Messages**

1. WorkStation Name must contain 4 characters. You entered __, __ characters.
2. No Zone data found for this inquiry!
3. DSS Terminal must be at least 8 characters. You entered __, __ characters.
4. Message Sent.

**Messages Sent**

A **V13** CSF Edit Station Status message is sent to the appropriate CSF Subcontroller.

### 5.3.26.3.1.3 (ASRS) Menu - Edit Tracking Area

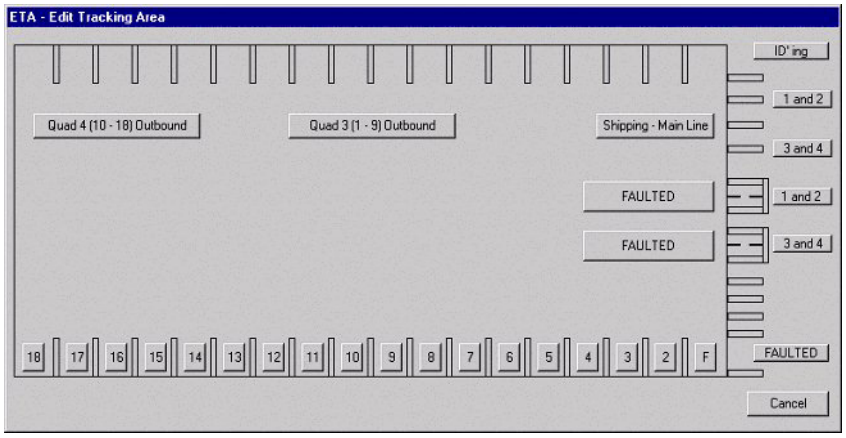



Figure 5.3.26.3.1.3-1 Edit Tracking Area (Screen 1)

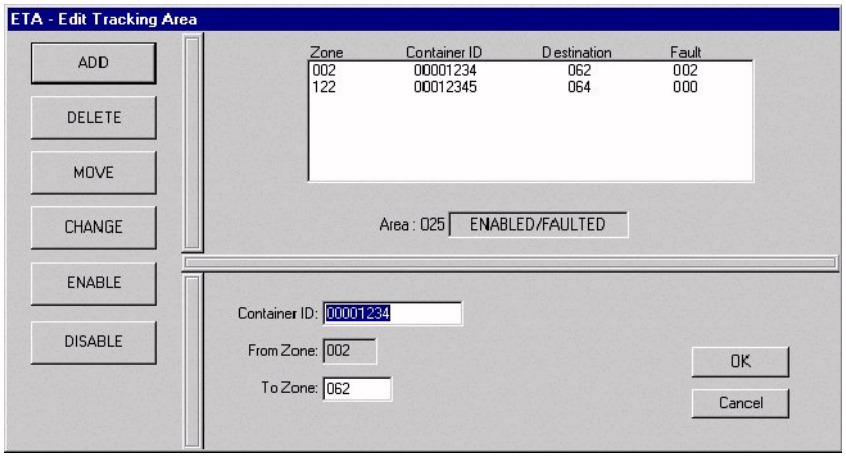



Figure 5.3.26.3.1.3-2 Edit Tracking Area (Screen 2)

**Description**

This process allows the operator to modify the status of an area and change tracking ID 's on the conveyor. The operator selects an area from screen 1 by pressing the appropriate button. The screen 2 allows the operator add, move, delete and change container ID's and movements as appropriate. Enable/Disable allows an operator to start and stop conveyor movement. Refresh updates the container ID'S and destinations. **Note:** In order to make changes to the tracking information the area must be disabled.

**Conversation Access**

From the Menu Bar on the UI **Select** ASRS

**Data Entry Procedures**

1. **Select** CSF
2. **Select** Edit. Displays The Edit Selection Menu dialog box.
3. **Screen** 1
4. **Select** Edit Tracking Area. Displays The Edit Tracking Area dialog box or warning that screen is in use.
5. **Select** Area. Displays appreciate message boxes – Working, Transaction Failed, Transaction Successful and/or Displays The Edit Tracking Area (Screen 2) dialog box.
6. **Screen** 2 **- Add**
7. **Select** a zone from list box, **Click** Add button. Displays data entry boxes.
8. **Enter** appreciate zone data into editable fields.
9. **Select** OK. Message Sent appears and beeps, User remains on screen until selecting Cancel.
10. **Screen** 2 **–** Delete
11. **Select** a zone from list box, **Click** Delete button. Displays message box that asks user if he wishes to delete the selected zone Container ID.
12. **Select** YES. Message Sent appears and beeps, User remains on screen until selecting Cancel.
13. **Select** NO. No action results. User remains on screen until selecting Cancel.
14. **Screen** 2 **–** Move
15. **Select** a zone from list box, **Click** Move button. Displays data entry boxes.
16. **Enter** appreciate zone data into editable fields.
17. **Select** OK. Message Sent appears and beeps, User remains on screen until selecting Cancel.
18. **Screen** 2 **–** Change
19. **Select** a zone from list box, **Click** Change button. Displays data entry boxes.
20. **Enter** appreciate zone data into editable fields.
21. **Select** OK. Message Sent appears and beeps, User remains on screen until selecting Cancel.
22. **Screen** 2 **–** Enable
23. **Select** Enable button. Displays message box that asks user if he wishes to enable the area.
24. **Select** YES. Message Sent appears and beeps, screen is refreshed to reflect the status change. User then remains on screen until selecting Cancel.
25. **Select** NO. No action results. User remains on screen until selecting Cancel.
26. **Screen** 2 **–** Disable
27. **Select** Disable button. Displays message box that asks user if he wishes to disable the area.
28. **Select** YES. Message Sent appears and beeps, screen is refreshed to reflect the status change. User then remains on screen until selecting Cancel.
29. **Select** NO. No action results. User remains on screen until selecting Cancel.
30. **Screen** 2 **–** Refresh
31. **Select** Refresh. Message Sent appears and beeps, screen is refreshed to reflect any changes. User then remains on screen until selecting Cancel.
32. **Select** Cancel to exit.

**Note: Any operation on screen 2 can be aborted by simply selecting a new button or click within the zone data list box.**

**Messages**

1. Load/Container ID [_____] was not found in the database and will be sent to the reject lane. Press OK to have Load/Container sent to reject Or Cancel to enter/select a new Load/Container ID
2. Destination is not a valid Zone ID/Zone Name. Please enter a valid Zone or Press Cancel to quit.
3. Are you sure you want to Delete this Container/Load?
4. Are you sure you want to Enable Area?
5. Are you sure you want to Disable Area?

**Messages Sent**

A **V25** CSF Add Load To Zone message is sent to the appropriate CSF Subcontroller.
A **V23** CSF Delete Load To Zone message is sent to the appropriate CSF Subcontroller.
A **V29** CSF Relocate Load message is sent to the appropriate CSF Subcontroller.
A **V27** CSF Change Load Destination message is sent to the appropriate CSF Subcontroller.
A **V21** CSF Enable/Disable Area message is sent to the appropriate CSF Subcontroller.
A **X20** CSF Tracking Read Response message is sent to the appropriate CSF User Interface.
A **X30** CSF Load Change Response message is sent to the appropriate CSF User Interface.

### 5.3.26.4 (ASRS) Menu - Manual Stacker Control

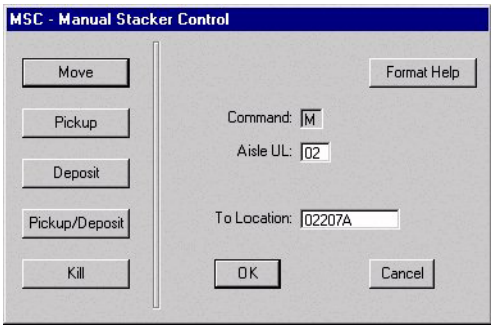



Figure 5.3.26.4-1 Manual Stacker Control (Screen 1)

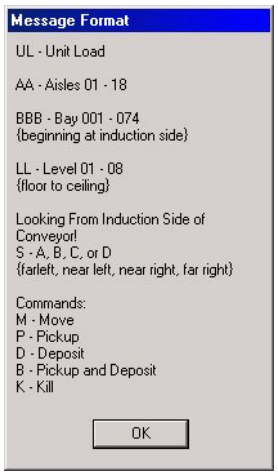



Figure 5.3.26.4-2 Manual Stacker Control Help (Screen 2)

**Description**

This process allows the operator to direct the S/R (Storage/Retrieval) Machine in a semi – automatic mode. The operator selects the appropriate button to perform the desired action task.

**Conversation Access**

From the Menu Bar on the UI **Select** ASRS

**Data Entry Procedures**

1. **Select** CSF
2. **Select** Manual Stacker Control. Displays appreciate message boxes – Working, Stacker Transaction Failed, Stacker Transaction Successful and/or Displays The Manual Stacker Control dialog box.
3. **Select Move** Displays data entry boxes.
4. **Enter** Aisle Number, 01-18

5. **Enter** appreciate To Location.
6. **Select Pickup** Displays data entry boxes.
7. **Enter** Aisle Number, 01-18
8. **Enter** appreciate From Location.
9. **Select Deposit** Displays data entry boxes.
10. **Enter** Aisle Number, 01-18
11. **Enter** appreciate To Location.
12. **Select Pickup/Deposit** Displays data entry boxes.
13. **Enter** Aisle Number, 01-18
14. **Enter** appreciate From Location.
15. **Enter** appreciate To Location.
16. **Select** Kill Displays data entry boxes.
17. **Enter** Aisle Number, 01-18
18. **Select** Format Help. Displays The Message Format Help dialog box.
19. **Select** OK. Message Sent appears and beeps, User remains on screen until selecting Cancel.
20. **Select** Cancel to exit.

**Messages**

1. Aisle Number must be between 01 – 18. You entered __.
2. From Location must contain at least 1 character. You entered __, __ characters.
3. To Location must contain at least 1 character. You entered __, __ characters.
4. Message Sent

**Messages Sent**

A **V15** CSF Add Load To Zone message is sent to the appropriate CSF Subcontroller.
A **X16** CSF Manual Stacker Reply message is sent to the appropriate CSF User Interface.
A **X20** CSF Tracking Read Response message is sent to the appropriate CSF User Interface.

### 5.3.27 Conveyor System Menu - New Cumberland only

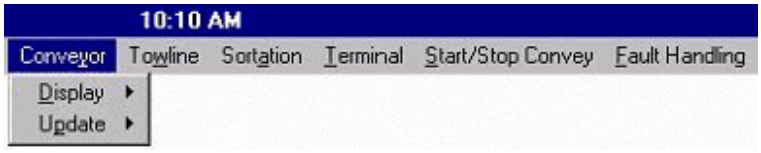



Figure 5.3.27-1 Conveyor System Menu

The conversations on the Conveyor System Menu are used to manage the movement of material transported on the tote and pallet conveyors. Display conversations are used to monitor the activity of the conveyors. They display lane statuses. Data entry conversations are used to update the tote conveyor parameters that control tote distribution and routing. They allow user to unlock a workstation, to update the logical statuses of the conveyor lanes, change active item error lane status, and to change functions of the inspection lanes.

| | |
|---|---|
| Display Conveyor Lane Status | Displays work area functions, Conveyance Lane, Logical Status and Intradepot Lanes for Receiving, Storage and Sortation / Consolidation and Packing areas. |
| Update Conveyor Lane Status | Changes the logical status of a tote conveyor Lane Status lane(s) in an area from “active” to “inactive” and vice versa. Also used to change the “current” error lane status for Active Item. |
| Update Conveyor Inspection Lane Type | Notifies the ECS that a different type of Inspection Lane Type inspection will be performed at one or more tote conveyor lanes in the receiving inspection area. |

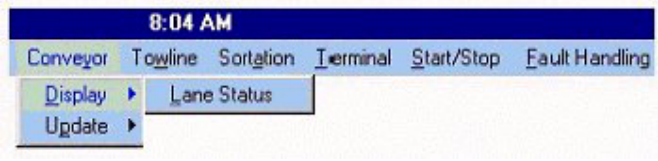



Figure 5.3.27-2 Conveyor Menu (Display)

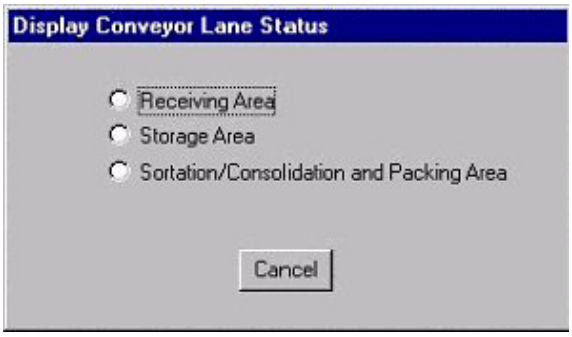



Figure 5.3.27-3 Display (Conveyor Lane Status)

**Description**

This process is used to display the logical status of the tote conveyor lanes. The first screen shown will allow the user to choose the receiving area, the storage area, or the sortation/consolidation and packing area. After the functional area has been selected, this process will query the database for information. It will then display the workstation function (mnemonic), the conveyor lane id, and the logical status of the lane. In addition, this process will display the status of the lanes at Intradepot Receiving. The logical status will either be on-line, or inactive. The status of the Intradepot receiving lanes will be inbound, outbound, or not applicable.

**Conversation Access**

From the Menu Bar on the UI **Select** Conveyor

**Data Entry Procedures**

1. **Conveyor** displays Display or Update.
2. **Select** Display. Displays Lane Status.
3. **Select** Lane Status. Display Conveyor Lane Status box appears.
4. **Select** Receiving. Displays Workstation Function, Conveyor Lane, Logical Status, and Intradepot Lanes.
5. **Select** Print or OK. Selecting Print brings up Print box to send to printer or selecting OK exits.
6. **Select** Display, Select Lane Status.
7. **Select** Storage. Displays Workstation Function, Conveyor Lane, Logical Status, and Intradepot Lanes.

**Conveyor System Menu (Display Lane Status) - New Cumberland only**

1. **Select** Print or OK.
2. **Select** Display, Select Lane Status.
3. **Select** Sortation/Consolidation and Packing Area. Displays Workstation Function, Conveyor Lane, Logical Status, and Intradepot Lanes.
4. **Select** Print or OK.

**Messages**

No TOT Data found

**Messages Sent**

None

**System Response**

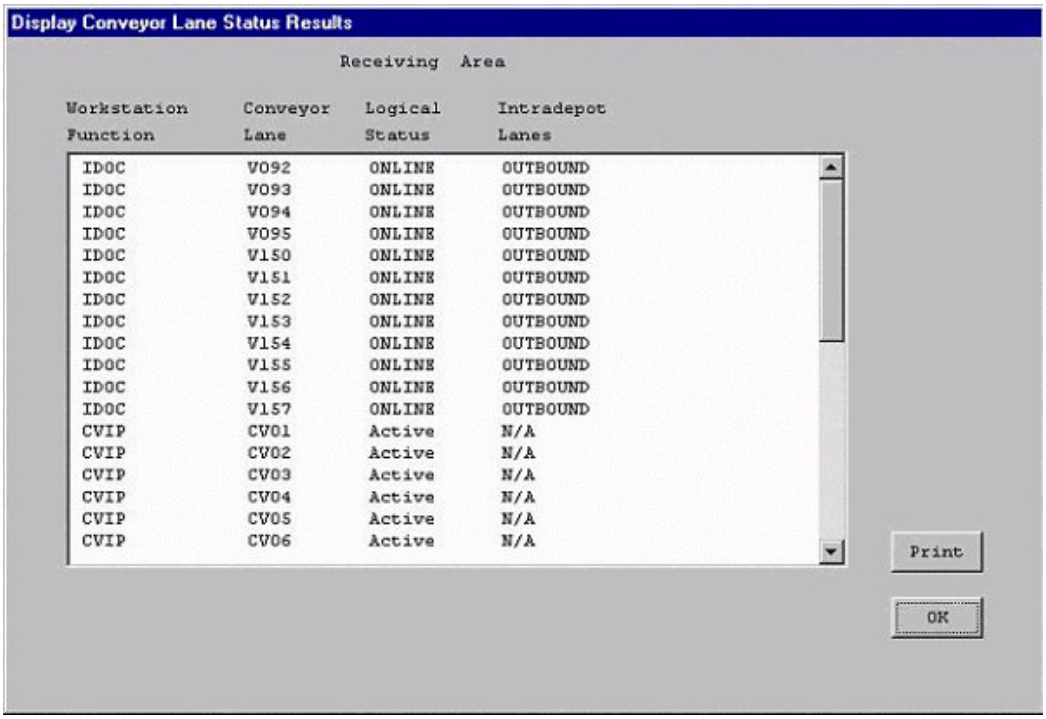



Figure 5.3.27-4 System Response (Display Conveyor Lane Status Results)

**Note**: Once the user has reviewed the information in the Display Results dialog box, clicking the OK button returns to the main menu.

Click the Print button to generate a printout of data displayed in the Results dialog box. A system Print dialog box will appear to allow the user to select a printer to print the report. The default, system Printer is pre-selected; if this is the correct printer, click the OK button or press the <Enter Key>. To configure the selected printer, click the Properties button. An alternate printer can be selected from a drop-down list of printers. For more information on printer selection and configuration consult your Windows NT Workstation manual.

### 5.3.27.1 Conveyor System Menu (Update Lane Status) - New Cumberland only

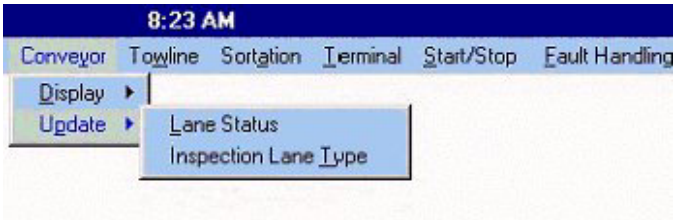



Figure 5.3.27.1-1 Conveyor Menu (Update)

Figure 5.3.27.1-2 Update Conveyor Lane Status

**Description**

This process is used to update the logical status of the tote conveyor lanes. The first screen shown will allow the user to choose the active item area, receiving area, the storage area, or the sortation/consolidation and packing area. After the functional area has been selected, this process will query the database for information. It will then display the workstation function (mnemonic), the conveyor lane id and the logical status. The logical status will either be on-line, or inactive. In the case of active item area the conveyor lane id and the current error lane status will be displayed. The user will then be able to highlight the lane and check a box to set the lane as active or as inactive or for active item set the new error lane

**Conversation Access**

From the Menu Bar on the UI **Select** Conveyor

**Data Entry Procedures**

1. Repeat **Select** Conveyor.
2. **Select** Update. Displays Lane Status and Inspection Lane Type.
3. **Select** Lane Status. Update Conveyor Lane Status box appears.

### 5.3.27.2 Conveyor System Menu (Update Lane Status) – New Cumberland Only

1. **Select** Active Item. Displays Workstation Function, Conveyor Lane, and Logical Status.
2. **Select** lane to change by clicking on to highlight. Highlights error lane to change status.
3. **New lane** will appear to indicate new error lane desired
4. **Click** OK or Cancel to exit. Message Sent appears and beeps.
5. Repeat **Select** Conveyor.
6. Repeat **Select** Update. Displays Lane Status and Inspection Lane Type.
7. Repeat **Select** Lane Status. Update Conveyor Lane Status box appears.
8. **Select** Receiving. Displays Workstation Function, Conveyor Lane, and Logical Status.
9. **Select** lanes to change by clicking on to highlight and holding Ctrl key down for more than one. Highlights lanes to change status.
10. **Select** Active or Inactive. Changes lane status.
11. **Click** OK or Cancel to exit. Message Sent appears and beeps.
12. Repeat **Select** Conveyor.
13. Repeat **Select** Update. Displays Lane Status and Inspection Lane Type.
14. Repeat **Select** Lane Status. Update Conveyor Lane Status box appears.
15. **Select** Storage. Displays Workstation Function, Conveyor Lane, and Logical Status.
16. **Select** lanes to change by clicking on to highlight and holding Ctrl key down for more than one. Highlights lanes to change status.
17. **Select** Active or Inactive. Changes lane status.
18. **Click** OK or Cancel to exit. Message Sent appears and beeps.
19. Repeat **Select** Conveyor.
20. Repeat **Select** Update. Displays Lane Status and Inspection Lane Type.
21. Repeat **Select** Lane Status. Update Conveyor Lane Status box appears.
22. **Select** Sortation/Consolidation and Packing Area. Displays Workstation Function, Conveyor Lane, and Logical Status.
23. **Select** lanes to change by clicking on and holding Ctrl key down for more than one. Highlights lanes to change status.
24. **Select** Active or Inactive. Changes lane status.
25. **Click** OK or Cancel to exit. Message Sent appears and beeps.
26. Repeat **Select** Conveyor.
27. Repeat **Select** Update. Displays Lane Status and Inspection Lane Type.
28. **Select** Inspection Lane Status. Displays Inspection Lane Type Receiving box.
29. **Select** Receiving. Displays Conveyor Lanes, and Types.
30. **Highlight** conveyor lanes to change. Highlighted lanes change Insp lane types.
31. **Select** Inspection Lane types.
32. **Select** OK or Cancel to exit. Message Sent appears and beeps.

**Messages**

Message Sent
Nothing selected

Messages Sent

1. **A** J73 **TOT Update Lane Status message is sent to the appropriate TOT Subcontroller.**
2. **A** T40 **ACT Update Lane Status message is sent to the appropriate ACT Subcontroller.**

**System Response –Tote**

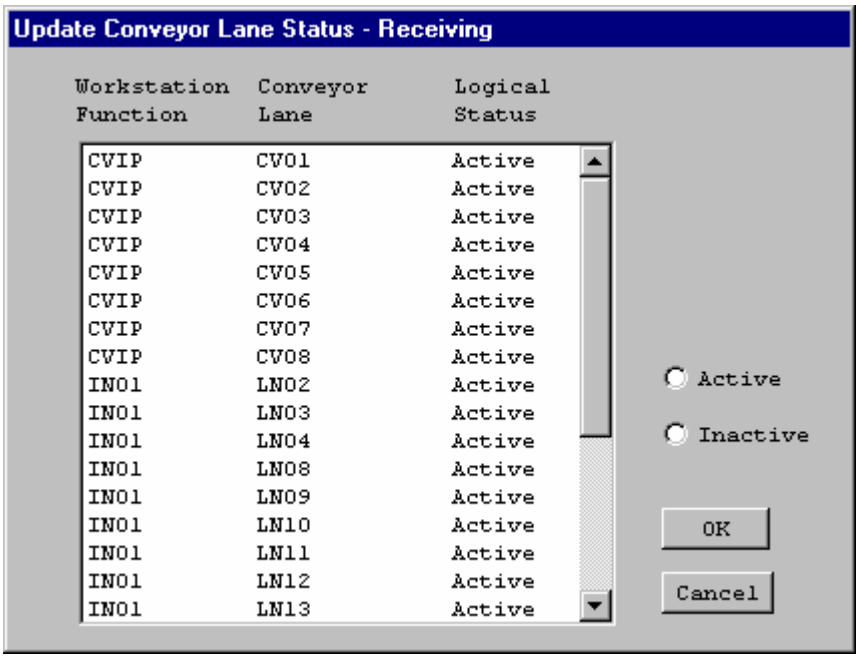



Figure 5.3.27.2-1 System Response Update (Conveyor Lane Status)

**System Response –Active**

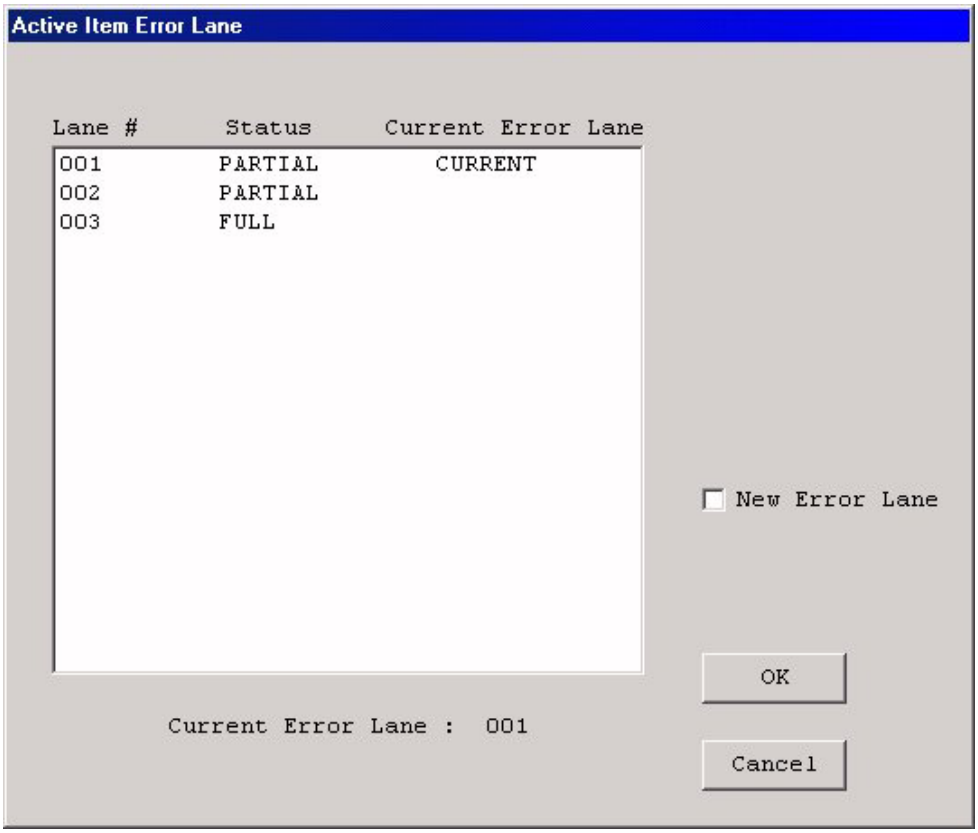



Figure 5.3.27.2-2 System Response Update (Active Item)

**Note**: Once the user has reviewed the information in the Update Results dialog box, clicking the OK button returns to the Selection dialog box.

### 5.3.27.3 Conveyor System Menu (Update Inspection Lane Type) - New Cumberland only

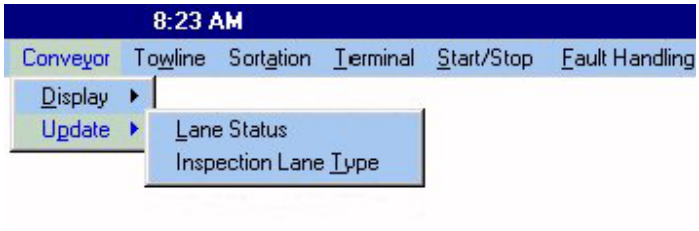



Figure 5.3.27.3-1 Conveyor Menu (Update)

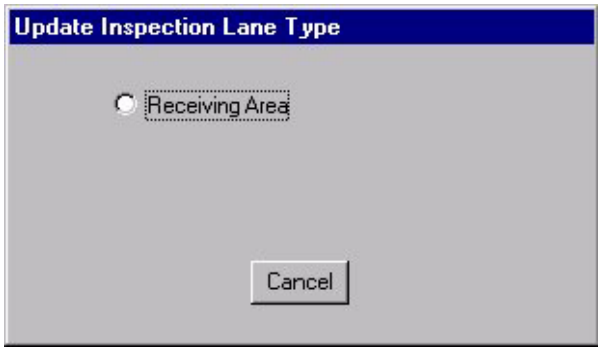



Figure 5.3.27.3-2 (Inspection Lane Type)

**Description**

This process is used to change the type of inspection that is being performed at a particular tote conveyor lane in the receiving area. This process will allow the user to choose a lane(s) and to choose the type of inspection to be performed at the lane(s). This process will then format and send a message to the Tote Conveyor Subcontroller (F.DFD) via the Traffic Subcontroller (T.DFD).

**Conversation Access**

From the Menu Bar on the UI **Select** Conveyor

**Data Entry Procedures**

1. **Select** Conveyor.
2. Repeat **Select** Update. Displays Lane Status and Inspection Lane Type.
3. **Select** Inspection Lane Status. Displays Inspection Lane Type Receiving box.
4. **Select** Receiving. Displays Conveyor Lanes, and Types.
5. **Highlight** conveyor lanes to change. Highlighted lanes change Insp lane types.
6. **Select** Inspection Lane types.
7. **Select** OK or Cancel to exit. Message Sent appears and beeps.

**Messages**

Message Sent
Nothing selected, to exit press Cancel
Nothing selected

Messages Sent

**A** J75 **TOT Update Inspection Lane Type message is sent to the appropriate TOT Subcontroller.**

**System Response**

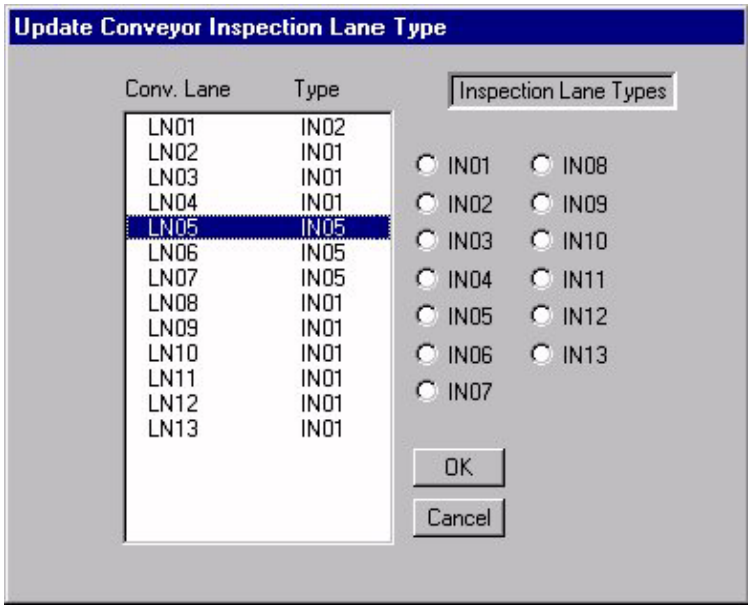



Figure 5.3.27.3-3 System Response (Update Conveyor Inspection Lane Type)

**Note**: Once the user has reviewed the information in the Update Results dialog box, clicking the OK button returns to the Selection dialog box.

### 5.3.28 Towline System Menu-New Cumberland only

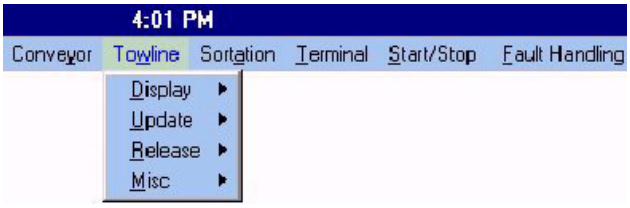



Figure 5.3.28-1 Towline Menu

The Towline Menu Dialog Boxes are used to manage the movement of the towline carts. Display Dialog Boxes are used to monitor the activity of the towline. They display special cart locations, spur statuses, drop point warehouses and loop workloads. Data entry Dialog Boxes are used to update the towline parameters used in distributing and routing carts. They allow user to release carts from queues, change cart types, unlock workstations, change spur priorities, change the status of spurs, change inspection types associated with spurs, change drop point warehouses, and manage cart distribution.

#### 5.3.28.1 Towline System Menu (Display)-New Cumberland only

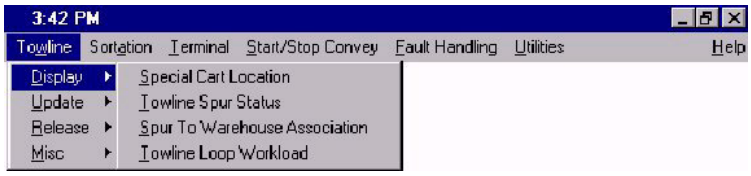



Figure 5.3.28.1-1 Towline Menu (Display)

##### 5.3.28.1.1 Towline System Menu (Display Special Cart Location)-New Cumberland only

Figure 5.3.28.1.1-1 Display Special Cart Location

**Description**

This process is used to display the last known locations and destinations of special towline carts. The user will first choose the type of cart to display, or they can choose to display information about all special towline carts. Then the process will select the information from the database and will show the cart ID, the type of cart, the last known location and the destination of the cart. If the status of the cart is offline, this information is displayed in the destination field.

**Conversation Access**

From the Menu Bar on the UI **Select** Towline

**Data Entry Procedures**

1. **Select** Towline**.** Displays submenu Display, Update, Release, Misc.
2. **Select** Display**.** Displays submenu Special Cart Location, Towline Spur Status, Spur to Warehouse Association, Towline Loop Workload.
3. **Select** Special Cart Location**.** Display Special Cart dialog box appears. Displays cart types.
4. **Select** All or cart type. Displays dialog box with list of Cart, Type, Last Known Location, and Destination.
5. **Select** Print or Ok**.** Sends to printer or exits.

**Messages**

1. No TOW Data found

**Messages Sent**

N/A

**System Response**

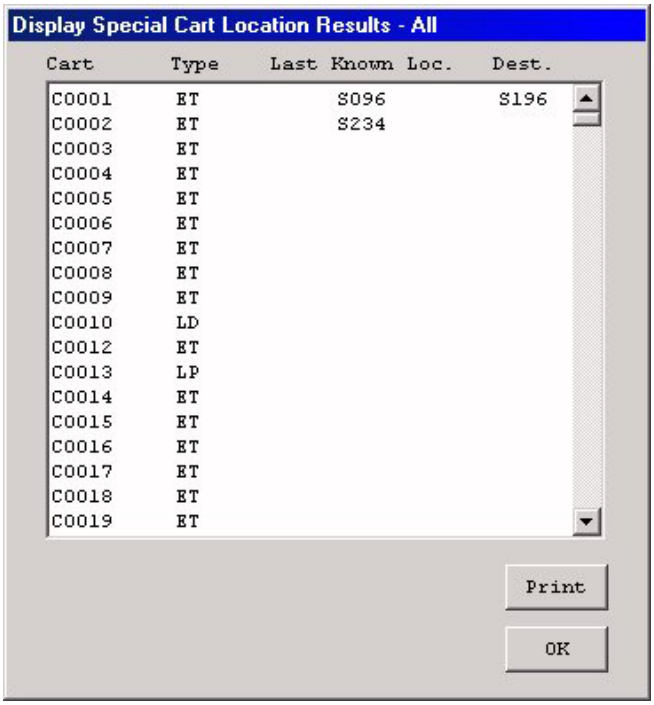



Figure 5.3.28.1.1-2 Towline Display (Display Special Cart Location)

**Note:** Once the user has reviewed the information in the Display Results dialog box, clicking the OK button returns to the main menu.

Click the Print button to generate a printout of data displayed in the Results dialog box. A system Print dialog box will appear to allow the user to select a printer to print the report. The default, system Printer is pre-selected; if this is the correct printer, click the OK button or press the <Enter Key>. To configure the selected printer, click the Properties button. An alternate printer can be selected from a drop-down list of printers. For more information on printer selection and configuration consult your Windows NT Workstation manual.

### 5.3.28.1.2 Towline System Menu (Display Towline Spur Status)-New Cumberland only

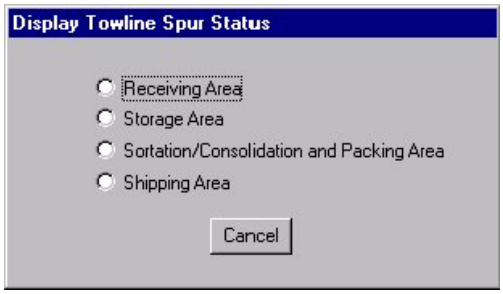



Figure 5.3.28.1.2-1 Towline Display (Towline Spur Status)

**Description**

This process will display the status of the towline at a particular spur. The user will first select an area, Receiving, Storage, Sortation/Consolidation and Packing, or Shipping. This process will query the database for needed information. Then it will list information about the spur, including the physical and logical status, whether the spur is locked or unlocked, condition status of the spur (whether it is empty or occupied), carts enroute or carts at station, the Station Function, and the Spur ID.

**Conversation Access**

From the Menu Bar on the UI **Select** Towline.

**Data Entry Procedures**

1. **Select** Display.
2. **Select** Towline Spur Status. Displays Towline Spur Status dialog box: Receiving Area, Storage Area, Sortation/Consolidation and Packing Area, Shipping Area.
3. **Select** Receiving. Displays Status box with Workstation Function, Spur ID, Logical Status, Physical Status, Spur Locked, and Condition Status, Carts Enroute or Carts at Station.
4. **Select** Print or OK. Sends output to printer or exits.

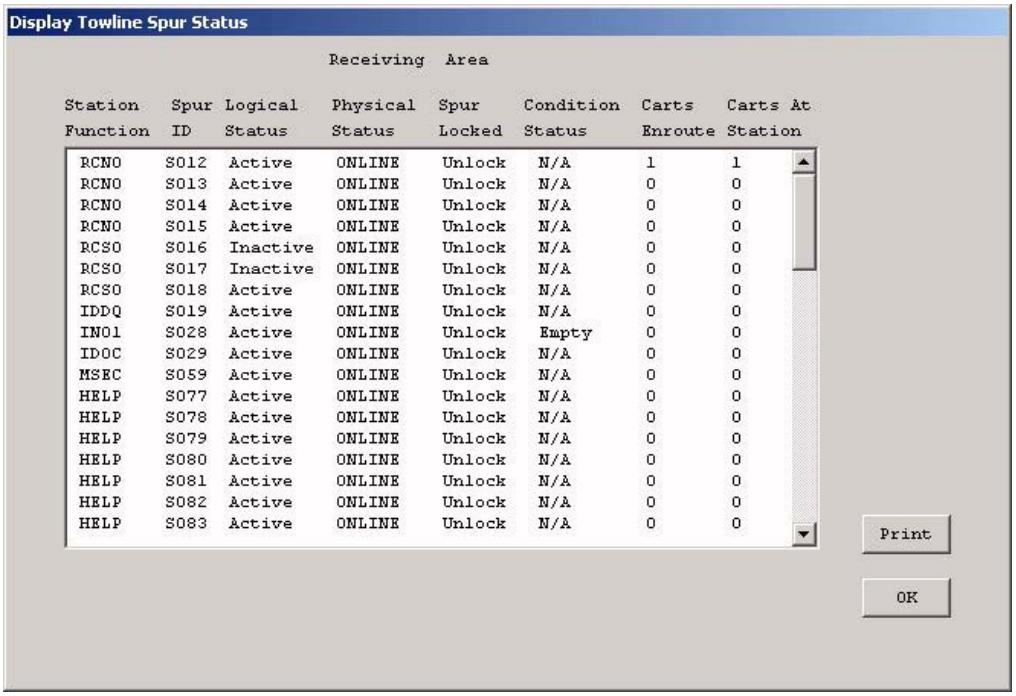
**Messages**

1. No TOW Data found

**Messages Sent**

None

**System Response**




| Station Function | Spur ID | Logical Status | Physical Status | Spur Locked | Condition Status | Carts Enroute | Carts At Station |
|---|---|---|---|---|---|---|---|
| RCNO | S012 | Active | ONLINE | Unlock | N/A | 1 | 1 |
| RCNO | S013 | Active | ONLINE | Unlock | N/A | 0 | 0 |
| RCNO | S014 | Active | ONLINE | Unlock | N/A | 0 | 0 |
| RCNO | S015 | Active | ONLINE | Unlock | N/A | 0 | 0 |
| RCSO | S016 | Inactive | ONLINE | Unlock | N/A | 0 | 0 |
| RCSO | S017 | Inactive | ONLINE | Unlock | N/A | 0 | 0 |
| RCSO | S018 | Active | ONLINE | Unlock | N/A | 0 | 0 |
| IDDQ | S019 | Active | ONLINE | Unlock | N/A | 0 | 0 |
| IN01 | S028 | Active | ONLINE | Unlock | Empty | 0 | 0 |
| IDOC | S029 | Active | ONLINE | Unlock | N/A | 0 | 0 |
| MSEC | S059 | Active | ONLINE | Unlock | N/A | 0 | 0 |
| HELP | S077 | Active | ONLINE | Unlock | N/A | 0 | 0 |
| HELP | S078 | Active | ONLINE | Unlock | N/A | 0 | 0 |
| HELP | S079 | Active | ONLINE | Unlock | N/A | 0 | 0 |
| HELP | S080 | Active | ONLINE | Unlock | N/A | 0 | 0 |
| HELP | S081 | Active | ONLINE | Unlock | N/A | 0 | 0 |
| HELP | S082 | Active | ONLINE | Unlock | N/A | 0 | 0 |
| HELP | S083 | Active | ONLINE | Unlock | N/A | 0 | 0 |

Figure 5.3.28.1.2-2 System Response Display (Towline Spur Status)

**Note:** Once the user has reviewed the information in the Display Results dialog box, clicking the OK button returns to the main menu.

Click the Print button to generate a printout of data displayed in the Results dialog box. A system Print dialog box will appear to allow the user to select a printer to print the report. The default, system Printer is pre-selected; if this is the correct printer, click the OK button or press the <Enter Key>. To configure the selected printer, click the Properties button. An alternate printer can be selected from a drop-down list of printers. For more information on printer selection and configuration consult your Windows NT Workstation manual.

### 5.3.28.1.3 Towline System Menu (Spur to Warehouse Association)-New Cumberland only

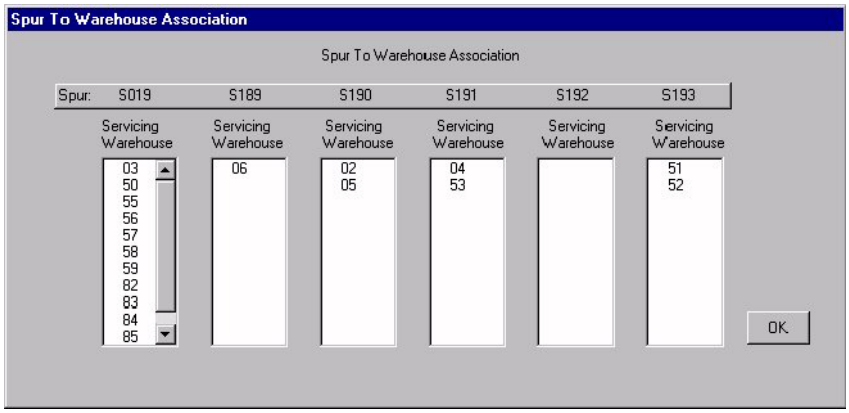



Figure 5.3.28.1.3-1 Display (Spur to Warehouse Association)

**Description**

This process is used to display the drop point warehouse assigned to each towline spur in the Intradepot Receiving Queue, and the warehouses serviced by each drop point warehouse. This process will select the needed information from the database and will display the results to the user.

**Conversation Access**

From the Menu Bar on the UI **Select** Towline.

**Data Entry Procedures**

1. **Select** Towline.
2. **Select** Display.
3. **Select** Spur to Warehouse Association.
4. **Select** OK to exit.

**Messages**

None

**Messages Sent**

N/A

**Note:** Once the user has reviewed the information in the Display Results dialog box, clicking the OK button returns to the main menu.

### 5.3.28.1.4 Towline System Menu (Towline Loop Workload)-New Cumberland only

Figure 5.3.28.1.4-1 Display (Towline Loop Workload)

**Description**

This process will display workloads for the towline loops. The user will select which towline loop to view, or they may choose to view several or all towline loops. Then this process will query the database for the information. It will then display the loop number, capacity, number of carts currently on the loop, and the percentage used.

**Conversation Access**

From the Menu Bar on the UI **Select** Towline.

**Data Entry Procedures**

1. **Select** Towline.
2. **Select** Display.
3. **Select** Towline Loop Workload. Displays Towline Loop Workload dialog box with AL for all loops, Receiving, CCP Processing, Mission Processing, Intradepot Processing, Storage Area, Packing Area, M/H Pack Area, Sortation Area, NW Shipping, Pallet building, NE Shipping.
4. **Select** Al or area desired. Displays Loop Number, Loop Capacity, Number of Carts, Percent Used.
5. **Select** Print or Ok. Sends output to printer or exits.

**Messages**

1. No TOW Data found

**Messages Sent**

None

**System Response**

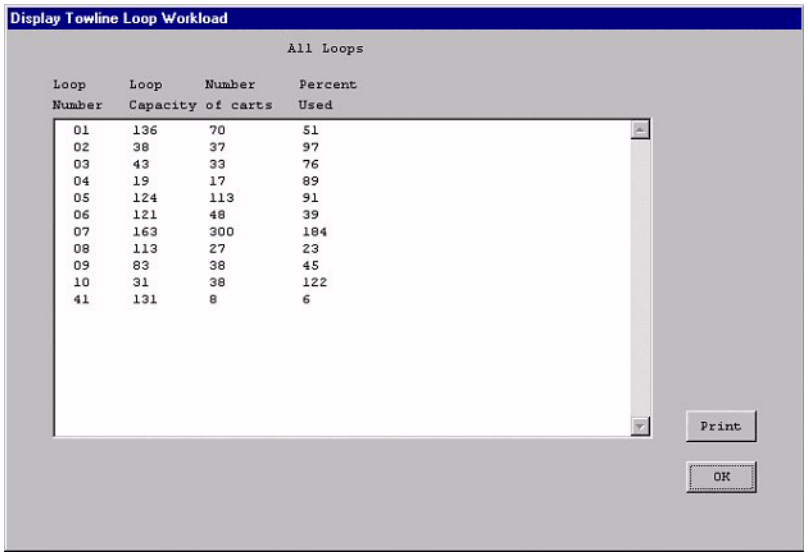



Figure 5.3.28.1.4-2 Display (Towline Loop Workload)

**Note:** Once the user has reviewed the information in the Display Results dialog box, clicking the OK button returns to the Inquiry dialog box.

Click the Print button to generate a printout of data displayed in the Results dialog box. A system Print dialog box will appear to allow the user to select a printer to print the report. The default, system Printer is pre-selected; if this is the correct printer, click the OK button or press the <Enter Key>. To configure the selected printer, click the Properties button. An alternate printer can be selected from a drop-down list of printers. For more information on printer selection and configuration consult your Windows NT Workstation manual.

### 5.3.28.2 Towline System Menu (Towline Cart Type)-New Cumberland only

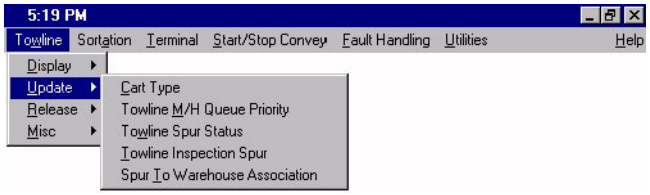



Figure 5.3.28.2-1 Towline Menu (Update)

#### 5.3.28.2.1 Towline System Menu (Update Towline Cart Type)-New Cumberland only

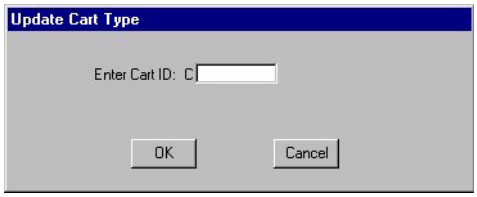



Figure 5.3.28.2.1-1 Update (Update Cart Type)

**Description**

This process is used to update the cart type for a cart in the EDC. This process will prompt the user for a Cart ID. The current type of the cart is selected from the database and displayed to the user. This process will also display all other possible types of towline carts. The user can select a new cart type to associate with the Cart ID. The process will then format and send a message to the Towline Subcontroller via the Traffic Subcontroller to have the type updated in the database.

**Conversation Access**

From the Menu Bar on the UI **Select** Towline.

**Data Entry Procedures**

1. **Select** Towline.
2. **Select** Update.
3. **Select** Cart Type. Displays Update Cart Type dialog box.
4. **Enter** Cart ID (*non-caged cart). Brings up dialog box with cart types.
5. **Select** Cart type. Message sent appears. Update Cart Type dialog box prompting to enter another cart reappears.
6. **Select** Cancel to exit.

**Messages**

1. Message Sent
2. No Tow Data Found.
3. Cart ID must contain a minimum of 4 characters. You entered __, __ characters.

**Messages Sent**

1. A **J81** TOW Update Cart Type message is sent to the appropriate TOW Subcontroller.

**System Response**

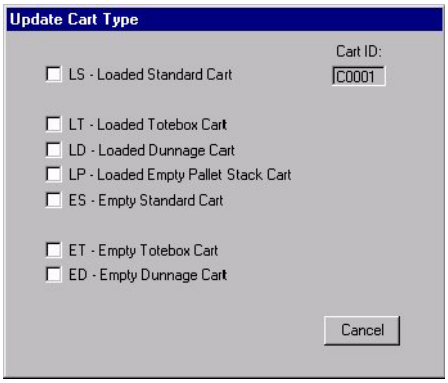



Figure 5.3.28.2.1-2 System Response (Update Cart Type)

**Note:** Once the user selects a cart type a message is sent to the Towline subcontroller. User is then returned to main menu.

### 5.3.28.2.2 Towline System Menu (Update M/H Pack Queue)-New Cumberland only

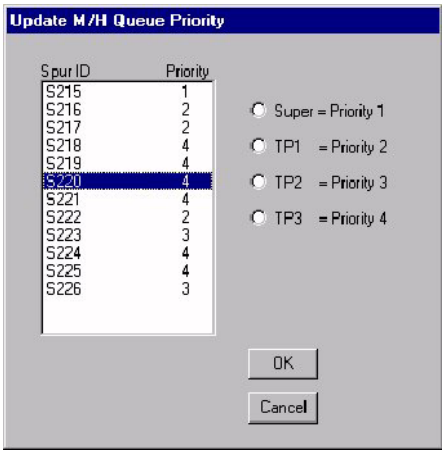



Figure 5.3.28.2.2-1 Update (M/H Pack Queue)

**Description**

This process is used to display and/or change the priority assigned to one or more towline spurs in the M/H Pack Queue. The information regarding M/H Pack Queue is selected from the database and displayed to the user. The user will then be able to select a Spur ID and change the priority associated with it by checking the box with the new priority. If any priorities are changed, a message (J85) will be formatted and sent to the Towline Subcontroller via the Traffic Subcontroller to update the database.

**Conversation Access**

From the Menu Bar on the UI **Select** Towline.

**Data Entry Procedures**

1. **Select** Towline.
2. **Select** Update.
3. **Select** Towline M/H Queue Priority. Displays dialog boxes with Spur ID and Priority on left side with types of priorities on the right side.
4. **Select** Spur ID(s) to change.
5. **Select** Priority.
6. **Select** Ok. Message Sent appears if no errors. (You must have at least one of each priority type assigned.)
7. **Select** Cancel. Exits

**Messages**

1. Message Sent
2. No Tow Data Found.
3. Nothing selected, to exit press cancel.
4. Nothing selected.
5. Multiple range selection not allowed.
6. You must have at least one of each priority type.

**Messages Sent**

1. A **J85** TOW Update M/H Pack Queue Type message is sent to the appropriate TOW Subcontroller

**Note:** Once the user changes any priorities a message is sent to the Towline subcontroller.

### 5.3.28.2.3 Towline System Menu (Update Towline Spur Status)-New Cumberland only

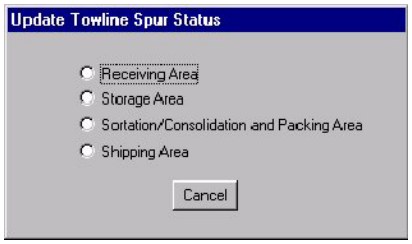



Figure 5.3.28.2.3-1 Update (Towline Spur Status)

**Description**

This process is used to change the logical status for one or more towline spur stations. Changes can be made to spurs in either the Receiving area, the Storage area, the Sortation/ Consolidation and Packing area, or the Shipping area. Once the user selects the area, this process will query the database for the towline spur statuses. Then the process will list the information about the spur, including the logical and physical status and the condition status. The user can then change the status for a particular spur by selecting the Spur ID and clicking on the toggle status button. Once a spur status in changed, a message will be formatted and sent to the Towline Subcontroller via the Traffic Subcontroller to have the change made in the database.

**Conversation Access**

From the Menu Bar on the UI **Select** Towline.

**Data Entry Procedures**

1. **Select** Towline.
2. **Select** Update.
3. **Select** Towline Spur Status. Displays Update Towline Spur Status dialog box appears. Receiving area, Storage Area, Sortation/Consolidation and Packing Area, Shipping Area.
4. **Select** Receiving Area. Displays Workstation Function, Spur ID, Logical Status, Physical Status, Condition Status.
5. **Select** Spur to change status. Highlights selection.
6. Select Active or Inactive. Changes from Active to Inactive or Inactive to Active.
7. **Select** OK. Message Sent appears.
8. **Select** Cancel to exit.
9. Repeat **Select** Towline Spur Status. Displays Update Towline Spur Status dialog box appears. Receiving area, Storage Area, Sortation/Consolidation and Packing Area, Shipping Area.
10. **Select** Storage Area. Displays Workstation Function, Spur ID, Logical Status, Physical Status, Condition Status.

11. **Select** Spur to change status**.** Highlights selection.
12. **Select** Active or Inactive**.** Changes from Active to Inactive or Inactive to Active.
13. **Select** OK**.** Message Sent appears.
14. **Select** Cancel to exit.
15. Repeat **Select** Towline Spur Status. Displays Update Towline Spur Status dialog box appears. Receiving area, Storage Area, Sortation/Consolidation and Packing Area, Shipping Area.
16. **Select** Sortation/Consolidation and Packing Area**.** Displays Workstation Function, Spur ID, Logical Status, Physical Status, Condition Status.
17. **Select** Spur to change status**.** Highlights selection.
18. **Select** Active or Inactive**.** Changes from Active to Inactive or Inactive to Active.
19. **Select** OK**.** Message Sent appears.
20. **Select** Cancel to exit.
21. Repeat **Select** Towline Spur Status. Displays Update Towline Spur Status dialog box appears. Receiving area, Storage Area, Sortation/Consolidation and Packing Area, Shipping Area.
22. **Select** Shipping Area. Displays Workstation Function, Spur ID, Logical Status, Physical Status, Condition Status.
23. **Select** Spur to Change Status**.** Highlights selection.
24. **Select** Active or Inactive. Changes from Active to Inactive or Inactive to Active.
25. **Select** OK. Message Sent appears.
26. **Select** Cancel. Exits.

**Messages**

1. Message Sent
2. No Tow Data Found.
3. Nothing selected, to exit press cancel.
4. Nothing selected.
5. Multiple range selection not allowed.

**Messages Sent**

1. A **T25** TOW Update Towline Spur Status Type message is sent to the appropriate TOW Subcontroller

**System Response**

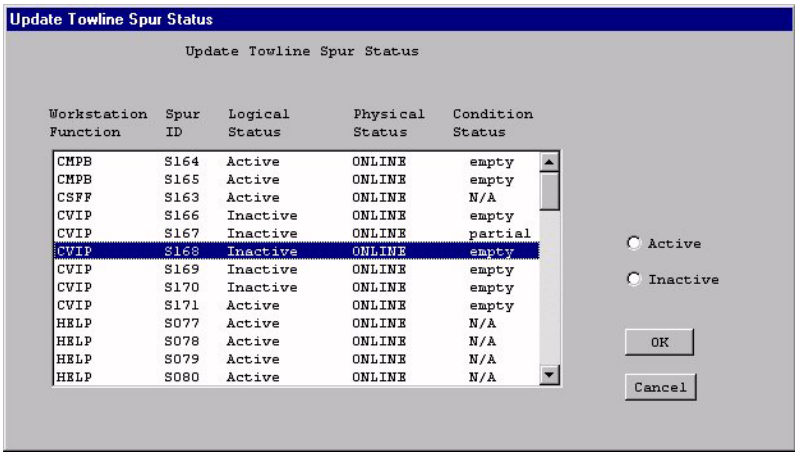



Figure 5.3.28.2.3-2 Update (Towline Spur Status)

**Note:** Once the user changes any statuses a message is sent to the Towline subcontroller.

### 5.3.28.2.4 Towline System Menu (Update Towline Spur Type)-New Cumberland only

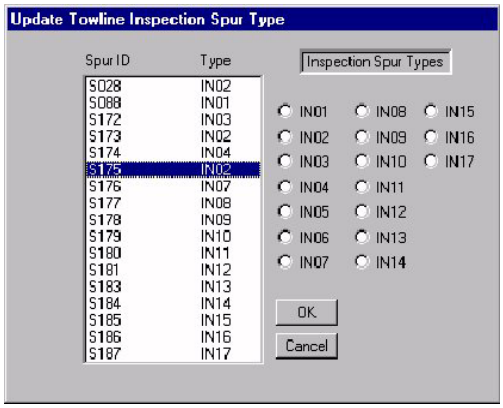



Figure 5.3.28.2.4-1 Update (Towline Spur Type)

**Description**

This process is used to change the type of inspection that is being performed at a particular towline spur(s) in the receiving area. It will allow the user to choose the spur(s) and to choose the type of inspection to be performed at the spur(s). This process will then format and send a message to the Towline Subcontroller via the Traffic Subcontroller.

**Conversation Access**

From the Menu Bar on the UI **Select** Towline.

**Data Entry Procedures**

1. **Select** Towline.
2. **Select** Update.
3. **Select** Towline Inspection Spur. Dialog box displays Spur ID and Type on left and Inspection spur Types on right.
4. **Select** Spur to change. Highlights selection
5. **Select** Inspection Spur Type. Inspection Spur type changes on highlighted selection.
6. **Select** OK. Message Sent appears.
7. **Select** Cancel to exit.

**Messages**

1. Message Sent
2. No Tow Data Found.
3. Nothing selected, to exit press cancel.
4. Nothing selected.
5. Multiple range selection not allowed.

**Messages Sent**

1. A **J99** TOW Update Inspection Spur message is sent to the appropriate TOW Subcontroller

   **Note:** Once the user changes any of the spur types a message is sent to the Towline subcontroller.

### 5.3.28.2.5 Towline System Menu (Update Spur To Warehouse Association)-New Cumberland only

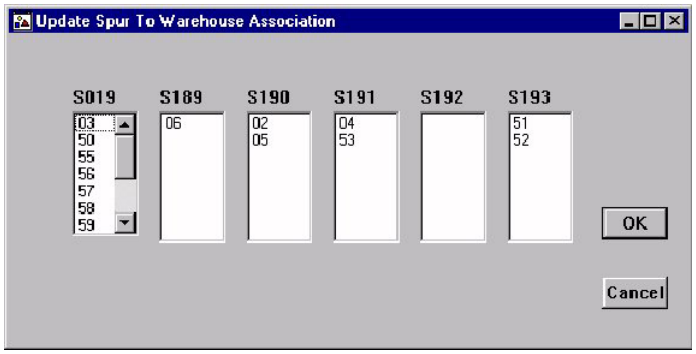



Figure 5.3.28.2.5-1 Update (Spur To Warehouse Association)

**Description**

This process is used to change the drop point warehouse assigned to a towline spur in the Intradepot Receiving Queue, and/or the outlying warehouses serviced by each drop point warehouse. This process will read the 'Warehouses' and 'Workstations' database tables and display the current outlying warehouse to Intradepot Receiving Queue configuration. The user can then make changes to the outlying warehouse to Intradepot Receiving Queue configuration. This will cause a message to be sent to the Towline Subcontroller via the Traffic Subcontroller to update the database.

**Conversation Access**

From the Menu Bar on the UI **Select** Towline.

**Data Entry Procedures**

1. **Select** Towline**.**
2. **Select** Update.
3. **Select** Spur to Warehouse Association. Displays Spurs and servicing warehouses.
4. **Select** OK.
5. **Select** Cancel to exit.

**Messages**

1. Message Sent

**Messages Sent**

1. A **J87** TOW Update Spur To Warehouse Association Type message is sent to the appropriate TOW Subcontroller.

**Note**: This process utilizes the windows **drop and drag** capabilities by allowing the use of a mouse to reassign servicing warehouses to proper spurs. Once the user makes changes to the outlying warehouse to Intradepot Receiving Queue configuration a message is sent to the Towline Subcontroller.

### 5.3.28.2.6 Towline System Menu (Release Cart From Intradepot Receiving Queue)- New Cumberland only

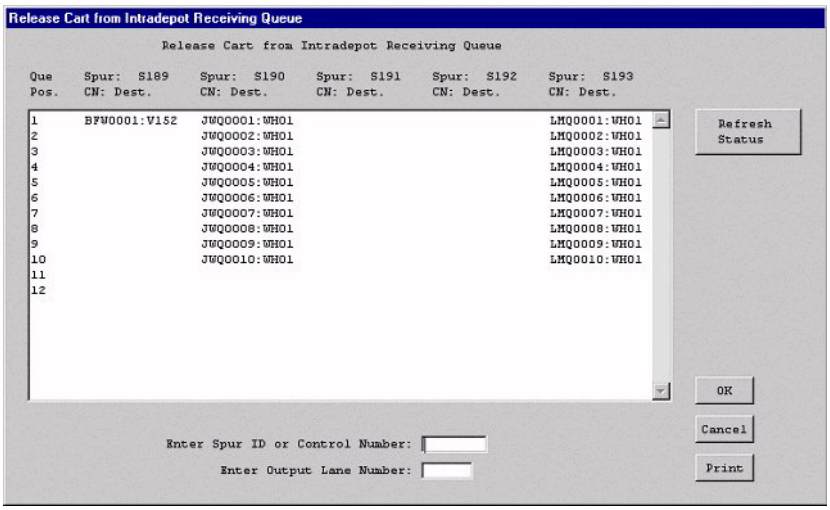



Figure 5.3.28.2.6-1 Release (Cart From Intradepot Receiving Queue)

**Description**

This process is used to notify the ECS that a cart, or set of carts, in the Intradepot Receiving Queue is ready to be moved to the outbound pallet conveyors. This process will first select and display information pertaining to the Intradepot Receiving Queues. The user will enter in the Spur ID or Control Number and then enter the output lane. This process will then format and send a message to the Towline Subcontroller via the Traffic Subcontroller to have the carts moved from the queue.

**Conversation Access**

From the Menu Bar on the UI **Select** Towline.

**Data Entry Procedures**

1. **Select** Towline.
2. **Select** Release.
3. **Select** From Intradepot Receiving Queue. Displays dialog box with queue position, spur numbers and destinations.
4. **Enter** Spur ID or Control Number to release. 4 digits in first box if spur, 5 digits if a control number.
5. **Enter** Output Lane Number. 1 digit in second box.
6. **Select** Ok or Print or Cancel. Selecting Ok sends Message Sent. Print sends output to printer. Cancel exits.

**Messages**

1. Message Sent
2. Spur/control number must contain a minimum of 4 characters. You entered __, __ characters.
3. Output Lane must contain a value between 1 and 8. You entered __.

**Messages Sent**

1. A **J77** TOW Release Cart From Intradepot Receiving Queue message is sent to the appropriate TOW Subcontroller.

**Note:** Once the user enters in the Spur ID or Control Number and then enters the output lane a message is sent to the Towline subcontroller.

Click the Print button to generate a printout of data displayed in the Results dialog box. A system Print dialog box will appear to allow the user to select a printer to print the report. The default, system Printer is pre-selected; if this is the correct printer, click the OK button or press the <Enter Key>. To configure the selected printer, click the Properties button. An alternate printer can be selected from a drop-down list of printers. For more information on printer selection and configuration consult your Windows NT Workstation manual.

### 5.3.28.2.7 Towline System Menu (Release Cart From M/H Queue)-New Cumberland only

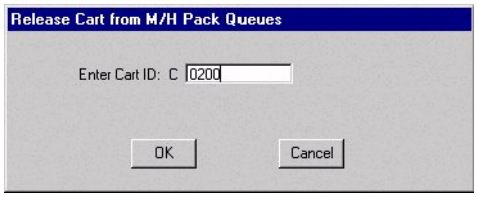



Figure 5.3.28.2.7-1 Release (Release Cart From M/H Queue)

**Description**

This process allows the user to release a towline cart on a M/H Queue spur. This cart must be first on a spur and not part of a chain of carts. Normally, the releasing of carts from this queue is automatically scheduled, but this process will allow the user to override this release schedule. The user will be prompted for the Cart ID of the cart to be released. The Cart ID will be verified through the database, and then a message will be formatted and sent to the Towline Subcontroller via the Traffic Subcontroller to move the cart.

**Conversation Access**

From the Menu Bar on the UI **Select** Towline.

**Data Entry Procedures**

1. **Select** Towline.
2. **Select** Release.
3. **Select** From M/H Pack Queue. Dialog box appears requesting Cart ID.
4. **Enter** Cart ID.
5. **Enter** minimum of 4 digits cart ID.
6. **Select** Ok. Message Sent appears.
7. **Select** Cancel to exit.

**Messages**

1. Message Sent
2. Cart ID must contain a minimum of 4 characters. You entered __, __ characters.

**Messages Sent**

1. A **J79** TOW Release Cart From M/H Queue message is sent to the appropriate TOW Subcontroller.

**Note:** Once the user inputs a valid Cart ID of the cart to be released a message is sent to the Towline subcontroller.

### 5.3.28.2.8 Towline System Menu (Abort Towline Chain)-New Cumberland only

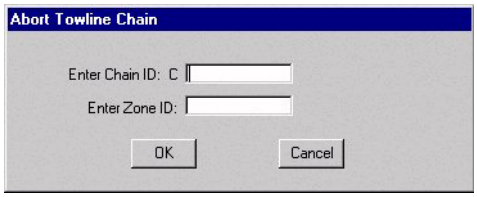



Figure 5.3.28.2.8-1 Misc. (Abort Towline Chain)

**Description**

This process is used to abort a chain that has caused a towline spur to be locked. The user is prompted for the Chain ID, which is then validated by this process. A message is then formatted and sent to the Towline Subcontroller to have the chain dissolved and to have the workstation unlocked.

**Conversation Access**

From the Menu Bar on the UI **Select** Towline.

**Data Entry Procedures**

1. **Select** Towline.
2. **Select** Misc.
3. **Select** Abort Towline Chain. Displays dialog box requesting Chain ID and Zone ID.
4. **Enter** Chain ID. 3 digits in first box.
5. **Enter** Zone ID. 1 digit in second box.
6. **Select** OK. Message Sent appears.
7. **Select** Cancel to exit.

**Messages**

1. Message Sent
2. Cart ID must contain a minimum of 3 characters. You entered __, __ characters.
3. Zone must contain a value between 1 and 6. You entered __.
4. Zone must contain 1 character. You entered __, __ characters.

**Messages Sent**

1. A **J91** TOW Abort Towline Chain message is sent to the appropriate TOW Subcontroller.

**Note:** Once the user inputs a valid Cart ID and zone a message is sent to the Towline subcontroller.

### 5.3.28.2.9 Towline System Menu (Unlock Towline Workstation)-New Cumberland only

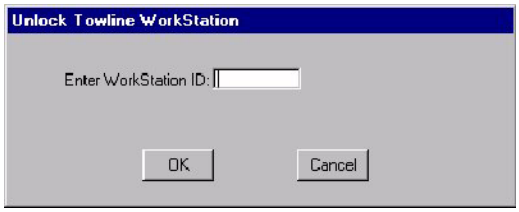



Figure 5.3.28.2.9-1 Misc. (Unlock Towline Workstation)

**Description**

This process is used to unlock a towline spur that has been locked by a cart that is part of a chain. When the spur is unlocked using this process, the chain is dissolved. This process will prompt the user for the Spur ID and will validate this information against data in the database. Then this process will format and send a message to the Towline Subcontroller via the Traffic Subcontroller to have the spur unlocked and the chain dissolved.

**Conversation Access**

From the Menu Bar on the UI **Select** Towline.

**Data Entry Procedures**

1. **Select** Towline.
2. **Select** Misc.
3. **Select** Unlock Towline Workstation. Dialog box appears requesting Workstation ID.
4. **Enter** Workstation ID. 4 digit Workstation ID.
5. **Select** OK. Message Sent appears.
6. **Select** Cancel to exit.

**Messages**

1. Message Sent
2. Workstation must contain 4 characters. You entered __, __ characters.

**Messages Sent**

1. A **J83** TOW Unlock Towline Workstation message is sent to the appropriate TOW Subcontroller.

**Note:** Once the user inputs a valid Workstation ID a message is sent to the Towline subcontroller.

### 5.3.29 Sortation System Menu - New Cumberland Only

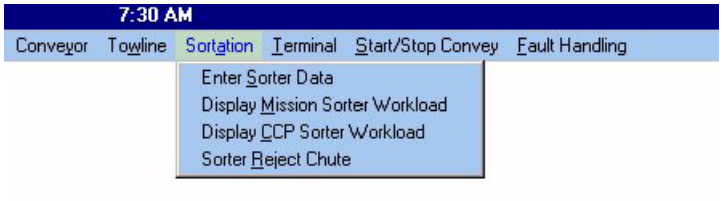



Figure 5.3.29-1 Sortation Menu -New Cumberland Only

Sortation Dialog Boxes direct the delivery of conveyable material to sorter chutes, each of which is dedicated to a specific destination within or outside of the EDC. There are two sorters, one that handles Mission, ISA and dedicated truck material, and one that handles CCP material.

The two display menu selections display the workloads of the Mission and CCP Sorters. They show the number of barcoded items delivered to each chute since ECS start-up, and a cumulative total for all chutes on the sorter.

The data entry conversations allow the user to assign a chute destination to an item that does not already have one assigned, and determine what action should be taken for a package that arrives at the CCP or Mission Sorter Reject Chute.

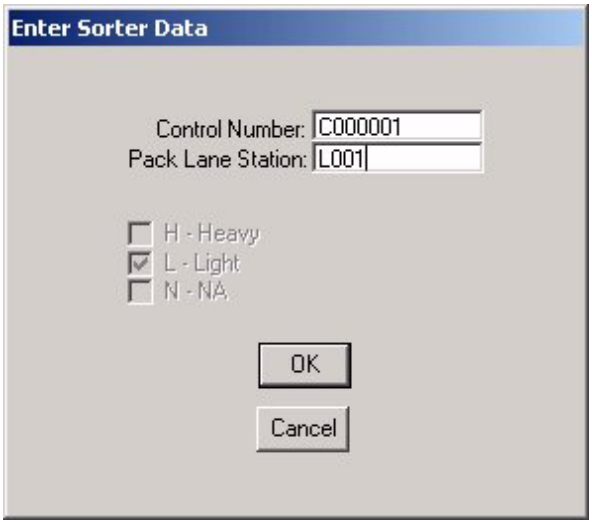



Figure 5.3.29-2 Enter Sorter Data – New Cumberland Only

**Description**

This process is used to assign a chute destination to a bar-coded item for which an assignment has not already been made (for instance, an item that arrives from an outlying warehouse). This process will prompt the user for the control number of the item to be inducted into the sorter, and the ID of the Pack Lane (sorter chute) to which the item is to be delivered. If the item is mission material, the user must also indicate whether the item is to be delivered to the heavy or light side of the chute, or neither. This process will then format and send a message to the Sorter Subcontroller via the Traffic Subcontroller to have the appropriate database records updated.

**Conversation Access**

From the Menu Bar on the UI **Select** Sortation.

**Data Entry Procedures**

1. **Sortation** displays submenu Enter Sorter Data, Display Mission Sorter Workload, Display CCP Sorter Workload, Sorter Reject Chute.
2. **Select** Enter Sorter Data. Displays dialog box.
3. **Select** either Heavy, Light, or N/A.
4. **Enter** Control Number and Pack Lane Station.
5. **Select** OK. Message Sent appears.
6. **Select** Cancel to exit.

**Messages**

1. Message Sent
2. Control Number not found.
3. Pack Lane must contain 4 characters. You entered __, __ characters.
4. Invalid Pack Lane Station.
5. Control Number must contain 7 characters. You entered __, __ characters.

**Messages Sent**

1. A **M01** message: Enter Sorter Data message is sent to the appropriate SRT Subcontroller.

**Note:** Once the user inputs a valid Control Number and Pack Lane Station a message is sent to the Sorter subcontroller.

### 5.3.29.1 Display Mission/CCP Sorter Workload-New Cumberland Only

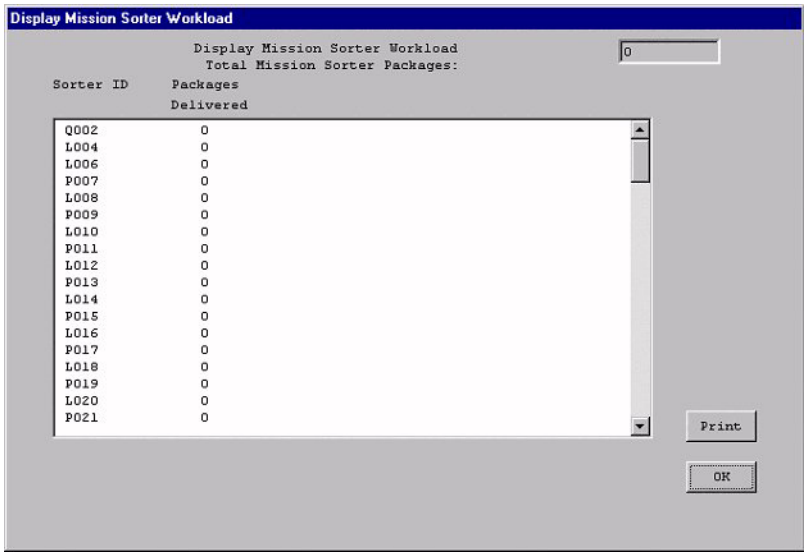



Figure 5.3.29.1-1 Display (Mission Sorter Workload) New Cumberland Only

**Description**

This process is used to obtain the number of bar-coded items delivered to the Mission Sorter since startup. This process will select information from the database and will then display the counts (Packages Delivered) for individual Mission Sorter chutes and will also display a cumulative total (Total Mission Sorter Packages) for all Mission chutes.

**Conversation Access**

From the Menu Bar on the UI **Select** Sortation.

**Data Entry Procedures**

1. **Select** Display Mission Sorter Workload. Displays Sorter ID and Packages delivered.
2. **Select** Print or OK to exit.
3. **Select** Display CCP Sorter Workload. Displays Sorter ID and Packages delivered.
4. **Select** Print or OK to exit.

**Messages**

1. Message Sent
2. Traffic Controller is Down-Unable to Complete Request

**Messages Sent**

1. A **T15** message: Display Mission/CCP Sorter Workload message is sent to the appropriate Sorter Subcontroller.

**System Response**

1. A **U16** message: Display Mission/CCP Sorter Workload Inquiry Response is returned from the appropriate Sorter Subcontroller to the UI.

**Note:** Once the user has reviewed the information in the Display Results dialog box, clicking the OK button returns to the main menu.

Click the Print button to generate a printout of data displayed in the Results dialog box. A system Print dialog box will appear to allow the user to select a printer to print the report. The default, system Printer is pre-selected; if this is the correct printer, click the OK button or press the <Enter Key>. To configure the selected printer, click the Properties button. An alternate printer can be selected from a drop-down list of printers. For more information on printer selection and configuration consult your Windows NT Workstation manual.

### 5.3.29.2 Sorter Reject Chute - New Cumberland Only

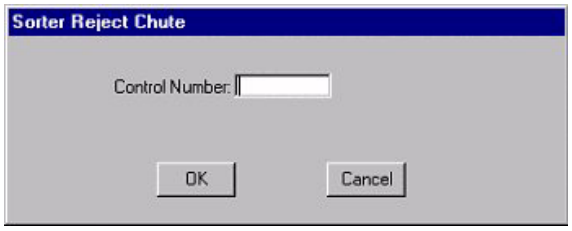



Figure 5.3.29.2-1 Sortation (Sorter Reject Chute) New Cumberland Only

**Description**

This process is used to display the sortation status of an item. This can be used solely as an inquiry process, or for taking action to correct an error condition. This process will display information from the database which informs the user as to whether or not a package arrived at the correct sorter chute and, if not, the reason it did not arrive. If the user decides to take a recommended action, a message will be formatted and sent to the Sorter Controller via the Traffic Subcontroller.

**Conversation Access**

From the Menu Bar on the UI **Select** Sortation.

**Data Entry Procedures**

1. **Select** Sorter Reject Chute. Displays dialog box requesting control number.
2. **Enter** Control Number. Displays dialog box requesting chute address.
3. **Enter** Chute Address.
4. **Displays** Status and Options to Re-induct, No Action, or Manually Deliver.
5. **Select** Option**.** Message Sent appears.
6. **Select** Cancel to exit**.**

**Messages**

1. Message Sent
2. Control Number not found
3. Control Number must contain a minimum of 7 characters. You entered __, __ characters.

**Messages Sent**

1. A **U18** message: Sorter Reject Chute message is sent to the appropriate Sorter Subcontroller.

**System Response - New Cumberland Only**

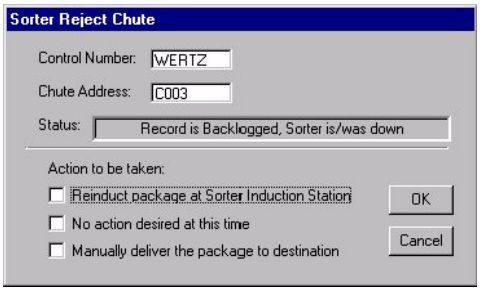



Figure 5.3.29.2-2 System Response (Sorter Reject Chute) New Cumberland Only

**Note:** Once the user has reviewed the information in the Results dialog box, user selects an action and confirms by clicking the OK button.

### 5.3.30 Sortation System Menu - Tracy Only

Figure 5.3.30-1 Sortation System Menu - Tracy Only

Sortation Dialog Boxes direct the delivery of conveyable material to sorter chutes, each of which is dedicated to a specific destination within or outside of **TRACY**. There are two sorters, one that handles Mission material, and one that handles CCP material.

The data entry conversations allow the user to assign a chute destination to an item that does not already have one assigned, and determine what action should be taken for a package that arrives at the CCP or Mission Sorter Reject Chute.

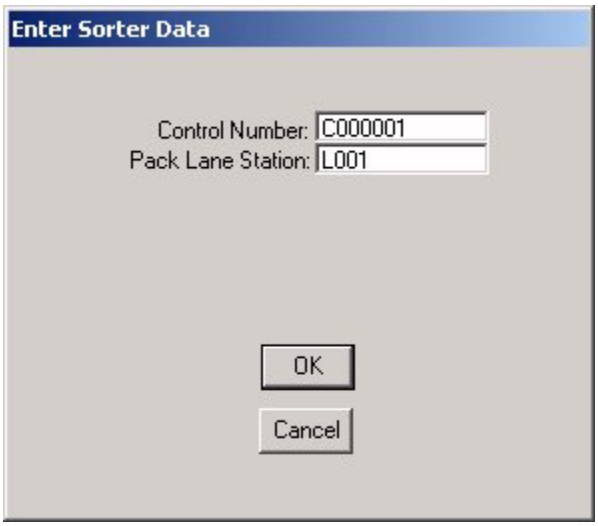



Figure 5.3.30-2 Enter Sorter Data – Tracy Only

**Description**

This process is used to assign a chute destination to a bar-coded item for which an assignment has not already been made (for instance, an item that arrives from an outlying warehouse). This process will prompt the user for the control number of the item to be inducted into the sorter, and the ID of the Pack Lane (sorter chute) to which the item is to be delivered. This process will then format and send a message to the Sorter Subcontroller via the Traffic Subcontroller to have the appropriate database records updated.

**Conversation Access**

From the Menu Bar on the UI **Select** Sortation.

**Data Entry Procedures**

1. **Sortation** displays submenu Enter Sorter Data, Sorter Reject Chute, Reload Sorter Data..
2. **Select** Enter Sorter Data. Displays dialog box.
3. **Enter** Control Number and Pack Lane Station.
4. **Select** OK. Message Sent appears.
5. **Select** Cancel to exit.

**Message**

1. Message Sent
2. Control Number not found.
3. Invalid Pack Lane Station.
4. Control Number must contain 7 characters. You entered __, __ characters.
5. Pack Lane must contain 4 characters. You entered __, __ characters.

**Messages Sent**

1. A **M01** message: Enter Sort Data message is sent to the appropriate SRT Subcontroller.

**Note:** Once the user inputs a valid Control Number and Pack Lane Station a message is sent to the Sorter subcontroller.

### 5.3.30.1 Sorter Reject Chute - Tracy Only

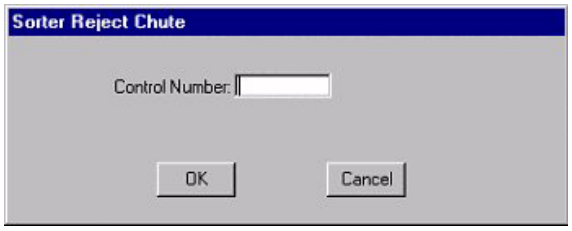



Figure 5.3.30.1-1 Sortation (Sorter Reject Chute) Tracy Only

**Description**

This process is used to display the sortation status of an item. This can be used solely as an inquiry process. This process will display information from the database which informs the user as to whether a package arrived at the correct sorter chute and, if not, the reason it did not arrive.

**Conversation Access**

From the Menu Bar on the UI **Select** Sortation.

**Data Entry Procedures**

1. **Select** Sorter Reject Chute. Displays dialog box requesting control number.
2. **Enter** Control Number. Displays dialog box requesting chute address.
3. **Enter** Chute Address.
4. **Displays** Status Message.
5. **Select** Cancel to exit**.**

**Messages**

1. Message Sent
2. Control Number not found
3. Control Number must contain a minimum of 7 characters. You entered __, __ characters.

**Messages Sent**

1. None.

**System Response - Tracy Only**

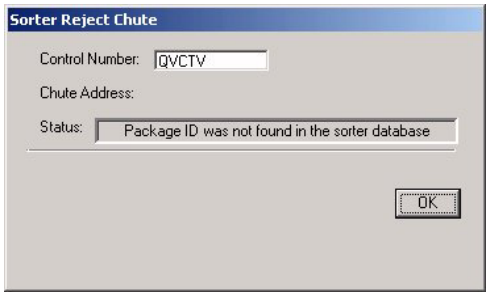



Figure 5.3.30.1-2 System Response (Sorter Reject Chute) Tracy Only

**Note:** Once the user has reviewed the information in the Results dialog box, user selects OK button.

5.3.30.2 **Reload Sorter Data - Tracy Only**

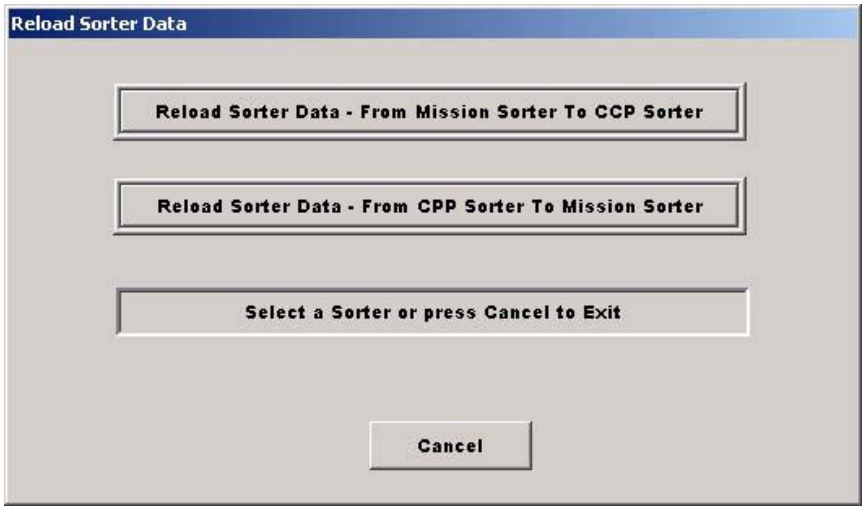



Figure 5.3.30.2-1 Sortation (Reload Sorter Data) – Tracy Only

**Description**

This process is used to reload the sortation data from the database to the appropriate CCP or Mission Sorter Subcontroller.

**Conversation Access**

From the Menu Bar on the UI **Select** Sortation.

**Data Entry Procedures**

1. **Select** Reload Sorter Data. Status Message ("Select a Sorter or press Cancel to Exit"). If Cancel button is pressed, Returns User to Main Menu.
2. **Select** 'Cancel' Button. Returns User to Main Menu.
3. **SELECT** *'Reload Sorter Data – From Mission Sorter To CCP Sorter'* or *'Reload Sorter Data – From CCP Sorter To Mission Sorter'*, Button. Displays appropriate Status Message. MessageBox – 'Message Sent" appears and screen reloads to original state.
4. **Select** Cancel to exit**.**

**Messages**

1. Message Sent
2. Select a Sorter or press Cancel to Exit
3. Loading CCP Sorter Data
4. Loading Mission Sorter Data

**Messages Sent**

1. An **A11** message: Reload Sorter Data message is sent to the appropriate sorter Subcontroller.

### 5.3.31 Terminal System Menu -New Cumberland only

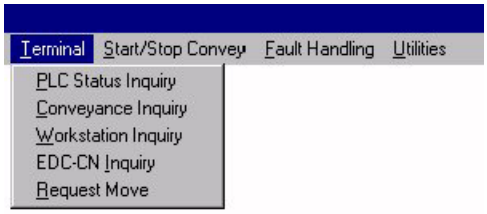



Figure 5.3.31-1 Terminal Menu

**Description**

The Terminal Menu includes inquiry Dialog Boxes and various data entry Dialog Boxes that are not used during the normal workflow. Though the selections listed on this menu, the user can (1) request information about the state of any of the several communication links that affect ECS operations, about a conveyance (tote or cart), about a workstation, spur or work area, or about an EDC-CN; (2) request material movement, modify material movement, or report the manual movement of material.

#### 5.3.31.1 Terminal System Menu (PLC Status Inquiry)-New Cumberland only

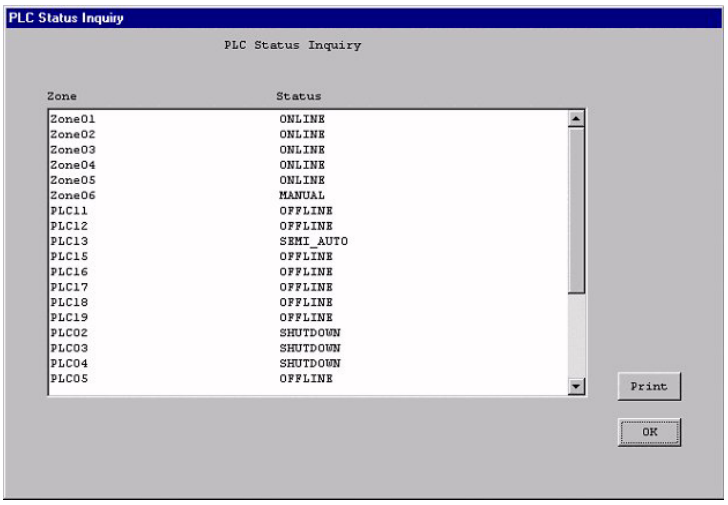



Figure 5.3.31.1-1 Terminal (PLC Status Inquiry)

**Description**

This process is used to display information about the status of the Towline PLCs, the Tote PLCs, the Conveyor PLCs, and the Sorters. The status can either be Startup, Shutdown, Manual, Semi-automatic, Online, Offline, No Node, or Unknown. This process selects the necessary information from the database and displays it to the user.

**Conversation Access**

From the Menu Bar on the UI **Select** Terminal.

**Data Entry Procedures**

1. **Terminal** displays submenu PLC Status Inquiry, Conveyance Inquiry, Workstation Inquiry, EDC-CN Inquiry, Request Move.
2. **Select** PLC Status Inquiry**.** Displays PLC zone and status.
3. **Select** Print or Ok to exit.

**Messages**

None

**Messages Sent**

N/A

**Note:** Once the user has reviewed the information in the Results dialog box, clicking the OK button returns to the main menu.

Click the Print button to generate a printout of data displayed in the Results dialog box. A system Print dialog box will appear to allow the user to select a printer to print the report. The default, system Printer is pre-selected; if this is the correct printer, click the OK button or press the <Enter Key>. To configure the selected printer, click the Properties button. An alternate printer can be selected from a drop-down list of printers. For more information on printer selection and configuration consult your Windows NT Workstation manual.

### 5.3.31.2 Terminal System Menu (Conveyance Inquiry)-New Cumberland only

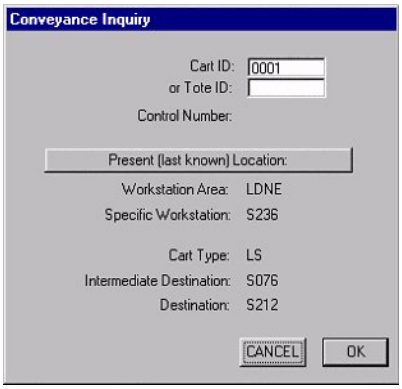



Figure 5.3.31.2-1 Terminal (Conveyance Inquiry)

**Description**

This process will display information for either a Cart ID or a Tote ID. It will receive the ID from the user and will query the database for the needed information. The process will then display necessary information about the conveyance, including control number, workstation area, and destinations.

**Conversation Access**

From the Menu Bar on the UI **Select** Terminal.

**Data Entry Procedures**

1. **Select** Conveyance Inquiry**.** Displays conveyance inquiry dialog box requesting Cart ID.
2. **Enter** Cart ID or Tote ID**.**
3. **Select** Ok**.** Displays status on cart of control number, workstation area, specific workstation, cart type, intermediate destination, destination.
4. **Select** Cancel to Exit.

**Messages**

1. Conveyance ID ____ was not found.
2. No conveyance selected (choose cancel to exit)
3. Cart ID must contain a minimum of 4 characters. You entered __, __ characters.
4. Tote ID must contain a minimum of 5 characters. You entered __, __ characters.

**Messages Sent**

None

**Note:** Once the user has reviewed the information in the Results dialog box, clicking the OK button returns to the main menu.

### 5.3.31.3 Terminal System Menu (Workstation Inquiry)-New Cumberland only

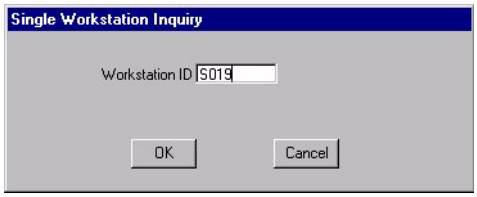



Figure 5.3.31.3-1 Terminal (Workstation Inquiry)

**Description**

This process will display information about a given Workstation ID. The user will be prompted for an ID, and the process will show the activity count for that workstation. The activity count is either for the tote or the towline. This information is selected from the database.

**Conversation Access**

From the Menu Bar on the UI **Select** Terminal.

**Data Entry Procedures**

1. **Select** Workstation Inquiry.
2. **Enter** Workstation ID. Displays workstation ID, area, type, locked/unlocked, capacity, counts, status logical/physical, permanent loops, destination, and PLC number.
3. **Select** Print or OK to exit.

**Messages**

1. Workstation ID ____ was not found.
2. Workstation ID must contain 4 characters. You entered __, __ characters.

**Messages Sent**

None

**System Response-New Cumberland only**

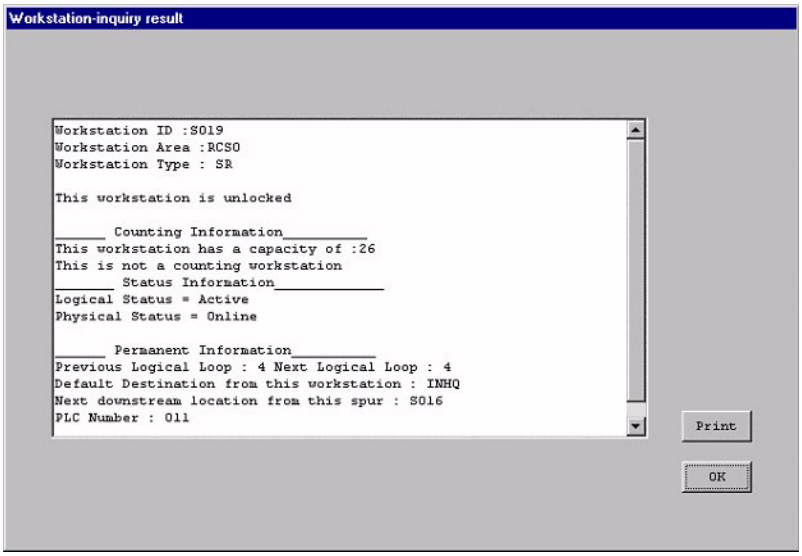



Figure 5.3.31.3-2 Terminal (Workstation Inquiry)

**Note:** Once the user has reviewed the information in the Results dialog box, clicking the OK button returns to the Inquiry dialog box.

Click the Print button to generate a printout of data displayed in the Results dialog box. A system Print dialog box will appear to allow the user to select a printer to print the report. The default, system Printer is pre-selected; if this is the correct printer, click the OK button or press the <Enter Key>. To configure the selected printer, click the Properties button. An alternate printer can be selected from a drop-down list of printers. For more information on printer selection and configuration consult your Windows NT Workstation manual.

### 5.3.31.4 Terminal System Menu (EDC-CN Inquiry)-New Cumberland only

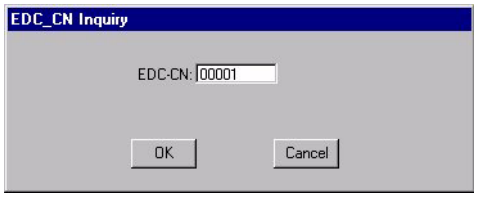



Figure 5.3.31.4-1 Terminal (EDC-CN Inquiry)

**Description**

This process is used to obtain status and location information about a specific EDC-CN. The user will be prompted for the CN. The process will then query the database and display the information about the EDC-CN, including the Status, Status Date and Time, the PCN, Intermediate Destination, Final Destination, and Shipment Unit Number.

**Conversation Access**

From the Menu Bar on the UI **Select** Terminal.

**Data Entry Procedures**

1. **Select** EDC-CN Inquiry.
2. **Enter** Control number. Displays Control number, status date, intermediate destination, destination, conveyance ID.

**Messages**

1. **Control** number must contain 5 characters. You entered __, __ characters.

**Messages Sent**

None

**System Response-New Cumberland only**

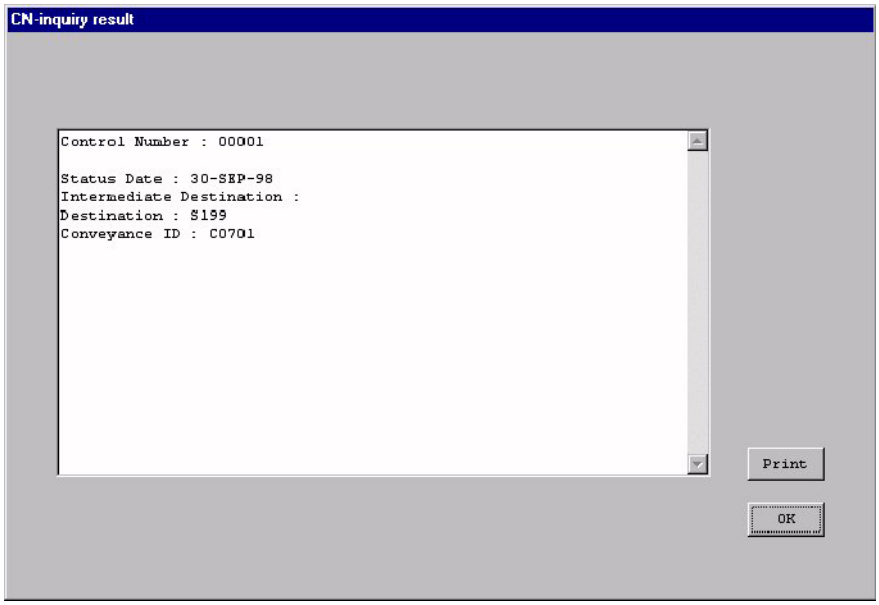



Figure 5.3.31.4-2 Terminal (EDC-CN Inquiry)

**Note:** Once the user has reviewed the information in the Results dialog box, clicking the OK button returns to the Inquiry dialog box.

Click the Print button to generate a printout of data displayed in the Results dialog box. A system Print dialog box will appear to allow the user to select a printer to print the report. The default, system Printer is pre-selected; if this is the correct printer, click the OK button or press the <Enter Key>. To configure the selected printer, click the Properties button. An alternate printer can be selected from a drop-down list of printers. For more information on printer selection and configuration consult your Windows NT Workstation manual.

### 5.3.31.5 Terminal System Menu (Request Move)-New Cumberland only

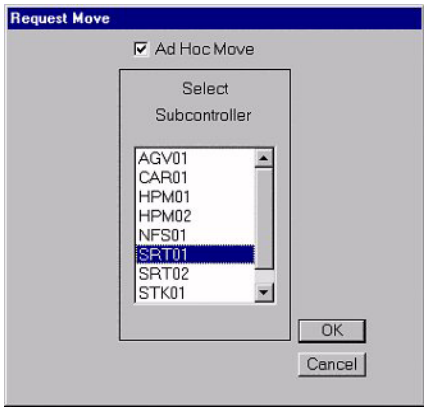



Figure 5.3.31.5-1 Terminal (Request Move)

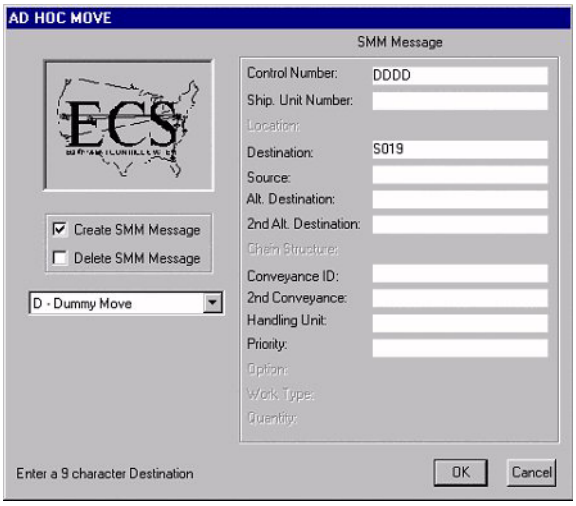



Figure 5.3.31.5-2 Terminal (Request Move-Ad Hoc Move)

**Description**

This process is used to move material either by the towline or by the tote conveyor. The user will enter the EDC-CN as well as the destination. The process will verify the information entered. When valid data is entered, the process will format and send a message to either the Towline Subcontroller or the Tote Conveyor Subcontroller.

**Conversation Access**

From the Menu Bar on the UI **Select** Terminal.

**Data Entry Procedures**

1. **Select** Request Move**.** Displays dialog box, listing subcontrollers.
2. **Select** Subcontroller.
3. **Select** OK.
4. **See** Ad Hoc move section in MHE**.**

**Messages**

1. **See** Ad Hoc move section in MHE**.**

**Messages Sent**

1. **See** Ad Hoc move section in MHE**.**

**Note:** Once the user has Filled-in enabled fields, clicking the OK button returns to the Request Move dialog box.

## 5.3.32 Start/Stop Conveyance System-New Cumberland only

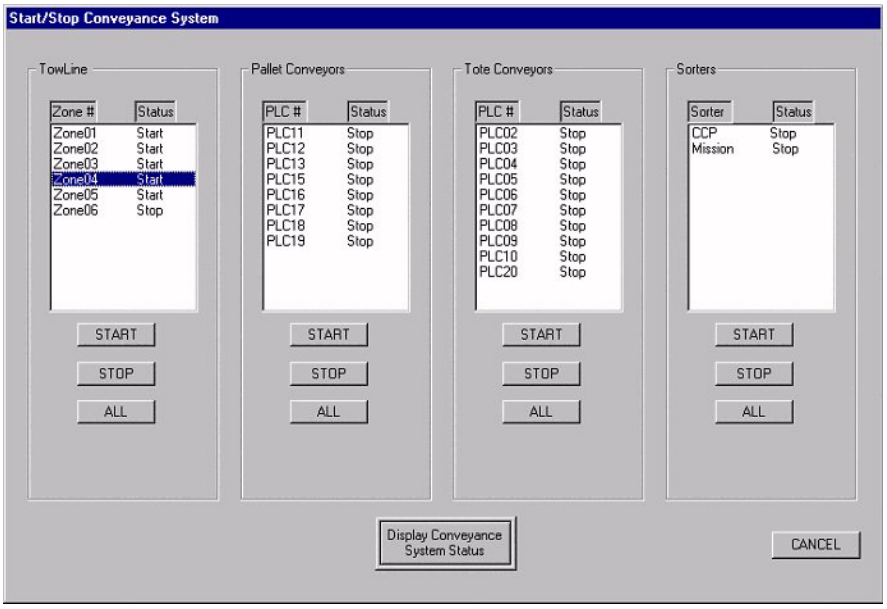



Figure 5.3.32-1 Start/Stop Conveyance System

There are three groups of ECS software that manage automatic movement of material throughout the DC:

- The Towlines are managed by Towline system software. This software routes carts to a given destination by sending movement request to towline Programmable Logic Controllers (PLCs). There are six towlines PLCs, each controlling a separate towline PLC zone, within the DC.
- The Pallet and Tote conveyors are managed by Conveyor system software. This software routes pallets and totes to a given destination by sending movement requests to conveyor PLCs. There are eight-pallet conveyor PLCs and PLC zones. There are 10-tote conveyor PLCs and PLC zones.
- The Mission and CCP Sorters are managed by Sortation system software. This software delivers material to a given chute by sending movement requests to Microprocessors. A separate microprocessor controls each sorter.

**Description**

This process will either start or stop the Towline, Pallet, Tote Conveyors, CCP and Mission Sorters. The process will receive the request from the user, and will format and send the appropriate message(s) to the pertinent Subcontroller via the Traffic Subcontroller.

**Conversation Access**

From the Menu Bar on the UI **Select** Start/Stop Convey.

**Data Entry Procedures**

1. **Start/Stop Convey** displays dialog box displaying Towline Zone number and status, Pallet Conveyors with PLC numbers and status, Tote Conveyors with PLC number and status, Sorters with sorter numbers and status, and Display Conveyance System Status.
2. **Select** Options. Displays Submit dialog box.
3. **Click** on Submit. Message Sent appears.
4. **Select** Display Conveyance System Status. Displays Zone, PLC and current status of on line, offline, semi-auto, or shutdown.
5. **Select** Cancel to exit.

**Messages**

1. Message Sent
2. PLC zone ___ can't be started because it is in Online mode.

**Messages Sent**

A **A01** TOW Start/Stop Conveyance System message is sent to the appropriate TOW Subcontroller.
A **A01** PAL Start/Stop Conveyance System message is sent to the appropriate PAL Subcontroller.
A **A01** TOT Start/Stop Conveyance System message is sent to the appropriate TOT Subcontroller.
A **A01** SRT Start/Stop Conveyance System message is sent to the appropriate SRT Subcontroller.

**System Response-New Cumberland only**

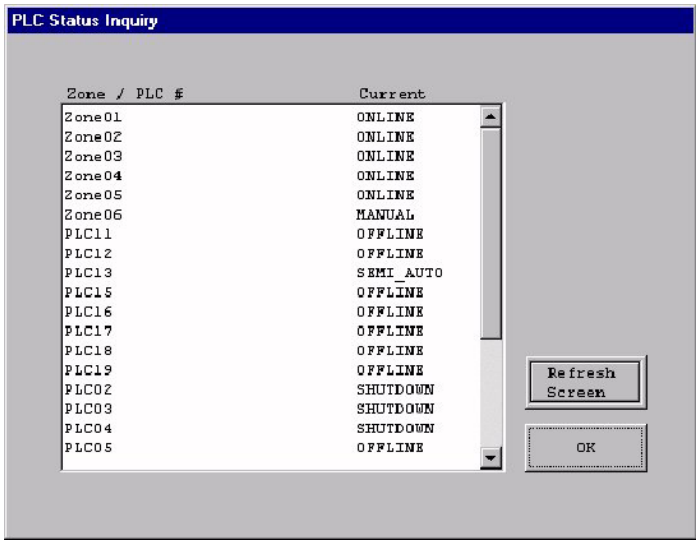



Figure 5.3.32-2 Display (PLC Status Inquiry)

**Note:** Once the user has reviewed the information in the Results dialog box, clicking the OK button returns to the Start/Stop Conveyance System dialog box.

### 5.3.33 Fault Handling System Menu -New Cumberland only

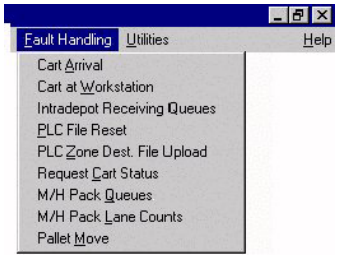



Figure 5.3.33-1 Fault Handling Menu

The conversations on the Fault Handling Menu are used to correct discrepancies between the locations of a cart in the ECS and the physical location of the cart in the DC. Specifically, the conversation notifies ECS that (1) a cart has been diverted to a spur, or (2) a cart is located at a specific place on the spur.

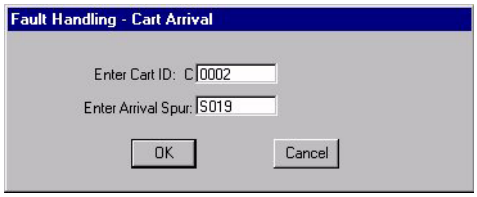



Figure 5.3.33-2 Fault Handling (Cart Arrival)

**Description**

A Cart Arrival process is initiated by the user to tell ECS that a cart has arrived at a towline spur or transfer. This process will allow the user to enter in a Cart ID as well as to enter in the Arrival Spur. After validating the information, the process will format and send a message to the Towline Subcontroller via the Traffic Subcontroller.

**Conversation Access**

From the Menu Bar on the UI **Select** Fault Handling.

**Data Entry Procedures**

1. **Fault Handling** displays submenu Cart Arrival, Cart at Workstation, Intradepot Receiving Queues, PLC File Reset, and PLC Zone Dest. File Upload, Request Cart Status, M/H Pack Queues, M/H Pack Lane Counts.
2. **Select** Cart Arrival**.** Displays dialog box requesting Cart ID and Arrival Spur.
3. **Enter** Cart ID and Arrival Spur.
4. **Select** OK. Message Sent appears.
5. **Select** Cancel to exit.

**Messages**

1. Message Sent
2. Cart ID must contain a minimum of 4 characters. You entered __, __ characters.
3. Arrival spur must contain 4 characters. You entered __, __ characters.

**Messages Sent**

1. A **J93** TOW Cart Arrival message is sent to the appropriate TOW Subcontroller.

**Note:** Once the user has provided a valid Cart ID and Arrival Spur, clicking the OK button returns to the Cart Arrival dialog box.

### 5.3.33.1 Fault Handling System Menu (Cart At Workstation)-New Cumberland only

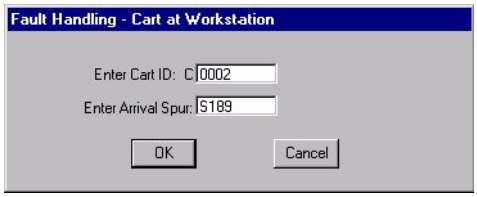



Figure 5.3.33.1-1 Fault Handling (Cart At Workstation)

**Description**

A Cart at Workstation process is initiated by the user to tell ECS the location of a cart. The message is initiated when a cart is physically located at a specific place on a spur, but the ECS does not know the cart is located there. This process will allow the user to enter in a Cart ID as well as to enter in the Arrival Spur. After validating the information, the process will format and send a message to the Towline Subcontroller via the Traffic Subcontroller.

**Conversation Access**

From the Menu Bar on the UI **Select** Fault Handling.

**Data Entry Procedures**

1. **Select** Cart at Workstation**.** Displays dialog box requesting Cart ID and Arrival Spur.
2. **Enter** Cart ID and Arrival Spur.
3. **Select** OK**.** Message Sent appears.

**Messages**

1. Message Sent
2. Cart ID must contain a minimum of 4 characters. You entered __, __ characters.
3. Arrival spur must contain 4 characters. You entered __, __ characters.

**Messages Sent**

1. A **J93** TOW Cart At Workstation message is sent to the appropriate TOW Subcontroller.

**Note:** Once the user has provided a valid Cart ID and Arrival Spur, clicking the OK button returns to the Cart Arrival dialog box.

### 5.3.33.2 Fault Handling System Menu (Intradepot Receiving Queues)-New Cumberland only

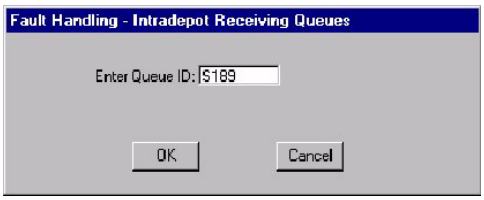



Figure 5.3.33.2-1 Fault Handling (Intradepot Receiving Queues)

**Description**

This process will display information for a given queue at Intradepot Receiving. The user will be prompted for a Queue ID, which will then be validated. Then this process will select the necessary information from the database and will display the queue as well as Cart IDs, CNs, and Destinations for the carts listed in the queue. The user has the ability to change the Queue Position for a cart in the queue, and the user may also add new Cart IDs to the queue. Whenever a change is made to information about the queue, this process will format and send a message to the Towline Subcontroller via the Traffic Subcontroller.

**Conversation Access**

From the Menu Bar on the UI **Select** Fault Handling.

**Data Entry Procedures**

1. Select Intradepot Receiving Queues. Displays dialog box-requesting queue ID.
2. **Enter** Queue ID.

**Messages**

1. Message Sent
2. Cart ID must contain a minimum of 4 characters. You entered __, __ characters.
3. ____ is an invalid spur number.
4. Queue ID must contain a value between S189 and S193. You entered ____.
5. (Entry 1) You must enter 4 numeric characters. You entered __, __ characters.
6. (Entry 1) Cart ID cannot exceed a value of '1125'. You entered __, __ characters.
7. (Entry _) You must enter 4 numeric characters. You entered __, __ characters.
8. (WARNING)-You must have at least 1 entry or cancel to exit.
9. Location must contain 4 characters. You entered __ , __ characters.
10. (WARNING)-To clear a queue enter 0000 into the first position while leaving ALL other positions blanks.
11. (Entry _) Queue can only be cleared from first entry box!

**Messages Sent**

1. A **T27** TOW Intradepot Receiving Queues message is sent to the appropriate TOW Subcontroller.

**System Response-New Cumberland only**

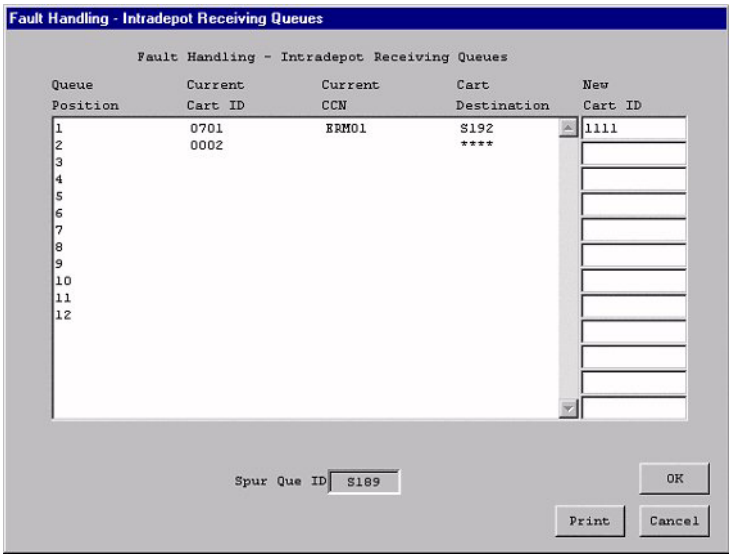



Figure 5.3.33.2-2 System Response (Intradepot Receiving Queues)

**Note:** Once the user has changed the Queue Position for a cart in the queue, or added new Cart IDs to the queue, clicking the OK button returns to the Intradepot Receiving Queues dialog box.

Click the Print button to generate a printout of data displayed in the Results dialog box. A system Print dialog box will appear to allow the user to select a printer to print the report. The default, system Printer is pre-selected; if this is the correct printer, click the OK button or press the <Enter Key>. To configure the selected printer, click the Properties button. An alternate printer can be selected from a drop-down list of printers. For more information on printer selection and configuration consult your Windows NT Workstation manual.

### 5.3.34 Fault Handling System Menu (PLC File Reset)-New Cumberland only

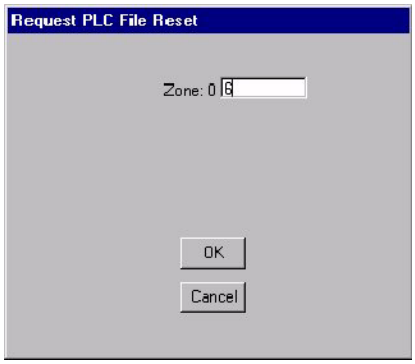



Figure 5.3.34-1 Fault Handling (PLC File Reset**)**

**Description**

This process will allow the user to request the resetting of the PLC file. This conversation should only be used in case of emergency! The user will enter the zone that is to be reset. This process will then format and send a message to the Towline Subcontroller via the Traffic Subcontroller.

**Conversation Access**

From the Menu Bar on the UI **Select** Fault Handling.

**Data Entry Procedures**

1. **Select** PLC File Reset. Displays dialog box requesting zone number.
2. **Enter** Zone Number.
3. **Select** Ok or Cancel to exit.

**Messages**

1. Message Sent
2. Zone must contain 1 characters. You entered __, __ characters.
3. Zone must contain a value between 1 and 6. You entered __.

**Messages Sent**

1. A **T13** TOW PLC File Reset message is sent to the appropriate TOW Subcontroller.

**Note:** Once the user has provided a valid Zone number, clicking the OK button returns to the PLC File Reset dialog box.

### 5.3.35 Fault Handling System Menu (Request PLC Zone Destination File Upload)- New Cumberland only

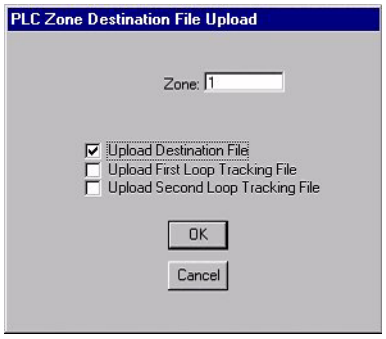



Figure 5.3.35-1 Fault Handling **(**Request PLC Zone Destination File Upload**)**

**Description**

This process will allow the user to request the resetting of the PLC file. This conversation should only be used in case of emergency! The user will enter the zone that is to be reset. This process will then format and send a message to the Towline Subcontroller via the Traffic Subcontroller.

**Conversation Access**

From the Menu Bar on the UI **Select** Fault Handling.

**Data Entry Procedures**

1. **Select Request PLC Zone Destination File Upload.**
2. **Enter Zone** number and select option of either Upload Destination File, Upload First Loop Tracking File, Upload Second Loop Tracking File.
3. **Select Ok.** Message Sent appears.
4. **Select Cancel** to exit.

**Messages**

1. Message Sent
2. PLC Zone must contain 1 characters. You entered __, __ characters.
3. PLC Zone must be between 1 and 6.
4. No file selected!

**Messages Sent**

1. A **T07** TOW Request PLC Zone Destination File Upload message is sent to the appropriate TOW Subcontroller.

**Note:** Once the user has provided a valid Zone number and file, clicking the OK button returns to the Request PLC Zone Destination File Upload dialog box.

### 5.3.35.1 Fault Handling System Menu (Request Cart Status)-New Cumberland only

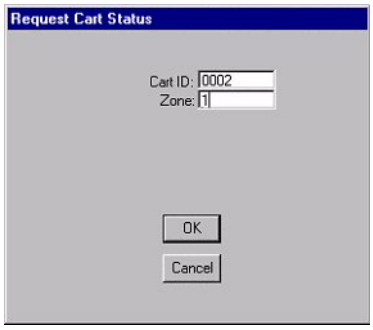



Figure 5.3.35.1-1 Fault Handling (Request Cart Status)

**Description**

The user generates this process when they wish to request the information on a cart. The information that will be displayed to the user is the cart destination, the recirculation count, the chain ID, and the chain length. This process will prompt the user for a Cart ID and will then format and send a message to the Towline Subcontroller via the Traffic Subcontroller. This process will also receive the response message from the Towline Subcontroller via the Traffic Subcontroller that will be displayed to the user.

**Conversation Access**

From the Menu Bar on the UI **Select** Fault Handling.

**Data Entry Procedures**

1. **Select** Request Cart Status. Displays dialog box requesting cart ID and zone.
2. **Enter** Cart ID and Zone**.** **Click** on OK. Message Sent appears.
3. **Select** Cancel to exit**.**

**Messages**

1. Message Sent
2. Cart ID must contain a minimum of 4 characters. You entered __, __ characters.
3. Zone must contain 1 characters. You entered __, __ characters.

**Messages Sent**

1. A **T11** TOW Request Cart Status message is sent to the appropriate TOW Subcontroller

**Note**: Once the user has provided a valid Cart ID and Zone number, clicking the OK button returns to the Request Cart Status dialog box.

### 5.3.35.2 Fault Handling System Menu (M/H Pack Lane Queues)-New Cumberland only

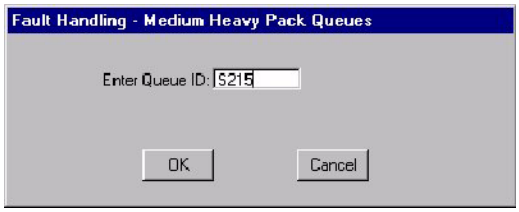



Figure 5.3.35.2-1 Fault Handling (M/H Pack Lane Queues)

**Description**

This process will display information for a given queue at M/H Pack. The user will be prompted for a Queue ID, which will then be validated. Then this process will select the necessary information from the database and will display the queue as well as Cart IDs, CNs, Destinations for the carts listed in the queue. The user has the ability to change the Queue Position for a cart in the queue, and the user may also add new Cart IDs to the queue. Whenever a change is made to information about the queue, this process will format and send a message to the Towline Subcontroller via the Traffic Subcontroller.

**Conversation Access**

From the Menu Bar on the UI **Select** Fault Handling.

**Data Entry Procedures**

1. **Select** M/H Pack Queues. Dialog box appears requesting Queue ID.
2. **Enter** Queue ID. Click on OK.
3. **Select** Cancel to exit.

**Messages**

1. Message Sent
2. Cart ID must contain a minimum of 4 characters. You entered __, __ characters.
3. ____ is an invalid spur number.
4. Queue ID must contain a value between S215 and S226. You entered ____.
5. (Entry 1) You must enter 4 numeric characters. You entered __, __ characters.
6. (Entry 1) Cart ID cannot exceed a value of '1125'. You entered __, __ characters.
7. (Entry _) You must enter 4 numeric characters. You entered __, __ characters.
8. (WARNING)-You must have at least 1 entry or cancel to exit.
9. Location must contain 4 characters. You entered __ , __ characters.
10. (WARNING)-To clear a queue enter 0000 into the first position while leaving ALL other positions blanks.
11. (Entry _) Queue can only be cleared from first entry box!!!

**Messages Sent**

1. A **J95** TOW M/H Pack Lane Queues message is sent to the appropriate TOW Subcontroller.

**System Response-New Cumberland only**

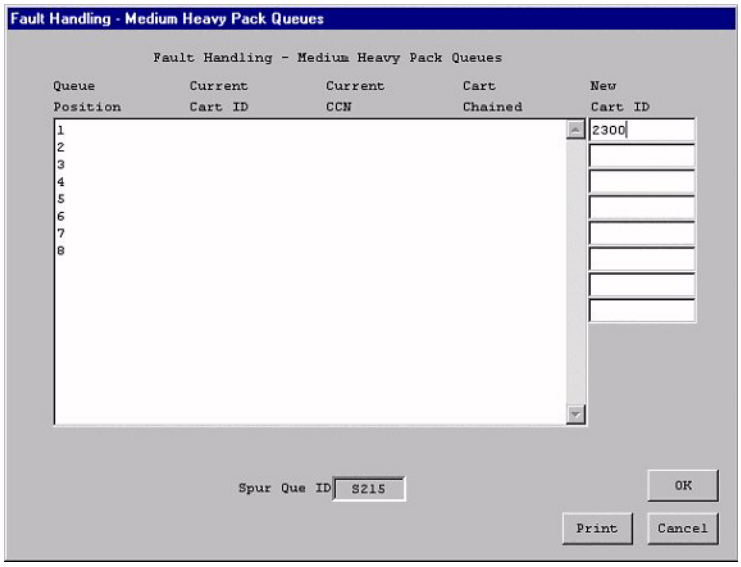



Figure 5.3.35.2-2 System Response (M/H Pack Lane Queues)

**Note**: Once the user has changed the Queue Position for a cart in the queue, or added new Cart IDs to the queue, clicking the OK button returns to the M/H Pack Lane Queues dialog box.

Click the Print button to generate a printout of data displayed in the Results dialog box. A system Print dialog box will appear to allow the user to select a printer to print the report. The default, system Printer is pre-selected; if this is the correct printer, click the OK button or press the <Enter Key>. To configure the selected printer, click the Properties button. An alternate printer can be selected from a drop-down list of printers. For more information on printer selection and configuration consult your Windows NT Workstation manual.

### 5.3.35.3 Fault Handling System Menu (M/H Pack Lane Counts)-New Cumberland only

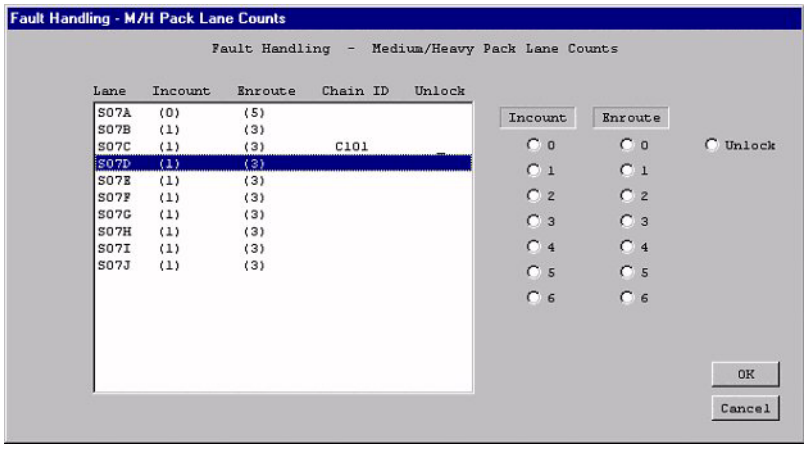



Figure 5.3.35.3-1 Fault Handling (M/H Pack Lane Counts)

**Description**

This process will display the counts for the lanes at M/H Pack. For each lane, this process will display the number of carts in the lane, the number of carts in route to the lane, and the Chain ID and lock status if they apply. This information is selected from the database. The user has the ability to change either the count for the carts within the lane, or the count for the number of carts in route to the lane. The user can also unlock a lane from this process. If changes are made, this process will format and send a message to the Towline Subcontroller via the Traffic Subcontroller.

**Conversation Access**

From the Menu Bar on the UI **Select** Fault Handling.

**Data Entry Procedures**

1. **Select** M/H Pack Lane Counts. Dialog box appears displaying Lane, InCount, Enroute, Chain ID, and Unlock statuses.
2. **Select** an option of InCount, Enroute, or Unlock.
3. **Select** OK. Message Sent appears.
4. **Select** Cancel to exit.

**Messages**

1. Message Sent
2. Nothing selected.
3. One or more selections are not a valid chain.
4. Do you really want to unlock this chain?

**Messages Sent**

1. A **J97** TOW M/H Pack Lane Counts message is sent to the appropriate TOW Subcontroller.

**Note:** Once the user has changed either the count for the carts within the lane, or the count for the number of carts enroute to the lane or unlocks a lane, clicking the OK button returns to the main menu.

## 5.3.36 Fault Handling System Menu (Pallet Move)-New Cumberland only

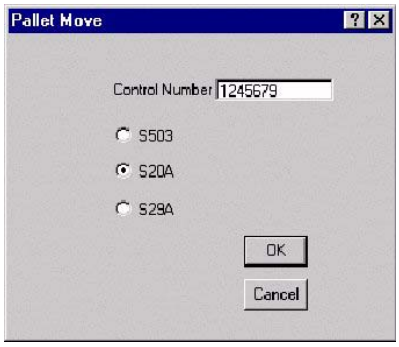



Figure 5.3.36-1 Fault Handling **(**Pallet Move**)**

**Description**

This process will allow the user to send a pallet move request to the PLC. The user will enter the control number and select offloading spur. This process will then format and send a message to the Towline Subcontroller via the Traffic Subcontroller.

**Conversation Access**

From the Menu Bar on the UI **Select** Fault Handling.

**Data Entry Procedures**

1. **Select Pallet Move.**
2. **Enter** Control number and select offloading spur.
3. **Select Ok.** Message Sent appears.
4. **Select Cancel** to exit.

**Messages**

1. Message Sent
2. Control number must contain 7 characters. You entered __, __ characters.
3. You must select an offloading spur.

**Messages Sent**

1. A **T23** TOW Pallet Move message is sent to the appropriate TOW Subcontroller.

**Note:** Once the user has provided a valid control number and offloading spur, clicking the OK button returns to the Pallet Move dialog box.

### 5.3.37 Utilities System Menu – New Cumberland Only

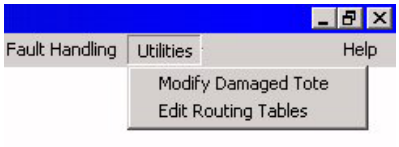



Figure 5.3.37-1 Utilities Menu (Modify Damaged Tote)

This is the utilities section of the User Interface. All general system utilities and tools will be added to this menu selection.

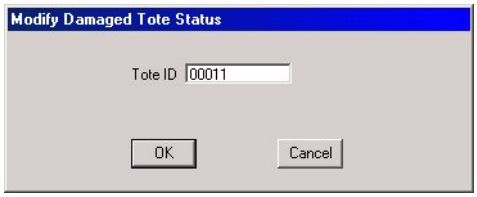



Figure 5.3.37-2 Utilities (Damaged Tote)

**Description**

This is the utilities section of the User Interface, UI. Selection to Modify Damaged Tote can be performed here. Typically, a submenu action for the Modify Damaged Tote is selected, a dialog box will be displayed and the OK button is clicked. The following actions may be performed from the **Utilities** selection:

**Conversation Access**

From the Menu Bar on the UI **Select** Utilities.

**Data Entry Procedures**

1. **Utilities** displays submenu Modify Damaged Tote.
2. **Select** Modify Damaged Tote. Displays dialog box requesting Tote ID.
3. **Enter** Tote ID.
4. **Select** OK. Message Sent appears.
5. **Select** Cancel to exit.

**Messages**

1. Message Sent
2. Tote ID must contain a minimum of 5 characters. You entered __, __ characters.
3. Tote ID must contain only numbers. You entered __, __ characters.

**Messages Sent**

A **T29** TOT Damaged Tote message is sent to the appropriate TOT Subcontroller.

**Note:** Once the user has input the number of the damaged tote, clicking the OK button returns to the Damaged Tote dialog box.

## 5.3.38 Utilities System Menu (Route Tables)

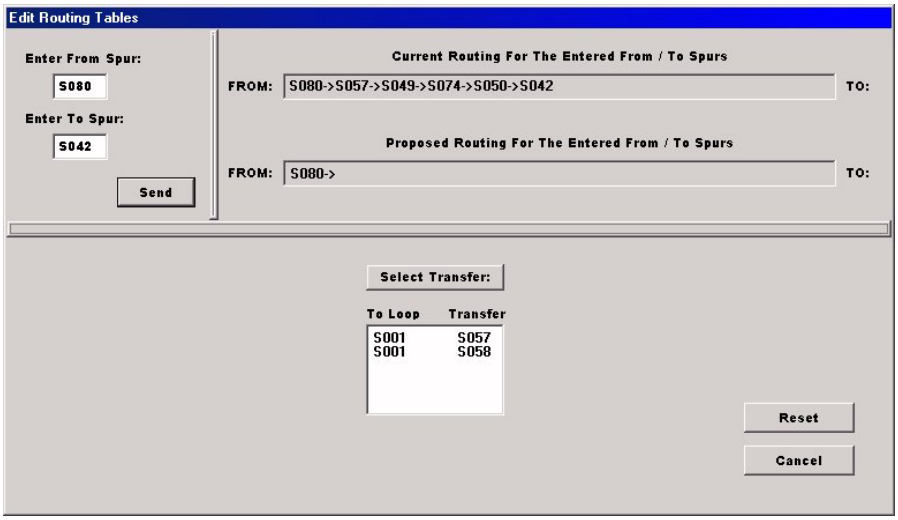



Figure 5.3.38-1 Utilities (Route Tables)

### Description

This is the utilities section of the User Interface, UI. Selection to Route Tables can be performed here. Typically, a submenu action for the Route Tables is selected; a dialog box will be displayed. The following actions may be performed from the **Utilities** selection:

### Conversation Access

From the Menu Bar on the UI **Select** Utilities.

### Data Entry Procedures

1. **Utilities** displays submenu Route Tables.
2. **Select** Route Tables. Displays dialog box requesting Enter From Spur and Enter To Spur.
3. **Enter** From and To Spur ID's.
4. **Select** Transfers.
5. **Select** Accept Selection (May repeat several times).
6. **Select** OK. Message Sent appears.
7. **Select** Reset. Clear all fields.
8. **Select** Cancel to exit.

### Messages

1. Message Sent.

## 5.3.39 Help Functions - All sites

**Select** the Help Functions: **Place** the mouse pointer on Help on the menu bar and **click** the left mouse button. This will present a dropdown box that will allow a choice of Contents or About.

**Contents**: **Click** on the Contents selection in the dropdown box. This will present a index of help topics (see Figure 5.3.39-1). **Type** the first few letters of the help topic you are trying to locate. If the topic is found double click on the topic to retrieve the help. If the topic is not directly available **click** on the Find tab. This will present a list of words with a cross-referenced list of topics (see Figure 5.3.39-2). **Type** a few letters of the word you want to select. **Click** on the word you want included in your help material. **Double Click** on one of the help topics to retrieve the available help.

**About**: **Click** on the About selection in the drop down box. This will present a partial list of credits for the ECS programs.

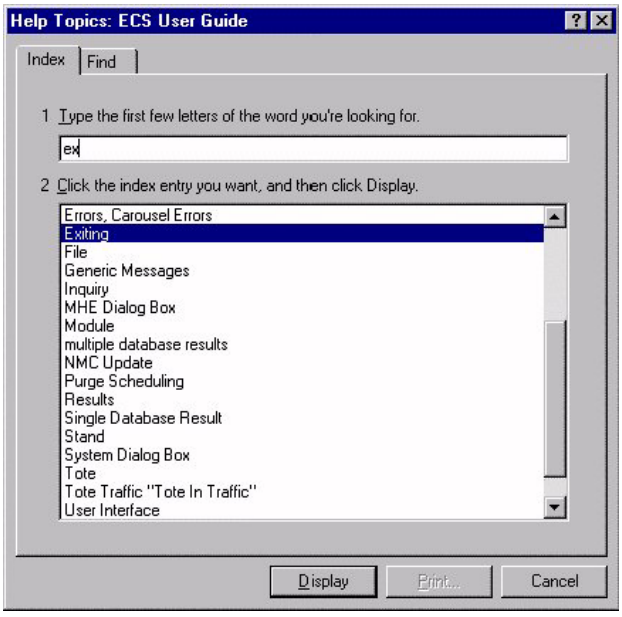



Figure 5.3.39-1 Help Index

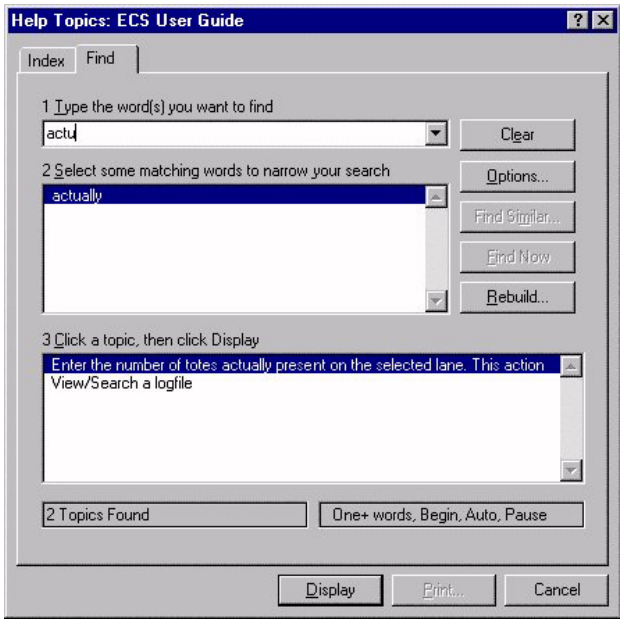



Figure 5.3.39-2 Help Find

## 5.3.40 ECS Mini Stacker Handler System

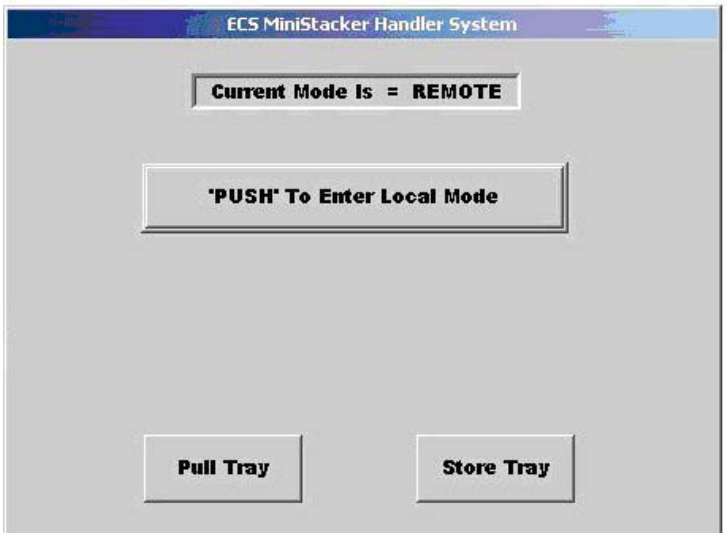



Figure 5.3.40-1 Primary Screen - ECS Mini Stacker Handler System

The conversations on the ECS Mini Stacker Handler System are used to manage the movement of material transported to the operator's workstation from the locations within the Mini Stacker itself. The ECS Mini Stacker Handler System is a stand-alone component of the ECS User Interface and was designed to address the unique operation of the Norfolk Mini Stacker System. Two modes of operation have been integrated into the design to allow movement of material.

1. **<u>REMOTE MODE</u>**: Allows retrieving and storing of material under error conditions where communication is minimally established with ECS. **Note:** REMOTE mode requires the operator to toggle a panel switch located at the front of the Mini Stacker to the '**REMOTE'** position to maintain communication. **(See figure5.3.40 - 1)** *The following message box is displayed when the ' "PUSH" to enter Local Mode ' button is selected.*

Figure 5.3.40-2 Remote Mode Response Screen - ECS Mini Stacker Handler System

2. **<u>LOCAL MODE</u>**: Allows retrieving and storing of material under conditions when communication is not available with either DSS or ECS. **Note:** LOCAL mode requires the operator to toggle a panel switch located at the front of the Mini Stacker to the '**LOCAL'** position to establish communication with the User Interface Handler System. **(See figure 5.3.40 - 1)** *The following message box is displayed when the ' "PUSH" to enter Remote Mode ' button is selected.*

Figure 5.3.40-3 Local Mode Response Screen - ECS Mini Stacker Handler System

The ECS Mini Stacker Handler System is comprised of two primary screens, which are described as follows:

Figure 5.3.40-4 ECS Mini Stacker Handler System – Screen 1

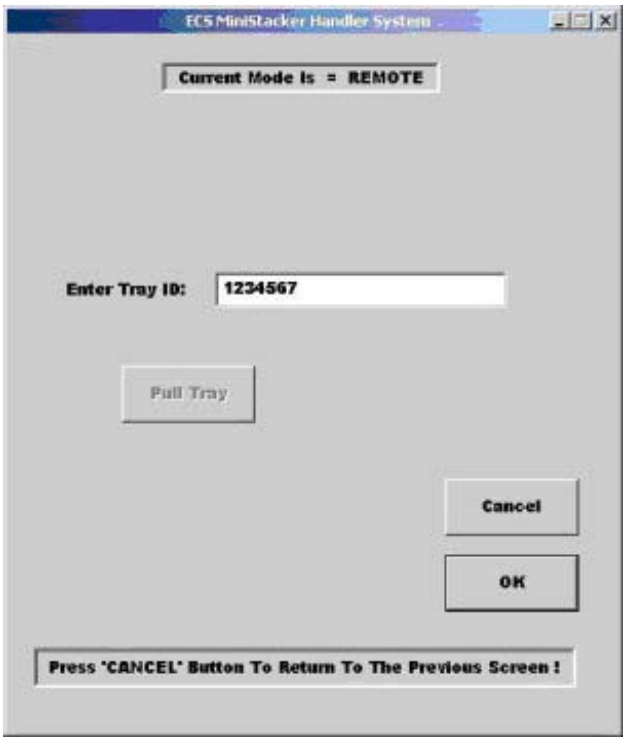



Figure 5.3.40-5 ECS Mini Stacker Handler System – Screen 1a

**Description**

This process is used to provide an operator the ability to pull or store trays while in either REMOTE or LOCAL modes. The current mode is displayed in the status box at the top of the dialog box. A push bar is provided to change modes. Two push buttons are provided to perform the desired tray operations. A CANCEL button is provided to end the current pull or store operations. The user may pull or store as many trays as required until the CANCEL button is pushed. The OK button is provided for keyboard operation and emulates the ENTER key on the keyboard. The user has the ability to tab between all available items within the dialog box. **Note:** Crane errors will automatically send the user to Error Recovery screen (**See figure 5.3.40 -4**), which is described separately in this text.

From ECS Mini Stacker Handler System – Screen 1

**Data Entry Procedures**

1. Select Mode.

   - Push button text will be ' “PUSH” To Enter LOCAL Mode ' or ' “PUSH” To Enter REMOTE Mode ' depending on current mode. **(See figure 5.3.40 - 2)**
     - A beep or double beep will sound (depending on current mode). The status window will display the new operation mode. Select the mode button again and the mode will return to its previous state. Also, when returning to REMOTE mode, a message is sent to the appropriate ECS Subcontroller.

2. Select Pull Tray mode. **(See figure 5.3.40 - 3)**

   - Enter 7-character Tray ID or 9-character DSS location. APPLIES TO DDMA Richmond ONLY!
   - Enter 7-character Tray ID or 12-character DSS location. APPLIES TO DDNV Norfolk ONLY!
   - Select 'OK' or press the 'Enter' key and Message Sent appears.
   - Select 'CANCEL' to end the Pull Tray operation, and return to the primary screen. **(See figure 5.3.40 - 2)**

3. Select Store Tray Mode. **(See figure 5.3.40 - 3)**

   - Enter 7-character Tray ID or 9-character DSS location. APPLIES TO DDMA Richmond ONLY!
   - Enter 7-character Tray ID or 12-character DSS location. APPLIES TO DDNV Norfolk ONLY!
   - Select OK or Enter key. Message Sent appears.
   - Select CANCEL to end the Store Tray operation and return to the primary screen. **(See figure 5.3.40 - 2)**

**Messages**

1. Do Not Change Key Position Until All Trays have Been Returned To Storage!
2. Change Key Position To Local!
3. Loading Local Subcontroller Processes To ECS User
4. Tray ID must contain a 7-character Tray ID or 9-character DSS location. APPLIES TO DDMA Richmond ONLY!
5. Tray ID must contain a 7-character Tray ID or 12-character DSS location. APPLIES TO DDNV Norfolk ONLY!
6. Current Mode Is = Remote
7. Current Mode Is = Local
8. Message Sent

**Messages Sent**

An **M01** User initiated SMM message is sent to the appropriate ECS Subcontroller.

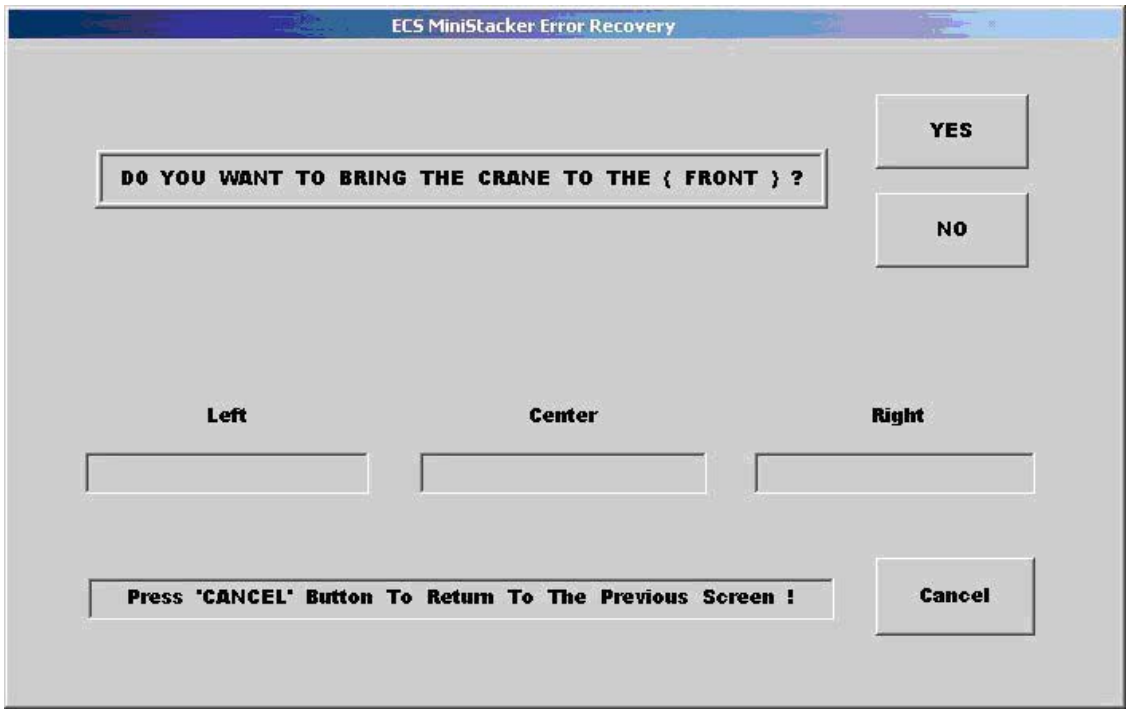



Figure 5.3.40-6 ECS Mini Stacker Handler System – Screen 2

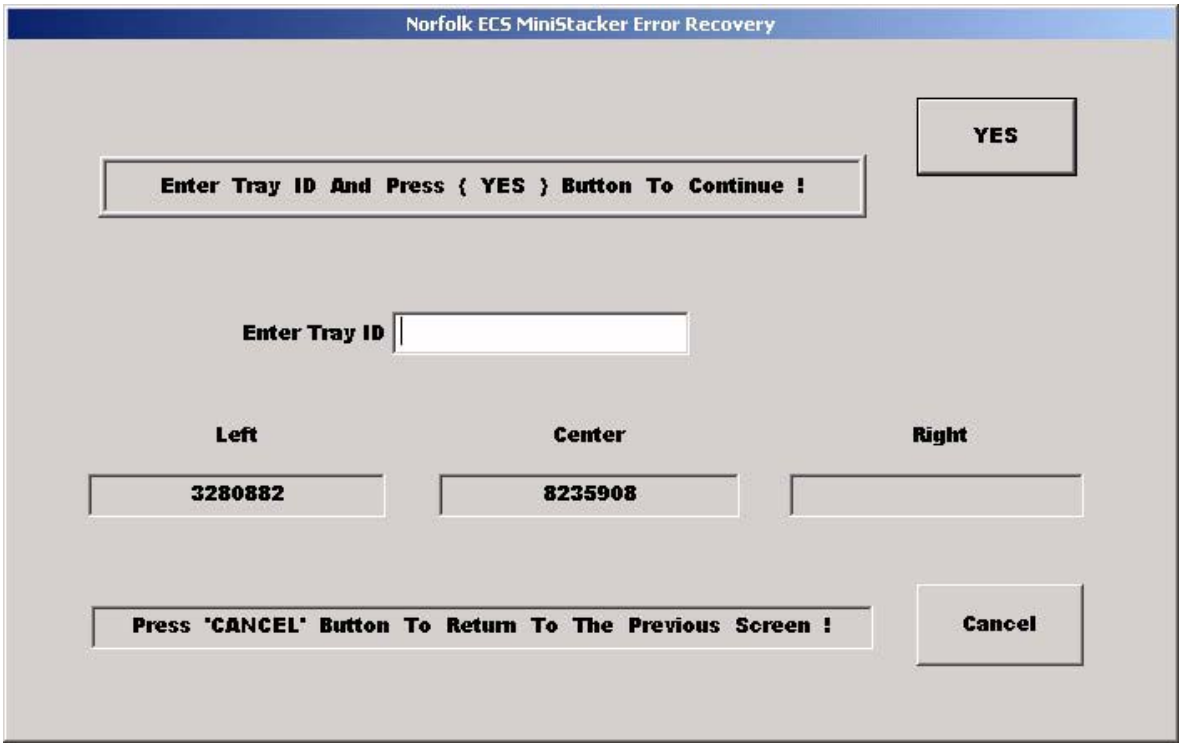



Figure 5.3.40-7 ECS Mini Stacker Handler System – Screen 2a

**Description**

This screen appears in 'REMOTE MODE' and 'LOCAL MODE' when a crane error occurs. The operator answers the questions displayed in the top status box by pressing the appropriate 'YES' or 'NO' button and provides tray information when required. When the procedure is completed the operator is returned to the primary screen.

From ECS Mini Stacker Handler System – Screen 2

**Data Entry Procedures**

**NOTE: The CANCEL button will return the operator to the primary screen (see figure 5.3.40 - 1) during any part of the process.**

1. Displays Error Recovery, top screen Question 1: DO YOU WANT TO BRING THE CRANE TO THE { FRONT }? **(See figure 5.3.40 - 4)**

    - Select YES. Status message 'Crane Is Moving To The Front!' is displayed.
    - Select NO Status message 'Crane Is Idle!' is displayed.

2. Displays Error Recovery, top screen Question 2: IS THERE A TRAY ON THE { LEFT }?

   - Select 'YES'.

     - Displays Tray ID entry box. Operator scans or types in Tray ID. Press 'Yes' to continue. Data is transferred to LEFT display box.

   - Select NO.

     - No data is transferred and X's appear in LEFT display box.

3. Displays Error Recovery, top screen Question 3: IS THERE A TRAY ON THE { CENTER }?

   - Select 'YES'.

     - Displays Tray ID entry box. Operator scans or types in Tray ID. Press 'Yes' to continue. Data is transferred to CENTER display box.

   - Select 'NO'.

     - No data is transferred to and X's appear in the CENTER display box.

4. Displays Error Recovery, top screen Question 4: IS THERE A TRAY ON THE { RIGHT }?

   - Select 'YES'.

     - Displays Tray ID entry box. Operator scans or types in Tray ID. Press 'Yes' to continue. Data is transferred to RIGHT display box.

   - Select 'NO'.

     - No data is transferred to and X's appear in the RIGHT display box.

5. Displays Error Recovery, top screen Question 5: IS ALL THE TRAY INFORMATION CORRECT?

   - Select 'YES'.

     - Message box appears, 'Are you sure you want to Complete The Recovery Process?'

       - Select 'YES'. Message Sent appears with a beep. The operator is returned to the primary screen.

- Select 'NO' to return to screen #2 and make correction.

- Select 'NO'

  - Message box appears, 'Restart Error Recovery Screen Process?'

    - Select 'YES'. 'Message Sent' appears, with a beep. The operator is returned to the Error Recovery top screen Question 2. See ECS ERROR RECOVERY SYSTEM Procedure step 2.

    - Select 'NO'. The operator is returned to the Error Recovery top screen Question 5. See ECS ERROR RECOVERY SYSTEM Procedure step 5.

**Messages**

1. Message Sent

**Messages Sent**

An **M01** User initiated SMM message is sent to the appropriate ECS Subcontroller.

## 5.4 Towline, Tote Conveyor and Utility Keypad Conversations

| Function Keys | Keypad Conversations |
|---|---|
| F8 | (SEL) Select Menu |
| F8 F1 | (MOV) Towline Cart Movement |
| F8 F1 F1 | (CSC) Create Single Cart Move |
| F8 F1 F3 | (ISC) Initiate Single Cart Move |
| F8 F1 F4 | (ICC) Initiate Chained Cart Move |
| F8 F2 | (CAR) Towline Cart Management |
| F8 F2 F1 | (DMD) Determine Material Destination |
| F8 F2 F2 | (QER) Queue Empty Request |
| F8 F2 F3 | (QEC) Queue Empty Cart |
| F8 F2 F4 | (UCT) Update Cart Type |
| F8 F2 F6 | (RCM) Recreate Cart Move |
| F8 F6 | (CKD) Tote Conveyor |
| F8 F6 F1 | (CST) Create Single Tote Move |
| F8 F6 F3 | (IST) Initiate Single Tote Move |
| F8 F7 | (UTL) Utility |
| F8 F7 F1 | (KCA) Keypad Conversation Authorization |
| F8 F7 F3 | (DDR) Display Database Record |
| F8 F7 F4 | (RTE) Display Cart Routing |
| F8 F7 F5 | (SCL) Set Cart Location |

### 5.4.1 [SEL] - Select Menu

```
SEL: F1MOV F2CAR
           F6CKD F7UTL
```

Select Menu (Screen 1)

```
SEL: NOT AUTHORIZED_
```

Select Menu (Optional Screen 2)

**Description**

The Select Menu allows the operator to select a sub menu. If the selected menu is not authorized at the current workstation, the optional screen 2 will be displayed. After 1.5 seconds the SEL menu is displayed.

**Conversation Access**

When the Keypad Subcontroller or TIM Subcontroller is started up from the icon, the Select Menu will appear on the keypad after the F8 key is pressed.

**Data Entry Procedures**

Selections are made by pressing the function keys.

**Messages**

1. Not Authorized

**Message Sent**

None

**Response**

None

### 5.4.1.1 [MOV] - Towline Cart Movement

```
MOV:  F1CSC      F3ISC
F4ICC
```

Towline Cart Movement (Screen 1)

```
MOV: NOT AUTHORIZED_
```

Towline Cart Movement (Optional Screen 2)

**Description**

This display allows the operator to select conversations relating to cart movement. If the selected sub-menu is not authorized at the current workstation, the optional screen 2 will be displayed. After 1.5 seconds the SEL menu is displayed.

**Conversation Access**

This menu is accessed by pressing F8 F1.

**Data Entry Procedures**

Selections are made by pressing the function keys.

**Messages**

1. Not Authorized

**Message Sent**

None

**Response**

None

#### 5.4.1.1.1 [CSC] - Create Single Cart Move

```
CSC:CART:_____
¦¦¦¦¦¦¦¦¦¦¦¦¦¦¦¦¦¦¦¦¦¦¦¦¦¦¦¦¦¦
```

Create Single Cart Move (Screen 1)

```
CSC:DEST(XXXX):_____
¦¦¦¦¦¦¦¦¦¦¦¦¦¦¦¦¦¦¦¦¦¦¦¦¦¦¦¦¦¦
```

Create Single Cart Move (Screen 2)

**Description**

This conversation allows the operator to specify a cart to be moved. This is a cart that does not have a control number associated with it. The first screen prompts the operator for the Cart ID of the cart to be moved. If this is invalid, or if there is an error associated with the Cart ID, the error message will be displayed in the shaded portion of the screen. After the operator successfully enters a Cart ID, the next screen will be displayed.

The second screen for this conversation will display the default destination. The operator may confirm the displayed destination or may enter a new one. If the destination entered is invalid, an error message will be displayed in the shaded portion of screen 2. After the operator has confirmed the default destination by pressing `<ENTER>` or successfully changed it, the move will be initiated by sending a message (M01) to the Towline Subcontroller via the Traffic Subcontroller. Then screen 1 will be displayed. This sequence will continue until a valid Function Key is pressed.

**Conversation Access**

This screen is accessed by pressing F8 F1 F1.

**Data Entry Procedures**

Information is entered by hitting the proper characters and then by hitting the Enter key. To clear out unwanted information, press the Clear key. To backup one character at a time press the delete key.

**Messages**

Valid error messages for screen 1 are:

1. Invalid Cart ID
2. Cart ID Not Found
3. Cart is Offline
4. Cart Currently on Chain
5. Cart Currently in Use
6. Cart NOT at this WKST
7. WKST not found

Valid error messages for screen 2 are:

1. Destination Invalid

Other errors are returned by the Towline Subcontroller in the Z08 message. Refer to Towline Documentation for a list of these messages.

**Message Sent**

1. A M01 will be sent to the Towline Subcontroller to move the cart.

**Response**

1. A Z08 will be received from the Towline Subcontroller giving a move status of success or failure.

### 5.4.1.1.2 [ISC] - Initiate Single Cart Move

```
ISC:CART:_____,CN:_________
|||||||||||||||||||||||||||
```

Initiate Single Cart Move (Screen 1)

```
ISC:DEST(XXXX):_____
|||||||||||||||||||||||||||
```

Initiate Single Cart Move (Screen 2)

**Description**

This conversation allows a cart with a control number to be moved. Screen 1 will prompt the operator for the Cart ID and for the Control Number of the material. If invalid information is entered, an error message will be displayed in the shaded area of screen 1. After the operator successfully enters a Cart ID and Control Number, screen 2 will be displayed.

Screen 2 will display the destination assigned to the material the operator requested to be moved. The operator may accept the displayed destination by pressing `<ENTER>`, or they may enter in a new one. If an invalid destination is entered, an error message will be displayed in the shaded area of screen 2. Once the operator has confirmed the default destination, or successfully changed it, the move will be initiated by sending a message (M01) to the Towline Subcontroller via the Traffic Subcontroller. Screen 1 will be then be displayed.

This sequence will continue until another Function Key is pressed.

**Conversation Access**

This screen is accessed by pressing F8 F1 F3.

**Data Entry Procedures**

Information is entered by hitting the proper characters and then by hitting the Enter key. To clear out unwanted information, press the Clear key. To backup one character at a time press the delete key.

**Messages**

Valid error messages for screen 1 are:

1. Invalid Cart ID
2. Invalid Control Number
3. Cart ID Not Found
4. Cart is Offline
5. Cart Currently on Chain
6. Cart Currently in Use
7. Cart NOT at this WKST
8. Control Number Not Found

Valid error messages for screen 2 are:

1. Destination Invalid

Other errors are returned by the Towline Subcontroller in the Z08 message. Refer to Towline Documentation for a list of these messages.

**Message Sent**

1. A M01 will be sent to the Towline Subcontroller to move the cart.

**Response**

1. A Z08 will be received from the Towline Subcontroller giving a move status of success or failure.

### 5.4.1.1.3 [ICC] - Initiate Chained Cart Move

```
ICC:CART:_____,CART:_____
¦¦¦¦CART:_____,CART:_____
```

Initiate Chained Cart Move (Screen 1)

```
ICC:CN:_________
¦¦¦¦¦¦¦¦¦¦¦¦¦¦¦¦¦¦¦¦¦¦¦¦
```

Initiate Chained Cart Move (Screen 2)

```
ICC:DEST(XXXX):_____
¦¦¦¦¦¦¦¦¦¦¦¦¦¦¦¦¦¦¦¦¦¦¦¦
```

Initiate Chained Cart Move (Screen 3)

**Description**

This conversation will move a chain of carts that has a control number associated with it. Screen 1 will prompt the operator for the Cart IDs of the carts in the chain. If any of the entered information is invalid, an error message ID will be displayed in the shaded area of screen 1. Screen 2 will be displayed after the operator has successfully entered all of the carts in the chain.

At screen 2, the operator will be prompted for the Control Number of the material on the carts in the chain. If an invalid control number is entered, an error message will be displayed in the shaded area of screen 2. After the operator has successfully entered the Control Number of the material on the chain, screen 3 will be displayed.

Screen 3 will display the destination assigned for the chain of material the operator wishes to move. The operator may accept the displayed destination by pressing `<ENTER>`, or they may enter in a new one. If an invalid destination is entered, an error message will be displayed in the shaded area of screen 3. Once the operator has confirmed the default destination, or successfully changed it, the move will be initiated by sending a message (M01) to the Towline Subcontroller via the Traffic Subcontroller. Screen 1 will be then be displayed.

This sequence will continue until another Function Key is pressed.

**Conversation Access**

This screen is accessed by pressing F8 F1 F4.

**Data Entry Procedures**

Information is entered by hitting the proper characters and then by hitting the Enter key. To clear out unwanted information, press the Clear key. To backup one character at a time press the delete key.

**Messages**

Valid error messages for screen 1 are:

1. ER1 = Invalid Cart ID
2. ER2 = Not enough Carts Entered
3. ER3 = Duplicate Cart IDs
4. ER4 = Cart ID Not Found
5. ER5 = Cart is Offline
6. ER6 = Cart Currently on Chain
7. ER7 = Cart Currently in Use
8. ER8 = Cart NOT at this WKST

Valid error messages for screen 2 are:

1. Invalid Control Number
2. Control Number Not Found

Valid error messages for screen 3 are:

1. Destination Invalid

Other errors are returned by the Towline Subcontroller in the Z08 message. Refer to Towline Documentation for a list of these messages.

**Message Sent**

1. A M01 will be sent to the Towline Subcontroller to move the cart.

**Response**

1. A Z08 will be received from the Towline Subcontroller giving a move status of success or failure.

### 5.4.1.2 [CAR] - Towline Cart Management

```
CAR:  F1DMD F2QER F3QEC
F4UCT       F6RCM
```

Towline Cart Management (Screen 1)

```
CAR: NOT AUTHORIZED_
```

Towline Cart Management (Optional Screen 2)

**Description**

This display allows the operator to select conversations relating to cart management. If the selected sub-menu is not authorized at the current workstation, the optional screen 2 will be displayed. After 1.5 seconds the SEL menu is displayed.

**Conversation Access**

This menu is accessed by pressing F8 F2.

**Data Entry Procedures**

Selections are made by pressing the function keys.

**Messages**

1. Not Authorized

**Message Sent**

None

**Response**

None

### 5.4.1.2.1 [DMD] - Determine Material Destination

```
DMD:CN:_______
¦¦¦¦¦¦¦¦¦¦¦¦¦¦¦¦¦¦¦¦¦¦¦¦¦¦
```

Determine Material Destination (Screen 1)

```
DMD:DEST(XXXX):_____
¦¦¦¦¦¦¦¦¦¦¦¦¦¦¦¦¦¦¦¦¦¦¦¦¦¦
```

Determine Material Destination (Screen 2)

**Description**

This conversation allows the user to move a load that has entered the EDC through the Intradepot Transporter at shipping or receiving. Screen 1 will prompt the user for the Control Number of the material. If the control number is invalid, an error message will be displayed in the shaded area of screen 1. Screen 2 will be displayed after the operator has successfully entered the Control Number.

Screen 2 will display the assigned destination for the material. The operator may confirm the destination by pressing `<ENTER>`, or they may override the destination. If an invalid destination is entered, an error message is displayed in the shaded area of screen 2. After the operator has confirmed the default destination or successfully changed it, the move will be initiated by sending a message (M01) to the Towline Subcontroller via the Traffic Subcontroller. Then screen 1 will be displayed.

This sequence will be continue until another Function Key is pressed.

**Conversation Access**

This screen is accessed by pressing F8 F2 F1.

**Data Entry Procedures**

Information is entered by hitting the proper characters and then by hitting the Enter key. To clear out unwanted information, press the Clear key. To backup one character at a time press the delete key.

**Messages**

Valid error messages for screen 1 are:

1. Invalid Control Number
2. Conversation Not Allowed At This Workstation
3. Workstation Record Not Found Call For Help
4. Cart is Queued Wait For Next Cart
5. Loader Must Be Clear First
6. Control Number Not Found

Valid error messages for screen 2 are:

1. No Move Record
2. Control Number Not Found
3. Cart is Queued Wait For Next Cart

Other errors are returned by the Towline Subcontroller in the Z08 message. Refer to Towline Documentation for a list of these messages.

**Message Sent**

1. A M01 will be sent to the Towline Subcontroller to move the cart.

**Response**

1. A Z08 will be received from the Towline Subcontroller giving a move status of success or failure.

### 5.4.1.2.2 [QER] - Queue Empty Request

```
QER:CART TYPE:__
|||||||||||||||||||||||||||
```

Queue Empty Request (Screen 1)

**Description**

This conversation will prompt the user for the type of empty cart to be delivered to the operator's workstation. If invalid information is entered, an error message will be displayed in the shaded area of the screen.

After the operator has successfully entered a cart type, the request will be initiated by sending a message (T01) to the Empty Cart Manager Subcontroller via the Traffic Subcontroller. Then this screen will be redisplayed. This sequence will continue until another Function Key is pressed.

**Conversation Access**

This screen is accessed by pressing F8 F2 F2.

**Data Entry Procedures**

Information is entered by hitting the proper characters and then by hitting the Enter key. To clear out unwanted information, press the Clear key. To backup one character at a time press the delete key.

**Messages**

1. Work Station Not Found
2. Work Station Inactive
3. Invalid Cart Type

**Message Sent**

1. A T01 will be sent to the Empty Cart Manager Subcontroller to handle the request for the empty cart.

**Response**

None

### 5.4.1.2.3 [QEC] - Queue Empty Cart

```
QEC:CART:_____, TYPE:__
```

Queue Empty Cart (Screen 1)

**Description**

This conversation will inform the Empty Cart Management process that the cart is now empty and available for use. The user will be prompted for the Cart ID and for the Type. If invalid information is entered, an error message will be displayed in the shaded area of the screen.

After the operator has successfully entered a Cart ID and Cart Type, the request will be initiated by sending a message (T03) to the Empty Cart Manager Subcontroller via the Traffic Subcontroller. Then this screen will be redisplayed. This sequence will continue until another Function Key is pressed.

**Conversation Access**

This screen is accessed by pressing F8 F2 F3.

**Data Entry Procedures**

Information is entered by hitting the proper characters and then by hitting the Enter key. To clear out unwanted information, press the Clear key. To backup one character at a time press the delete key.

**Messages**

1. Invalid Cart ID
2. Cart ID Not Found
3. Cart is Offline
4. Cart Currently On Chain
5. Cart Currently In Use
6. Cart NOT at this WKST
7. Unauth ECM Cart Type
8. Invalid Cart Type
9. Cart Already Queued

**Message Sent**

1. A T03 will be sent to the Empty Cart Manager Subcontroller to queue the empty cart.

**Response**

None

### 5.4.1.2.4 [UCT] - Update Cart Type

```
UCT:CART:_____, TYPE:__
¦¦¦¦¦¦¦¦¦¦¦¦¦¦¦¦¦¦¦¦¦¦¦¦¦¦¦¦¦¦
```

Update Cart Type (Screen 1)

**Description**

This conversation allows the operator to change the cart type. This screen will prompt the user for the Cart ID and the new Cart Type. If invalid information is entered, an error message will be displayed in the shaded area of the screen.

After the operator has successfully entered the Cart Type and Cart ID, the change will be updated in the database, and this screen will be redisplayed. This sequence will continue until another Function Key is pressed.

**Conversation Access**

This screen is accessed by pressing F8 F2 F4.

**Data Entry Procedures**

Information is entered by hitting the proper characters and then by hitting the Enter key. To clear out unwanted information, press the Clear key. To backup one character at a time press the delete key.

**Messages**

1. Invalid Cart ID
2. Cart ID Not Found
3. Cart is Offline
4. Cart NOT At This WKST
5. Invalid Cart Type
6. Invalid Change
7. Invalid Change Type
8. Change Not Successful

**Message Sent**

None

**Response**

None

5.4.1.2.5 **[RCM] - Recreate Cart Move**

```
RCM:CART:____
!!!!!!!!!!!!!!!!!!!!!!!!
```

Recreate Cart Move (Screen 1)

```
LS going to Snnn XXXXX
(CXXX) Data OK (Y/N)?_
```

Recreate Cart Move (Screen 2)

```
WARNING - cart currently
On chain CONTINUE(Y/N)?_
```

Recreate Cart Move (Screen 3)

```
RCM:CART TYPE(XX):__
!!!!!!!!!!!!!!!!!!!!!!!!
```

Recreate Cart Move (Screen 4)

```
RCM:CN(XXXXXXX):_____
!!!!!!!!!!!!!!!!!!!!!!!!
```

Recreate Cart Move (Screen 5)

```
RCM:DEST(XXXX):____
!!!!!!!!!!!!!!!!!!!!!!!!
```

Recreate Cart Move (Screen 6)

```
Put Cart nnnnn on Loop n
    THEN press ENTER
```

Recreate Cart Move (Screen 7)

**Description**

This conversation allows the operator to recreate a single cart move from any authorized towline workstation keypad using the existing conveyance record Control Number, Chain ID, Final Destination, and routing if applicable. Otherwise, the operator has the capability to change the cart type, queue an empty cart, or create or initiate a single cart move.

The first screen, screen 1, prompts the operator for the Cart ID. If an invalid ID is entered, an error message will be displayed in the shaded area of screen 1. After the operator has successfully entered the Cart ID, the next screen will be displayed. If routing information is still available for the cart, screen 2 will be displayed; otherwise, screen 4 is displayed.

Screen 2 is displayed when routing information is available for the Cart ID. This screen will display (if applicable) the Cart Type (LS), Destination Spur (Snnn), Control Number (XXXXXXX), and Chain ID (CXXX). The operator is prompted for confirmation of routing. Screen 4 is displayed if the operator responds 'N' to screen 2. If the operator responds with a 'Y' and the cart is on a chain, screen 3 will be displayed. Otherwise screen 7 will be displayed.

Screen 3 will notify the operator that the cart is on a chain. The operator will then be prompted as to whether or not they want to continue. If the operator responds with a 'Y', screen 4 will be displayed and the chain will be dissolved; otherwise screen 2 will be displayed.

The next screen (4) is displayed when the cart does not have valid routing information, or when the operator overrides the current routing data. Screen 4 will display the cart type and allow the operator to confirm it by pressing <ENTER>. If an invalid type is entered, an error message will be displayed in the shaded area of screen 4. If the cart type is empty, a load of totes, or a load of pallets, screen 7 will be displayed; otherwise screen 5 will be displayed.

Screen 5 is displayed to allow the operator to accept the default load control number or to enter one if there isn't a default or to correct a default. If an incorrect control number is entered, an error message is displayed in the shaded area of screen 5. Screen 6 is displayed after a correct control number is entered.

Screen 6 prompts the operator for the cart destination. The operator can accept the default destination by pressing <ENTER>, or they may enter a new one. If an invalid cart destination is entered, an error message is displayed in the shaded area of screen 6. Screen 7 is displayed after the operator confirms the displayed default destination or successfully changes it.

The last screen (7) tells the operator which loop to place the cart on and then prompts the operator to press <ENTER>. After the operator physically places the cart on the specified path and presses <ENTER> on the keypad, a message is sent to the Towline Subcontroller via the Traffic Subcontroller to initiate the move. Then screen 1 will be displayed.

This sequence will continue until another Function Key is pressed.

**Conversation Access**

This screen is accessed by pressing F8 F2 F6.

**Data Entry Procedures**

Information is entered by hitting the proper characters and then by hitting the Enter key. To clear out unwanted information, press the Clear key. To backup one character at a time press the delete key.

**Messages**

Valid error messages for screen 1 are:

1. Invalid Cart ID
2. Cart ID Not Found

Valid error messages for screen 4 are:

1. Invalid Cart Type
2. Invalid Change
3. Invalid Change Type
4. Change Not Successful

Valid error messages for screen 6 are:

1. Destination Not Defined
2. Current Loc Not Defined
3. 1ST Loop Not Available
4. Path Not Available
5. Invalid Status

**Message Sent**

1. A T05 message will be sent to the Towline Subcontroller for routing information.
2. An M01 will be sent to Towline to move the cart.

**Response**

1. A U06 routing response message will be sent from the Towline Subcontroller with cart routing.
2. A Z08 will be received from the Towline Subcontroller giving a move status of success or failure.

### 5.4.1.3 [CKD] - Tote Conveyor Menu

```
CKD:  F1CST        F3IST
```

Tote Conveyor Menu (Screen 1)

```
CKD: NOT AUTHORIZED_
```

Tote Conveyor Menu (Optional Screen 2)

**Description**

This display allows the operator to select conversations relating to tote movement. If the selected sub-menu is not authorized at the current workstation, the optional screen 2 will be displayed. After 1.5 seconds the SEL menu is displayed.

**Conversation Access**

This menu is accessed by pressing F8 F6.

**Data Entry Procedures**

Selections are made by pressing the function keys.

**Messages**

1. Not Authorized

**Message Sent**

None

**Response**

None

### 5.4.1.3.1 [CST] - Create Single Tote Move

```
CST:TOTE:______
|||||||||||||||||||||||||
```

Create Single Tote Move (Screen 1)

```
CST:DEST(XXXX):_____
|||||||||||||||||||||||||
```

Create Single Tote Move (Screen 2)

**Description**

This conversation allows the operator to specify a tote to be moved. This is a tote that does not have a control number associated with it. The first screen prompts the operator for the Tote ID. If this is an invalid Tote ID, or if there is an error associated with the Tote ID, the error message will be displayed in the shaded portion of the screen. After the operator successfully enters a Tote ID, the next screen will be displayed.

The second screen for this conversation will display the default destination. The operator may confirm the displayed destination by pressing `<ENTER>`, or may enter a new one. If the destination entered is invalid, an error message will be displayed in the shaded portion of screen 2. After the operator has confirmed the default destination or successfully changed it, the move will be initiated by sending a message (M01) to the Tote Conveyor Subcontroller via the Traffic Subcontroller. Then screen 1 will be displayed. This sequence will continue until a valid Function Key is pressed.

**Conversation Access**

This screen is accessed by pressing F8 F6 F1 from the main menu.

**Data Entry Procedures**

Information is entered by hitting the proper characters and then by hitting the Enter key. To clear out unwanted information, press the Clear key. To backup one character at a time press the delete key.

**Messages**

Valid error messages for screen 1 are:

1. Invalid Tote ID
2. Tote ID Not Found
3. Tote Currently In Use
4. FUNC Rec Not Found

Valid error messages for screen 2 are:

1. Invalid Destination
2. Destination Not Found
3. Invalid For This WKST

**Message Sent**

1. A M01 will be sent to the Tote Conveyor Subcontroller to move the tote.

**Response**

None

### 5.4.1.3.2 [IST] - Initiate Single Tote Move

```
IST:TOTE:_____,CN:_______
|||||||||||||||||||||||||
```

Initiate Single Tote Move (Screen 1)

```
IST:DEST(XXXX):____
|||||||||||||||||||||||||
```

Initiate Single Tote Move (Screen 2)

**Description**

This conversation allows a tote with a control number to be moved. Screen 1 will prompt the operator for the Tote ID and for the Control Number of the material. If invalid information is entered, an error message will be displayed in the shaded area of screen 1. After the operator successfully enters a Tote ID and Control Number, screen 2 will be displayed

Screen 2 will display the destination assigned to the material the operator requested to be moved. The operator may accept the displayed destination by pressing `<ENTER>`, or they may enter in a new one. If an invalid destination is entered, an error message will be displayed in the shaded area of screen 2. Once the operator has confirmed the default destination, or successfully changed it, the move will be initiated by sending a message (M01) to the Tote Conveyor Subcontroller via the Traffic Subcontroller. Screen 1 will be then be displayed.

This sequence will continue until another Function Key is pressed.

**Conversation Access**

This screen is accessed by pressing F8 F6 F3.

**Data Entry Procedures**

Information is entered by hitting the proper characters and then by hitting the Enter key. To clear out unwanted information, press the Clear key. To backup one character at a time press the delete key.

**Messages**

Valid error messages for screen 1 are:

1. Invalid Tote ID
2. Invalid Control Number
3. Tote ID Not Found
4. Control Number NOT Found

Valid error messages for screen 2 are:

1. Invalid Destination
2. Destination Not Found
3. Invalid For This WKST

**Message Sent**

1. A M01 will be sent to the Tote Conveyor Subcontroller to move the tote.

**Response**

None

### 5.4.1.4 [UTL] - Keypad Utilities

```
UTL:  F1KCA        F3DDR
F4RTE F5SCL
```

Keypad Utilities Menu (Screen 1)

```
UTL: NOT AUTHORIZED_
```

Keypad Utilities Menu (Optional Screen 2)

**Description**

This display allows the operator to select utility conversations. If the selected sub-menu is not authorized at the current workstation, the optional screen 2 will be displayed. After 1.5 seconds the SEL menu is displayed.

**Conversation Access**

This menu is accessed by pressing F8 F7.

**Data Entry Procedures**

Selections are made by pressing the function keys.

**Messages**

1. Not Authorized

**Message Sent**

None

**Response**

None

### 5.4.1.4.1 [KCA] - Keypad Conversation Authorization

```
KCA:      A/D CODE:___
     KEYPAD SCREEN:___
```

Keypad Conversation Authorization (Screen 1)

**Description:**

This screen allows an operator to change the keypad conversations allowed at a particular keypad pedestal. The operator will be prompted for the authorization password, which is a two-character code preceded by an A (for authorize) or a D (for de-authorize). Then the operator will enter the numerical equivalents for the keypad conversation that they wish to authorize (or de-authorize) at that pedestal. Assuming valid information, when the operator presses ENTER, the screen is refreshed and the changes are applied.

**Conversation Access**

This screen is accessed by pressing F8 F7 F1.

**Data Entry Procedures**

Information is entered by hitting the proper characters and then by hitting the Enter key. To clear out unwanted information, press the Clear key. To backup one character at a time press the delete key.

**Messages**

1. Not Authorized

**Message Sent**

None

**Response**

None

5.4.1.4.2 **[DDR] - Display Database Record**

```
DDR:RECORD TYPE:____
```

Display Database Record (Screen 1)

**Description:**

This conversation allows the user to view a database information for a Chain record, a Conveyance record, a Function record, a Move record, or a Workstation record. The operator enters a code to view the appropriate record:

- 1 = Chain,
- 2 = Conveyance,
- 3 = Function,
- 4 = Move, or
- 5 = Workstation.

The operator can also enter the database table name (example: WKST) or enough characters of the database table name to uniquely identify the table (example: W will identify the WKST table, but CO must be entered to identify the CONV table).

The next few pages discuss each of these options.

**Conversation Access**

This screen is accessed by pressing F8 F7 F3.

**Data Entry Procedures**

Information is entered by hitting the proper characters and then by hitting the Enter key. To clear out unwanted information, press the Clear key. To backup one character at a time press the delete key.

**Messages**

1. Invalid Selection
2. Not Authorized

**Message Sent**

None

**Response**

None

### 5.4.1.4.2.1 [DDR] - Display Database Record - Chain Record

```
DDR:CHAIN ID:_____
|||||||||||||||||||||||||
```

Display Database Record - Chain (Screen 1)

```
DDR: CHNS CONV1 CONV2  # A
R=X Xnnn Xnnnnnnn Xnnnnnnn n n
```

Display Database Record - Chain (Screen 2)

```
DDR:CHNS CONV3  CONV4  S PR
    Xnnn Xnnnnnnn Xnnnnnnn n n
```

Display Database Record - Chain (Screen 3)

**Description**

This conversation allows the operator to view the database record for a Chain. Screen 1 prompts the operator for the Chain ID. If the ID is invalid, an error message will be entered in the shaded area of screen 1. After the operator has successfully entered the Chain ID, screen 2 will be displayed.

Screens 2 and 3 will display the information from the Chain record. Screen 2 will display the Release Indicator, the Chain ID, Conveyance 1 and 2, the Number in the Chain, and the Number Arrived at the Destination. Screen 3 will display the Chain ID, Conveyances 3 and 4, and the destination. When the operator presses <ENTER> at screen 2, screen 3 will be displayed. After the operator presses <ENTER> at screen 3, the original DDR screen 1 will be displayed.

This sequence will continue until another Function Key is pressed.

**Conversation Access**

This screen is accessed by pressing F8 F7 F3 and then entering ‘1’, ‘CH’ or ‘CHNS’ for the record type.

**Data Entry Procedures**

Information is entered by hitting the proper characters and then by hitting the Enter key. To clear out unwanted information, press the Clear key. To backup one character at a time press the delete key.

**Messages**

Valid error messages for screen 1 are:

1. Chain Not Found

**Message Sent**

None

**Response**

None

### 5.4.1.4.2.2 [DDR] - Display Database Record - Conveyance Record

```
DDR:CONV ID:________
|||||||||||||||||||||||||
```

Display Database Record - Conveyance
(Screen 1)

```
DDR:CONV CHNS CTRL# TY S
nc Xnnnnnnn Cnnn XXXXXXX XX X
```

Display Database Record - Conveyance
(Screen 2)

```
DDR: CONV AREA PRES FINL
nND Xnnnnnn XXXX XXXX XXXX
```

Display Database Record - Conveyance
(Screen 3)

```
DDR: CONV NXT1 NXT2 NXT3
nND Xnnnnnn XXXX XXXX XXXX
```

Display Database Record - Conveyance
(Screen 4)

**Description:**

This conversation allows the operator to view the Conveyance database record. Screen 1 prompts the operator for the Conveyance ID. If the ID is invalid, an error message will be entered in the shaded area of screen 1. After the operator has successfully entered the Conveyance ID, screen 2 will be displayed.

Screen 2, 3, and 4 will display the information from the Chain record. Screen 2 will display the Number on the Chain, Conveyance ID, Chain Number, Control Number, Conveyance Type, and Conveyance Status. When the operator presses `<ENTER>` at screen 2, screen 3 will be displayed. Screen 3 will display the Number of Next Destinations, Conveyance ID, Area, Present Location, and Final Destination. When the operator presses `<ENTER>`, if there is more than 1 next destination, screen 4 will be displayed. Screen 4 will display the Number of Next Destinations, Conveyance ID, and Next Destinations, until the Number of Next Destinations is 0. Then the original DDR screen 1 will be displayed.

This sequence will continue until another Function Key is pressed.

**Conversation Access**

This screen is accessed by pressing F8 F7 F3 and then entering ‘2’, ‘CO’ or ‘CONV’ for the record type.

**Data Entry Procedures**

Information is entered by hitting the proper characters and then by hitting the Enter key. To clear out unwanted information, press the Clear key. To backup one character at a time press the delete key.

**Messages**

Valid error messages for screen 1 are:

1. Conveyance Not Found

**Message Sent**

None

**Response**

None

### 5.4.1.4.2.3 [DDR] - Display Database Record - Function Record

```
DDR:FUNCTION:_____
!!!!!!!!!!!!!!!!!!!!!!!!!!!!
```

Display Database Record - Function (Screen 1)

```
DDR:FUNC T CUR DFLT PLC
    XXXX X nnn XXXX XXX
```

Display Database Record - Function (Screen 2)

**Description**

This conversation allows the operator to view the Function database record. Screen 1 prompts the operator for the Function mnemonic. If the mnemonic is invalid, an error message will be entered in the shaded area of screen 1. After the operator has successfully entered the Function, screen 2 will be displayed.

Screen 2 displays the Function, Function Type, Current Destination, Default Destination, and PLC Number. After the operator presses `<ENTER>`, the original DDR Screen 1 will be displayed.

This sequence will continue until another Function Key is pressed.

**Conversation Access**

This screen is accessed by pressing F8 F7 F3 then entering ‘3’, ‘F’, or ‘FUNC’ for record type.

**Data Entry Procedures**

Information is entered by hitting the proper characters and then by hitting the Enter key. To clear out unwanted information, press the Clear key. To backup one character at a time press the delete key.

**Messages**

Valid error messages for screen 1 are:

1. Function Not Found

**Message Sent**

None

**Response**

None

### 5.4.1.4.2.4 [DDR] - Display Database Record - Move Record

```
DDR: CONTROL NR:________
|||||||||||||||||||||||||
```

Display Database Record - Move (Screen 1)

```
DDR:CTRL CONV  DEST IDST
 XXXXXXX Xnnnnnnn XXXX XXXX
```

Display Database Record - Move (Screen 2)

```
DDR: CTRL  SRC H TY S
   XXXXXXX XXXX X XX X
```

Display Database Record - Move (Screen 3)

**Description**

This conversation allows the operator to view the Move database record. Screen 1 prompts the operator for the Control Number. If the Control Number is invalid, an error message will be entered in the shaded area of screen 1. After the operator has successfully entered the Control Number, screen 2 will be displayed.

Screen 2 will display the Control Number, Conveyance ID, Destination and Intermediate Destination. After the operator presses <ENTER>, screen 3 will be displayed. Screen 3 will display the Control Number, Source Spur ID, Handling Unit, Move Type, and the Transit Status. After the operator presses <ENTER>, the original DDR screen 1 will be displayed.

This sequence will continue until another Function Key is pressed.

**Conversation Access**

This screen is accessed by pressing F8 F7 F3 and then entering ‘4’, ‘M’, or ‘MOVE’ for the record type.

**Data Entry Procedures**

Information is entered by hitting the proper characters and then by hitting the Enter key. To clear out unwanted information, press the Clear key. To backup one character at a time press the delete key.

**Messages**

Valid error messages for screen 1 are:

1. Control Number Not Found

**Message Sent**

None

**Response**

None

5.4.1.4.2.5 **[DDR] - Display Database Record - Workstation Record**

```
DDR:SPUR ID:_____
|||||||||||||||||||||||||
```

Display Database Record - Workstation
(Screen 1)

```
DDR:WKST L P CAP IN RT Q
    XXXX X X  nn nn nn X
```

Display Database Record - Workstation
(Screen 2)

```
DDR:WKST AREA  CONV  CHNS
    XXXX XXXX XXXXXXX XXXX
```

Display Database Record - Workstation
(Screen 3)

```
DDR:WKST CTRL  DFLT NSPR
  XXXX XXXXXXX XXXX XXXX
```

Display Database Record - Workstation
(Screen 4)

```
DDR:WKST PLC P TY
    XXXX XXX X XX
```

Display Database Record - Workstation
(Screen 5)

**Description**

This conversation allows the operator to view the Workstation database record. Screen 1 prompts the operator for the Spur ID of the workstation. If the Spur ID is invalid, an error message will be entered in the shaded area of screen 1. After the operator has successfully entered the Spur ID, screen 2 will be displayed.

Screen 2 will display the Workstation Spur ID, Logical Status, Physical Status, Spur Capacity, In Count, Enroute Count, and Count Required Flag. After the operator presses <ENTER>, screen 3 will be displayed. Screen 3 will display the Workstation Spur ID, Area, Conveyance ID, and Chain ID. After the operator presses <ENTER>, screen 4 will be displayed. Screen 4 will display the Workstation Spur ID, Control Number, Default Destination, and Next Spur. After the operator presses <ENTER>, screen 5 will be displayed. Screen 5 will display the Workstation Spur ID, the PLC Number, the Priority, and the Workstation Type. After the operator presses <ENTER>, the original DDR screen 1 will be displayed.

This sequence will continue until another Function Key is pressed.

**Conversation Access**

This screen is accessed by pressing F8 F7 F3 and then entering ‘5’, ‘W’, or ‘WKST’ for the record type.

**Data Entry Procedures**

Information is entered by hitting the proper characters and then by hitting the Enter key. To clear out unwanted information, press the Clear key. To backup one character at a time press the delete key.

**Messages**

Valid error messages for screen 1 are:

1. Work Station Not Found

**Message Sent**

None

**Response**

None

### 5.4.1.4.3 [RTE] - Display Cart Routing

```
RTE: FROM SPUR:S___
       TO SPUR:S___
```

Display Cart Routing
(Screen 1)

```
Snnnnnn,snnn,snnn,snnn,snnn
Snnn,snnn,snnn,snnn,snnn
```

Display Cart Routing
(Screen 2)

**Description**

This conversation allows the user to display the route of a cart on the towline. The operator is prompted for the Originating and Destination Towline Spurs on screen 1. After the operator has successfully entered the information, screen 2 will be displayed. Screen 2 will display intermediate and final destinations for the movement of the cart from spur 1 to spur 2. After the operator presses `<ENTER>`, screen 1 will be displayed.

This sequence will continue until another Function Key is pressed.

**Conversation Access**

This screen is accessed by pressing F8 F7 F4.

**Data Entry Procedures**

Information is entered by hitting the proper characters and then by hitting the Enter key. To clear out unwanted information, press the Clear key. To backup one character at a time press the delete key.

**Messages**

Valid error messages for screen 2 are:

1. Destination Not Defined
2. Current Loc Not Defined
3. 1ST Loop Not Available
4. Path Not Available
5. Invalid Status

**Message Sent**

1. A T05 message is sent to the Towline Subcontroller to determine cart routine.

**Response**

1. A U06 routing response message is sent to the Keypad Subcontroller with the cart routing.

### 5.4.1.4.4 [SCL] - Set Cart Location

```
SCL:CART:_____
|||||||||||||||||||||||||
```

Set Cart Location
(Screen 1)

```
SCL:CONV CHNS CTRL# TY S
NC XXXXXXX Cnnn XXXXXXX XX X
```

Set Cart Location
(Screen 2)

```
SCL: CONV AREA PRES FINL
NND Xnnnnnn XXXX XXXX XXXX
```

Set Cart Location
(Screen 3)

```
SCL: CONV NXT1 NXT2 NXT3
NND Xnnnnnn XXXX XXXX XXXX
```

Set Cart Location
(Screen 4)

```
SCL:Cart XXXX to be set
At location SXXX (Y/N)?_
```

Set Cart Location
(Screen 5)

**Description**

This process allows the operator to logically place a cart at the current workstation. Screen 1 will prompt the operator for the Cart ID. If an invalid ID is entered, an error message will be displayed in the shaded area of screen 1.

After the operator has successfully entered a Cart ID, the conveyance record is displayed, starting with screen 2. Screen 2 will display the Number on the Chain, Conveyance ID, Control Number, Conveyance Type, and Conveyance Status. After the operator presses <ENTER>, screen 3 will be displayed. Screen 3 will display the Number of Next Destinations, Conveyance ID, Area, Present Location, and Final Destination. After the operator presses <ENTER>, if there is more than 1 next destination, screen 4 will be displayed; otherwise screen 5 will be displayed. Screen 4 displays the Number of Next Destinations, Conveyance ID, and Next Destinations 1 through 3.

Screen 5 will prompt the operator for confirmation that the displayed Cart ID is to be set at the displayed spur location. Only if the operator responds with 'Y' is the Conveyance Record updated. When the operator presses <ENTER>, screen 1 will be displayed.

This sequence will continue until another Function Key is pressed.

**Conversation Access**

This screen is accessed by pressing F8 F7 F5.

**Data Entry Procedures**

Information is entered by hitting the proper characters and then by hitting the Enter key. To clear out unwanted information, press the Clear key. To backup one character at a time press the delete key.

**Messages**

Valid error messages for screen 1 are:

1. Cart ID Not Found

Valid error messages for screen 5 are:

1. Is On Another Loop Can't Set Its Location
2. On Chain Can't Set Its Location
3. WKST Can't Update Database
4. CONV Can't Update Database

**Message Sent**

None

**Response**

None

# 6.0 NOTES

## 6.1 Acronyms

| | |
|---|---|
| ABP | Allen-Bradley PLC's at Richmond |
| AFLSC | Air Force Laser Scanner Controller |
| AGV | Automated Guided Vehicle Subcontroller Software |
| AWOS | Automated Weigh and Offer System |
| CAR | Navy Carousel Controller |
| CAR01 | Carousel Subcontroller Software |
| CSF | Consolidated Subsistence Facility |
| DAWS | Air Force Dimension and Weigh Systems |
| DDSC | Defense Distribution Systems Center |
| DLA | Defense Logistics Agency |
| DSDC | DLA Systems Design Center |
| DSS | Distribution Standard System |
| ECS | Equipment Control System |
| ECM01 | Empty Cart Manager Subcontroller Software (New Cumberland) |
| GUI | Graphical User Interface |
| HPM | Hewlett-Packard Mini Computer (Mechanicsburg) |
| HPM01/02 | Hewlett-Packard Subcontroller Software |
| KEY01/02 | Keypad Subcontroller Software (New Cumberland) |
| LT | DSS-ECS Lower Tier |
| MHE | Material Handling Equipment |
| MSS | Mechanized Specification System |
| NMC | NISTARS Ministacker Controller |
| NMC01 | NISTARS Ministacker Subcontroller Software |
| NLSC | NISTARS Laser Scanner Controller |
| NT | New Technology (Microsoft Windows) |
| OO | Object-Oriented |
| PAL01 | Pallet Subcontroller Software (New Cumberland) |
| PLC | Programmable Logic Controller |
| PTR | Production trouble Report |
| SIP | Software Installation Plan |
| SMM | Standard Movement Message |
| SMN01 | STACKMAN Subcontroller Software |
| SRT01 | Sorter Subcontroller Software (New Cumberland) |
| STACKMAN | Pallet Storage Retrieval System at San Diego |
| SPS | Software Product Specification |
| STK01 | Stacker (Hill) Subcontroller Software |
| SUM | Software User Manual |
| TOT01 | Tote Subcontroller Software (New Cumberland) |
| TOW01/02 | Towline Subcontroller Software (New Cumberland) |
| UPS | Uninterruptible Power Supply |
| UI | User Interface |
| UT | DSS-ECS Upper Tier |

# APPENDIX A STANDARD MOVEMENT MESSAGE

## 1.0 UPPER TO LOWER TIER INTERFACE

The Upper Tier (UT) to Lower Tier (LT) Interface provides a communications conduit between the DSS mainframe processes and the ECS utilizing a Standard Movement Message (SMM).

This interface will perform one-way message transmission from the UT to the LT. No return traffic will be required.

A variation on this one-way interface occurs at Automatic Weighing and Offering systems (AWOS), where two-way message transmissions exist. For AWOS systems, ECS initiates an SMM being sent to it by sending a Standard Up Message (M02) that includes information DSS needs to provide material routing.

## 2.0 STANDARD MOVEMENT MESSAGE (SMM) FORMAT/RULES

| Field Name | Size | Flags |
|---|---|---|
| Site ID | 4 | NONE |
| Sequence Number | 8 | RCEWPDNABMFSZ |
| Control Number | 7 | RCEWPDNABM |
| Consolidation Field | 15 | DN |
| Location | 16 | RCEWPN |
| Destination | 9 | RCEWPDNZABMS |
| Source | 9 | DNABFSPC |
| Alt. Destination | 9 | DN |
| Second Alt. Dest. | 9 | DN |
| Chain Structure | 4 | N |
| Conveyance | 7 | RCEWPDNABSM |
| Second Conveyance | 7 | DNM |
| Handling Unit | 1 | DN |
| Priority | 1 | DN |
| Flag | 1 | RCEWPDNZABFSM |
| Option | 2 | F |
| Work Type | 1 | CZRFSDE |
| Quantity | 2 | D |
| Datetime Stamp | 8 | RCEWPDNZABMFS |
| Pmg ID | 4 | NONE |
| Total Size | 124 | |

The flag field identifies type of message.

| | |
|---|---|
| R=Request | P=Pack Arrival |
| C =Completion | D=Dummy Move |
| E=Emergency | N=Chain Move |
| W=Clear | M=Module Builds |
| A=AGV Move | Z=Workstation Designation |
| B=Priority AGV Move | F=Fill Stand Flag |
| S=Stand Status | |

The following Work Type field entries are allowed.

| | | |
|---|---|---|
| P=Picking | S=Stows | I=Inspections |
| L=Locations Surveys | C=Inventory | E=Empty Module Fill |
| F=Loaded Module Fill | D=Disables | O=Occupied |

Certain SMM fields will be filled in for specific transactions. Not all fields will be filled in for each transaction. The flag column listed above identifies the transaction type for which the specific field will be entered. If the flag is not set for a field for a specific transaction, the field will be blanks. For example, a pick request transaction 'R' will require the Sequence Number, Destination, Location, Flag, and Datetime Stamp fields to be entered and all others to be blank. R, C, E, and W apply to storage activity such as, R = pick, inventory, stow or COSIS requests.

Source Field will always equal the fixed terminal ID or workstation ID originator unless the transaction is a pack arrival 'P' in which case it will contain the Pack Lane.

Destination Field will adhere to the following rules:

If the transaction is a rewarehouse or receipt this field will contain the 1st 9 digits of the destination location.

If the transaction is a pick completion 'D' this field will contain pack lane station.

If the transaction is a pack arrival 'P' this field will contain the consolidation carousel bin location.

If the transaction is a dumb move 'D' this field will be a terminal ID or preprinted barcode destination.

If the transaction is a Ministacker or stacker request 'R' or compl**e**tion 'C' this field will be a terminal ID or function ID. Function IDs are (P - Picking, S - Stow, L - Location Surveys, I -Inspections).

# APPENDIX B ECS INTERNAL MESSAGES

## 1.0 REFERENCE INTERFACE DESIGN DESCRIPTION DI-IPSC-81436

# APPENDIX C WHITE CAROUSEL MESSAGES

## 1.0 WHITE CAROUSEL MESSAGES

The following table represents a list of all messages from the Carousel subcontroller. The Message column represents the text of the message as displayed on the screen. The Type column represents the type of the message: "I" indicates informational, "A" indicates action required and "F" indicates fatal situation, immediate action is required before further processing. Action and Fatal messages will include the action to be performed. The Log/Display column represents where the message will be displayed: the annotation of "Error" means the message will be logged to the error log, the annotation of "User" means the message will be logged to the message log, and the annotation of "Display" means the message will be displayed through the UI on the screen as an Alert Message. The Explanation/Action column represents the action the user will perform when the message is displayed or an explanation of a Type “I” message.

***Note:** Variable text, depending on circumstance, is enclosed within brackets, [ ]. The text within the brackets describes the item that will appear in the error message.

| Message | Type | Log/Display | Explanation/Action |
|---|---|---|---|
| 00130000G023 | I | User | Host to Carousel Go To Bin Message; where:<br>0013 = to Left Carousel,<br>0000 = from Host,<br>G = Go to<br>023 = Bin Number 23 |
| 00230000R | I | User | Host to Carousel Restart Message; where:<br>0023 = to Right Carousel,<br>0000 = from Host,<br>R = Restart |
| 00130000SE | I | User | Host to Carousel Send Errors Message where:<br>0013 = to Left Carousel<br>0000 = from Host,<br>SE = Send Errors |
| 00230000SS | I | User | Host to Carousel Send Status Message where:<br>0023 = to Right Carousel<br>0000 = from Host,<br>SS = Send Status |

| Message | Type | Log/Display | Explanation/Action |
|---|---|---|---|
| Ad Hoc Request Buffer is Full | A | User Error Display | Ad Hoc Request Buffer has reached its current capacity. **Collect supporting documents and call the Systems Administrator to enlarge the Ad Hoc Request Buffer.** |
| Ad Hoc Request Buffer Overflow, Request Ignored | A | User Error Display | Ad Hoc Request Buffer is not large enough to contain all of the requests initiated. **Collect supporting documents and call the Systems Administrator to enlarge the Ad Hoc Request Buffer.** |
| All Units Set Offline by [userName] | I | User | All Carousels were set offline as requested by specified user. |
| All Units Started by [userName] | I | User | All Carousels were started as requested by specified user. |
| ECS.INI file not found! | F | User Error Display | ECS.INI file was not found. **Collect supporting documents and call the Systems Administrator.** |
| Invalid Aisle/Side [aisle/side] from [userName] | A | User Error Display | Specified Carousel not within the range of valid units. **Verify unit number and try again.** |
| Invalid Carousel Source Field [carousel] | A | User Error | Carousel to Host Message contains data in the source field not in linkage table (CARTABLE.DAT). **Collect supporting documents and call the Systems Administrator.** |
| Invalid SMM Message Flag [D] from [userName] | A | User Error Display | Ad Hoc Move was received from DSS. An Ad Hoc Move is accepted from User Interface ONLY. **Collect supporting documents and call the Systems Administrator.** |
| Invalid SMM Message Flag [Z] from [userName] | A | User Error Display | SMM Message Flag "Z" (Workstation Designation) not valid for Carousel. **Collect supporting documents and call the Systems Administrator.** |
| Invalid Message Format from Unit [unitNumber] | A | User Error Display | First character of Carousel to Host Message is neither an "A" for Automatic Mode, an "M" for Manual Mode, or numeric for number of CIB power cycles. **Collect supporting documents and call the Systems Administrator.** |

| Message | Type | Log/Display | Explanation/Action |
|---|---|---|---|
| Invalid Message Type [A05] from [userName] | A | User Error Display | Message Type "A05" (Delete SMM) not valid for the Carousel. **Collect supporting documents and call the Systems Administrator.** |
| Invalid Message Type [A41] from [userName] | A | User Error Display | Message Type "A41" (Workstation Assignment) not valid for carousel. **Collect supporting documents and call the Systems Administrator.** |
| Invalid Message Type [J41] from [userName] | A | User Error Display | Message Type "J41" (NMC at Workstation Request) not valid for the Carousel. **Collect supporting documents and call the Systems Administrator.** |
| Invalid Message Type [A21] from [userName] | A | User Error Display | Message Type "A21" (Initialize Device) not valid for the Carousel. **Collect supporting documents and call the Systems Administrator.** |
| Invalid Restart for Unit [UnitNumber] Requested by [userName] | A | User Error Display | Carousel Unit number is not within the range of valid unit numbers. **Verify carousel unit number and try again.** |
| Invalid Set Logging Flag [flag] by [userName] | A | User Error Display | Set Logging Flag not On ('N') or Off ('F'). **Collect supporting documents and call the Systems Administrator.** |
| Invalid Start/Stop Code [code] from [userName] | A | User Error Display | Start/Stop Code other than Start ('1') or Stop ('0') entered by specified user. **Collect supporting documents and call the Systems Administrator.** |
| Invalid Subsystem Start/Stop Code [code] from [userName] | A | User Error Display | Start/Stop Code other than Start ('1') or Stop ('0') entered by specified user. **Collect supporting documents and call the Systems Administrator.** |
| Invalid Unit Number [unitNumber] from [userName] | A | User Error Display | Specified Unit Number is outside the range of valid unit numbers. **Verify unit number and try again.** |
| Invalid SMM Message Flag [flag] from [userName] | A | User Error Display | SMM Message Flag other than ('C') Completion, ('D') Dummy Move, ('K') Pick Completion, ('L') Location Survey, ('P') Pack Arrival, ('R') Request, ('W') Clear, or ('Z') Workstation Designation. **Collect supporting documents and call the Systems Administrator.** |

| Message | Type | Log/Display | Explanation/Action |
|---|---|---|---|
| Linkage Table Not Loaded Properly | F | User Error Display | Premature End of File encountered reading the Carousel Unit Hardware Linkage Table. **Collect supporting documents and call the Systems Administrator.** |
| Logging Turned OFF by [userName] | I | User | Logging in User Log turned off by specified user. |
| Logging Turned ON by [userName] | I | User | Logging in User Log turned on by specified user. |
| Message Request Buffer is Full | A | User Error Display | The Message Request Buffer has reached its current capacity. **Either wait a few minutes to let the current requests be satisfied; thus, clearing the buffer, or collect supporting documents and call the Systems Administrator to enlarge the Message Buffer.** |
| Pick Complete Out of Sequence [ ] | I | User Error | Pick complete message received for other than the next pick in the queue. |
| Request Buffer is Full | A | User Error Display | The Request Buffer has reached its current capacity. **Collect supporting documents and call the Systems Administrator to enlarge the Request Buffer** |
| Request Buffer Overflow; Sequence Nr [Sequence] Ignored | A | User Error Display | The Request Buffer has overflowed trying to add the request from message with specified sequence number. **Inform DSS to re-transmit message at a later time. Collect supporting documents and call the Systems Administrator to enlarge the Request Buffer** |
| Set Offline Invalid for Unit [unitNumber] Requested by [userName] | A | User Error Display | Specified Unit Number is outside the range of valid unit numbers. **Select valid unit number and try again. If error continues, collect supporting documents and call the Systems Administrator.** |
| Shutting Down Subcontroller | F | Display | Couldn't find logging key or no value for logging key in ECS.INI. **Collect supporting documents and call the Systems Administrator.** |

| Message | Type | Log/Display | Explanation/Action |
|---|---|---|---|
| Subcontroller Set Offline | I | User Error | During check of the status for all carousels it was determined that they were all offline; consequently, the subcontroller was set offline. |
| Subsystem Shut Down by [userName] | I | User | Carousel Subsystem was shut down by the specified user. |
| Unit [unitNumber] Set Offline by [userName] | I | User | Specified user requested specified unit to be set offline. |
| Unit [unitNumber] Started by [userName] | I | User | Specified carousel started by specified user. |
| Unit [unitNumber] Workload Buffers Cleared by [userName] | I | User | The specified unit had its Workload Buffers cleared by the specified user. |
| Unit [unitNumber] Set Offline | A | User Error | Carousel to Host Message in response to Send Status Message indicates that carousel is in manual mode; therefore, carousel is set offline. **Determine if Carousel should be offline, and set online if applicable.** |
| Unknown Message Type [type] from [userName] | A | User Error Display | Message type other than ('A01') hardware unit restart, ('A03') Clear Buffers, ('A05') Delete SMM, ('A07') Set Logging, ('A09') System Stop, ('A21') Initial Device, ('A41') Workstation Assignment, ('J01') Status Request, ('J31') Send Errors Request, ('J33') Send Status Request, ('J41') Tray at Workstation request, ('M01') User Interface originated Standard Movement Message, ('SMM') DSS originated Stand Movement Message. **Select appropriate message type and try again.** |

| Message | Type | Log/Display | Explanation/Action |
|---|---|---|---|
| USE01CAR01lllK02SSSC…C | I | User | Host to User Interface Response to Status Request where:<br>USE01 = to User Interface 01,<br>CAR01 = from Carousel number 01,<br>lll = Message Length,<br>K02 = Message Type,<br>SSS = Subcontroller Status<br>"Off" = Offline, and<br>"On " = Online<br>C…C = Individual Carousel Status (positional: 1st is for Carousel #1, 2nd is for Carousel #2, etc.)<br>"F" = Offline<br>"N" = Online |
| USE01CAR01038K32aaaaabb bbcccccccc dddddeeeeeffffffggggg | I | User | Carousel to Host Send Errors Response Message, where:<br>USE01 = user requesting status,<br>CAR01 = carousel sending status,<br>038 = length of message,<br>K32 = message type,<br>aaaaa = number of power cycles,<br>bbbbb = number of unacknowledged messages sent by CIB,<br>ccccccc = number of message errors received by the CIB,<br>ddddd = number of message collisions,<br>eeeee = number of invalid commands,<br>fffff = number of carousel "won't move" errors, and<br>ggggg = number of positioning errors. |

| Message | Type | Log/Display | Explanation/Action |
|---|---|---|---|
| USE01CAR01021K34abcccdd deeefffgggh | I | User | Carousel to Host Send Status Response Message where:<br>USE01 = user requesting status,<br>CAR01 = carousel sending status,<br>021 = length of message,<br>K34 = message type,<br>a = CIB Mode (A=auto, M=manual)<br>b = Carousel Status; where:<br>Y = CIB ready for another command;<br>F = last Go not successful;<br>I = last Go in process;<br>J = carousel being jogged;<br>B-S = carousel is stopping;<br>U = carousel not yet initialized.<br>ccc = size of carousel;<br>ddd = current bin position of first workstation terminal position;<br>eee = current bin position of second workstation terminal position;<br>fff = coat constant;<br>ggg = number of pulses per bin; and<br>h = CIB transition mode; where:<br>A = asynchronous mode, or<br>P = polled mode. |
| Workload Buffers for All Units Cleared by [userName] | I | User | All units had their Workload Buffers cleared by specified user. |

Table C - 1-1 Carousel Messages

# APPENDIX D ECS DATABASE

## 1.0 ECS DATABASE (REFERENCE DATABASE DESIGN DESCRIPTION DI-IPSC-81437)

# APPENDIX E USER INTERFACE MESSAGES

## 1.0 USER INTERFACE MESSAGES

The following table represents a list of all messages from the User Interface. The Message column represents the text of the message as displayed on the screen or log file. The Type column represents the type of the message: "I" indicates informational, "A" indicates action required and "F" indicates a fatal situation, immediate action is required before further processing. Action and Fatal messages will include the action to be performed. The Log/Display column represents where the message will be displayed: the annotation of "Error" means the message will be logged to the error log, the annotation of "User" means the message will be logged to the message log, and the annotation of "Display" means the message will be displayed through the UI on the screen as an Alert Message. The Explanation/Action column represents the action the user will perform when the message is displayed or an explanation of a Type "I" message.

***Note:** Variable text, depending on circumstance, is enclosed within brackets, [ ]. The text within the brackets describes the item that will appear in the error message.

| Message | Type | Log/Display | Explanation/Action |
|---|---|---|---|
| (WARNING) - To clear a queue enter 0000 into the first position while leaving ALL other positions blanks | I | Display | Enter 0000 in first position to clear queue. |
| (WARNING) - You must have at least 1 entry or cancel to exit | I | Display | Make entry or press cancel to exit screen. |
| [AreaParams] section missing from ECS.INI | A | Error, Display | The [AreaParams] section along with its keys and values is missing from ECS.INI. Contact the Systems Administrator. |
| [Buildings] section missing from ECS.INI | A | Error, Display | The [Buildings] section along with its keys and values is missing from ECS.INI. Contact the Systems Administrator. |
| [HP_CaroNames] section missing from ECS.INI | F | Error, Display | The [HP_CaroNames] section along with its keys and values is missing from ECS.INI. Contact the Systems Administrator. |
| [HPM01] section in ECS.INI has value other than 'P' or 'R'. Cannot continue | F | Error, Display | The [HPM01] section along with its keys and values is missing from ECS.INI. Contact the Systems Administrator. |
| Aisle Number must be between 01 – 18. You entered __. | I | Error, Display | Enter valid number. |

| Message | Type | Log/Display | Explanation/Action |
|---|---|---|---|
| Are you sure you want to Delete this Container/Load? | I | Warning, Display | Select YES or NO. |
| Are you sure you want to Disable Area? | I | Warning, Display | Select YES or NO. |
| Are you sure you want to Enable Area? | I | Warning, Display | Select YES or NO. |
| Cannot find AdHoc Section in ECS.INI | A | Error, Display | The ECS.INI file needs the addition of an [AdHoc] section with correct values. Contact the Systems Administrator. |
| Cannot 'GetUserName' | I | Error, Display | The application cannot obtain the Current User Name from WinNT. |
| Cannot LB_GETTEXTLEN | I | Error, Display | The application could not obtain the length of text in a listbox. |
| Cannot Lock Local Memory | I | Error, Display | The application could not lock memory, attempted function will fail. |
| Cannot Lock Local Memory - Program Error | I | Error, Display | The application could not lock memory, attempted function will fail. |
| Cannot open file: [file name] | I | Error, Display | The application failed to open the named file. |
| Cannot open file: [filename] for write | I | Error, Display | The application failed to open the named file. |
| Cannot open file: FH_IDQ.txt (see administrator) | A | Display | Cannot open file. Contact Systems Administrator. |
| Cannot open file: FH_MHQ.txt (see administrator) | A | Display | Cannot open file. Contact Systems Administrator. |
| Cannot open file: WKST_Inq.txt (see administrator) | A | Display | Cannot open file. Contact Systems Administrator. |
| Cannot open: [log file to be opened] | I | Error, Display | The application failed to open the named logfile. |
| Cannot send to: [user interface or traffic controller] | A | Error, Display | Do not select either USRxx or TRFxx from the list of Subcontrollers |
| Cannot write to [filename] | I | Error, Display | The application could not write to the named file |
| Can't access process Token | I | Error, Display | The application cannot access the WinNT Process Token |
| Can't access Token Information | I | Error, Display | The application cannot access the WinNT Process Token Info Structure |
| Can't obtain process HANDLE | I | Error, Display | The application cannot access the current WinNT Process ID |

| Message | Type | Log/Display | Explanation/Action |
|---|---|---|---|
| Cart ID cannot exceed a value of '1125' You entered __. | I | Display | Enter a value less than 1125. There are no carts > 1125. |
| Cart ID can't contain non-numeric characters | I | Display | Enter a numeric cart ID. |
| Cart ID must contain a minimum of 4 characters You entered __, __ characters | I | Display | Enter 4 characters for cart ID. |
| Chain ID must contain 3 characters You entered __, __ characters | I | Display | Enter 3 characters for chain ID. |
| Chain ID must contain only Numeric characters | I | Display | Enter only numeric characters for chain ID. |
| Check On or Off | A | Error, Display | Check either the On or Off Checkbox |
| Check ON or OFF then click OK | A | Error, Display | Check either the On or Off Checkbox and click the OK button |
| Choose Either a Cart ID or a tote ID, not both | I | Display | Make only one choice. |
| Container Name must contain at least 1 character. You entered __, __ characters. | I | Error, Display | Enter 1 or more characters. |
| Control Number must contain 5 characters You entered __, __ characters | I | Display | Enter 5-character control number. |
| Control Number must contain only alphanumeric characters | I | Display | Enter an alphanumeric-only control number |
| Control Number Not Found | A | Display | Contact Systems Administrator. |
| Conveyance ID __ was not found | A | Display | Contact Systems Administrator. |
| Could not copy [logfile to be opened] to [temporary filename] | I | Error, Display | The application could not copy the selected logfile to the temporary filename |
| Could not execute NOTEPAD | I | Error, Display | The application could not execute the WinNT Notepad application. |
| Could not LB_DELETESTRING | I | Error, Display | The application could not delete text from a listbox |
| Could not read ECS.INI value for [HPM01] Function. Cannot continue | F | Error, Display | An [HPM01] section as well as keys and values must be added to ECS.INI. Contact the Systems Administrator. |
| Could not read ECS.INI value for [HPM02] Function. Cannot continue! | F | Error, Display | An [HPM02] section as well as keys and values must be added to ECS.INI. Contact the Systems Administrator. |

| Message | Type | Log/Display | Explanation/Action |
|---|---|---|---|
| Create/Delete Checkboxes not selected | A | Error, Display | Either the Create or Delete SMM Checkbox must be checked. |
| DSS Terminal must be at least 8 characters. You entered __, __ characters. | I | Error, Display | Enter 8 character DSS Terminal ID. |
| ECS.INI path is invalid! Check [HOME] value in WIN.INI file. FATAL ERROR | F | Display | The value in WIN.INI<br>[ECS]<br>Home=<br>is invalid. Contact the Systems Administrator. |
| Edit fields all blank | A | Error, Display | Values must be entered in the SMM Message Fields |
| Edit Tracking Screen is currently in use by "User Interface - ___. You are located at ___. Please retry in a few moments! | I | Warning, Display | Edit Tracking Screen is currently in use at another User Interface terminal. Retry to enter screen if problem persist, contact your system administrator |
| Error Reallocating memory | I | Error, Display | The application could not reallocate memory. |
| Fatal Error. There are more than [maximum number of subcontrollers] subcontrollers in system. Change MAX_SUBS in ECS_USER.H | F | Error, Display | In ECS.INI, the NumberofLinks= value is greater than the application's maximum subcontroller integer value. Either ECS.INI will have to contain fewer subcontrollers or the User Interface code will have to be recompiled with a larger value for MAX_SUBS in ECS_USER.H. Either way, Contact Systems Administrator. |
| FindInqType return 0 | I | Error, Display | The application failed to detect an inquiry type. |
| From Location must contain at least 1 characters. You entered __, __ characters. | I | Error, Display | Enter 1 or more characters. |
| From/To Fields are Empty | A | Error, Display | The action selection requires the From and To fields to contain values. |
| Incorrect Carousel Number. Enter a P or R and one of the following [carousel names] | A | Error, Display | The Carousel Number entered was invalid. Enter a P or R followed by one of the displayed values. |
| Incorrect case value | I | Error, Display | The application failed to detect the type of inquiry. |
| Incorrect parameter passed to SearchTheLog | I | Error, Display | The application failed to detect the type of log search to be performed. |

| Message | Type | Log/Display | Explanation/Action |
|---|---|---|---|
| Incorrect Quad Value | A | Error, Display | Enter a Quad value from a range of 1 to 4. |
| Inquiry must begin with either P or R | A | Error, Display | The Carousel Number must begin with a P (for Packing) or an R (for Receiving). |
| Inquiry: All Loop Workstation database inquiry sent | I | User | All Towline loop workstation data sent. |
| Inquiry: All PLC database inquiry sent | | User | All PLC data sent. |
| Inquiry: All SRT database inquiry sent | I | User | All Sorter data sent. |
| Inquiry: All Tote database inquiry sent | I | User | All Tote data sent. |
| Inquiry: All TOW database inquiry sent | I | User | All Towline data sent. |
| Inquiry: Database inquiry sent for Conveyor Lane Status values | I | User | Conveyor lane status, active or inactive sent. |
| Inquiry: Database inquiry sent for M/H Queue Priority Update values | I | User | Medium/Heavy queue priority updates sent. |
| Inquiry: Database inquiry sent for PLC Status values | I | User | PLC status sent. |
| Inquiry: Database inquiry sent for Spur Status values | I | User | Spur status values sent. |
| Inquiry: Database inquiry sent for Tote Update values | I | User | Tote update values sent. |
| Inquiry: Database inquiry sent for Tow Spur Status Update values | | User | Towline Spur status update values sent |
| Inquiry: Database inquiry sent for Towline Inspection Workstation Update values | I | User | Towline Inspection workstation update values sent. |
| Inquiry: Single SRT database inquiry sent | I | User | Single Sorter data sent. |
| Invalid Area Key | A | Error, Display | The value entered for the Area is invalid. Context sensitive help is available for obtaining a list of correct values. |
| Invalid Building | A | Error, Display | The value entered for the Building is invalid. Context sensitive help is available for obtaining a list of correct values. |
| Invalid Flag | A | Error, Display | The value for the Ad Hoc Move Flag is invalid. |
| Invalid Flag . redo | A | Error, Display | The value for the Ad Hoc Move Flag is invalid. |

| Message | Type | Log/Display | Explanation/Action |
|---|---|---|---|
| Invalid Message Type | I | Error, Display | The User Interface received an Invalid Message Type from the Traffic Controller. |
| Invalid Pack Lane Station | I | Display | Invalid pack lane. Re enter |
| J73 message (to, from, length, type, data) | I | User | Message from UI to change station status making it active or inactive. |
| J77 Msg (to, from, length, code, number) | I | User | Release from IQ Message |
| J79 Msg (to, from, length, code, number, cart ID) | I | User | Release from M/H Queue Message |
| J81 Msg (to, from, length, code, number, cart ID, cart type) | I | User | Update Cart Type Message |
| J83 Msg (from, to, length, code, spur | I | User | Unlock Workstation Message |
| J85 Msg (to, from, length, code, number, spur, status) | I | User | Update M/H Priority Message |
| J91 Msg (to, from, length, code, zone ID, zone ID, chain ID) | I | User | Abort Chain ID message. |
| J95 Msg (to, from, length, code, number, spur, cart) | I | User | Fault Handling Update Queue message. |
| J97 Msg (to, from, length, code, number, spur, old enroute, enroute, old count in, count in) | I | User | Fault Handling Update Queue message. |
| J99 Msg (to, from, length, code, number, spur, type) | I | User | Update Inspection Spur Status message. |
| Listener: Received NULL message from Traffic Controller | I | Error, Display | The User Interface received a NULL message from the Traffic Controller. |
| Load/Container ID [_____] was not found in the Database and will be sent to the reject lane. Press OK To have Load/Container sent to reject or Cancel to Enter/select a new Load/Container ID | I | Error, Display | Enter valid Load/Container ID or send to reject lane. |
| Location must begin with R or P | A | Error, Display | The Location value in Location Inquiry must begin with an R or a P. |
| Location must contain 4 characters You entered __, __ characters | I | Display | Enter 4-character location. |
| Location must contain 4 characters or be left blank you entered. You entered __, __ characters. | I | Error, Display | Enter 4 characters or leave entry blank to display all stations. |

| Message | Type | Log/Display | Explanation/Action |
|---|---|---|---|
| Location must contain 9 characters. You entered [entry], [number] characters | A | Error, Display | The Location value must be 9 characters. |
| Multiple range selection not allowed | A | Error, Display | The range of AGV Workstations can be selected and changed once before the OK button is clicked. |
| No .INI data for: [subcontroller] | A | Error, Display | The Subcontroller for an incoming K02 Status Response message does not have a Workstation= entry in ECS.INI. Contact the Systems Administrator. |
| No [site] entry in ECS.INI. FATAL ERROR | F | Display | In ECS.INI file, the [site] section did not have a value/key for site=. Contact the Systems Administrator. |
| No Action Selected. Check either: Display Update Purge or Ad Hoc Move | A | Error, Display | OK button was clicked before an Action selection was made. Check either: Display Update Purge or Ad Hoc Move |
| No AGV Data found | I | Error, Display | The database does not contain any AGV data. |
| No Carousel Data for: [carousel name] | I | Error, Display | The database does not contain any Carousel data. |
| No Control Numbers associated with: [module ID] | I | Error, Display | The database does not contain any Control Numbers in the selected Module record. |
| No conveyance selected (choose cancel to exit) | I | Display | Choose conveyance or cancel to exit. |
| No Data for: [inquiry value] | I | Error, Display | The database does not contain any data for the selected inquiry. |
| No file selected! | I | Display | File not selected. |
| No INI Workstation data for: [subcontroller] | A | Error, Display | The Subcontroller selected does not contain a Workstation= key. |
| No Lane ID data for: [subcontroller] in ECS.INI | A | Error, Display | ECS.INI does not contain a key value for LaneIDs= under the [HPMxx] section. Contact the Systems Administrator. |
| No matches for search - [search criteria] | I | Error, Display | The logfile search failed to find the entered criteria. |
| No matches for search [search fieldname] [search criteria 'from'] to [search criteria 'to'] | I | Error, Display | The logfile search failed to find the entered criteria. |
| No matches for search [search fieldname] [search criteria] | I | Error, Display | The logfile search failed to find the entered criteria. |

| Message | Type | Log/Display | Explanation/Action |
|---|---|---|---|
| No Module Data found | I | Error, Display | The database did not contain any data in the Module record for the Inquiry Value |
| No Module Data found for: [inquiry value] | I | Error, Display | The database did not contain any data in the Module record for the Inquiry Value |
| No Module Selected | A | Error, Display | 'All CNs' button clicked, but no Module ID was selected (highlighted). Select a Mod ID before clicking the All CNs button. |
| No Move Data for Control Number: [control number] | I | Error, Display | The database did not contain any data for the Control Number entered. |
| No PLC Data found | I | Display | The database does not contain PLC data. |
| No Sorter Data found | I | Display | The database does not contain Sorter data. |
| No Spur Data found | I | Display | The database does not contain Spur data. |
| No Stand Data found | I | Error, Display | The database did not contain any data for the Stand ID entered. |
| No 'Stand Inquiry' box checked | A | Error, Display | Stand Inquiry Checkbox must be checked. |
| No Status Request function for: [subcontroller] | I | Error, Display | The Subcontroller selected does not have an Update function. |
| No Tote Data found | I | Display | The database does not contain Tote data. |
| No TOW Data found | I | Display | The database does not contain Towline conveyance data. |
| No Value for AdHocMove Flag | A | Error, Display | Select a flag value from the drop-down list. |
| No value for inquiry | A | Error, Display | The edit box for the Inquiry value was blank. Fill-in with the data to make the Inquiry. |
| No Wkst Data found | I | Display | The database does not contain Workstation data. |
| No Zone data found for this inquiry! | I | Error, Display | Invalid entry. |
| Nothing selected | I | Error, Display | Select item from list box. |
| Nothing selected | A | Error, Display | A workstation, or range of workstations must be selected before the Autoload or Loaded checkbox can be checked. |

| Message | Type | Log/Display | Explanation/Action |
|---|---|---|---|
| Nothing selected from search list | A | Error, Display | An SMM field must be selected from the list. |
| Nothing selected, to exit press Cancel | A | Error, Display | A workstation, or range of workstations has not been selected to update. Press Cancel. |
| Nothing selected, to exit press Cancel. | I | Error, Display | Select item from list box or cancel. |
| Nothing to print | I | Error, Display | There is no information in the results box to print. |
| One or more selections are not a valid chain | I | Display | Enter valid chain ID. |
| Only Numeric Values are valid | A | Error, Display | Enter characters in the range from 0 (Zero) to 9 (Nine). |
| Output Lane must contain a value between 1 and 8 You entered __. | I | Display | Enter valid output lane value. |
| PLC Zone must be between 1 and 6 | I | Display | Enter valid PLC zone value. |
| PLC Zone must contain 1 characters You entered __, __ characters | I | Display | Enter 1 character PLC zone. |
| Please fill in both fields: FROM, TO | A | Error, Display | Enter search criteria in both fields, FROM and TO. |
| Processed Conveyance Inquiry request for ___ | I | User | Valid tote inquiry. |
| Processing error in Lane Adjust | I | Error, Display | The application failed to detect which lane was being adjusted. |
| Queue can only be cleared from first entry box!!! | I | Display | Use first entry box to clear queue. |
| Queue ID must contain a value between S189 and S193 You entered ___. | I | Display | Enter valid queue ID value. |
| Queue ID must contain a value between S215 and S226 .You entered __. | I | Display | Enter valid queue ID value. |
| Queue ID must contain a value of 'S' for first character You entered __. | I | Display | Enter valid queue ID which begins with ‘S’. |
| Screen has been edited. Do not modify database results | A | Error, Display | Inquiry Results have been edited and Print was selected. The Print function will not work if the Results text has been edited. |

| Message | Type | Log/Display | Explanation/Action |
|---|---|---|---|
| Search Index and From field values missing | A | Error, Display | View Log, a log filename and a TO value has been selected and the OK button pressed. If the TO field contains a value, a Search Value (SMM field) and a FROM value must also be entered. |
| Spur/Control Number must contain a minimum of 4 characters You entered __, __ characters | I | Display | Enter 4 character spur/control number. |
| Status Request without workstation selection | A | Error, Display | A workstation must be selected before the OK button is clicked. |
| Subcontroller Has Shut Down | I | Display | The Oklahoma City AWOS subcontroller has shut down |
| Subcontroller Has Started Up | I | Display | The Oklahoma City AWOS subcontroller has started up. |
| T07 Msg (to, from, length, code, number, zone0, zone1, type) | I | User | Fault Handling Request PLC File message. |
| T11 Msg (to, from, length, code, number, zone0, zone1, cart0, cart1) | I | User | Fault Handling Cart Status message. |
| T25 Msg (to, from, length, code, number, wkst, action) | I | User | Update spur status message. |
| T27 Msg (to, from, length, code, number, spur, card ID) | I | User | Fault Handling Update Queue Message |
| T29 (to, from, length, code, number, tote ID) | I | User | Modify Damaged tote Message |
| There must be at least one check box checked | A | Error, Display | In the System Dialog box, a Subcontroller was selected but no checkbox checked. Check the box for the action required. |
| To Location must contain at least 1 characters. You entered __, __ characters. | I | Error, Display | Enter 1 or more characters. |
| Tote ID is invalid for inquiry. Tote ID must start with R - Receiving P - Packing | A | Error, Display | Tote ID must begin with either an R or a P (Receiving or Packing). |
| Tote ID must contain 5 characters You entered __, __ characters | I | Display | Enter 7 character tote ID. |
| Tote ID must contain only numbers You entered __ | I | Display | Enter valid numeric tote ID. |
| TOW01USE01009J87S19199 | I | User | The Towline Subcontroller has received a J87 message from UI to update the spur to warehouse association. |

| Message | Type | Log/Display | Explanation/Action |
|---|---|---|---|
| Unable to access all SID elements but will continue | I | Error, Display | The application could not access all WinNT Security Identifier elements |
| Unable to access username - FATAL ERROR !!! | F | Error, Display | The application could not access the WinNT username. Contact the Systems Administrator. |
| Unable to allocate memory for Token Data | I | Error, Display | The application could not allocate memory. |
| Unable to create link thread. | A | Error, Display | The User Interface could not create the process thread that communicates with the other ECS applications. |
| Unable to create Listener Thread. | A | Error, Display | The User Interface could not create the process thread that communicates with the other ECS applications. |
| Unable to create Timer Thread on Maximize | I | Error, Display | The User Interface could not create the timer thread. |
| Unable to create Timer Thread on Restore | I | Error, Display | The User Interface could not create the timer thread. |
| Unable to create Timer Thread. | I | Error, Display | The User Interface could not create the timer thread. |
| Unable to free tokenData memory | I | Error, Display | The application was unable to free memory. |
| Unable to get Group Information | I | Error, Display | The application could not access WinNT's Token Group data. |
| Unable to look up SID | I | Error, Display | The application could not access WinNT's Security Identifier information. |
| Unable to open group.txt | I | Error, Display | The application could not open the file group.txt. |
| Unable to OpenProcess | I | Error, Display | The application could not access WinNT's PROCESS_QUERY_ INFORMATION |
| Unidentified Subcontroller: [subcontroller] | A | Error, Display | The subcontroller selected was neither Carousel nor NMC. This action only works with Carousel and NMC. |
| Unknown message type: [header and body of unknown message] | I | Error, Display | The User Interface received an ECS message from another ECS application where the message type could not be determined. |
| Warehouse 99 from 192 to 191 | I | User | The Towline Subcontroller has processed the J87 and has changed the spur associated with warehouse 99 from S192 to S191. |

| Message | Type | Log/Display | Explanation/Action |
|---|---|---|---|
| WIN.INI does not have a [ECS] Home = entry. FATAL ERROR | F | Error, Display | The WIN.INI file does not have a [ECS] Home = entry. Contact the Systems Administrator. |
| Workstation ___ was not found | I | Display | Workstation not found in database. |
| WorkStation Name must contain 4 characters. You entered __, __ characters. | I | Error, Display | Enter 4 characters. |
| You can only delete 1 stacker transaction at a time! | I | Error, Display | Select 1 stacker unit for deletion |
| You must enter 4 numeric characters You entered __, __ characters | I | Display | Enter 4 valid numbers. |
| You must have at least one of each priority type | I | Display | Enter one priority type each. |
| Zone must contain a value between 1 and 6 You entered __. | I | Display | Enter value for zone between 1 and 6. |
| Zone Name must contain 3 characters Stand Name must contain 4 characters. You entered __, __ characters. | I | Error, Display | Enter 3 or 4 characters. |

Table E - 1-1 User Interface Messages

# APPENDIX F HILL STACKER MESSAGES

## 1.0 HILL STACKER MESSAGES

The following table represents a list of all messages from the Hill Stacker subcontroller. The Message column represents the text of the messages as displayed on the screen. The Type column represents the type of the message: "I" indicates informational, "A" indicates action required and "F" indicates fatal situation, immediate action is required before further processing. Action and Fatal messages will include the action to be performed. The Log/Display column represents where the message will be displayed: the annotation of "Error" means the message will be logged to the error log, the annotation of "User" means the message will be logged to the message log, and the annotation of "Display" means the message will be displayed throughout the UI on the screen as an Alert Message. The Explanation/Action column represents the action the user will perform when the message is displayed or an explanation of a Type "I" message.

***Note:** Variable text, depending on circumstances, is enclosed within brackets, [ ]. The text within the brackets describes the item that will appear in the error message.

| Message | Type | Log/Display | Explanation/Action |
|---|---|---|---|
| All Units Set Offline by [userName] | I | User | All Stackers were set offline as requested by specified user. |
| All Units Started by [userName] | I | User | All Stackers were started as requested by specified user. |
| Could not execute NET, Message not sent | A | User, Error | Hardware Error could not be sent to aisle terminal. **Collect supporting documents and call the Systems Administrator.** |
| ECS.INI file not found! | F | User, Error, Display | ECS.INI file was not found. **Collect supporting documents and call the Systems Administrator.** |
| Invalid Location [location]; SMM Sequence No. [sequencenumber] | A | User, Error | Location provided in SMM is invalid. **Collect supporting documents and call the Systems Administrator.** |
| Invalid SMM Message Flag [D] from [userName] | A | User, Error | DSS Ad Hoc Move **not** valid for stacker. **Collect supporting documents and call the Systems Administrator.** |

| Message | Type | Log/Display | Explanation/Action |
|---|---|---|---|
| Invalid SMM Message Flag [flag] from [userName] | A | User, Error | SMM Message Flag **not**<br>C = Completion<br>D = Dummy<br>E = Emergency<br>L = Location Survey<br>P = Pack Arrival<br>R = Request<br>W = Clear Buffers<br>**Collect supporting documents and call the Systems Administrator.** |
| Invalid Message Type [A05] from [userName] | A | User, Error | User Interface request to Delete SMM (A05) is **not** valid for Stacker. **Collect supporting documents and call the Systems Administrator.** |
| Invalid Message Type [A21] from [userName] | A | User, Error | User Interface request to Initialize Device (A21) is **not** valid for Stacker. **Collect supporting documents and call the Systems Administrator.** |
| Invalid Message Type [A41] from [userName] | A | User, Error | User Interface request to Format Workstation Update (A41) is **not** valid for Stacker. **Collect supporting documents and call the Systems Administrator.** |
| Invalid Message Type [J31] from [userName] | A | User, Error | User Interface request to Send Errors (J31) is **not** valid for Stacker. **Collect supporting documents and call the Systems Administrator.** |
| Invalid Message Type [J33] from [userName] | A | User, Error | User Interface request to Send Status (J33) is **not** valid for Stacker. **Collect supporting documents and call the Systems Administrator.** |
| Invalid Message Type [J41] from [userName] | A | User, Error | User Interface request to Format At Workstation (J41) is **not** valid for Stacker. **Collect supporting documents and call the Systems Administrator.** |
| Invalid Restart from Unit [unitNumber] Requested by [userName] | A | User, Error | The Aisle requested to be started does not exist. **Collect supporting documents and call the Systems Administrator.** |

| Message | Type | Log/Display | Explanation/Action |
|---|---|---|---|
| Invalid Set Logging Flag [flag] by [userName] | I | User, Error | A flag of other than 'F' or 'N' transmitted in message. **Collect supporting documents and call the Systems Administrator.** |
| Invalid Start/Stop Code [code] from [userName] | I | User, Error | A Start and Stop code of other than 'N' or 'F' sent. **Collect supporting documents and call the Systems Administrator.** |
| Invalid Unit Number [unitNumber] from [userName] | I | User, Error | Invalid unit number sent in SMM. **Collect supporting documents and call the Systems Administrator.** |
| Linkage Table Not Loaded Properly | F | User, Error, Display | Premature End of File encountered reading the Stacker Linkage Table. **Collect supporting documents and call the Systems Administrator.** |
| Logging Turned OFF by [userName] | I | User | Logging in User Log turned off by specified user. |
| Logging Turned ON by [userName] | I | User | Logging in User Log turned on by specified user. |
| Pick Complete Out of Sequence [address] | A | User, Error | A completion SMM was received for a tray other than the current tray. Clear workstation. **Collect supporting documents and call the Systems Administrator.** |
| Request Buffer is Full | A | User, Error | Request buffer is full. **Collect supporting documents and call the Systems Administrator.** |
| Request Buffer Overflow; Sequence Nr. [sequenceNumber] Ignored | A | User, Error | Request buffer has overflowed last message disregarded. **Collect supporting documents and call the Systems Administrator.** |
| Set Offline Invalid for Unit [unitNumber] Requested by [userName] | I | User, Error | Unit set offline when already offline. |
| Stacker Error Message Table Not Loaded Properly | A | User, Error | Error loading error message table. **Collect supporting documents and call the Systems Administrator.** |

| Message | Type | Log/Display | Explanation/Action |
|---|---|---|---|
| Stacker Status Code [code] Invalid | I | User, Error | Stacker Status Code other than 'F' or 'N' |
| Subcontroller Set Offline | I | User, Error | Subcontroller set offline. All Aisles are offline. |
| SubSystem Shut Down by [userName] | I | User | SubSystem shut down by specified user. |
| Unit [unitNumber] Set Offline by [userName] | I | User | Aisle unit number shut down by specified user. |
| Unit [unitNumber] Started by [userName] | I | User | Aisle unit number has been cleared. All trays should be returned. If not return them manually. |
| Unknown Message Type [type] from [userName] | | User, Error | Unknown message type received. **Collect supporting documents and call the Systems Administrator.** |
| USE01STK01lllK02SSSU…U | I | User | Host to User Interface Response to Status Request where:<br>USE01 = to User Interface 01,<br>STK01 = from Stacker number 01,<br>lll = Message Length,<br>K02 = Message Type,<br>SSS = Subcontroller Status<br>"Off" = Offline, and<br>"On" = Online<br>U…U = Individual Unit Status (positional: 1st is for Stacker #1, 2nd is for Stacker #2, etc.)<br>"F" = Offline<br>"N" = Online |
| Workload Buffers for All Units Cleared by [userName] | I | User | All units had tier Workload Buffer cleared by specified user. |
| Workstation [unitNumbers] has trays [tray1], [tray2] and [tray3] | A | User, Error | Aisle unit numbers has the listed trays at its workstation. This message usually accompanies pick complete out of sequence. **Collect supporting documents and call the Systems Administrator.** |

| Message | Type | Log/Display | Explanation/Action |
|---|---|---|---|
| rpAcn | I | User | Notification of Alert On Message sent to stacker where:<br>r = route code (octal 32)<br>p = protocol character (alternating 'Y' and 'Z')<br>A = Alert On command code<br>c = carriage return<br>n = check SMM |
| rpCcn | I | User | Notification of Cancel Alert Message sent to stacker where:<br>r = route code (octal 32)<br>p = protocol character (alternating 'Y' and 'Z')<br>C = Cancel Alert command code<br>c = carriage return<br>n = check SMM |
| rpD1 s bb ttcn | I | User | Notification of Delivery Message sent to stacker where:<br>r = route code (octal 32)<br>p = protocol character (alternating 'Y' and 'Z')<br>D = Delivery command code<br>1 = destination code<br>s = side<br>bb = bay<br>tt = tier<br>c = carriage return<br>n = check SMM |
| rpNcn | I | User | Notification of Alert On Message sent to stacker where:<br>r = route code (octal 32)<br>p = protocol character (alternating 'Y' and 'Z')<br>N = restart command code<br>c = carriage return<br>n = check SMM |
| rpXcn | I | User | Notification of Return Tray Message sent to stacker where:<br>r = route code (octal 32)<br>p = protocol character (alternating 'Y' and 'Z')<br>X = Return Tray command code<br>c = carriage return<br>n = check SMM |

| Message | Type | Log/Display | Explanation/Action |
|---|---|---|---|
| tttttfffffllltttbbbbsssssssscccccc<br>fffffffffffffffllllllllllllllll<br>ddddddddsssssssssaaaaaaaaa222<br>222222cccc1111122222<br>hpfoowqqddddddddpppp | I | User | Standard Movement Message from Traffic Controller where:<br>ttttt = to address<br>fffff = from address<br>lll = message length<br>ttt = message type<br>bbbb = site ID<br>ssssssss = sequence number<br>ccccccc = control number<br>fffffffffffffff = consolidation field<br>lllllllllllllll = location<br>ddddddddd = destination<br>ssssssssss = source<br>aaaaaaaaa = alternate destination<br>222222222 = 2nd alt. Destination<br>cccc = chain<br>11111 = first choice<br>22222 = second choice<br>h = handling unit<br>p = priority<br>f = flag<br>oo = option<br>w = work type<br>qq = quantity<br>ddddddddd = date time stamp<br>pppp = program ID |
| Hardware Errors | A | User, Error, Workstation, Display | These are MC8 generated hardware errors. These messages will be logged and forwarded to the Aisle Workstation screen for resolution. Sometimes this resolution requires maintenance personnel intervention |

Table F - 1-1 Hill Stacker Message

## 2.0 END-OF-AISLE ERROR CODES

The following is a list of Stacker end-of-aisle error codes. They will be displayed at the End-of-Aisle DSS Workstation. The message will automatically be displayed in the Win Popup message box. The end-of-aisle operator will follow the error recovery procedures as outlined in the Action section.

### 2.1 Format

The format is as follows:

If the error code is less than 40 Hexadecimal:

| | |
|---|---|
| Pos 0-2 | "STK" |
| Pos 3-4 | Stacker Number |
| Pos 5 | Blank |
| Pos 6 | Retractor Code (Left or Right) |
| Pos 7 | Blank |
| Pos 8 | "B" |
| Pos 9-10 | Bay Number |
| Pos 11 | Blank |
| Pos 12-13 | "T" |
| Pos 13-14 | Tier Number |
| Pos 15 | Blank |
| Pos 16-60 | Status Text |

If the error code is equal to or greater than 40 hexadecimal:

| | |
|---|---|
| Pos 0-2 | "STK" |
| Pos 3-4 | Stacker Number |
| Pos 5 | Blank |
| Pos 6-50 | Status Text |

### 2.2 Error Codes

#### 2.2.1

| Error Code | Status Text |
|---|---|
| 00 | Unknown S/RM Errors - NO LOAD |
| 01 | Gx Com Error - NO LOAD |
| 02 | Unknown S/RM Errors - NO LOAD |
| 03 | Unknown S/RM Errors - NO LOAD |
| 04 | Unknown S/RM Errors - NO LOAD |
| 05 | Unknown S/RM Errors - NO LOAD |
| 06 | S/RM Cycle Complete - NO LOAD |
| 07 | Dynamic Sensor Error - NO LOAD |
| 08 | Dynamic Sensor Error - NO LOAD |
| 09 | Dynamic Sensor Error - NO LOAD |

| Error Code | Status Text (continued) |
|---|---|
| 0A | S/RM failed to Horiz. Position - NO LOAD |
| 0B | Unknown S/RM Errors - NO LOAD |
| 0C | S/RM failed to Vertically Position - NO LOAD |
| 0E | Retractor Timer Error - NO LOAD |
| 0F | Unknown S/RM Errors - NO LOAD |
| 10 | Dynamic Sensor Error - NO LOAD |
| 11 | Unknown S/RM Errors - NO LOAD |
| 12 | Unknown S/RM Errors - NO LOAD |
| 13 | Unknown S/RM Errors - NO LOAD |
| 14 | Unknown S/RM Errors - NO LOAD |
| 15 | Unknown S/RM Errors - NO LOAD |
| 16 | Unknown S/RM Errors - NO LOAD |
| 17 | Unknown S/RM Errors - NO LOAD |
| 18 | Stop Encounter - NO LOAD |
| 19 | Horiz,/Vert. Timer Error - NO LOAD |
| 1A | Unknown S/RM Errors - NO LOAD |
| 1B | Unknown S/RM Errors - NO LOAD |
| 1C | Bin Status- NO LOAD |
| 1D | Unknown S/RM Errors - NO LOAD |
| 1E | Retractor Finger Switch Error - NO LOAD |
| 1F | Retractor or Load Not Aligned - NO LOAD |
| 20 | Unknown S/RM Errors - LOAD |
| 21 | Gx tripped - LOAD |
| 22 | Unknown S/RM Errors - LOAD |
| 23 | Unknown S/RM Errors - LOAD |
| 24 | Unknown S/RM Errors - LOAD |
| 25 | Unknown S/RM Errors - LOAD |
| 26 | S/RM Cycle Complete - LOAD |
| 27 | Vertical Read Head Error - LOAD |
| 28 | Vertical Read Head Error - LOAD |
| 29 | Vertical Read Head Error - LOAD |
| 2A | Whedco Encoder Card Error- LOAD |
| 2B | Unknown S/RM Errors - LOAD |
| 2C | S.RM Failed to Horz. Position - LOAD |
| 2D | Unknown S/RM Errors - LOAD |
| 2E | Machine Emergency - LOAD |
| 2F | Unknown S/RM Errors - LOAD |
| 30 | Vertical Read Head Error - LOAD |
| 31 | Unknown S/RM Errors - LOAD |
| 32 | Unknown S/RM Errors - LOAD |
| 33 | Unknown S/RM Errors - LOAD |
| 34 | Unknown S/RM Errors - LOAD |
| 35 | Unknown S/RM Errors - LOAD |
| 36 | Unknown S/RM Errors - LOAD |
| 37 | Unknown S/RM Errors - LOAD |

| Error Code | Status Text (continued) |
|---|---|
| 38 | MCP8 Command Error - LOAD |
| 39 | Sidesensor Block Error - LOAD |
| 3A | Unknown S/RM Errors - LOAD |
| 3B | Unknown S/RM Errors - LOAD |
| 3C | Retractor Load Error - LOAD |
| 3E | Location Occupied - LOAD |
| 3F | Retractor or Load Not Aligned - LOAD |
| 40 | Overweight Load on Conveyor Pick Station |
| 41 | Dog #1 Not Initialized |
| 42 | Dog #2 Not Initialized |
| 43 | Dog #3 Not Initialized |
| 44 | Conveyor Manual Operation Required |
| 45 | All Conveyor Motors On |
| 46 | Motors 1 and 2 On |
| 47 | Motors 2 and 3 On |
| 48 | Dog 1 Failed to Move |
| 49 | Motor #1 Error |
| 4A | Dog 2 Failed to Move |
| 4B | Motor #2 Error |
| 4C | Dog 3 Failed to Move |
| 4D | Motor #3 Error |
| 4E | Dogs 1 and 2 Not Initialized |
| 4F | Dogs 2 and 3 Not Initialized |
| 51 | S/RM Communication Failure |
| 52 | S/RM P-Count Timer Overrun |
| 53 | Reset Sent to S/RM |
| 54 | Invalid Operator Command Entry |
| 55 | Invalid Address Entry |
| 56 | Invalid Computer Command |
| 57 | KE8 Processor Error |
| 58 | No Dogs Initialized |
| 5A | Chute Full |
| 5B | Chute Not Full |
| 5C | -- Message Not defined -- |
| 5D | -- Message Not defined -- |
| 5E | -- Message Not defined -- |
| 5F | -- Message Not defined -- |
| 60 | Printer Buffer Length Exceeded |
| 61 | -- Message Not defined -- |
| 62 | -- Message Not defined -- |
| 63 | -- Message Not defined -- |
| 64 | Invalid Printer Command from Computer |

## 2.3 Action

The actions on the End-of-Aisle error codes will follow the procedures as outlined below. ECS has not altered these messages. They are generated by the Stacker controllers.

## 2.4 DSS - ECS End-of-Aisle Procedures

### 2.4.1 Aisle Daily Startup Procedures

1. Insure the MC8 Unit is in ‘Automatic’ mode.
2. Logon to the DSS workstation.
3. Request DSS workload.

### 2.4.2 Aisle Clear Workload Procedures

1. Execute a DSS clear workload.
2. Allow all trays to return to the aisles automatically.
3. Request DSS workload.

### 2.4.3 Aisle Stacker Error Recovery Procedures (Displayed)

Once an error condition is displayed for your aisle:

1. Set MC8 unit to ‘Manual’ mode.
2. Perform current maintenance procedures.
3. Set MC8 unit to ‘Automatic’ mode.
4. Execute a DSS clear workload.
5. Allow all trays to return to the aisle automatically.
6. If trays are remaining after stacker activity has stopped;

    a) Set the MC8 unit into ‘Manual’ mode.
    b) Manually replace any remaining trays.
    c) Set the MC8 unit into ‘Automatic’ mode.
    d) Press the ‘RESET’ button on the MC8 unit.

7. Request DSS workload.

## 3.0 ECS SYSTEM RECOVERY PROCEDURES

### 3.1 Doctor Watson Recovery Procedures

1. If the Traffic Controller went down, bring it back up.
2. Shut down Stacker Subcontroller if it did not go down.
3. Announce to all aisle operators to clear their DSS workload, set their MC8 units to ‘manual’ and manually return all trays.
4. Allow all DSS SMM's to come down and the operators to return their trays. Wait for the quiet point.
5. At the quiet point shutdown the SNA Server Manager then all ECS software (Traffic Controller, User Interface and Stacker Subcontroller).
6. Click on the Wipeout icons on both computers.
7. Shutdown and power off both computers.
8. Unplug and Replug the Codex unit.
9. Power on and logon to both computers.
10. Click on the Wipeout icons on both computers.
11. Start the SNA Server Manager on the Traffic computer.
12. Start the ECS software (Traffic Controller, User Interface and Stacker Subcontroller).
13. Announce to all aisle operators to set their MC8 units to ‘Automatic’, press the ‘Reset’ button and logon to DSS and request workload.

### 3.2 Daily System Activity Procedures

1. At the end of each day insure the operators have returned all trays and cleared their DSS workload. Shutdown all software on both computers, click on the wipeout icon on both computers, shutdown and power off the computers.
2. At the beginning of each day startup all hardware, click on the wipeout icon on both computers and startup all software. Insure all aisles are in ‘Automatic’ and the ‘Reset’ has been pressed. Begin processing.
3. If a slowdown occurs on the SNA software;

    a) Insure the operators have returned all trays and cleared their DSS workload.
    b) Shutdown all software on both computers, click on the wipeout icon on both computers, shutdown and power off the computers.
    c) Unplug and replug the Codex units. Startup all hardware and software.
    d) Insure all aisles are in ‘Automatic’ and the ‘Reset’ has been pressed.
    e) Begin processing

4. If communications with the MC8 controllers appears to be lost (no LINKXX messages being displayed on the Display Messages box)

   a) Insure the operators have returned all trays and cleared their DSS workload.
   b) Shutdown all software on both computers, click on the wipeout icon on both computers, shutdown and power off the computers
   c) Unplug and replug the Codex unit.
   d) Power off and power on the digi-board equipment power strip.
   e) Startup all hardware and software.
   f) Insure all aisles are in ‘Automatic’ and the ‘Reset’ has been pressed.
   g) Begin processing.

## 3.3 Monthly Procedures

1. Near the end of each month copy the log files to another directory and delete them from the ECS_LOGS directory.

## 3.4 Message Announcement Procedures

1. As Stacker fault messages are displayed on the screen, click on the OK button to clear the messages.

## 3.5 Clear Aisle Procedures

1. Ask the operator to clear his workload, manually replace trays, set the MC8 to ‘Automatic’ and press ‘Reset’. Send a reset (MHE/Workstation Control/On) through the user interface.
2. Ask the operator to request workload. Tell the operator to continue processing.

# APPENDIX G MECHANICSBURG AGV MESSAGES

## 1.0 MECHANICSBURG AGV MESSAGES

The following table represents a list of all messages from the AGV subcontroller. The Message column represents the text of the message as displayed on the screen. The Type column represents the type of the message: "I" indicates informational, "A" indicates action required and "F" indicates fatal situation, immediate action is required before further processing. Action and Fatal messages will include the action to be performed. The Log/Display column represents where the message will be displayed: the annotation of "Error" means the message will be logged to the error log, the annotation of "User" means the message will be logged to the message log, and the annotation of "Display" means the message will be displayed through the UI on the screen as an Alert Message. The Explanation/Action column represents the action the user will perform when the message is displayed or an explanation of a Type “I” message.

| Message | Type | Log/ Display | Explanation/Action |
|---|---|---|---|
| ! AGV SubSystem Shut Down by [uuuuu] | I | User | AGV subsystem shutting down due to user interface A09 message. |
| ! ALL currently 'ON' Auto Refill Switches were toggled by uuuuu | I | User | Operator has initiated the toggling of currently on auto refill switches. This cancels all pending requests and renews the pending requests in stand number sequence. |
| ! Cannot Alter Parameters for Powered Stand 660 | I | User<br>Error<br>Display | The auto refill parameters cannot be changed for the powered stand in shipping. |
| ! Cannot Alter Parameters for Staging Stand sss | I | User<br>Error<br>Display | The auto refill parameters cannot be changed for a stand in any staging area. |
| ! Invalid AGV number in L01 message | A | User<br>Error | Verify AGV number and add to the database as necessary. |
| ? Loaded Module mmmmm not scheduled to sss | I | User<br>Error | Loaded Module requested by operator that was not scheduled to the specified stand. |
| Logging Turned ON by [uuuuu] | I | User | Logging was turned on by specified user. |
| ! mmmmm deleted from a Empty Module Queue | I | User<br>Error | Module removed from are a Empty Module Queue while de-linking a non-existing module. |

| Message | Type | Log/ Display | Explanation/Action |
|---|---|---|---|
| ! mmmmm removed from sss | I | User Error | Specified module removed from specified stand while de-linking non-existent module. |
| ! mmmmm rerouted to 999; Warn Maintenance | A | User Display | A module has been rerouted to the maintenance stand. **Notify maintenance of the impending occurrence** |
| ! mmmmm src sss a/c a -> a | I | User Error | Specified module's source stand area code was in error and corrected as indicated. |
| ! Module on stand sss changed from mmmmm to mmmmm | I | User Error | A new module/pallet was place on the specified stand before ECS was informed that the old one was removed. |
| ! Module on stand sss changed from mmmmm to mmmmm -<br>Module mmmmm was on sss | A | User Error | A new module/pallet was placed on the specified stand before ECS was informed that the old one was removed and the new one was on some other stand. Perform site inspection on both stand and take corrective action as required. |
| ! Pending Move for mmmmm already exists | I | User | Notification that the pending move for specified module already exists. |
| ! Pending Request [ssst] Already Exists | I | User | Pending Request; where,<br>sss = stand ID and<br>t = type (E = Empty & L = Loaded) already exists - only one pending request per stand can be active at any one time. |
| ! Stand sss in Auto Refill Mode; Can't service Request for Next Loaded Module! | A | User Error Display | While the system is automatically replenishing a given stand, no manual requests may be made to it. **If manual request is necessary, set auto refill flag to No ('N') and submit manual request again.** |
| * Stand sss is down; cannot place a load on it | A | User Error Display | Cannot place a module/pallet on the specified stand, since it is currently down. |
| ! Transaction tttt inactive | I | User Error | LAC L99 message with specified transaction no longer active. |

| Message | Type | Log/ Display | Explanation/Action |
|---|---|---|---|
| ! Unsolicited AGV Inquiry Response [L03ttttaaax] | I | User | AGV Inquiry Response received from LAC without a corresponding inquiry; where<br>tttt = transaction,<br>aaa = AGV number and<br>x = destination. |
| "* mmmmm placed on 999 was consigned to sss; consignment cancelled" | A | User Error Display | Specified module was manually placed on stand 999 although consigned to specified stand. Specified stand cleared and transaction deleted. Verify and correct as necessary. |
| * AGV [aaa] General Error; call maintenance | A | User Error | LAC sent L99 with status code of 17. **Call Maintenance.** |
| * AGV aaa encountered Error nn with nonexistent transaction tttt | A | User Error | LAC sent L99 with status code of 19 and a transaction ID that is not in our database. **Collect supporting documents and call the Systems Administrator to correct problem.** |
| * AGV aaa Lost Communications; Call Maintenance; Last Tag Read nnnn | A | User Error | LAC sent L99 with status code of 34 or 35. **Correct problem with AGV or take AGV offline. If a load is removed from the AGV, put the AGV back online long enough to report to the LAC and use the handheld terminal to notify host that the mod/pallet has been manually delivered.** |
| * AGV aaa Not In LAC Database | A | User Error Display | LAC send L99 message status code 27 subcode 131. ECS requested an AGV status inquiry for an AGV not recognizable to the LAC. Verify AGV number and try again. |
| * AGV System Error [009], Call Maintenance; UPS Battery Back-Up | A | User Error Display | LAC sent L99 with status code of 48 and status subcode of 009. **Correct problem with system component reporting error.** |

| Message | Type | Log/ Display | Explanation/Action |
|---|---|---|---|
| * AGV System Error [0XY], Call Maintenance; Line Driver Y BAD in Craffic Box X | A | User Error Display | LAC sent L99 with status code of 48 and status subcode of 0xy where x is 1-7 and y is 1-4. **Correct problem with system component reporting error.** |
| * AGV Traffic Zone Held Too Long, Call Maintenance; Transaction tttt; AGV aaa; Location llllllll | A | User Error Display | LAC sent L99 with status code of 42. Call maintenance. **Correct problem with AGV blocking zone or take that AGV offline. If a load is removed from that AGV, put AGV back online, long enough to report to the LAC and use the handheld terminal to notify host that the mod/pallet has been manually delivered.** |
| * AGVS [ ] Record not in database | A | User Error Display | LAC L03 message contains AGV number that is not in ECS database. Verify LAC AGV number **and contact Systems Administrator** to have the ECS database updated as necessary. |
| * Area a Empty Mod Set; mmmmm, mmmmm & mmmmm | I | User Error | Diagnostic message for bad empty module linkage, giving the area in question plus the module in question bracketed by its previous and next linked module. |
| * Area a Empty Stand Set; sss, sss & sss | I | User Error | Diagnostic message for bad empty stand linkage, giving the area in question plus the module in question bracketed by its previous and next linked modules. |
| * Craffic Box 1 Detected Power Failure | A | User Error Display | LAC sent L99 with status code of 20 and status subcode of 003. **Correct the power failure.** |
| * Craffic Box 2 Detected Power Failure | A | User Error Display | LAC sent L99 with status code of 20 and status subcode of 004. **Correct the power failure.** |
| * Craffic Box 3 Detected Power Failure | A | User Error Display | LAC sent L99 with status code of 20 and status subcode of 005. **Correct the power failure.** |

| Message | Type | Log/ Display | Explanation/Action |
|---|---|---|---|
| * Craffic Box 4 Detected Power Failure | A | User Error Display | LAC sent L99 with status code of 20 and status subcode of 006. **Correct the power failure.** |
| * Craffic Box 5 Detected Power Failure | A | User Error Display | LAC sent L99 with status code of 20 and status subcode of 007. **Correct the power failure.** |
| * Craffic Box 6 Detected Power Failure | A | User Error Display | LAC sent L99 with status code of 20 and status subcode of 008. **Correct the power failure.** |
| * Craffic Box 7 Detected Power Failure | A | User Error Display | LAC sent L99 with status code of 20 and status subcode of 009. **Correct the power failure.** |
| * Delivery Stand sss is Dead | A | User Error Display | LAC sent L99 with status code 28 and status subcode 328. **Correct the problem with the stand, update the status and request delivery.** |
| * Delivery Stand sss is Full | A | User Error Display | LAC sent L99 with status code 28 and status subcode 128. **Correct the problem with the stand, update the status and request delivery.** |
| * Dependency Conflict; Pickup Stand sss | A | User Error Display | LAC sent L99 with status code 27 and status subcode 119. **Another transaction is outstanding on the LAC for either the pickup or delivery stand. If the mod/pallet has been removed from the AGV and the AGV has been taken offline, put it back online long enough for it to communicate with the LAC so the transaction will be erased from the LAC.** |

| Message | Type | Log/ Display | Explanation/Action |
|---|---|---|---|
| * Dependency Conflict; Transaction tttt | A | User Error Display | LAC sent L99 with status code 27 and status subcode 125. **Another transaction is outstanding on the LAC for the delivery stand. If the mod/pallet has been removed from the AGV and the AGV has been taken offline, put it back online long enough for it to communicate with the LAC so the transaction will be erased from the LAC.** |
| * Duplicate Transaction ID; Transaction [tttt] | A | User Error Display | LAC sent L99 with status code 27 and status subcode 130. **Research log files to see what caused the error.** |
| * Error adding AGVS [aaa] Record; SQL error code and message | | User Error | SQL Error encountered while trying to add an AGV record. Collect supporting documents and **contact the Systems Administrator.** |
| * Error adding MODS [mmmmm] Record; SQL error code and message | A | User Error | SQL Error encountered while trying to add a Module record. **Collect supporting documents and call the Systems Administrator.** |
| * Error adding TRAN [tttt] Record; SQL error code and message | A | User Error | SQL Error encountered while trying to add a Transaction record. **Collect supporting documents and call the Systems Administrator.** |
| * Error deleting MODS [mmmmm] Record; SQL error code and message | A | User Error | SQL Error encountered while trying to delete a Module record. **Collect supporting documents and call the Systems Administrator.** |

| Message | Type | Log/ Display | Explanation/Action |
|---|---|---|---|
| * Error deleting TRAN [tttt] Record; SQL error code and message | A | User Error | SQL Error encountered while trying to delete a Transaction record. **Collect supporting documents and call the Systems Administrator.** |
| * Error reading AGVS [aaa] Record; SQL error code and message | A | User Error | SQL Error encountered while trying to read an AGV record. **Collect supporting documents and call the Systems Administrator.** |
| * Error reading AREA [a] Record; SQL error code and Message | A | User Error | SQL Error encountered while trying to read an Area record. **Collect supporting documents and call the Systems Administrator.** |
| * Error reading MODS [mmmmm] Record; SQL error code and message | A | User Error | SQL Error encountered while trying to read a Module record. **Collect supporting documents and call the Systems Administrator.** |
| * Error reading STND [sss] Record; SQL error code and message | A | User Error | SQL Error encountered while trying to read a Stand record. **Collect supporting documents and call the Systems Administrator.** |
| * Error reading STND Record Containing Module [mmmmm]; SQL error code and message | A | User Error | SQL Error encountered while trying to read a Stand Record using Module ID as the key. **Collect supporting documents and call the Systems Administrator.** |
| * Error searching TRAN Records; SQL error code and message | A | User Error | SQL Error encountered while trying to search the transaction records. **Collect supporting documents and call the Systems Administrator.** |
| * Error updating AGVS [aaa] record; SQL error code and message | A | User Error | SQL Error encountered while trying to update an AGV record. **Collect supporting documents and call the Systems Administrator.** |

| Message | Type | Log/ Display | Explanation/Action |
|---|---|---|---|
| * Error updating AREA [a] record; SQL error code and message | A | User Error | SQL Error encountered while trying to update an Area record. **Collect supporting documents and call the Systems Administrator.** |
| * Error updating MODS [mmmmm] record; SQL error code and message | A | User Error | SQL Error encountered while trying to update a Module record. **Collect supporting documents and call the Systems Administrator.** |
| * Error updating STND [sss] record; SQL error code and message | A | User Error | SQL Error encountered while trying to update a Stand record. **Collect supporting documents and call the Systems Administrator.** |
| * Error updating SYST record; SQL error code and message | A | User Error | SQL Error encountered while trying to update the System record. **Collect supporting documents and call the Systems Administrator.** |
| * Error updating TRAN [tttt] record; SQL error code and message | A | User Error | SQL Error encountered while trying to update a Transaction record. **Collect supporting documents and call the Systems Administrator.** |
| * Host/AGV Communications Up | I | User | Notification that the Host/AGV Communications is UP. |
| * Hyper Drive detected Power Failure | A | User Error Display | LAC sent L99 with status code of 20 and status subcode of 002. **Correct the power failure.** |
| * Invalid AGV Message Type [ttt] | A | User Error Display | Message Type from LAC **not** L01, L02, L03, L04, L05, L06, L98 or L99. **Collect supporting documents and call the Systems Administrator.** |
| * Invalid Data Was Received; Transaction [tttt] | A | User Error Display | LAC sent L99 with status code 27 and status subcode 121. **Research log files to see what caused the error.** |
| * Invalid Delivery Stand Number; Transaction [tttt] | A | User Error Display | LAC sent L99 with status code 27 and status subcode 118. **Research log files to see what caused the error.** |

| Message | Type | Log/ Display | Explanation/Action |
|---|---|---|---|
| * Invalid Destination [x] for AGV [aaa] | A | User Error | Out of Service message for LAC specified a destination other than Battery ('B'), Maintenance ('M') or Off Wire ('O'). **Collect supporting documents and call the Systems Administrator.** |
| * Invalid Destination Stand [sss]; Transaction [tttt] | A | User Error Display | LAC sent L99 with status code 27 and status subcode 124. **Research log files to see what caused the error.** |
| * Invalid Dummy Move | A | User Error | Dummy Move Type not H01, H02, H03, H04, H05, H06, H07, L04, L05 or L06. |
| * Invalid Message Flag; Type [ttt], Flag [f]; from [uuuuu] | A | User Error Display | SMM Message Flag **not** A =Regular, B = Priority, F = Stand Parameters or S = Stand Status. **Collect supporting documents and call the Systems Administrator.** |
| * Invalid Mod/Pal Selection; Transaction [tttt] | A | User Error Display | LAC sent L99 with status code 27 and status subcode 120. **Research log files to see what caused the error.** |
| * Invalid Module/Pallet ID [mmmmm] | A | User Error | Module/Pallet does not start with 'M' or 'P'. **Research log files to see what caused the error and resubmit.** |
| * Invalid Module/Pallet ID [mmmmm]; DSS Sequence Number [ssssssss] | A | User Error Display | Module/Pallet does not start with 'M' or 'P'. **Research log files to see what caused the error and resubmit.** |
| * Invalid Pickup Stand Number; Transaction [tttt] | A | User Error Display | LAC sent L99 with status code 27 and status subcode 117. **Research log files to see what caused the error.** |
| * Invalid Priority Selection; Transaction [tttt] | A | User Error Display | LAC sent L99 with status code 27 and status subcode 123. **Research log files to see what caused the error.** |
| * Invalid Set Logging Flag [f] by [uuuuu] | A | User Error Display | Set Logging Flag **not** On ('N') or Off ('F'). **Collect supporting documents and call the Systems Administrator.** |
| * Invalid SMM Destination [ddddddddd]; Sequence Number [ssssssss] | A | User Error Display | In attempting to enable or disable a stand, the destination field was neither "ENABLE  " or "DISABLE  ". **Research log files to see what caused the error.** |

| Message | Type | Log/ Display | Explanation/Action |
|---|---|---|---|
| * Invalid SMM Exception Message Source Field [ssssssssss] Sequence Number [nnnnnnnn] | A | User Error | Data in SMM source field not found in stand translation table. **Research log files to see what caused the error.** |
| * Invalid Source Field; sequence # [ssssssss] | A | User Error | In attempting to place a Module/Pallet on the stand, the SMM source field did not specify "EMPTY  " or "LOADED ". **Research log files to see what caused the error.** |
| * Invalid Start/Stop Code [c] by [uuuuu] | A | User Error Display | Start/Stop Code other than Start ('1') or Stop ('0') entered by specified user. **Collect supporting documents and call the Systems Administrator.** |
| * Invalid SubSystem Start/Stop Code [c] | A | User Error Display | Start/Stop Code other than Start ('1') or Stop ('0') entered by specified user. **Collect supporting documents and call the Systems Administrator.** |
| * Invalid Transaction [tttt] | A | User Error Display | LAC sent L99 with status code 27 and status subcode 116. **Research log files to see what caused the error.** |
| * Invalid WorkType [t] | A | User Error Display | In an attempt to alter the condition of a stand, the work type was neither; Place a module on the stand ('S'), Remove a module from the stand ('P'), nor to Enable or Disable the stand ('X'). **Collect supporting documents and call the Systems Administrator. Correct power failure.** |
| * LAC Detected Power Failure | A | User Error Display | LAC sent L99 with status code of 20 and status subcode of 001. **Correct power failure.** |
| * LAC Message [L99ttttssccrrrrddddf] has invalid Transaction Number | I | User Error | Specified LAC message has an inactive transaction number. |
| * LAC Stand Inquiry Response lists sss as Down | A | User Error Display | Results from a single stand inquiry. Perform a site survey. Make corrections as necessary. |
| * LAC thinks sss is empty. ECS thinks it is occupied. Check it out! | A | User Error Display | Results from a single stand inquiry. Perform a site survey. Make corrections as necessary. |

| Message | Type | Log/ Display | Explanation/Action |
|---|---|---|---|
| * LAC thinks sss is occupied. ECS thinks it is empty. Check it out! | A | User Error Display | Results from a single stand inquiry. Perform a site survey. Make corrections as necessary. |
| * Linked Empty Module NOT in database; Run Empty Module Linkage | A | User Error Display | Specified module linked as first empty module in area, but module record is not in ECS database. Run EMPTY MODULE LINKAGE to correct the problem. |
| * Load Conflict between AGV aaa and Delivery Stand sss | A | User Error Display | LAC sent L99 with status code of 19. **Determine what is blocking the delivery. After correcting the problem, update the stand and, if necessary, request delivery of a mod/pallet.** |
| * Load Conflict on Attempted Pickup Stand sss by AGV aaa | A | User Error Display | LAC sent L99 with status code of 18. **Determine how the stand got empty. If the stand does have a load on it, it must engage the switch and stand status on the HyperDrive should be "O". If another transaction to deliver to the stand is outstanding, no updates can be done until that transaction is completed. If possible, move the mod/pallet from the stand and allow the AGV to deliver. If that is not possible, the AGV will be rerouted when it reports a load conflict on delivery and the stand can be updated when the delivery is completed.** |
| * Load Conflict on Attempted Pickup Stand sss by AGV aaa - Load Manually Removed | I | User | LAC sent L99 with status code of 18. Load was manually removed from the stand. |
| * Load Conflict, Call Maintenance; Transaction tttt; Stand sss; AGV aaa; Location llllllll | A | User Error Display | LAC sent L99 with status code of 40. **Remove the mod/pallet from the outside stand.** |
| * Message not processed for Seq # [ ] | A | User Error Display | Message with specified sequence number was not processed. Check log and perform a site survey. Take corrective action as required. |

| Message | Type | Log/ Display | Explanation/Action |
|---|---|---|---|
| * mmmmm Deleted | A | User Error | Specified module was replaced on a stand by another module. The specified module has been deleted from the ECS database. Perform a site survey and take corrective action as necessary. |
| * mmmmm lost, last reported on sss | A | User Error | Perform site survey and introduce specified module if appropriate. |
| * mmmmm manually removed from sss | I | User | Module/Pallet manually placed from stand. |
| * mmmmm NOT in database"<br>- mmmmm removed from sss | A | User Error | Specified module was not in the ECS database and removed from the specified stand. Perform site survey and take corrective action as necessary. |
| * mmmmm not on a stand<br>* Message not processed for Seq # [nnnnnnnn] | A | User Error Display | Perform a site survey and take corrective action as required. |
| * mmmmm on sss deleted<br>Pending Move [mmmmmasssaddd] Cancelled | A | User Error Display | where<br>mmmmm = module,<br>asss = source area and stand and<br>addd = destination area and stand. Pending Move module has been deleted. Perform site inspection and make corrective adjustments as necessary. |
| * mmmmm on sss has unknown status | A | User Error Display | Module record created without a valid status. Do a site inspection and update. |
| * mmmmm pickup stand blank<br>* Message not processed for Seq # [nnnnnnnn] | A | User Error Display | Perform a site survey and take corrective action as required. |
| * mmmmm removed from AGV aaa<br>! locate mmmmm and place on stand sss.<br>! Use RF/DSS/UI to update the stand. | A | User Error | AGV returned to service without a load on its deck. |

| Message | Type | Log/ Display | Explanation/Action |
|---|---|---|---|
| * mmmmm source stand sss invalid | A | User Error | Specified module's source stand not in ECS database. Verify source stand number. **Contact the Systems Administrator** to add stand number to database if it is valid. |
| * mmmmm was on sss; it was removed and deleted per this error transaction | A | User Error Display | Perform site inspection and take corrective action as necessary. |
| * mmmmm was on sss; it was removed and sss disabled per this transaction | A | User Error Display | Perform site survey and take corrective action as required. |
| * Module mmmmm not in use | A | User Error Display | Requesting a specific module that is not currently in use. Verify Module ID. If correct, perform a site survey and update appropriate stand. |
| * Module mmmmm requested for sss is not on a stand | A | User Error Display | Specified module is not on a stand. Verify module number and try again if applicable. |
| * Numeric String Contained a Non-Numeric; Transaction [tttt] | A | User Error Display | LAC sent L99 with status code 27 and status subcode 201. **Research log files to see what caused the error.** |
| * Outer Double Deep Delivery Stand is DEAD | A | User Error Display | LAC sent L99 with status code 28 and status subcode 338. **Correct the problem with the stand, update the status and request delivery.** |
| * Outer Double Deep Delivery Stand sss is DEAD | A | User Error Display | LAC sent L99 message with status code 28 and status subcode 338. Correct the problem with the stand, update the status and request delivery. |
| * Outer Double Deep Pickup Stand is DEAD | A | User Error Display | LAC sent L99 with status code 28 and status subcode 339. **Correct the problem with the stand, update the status and request movement of the mod/pallet.** |
| * Outer Double Deep Pickup Stand sss is DEAD | A | User Error Display | LAC sent L99 with status code 28 and status subcode 339. Correct the problem with the stand, update the status and request movement of the mod/pallet. |

| Message | Type | Log/ Display | Explanation/Action |
|---|---|---|---|
| * Pending Move Buffer is Full | A | User Error Display | Pending Move Buffer has reached its current capacity. **Collect supporting documents and call the Systems Administrator to enlarge the Pending Move Buffer.** |
| * Pending Request Buffer is Full | A | User Error Display | Pending Request Buffer has reached its current capacity. **Collect supporting documents and call the Systems Administrator to enlarge the Pending Request Buffer.** |
| * Pickup Stand sss is Dead | A | User Error Display | LAC sent L99 with status code 28 and status subcode 329. **Correct the problem with the stand, update the status and request movement of the mod/pallet.** |
| * Pickup Stand sss is Empty | A | User Error Display | LAC sent L99 with status code 28 and status subcode 129. **Correct the problem with the stand, update the status and request movement of the mod/pallet.** |
| * Power Failure Detected (Unknown SubCode [nnn]) | A | User Error Display | LAC sent L99 with status code of 20 and status subcode other than 001-009. **Correct the power failure.** |
| * Processing LAC Error message; stand sss already disabled | A | User Error | LAC sent L99 requiring that the stand be disabled, but stand was already disabled. **Determine what caused the problem. After correcting problem, update stand status if necessary**. |
| * Request NOT Processed | A | User Error Display | The transaction was NOT processed. Determine problem and resubmit. |
| * Request to move mmmmm from sss to sss not processed | A | User Error Display | LAC send L99 message status code 28. If subcode xx8, specified module is reportedly empty and on specified staging stand; therefore no further movement is appropriate. If subcode is xx9, perform site survey and take corrective action if necessary. |

| Message | Type | Log/ Display | Explanation/Action |
|---|---|---|---|
| * Reroute Transaction/AGV Mismatch; Transaction [tttt]; AGV [aaa] | A | User Error Display | LAC sent L99 with status code of 29. **Research log files to see what caused the error. Either manually unload the AGV and use the handheld to notify the Host or manually resend the reroute transaction.** |
| * Set Offline Invalid for Unit [nn] requested by [uuuuu] | A | User Error Display | Request to turn offline any unit other one ('01') or all ('99') is invalid. **Collect supporting documents and call the Systems Administrator.** |
| * Set Online Invalid for Unit [nn] requested by [uuuuu] | A | User Error Display | Request to turn online any unit other one ('01') or all ('99') is invalid. **Collect supporting documents and call the Systems Administrator.** |
| * sss Auto Refill ON; Request NOT Processed | A | User Error Display | While the system is automatically replenishing a given stand, no manual requests may be made to it. If a manual request is necessary, set auto refill to No ('N') and submit the manual request again. |
| * sss Dead, Call Maintenance | A | User Error Display | LAC sent L99 message with status code 28 indicating that the pickup or delivery stand or its outer double deep stand is DEAD. **Call maintenance to ascertain the stand status.** If the stand is not down, (DEAD) initiate a single stand inquiry to rehabilitate the stand. |
| * sss disabled due to LAC reported error | A | User Error Display | LAC sent L99 requiring that the stand be disabled. **Determine what caused the problem. After correcting the problem, update stand status.** |
| * sss Disabled, Call Maintenance | A | User Error Display | Specified Stand sss has been disabled, **Notify Maintenance to do a site survey.** |
| * sss emptied and disabled | A | User Error Display | Specified stand has been set to empty and disabled. Perform site inspection and take corrective action as required. |

| Message | Type | Log/ Display | Explanation/Action |
|---|---|---|---|
| * sss Loaded Mod Set; mmmmm, mmmmm & mmmmm | I | User Error | Diagnostic message for bad-loaded module linkage, giving the stand in question plus the module in question bracketed by its previous and next linked module. |
| * sss not empty; request not processed | A | User Error Display | Verify stand is empty, update as necessary, and resubmit request as required. |
| * sss not enabled; request not processed | A | User Error Display | Enable stand and resubmit as necessary. |
| * sss not occupied, message not processed for Seq # [qqqqqqqq] | I | User Error | Request to remove module from specified stand was not processed due to stand not being occupied. |
| * sss was scheduled | I | User Error | Notification that module on specified stand was scheduled for AGV pick-up. |
| * Stand sss has an Invalid Auto Refill Type t | A | User Error | Specified stand has an auto refill type other than empty ('E') or loaded ('L'). **Collect supporting documents and call the Systems Administrator.** |
| * Stand [sss] not in database; Sequence Number [ssssssss] | A | User Error | Unable to read stand record. **Previous log message specifies why and action to be taken**. |
| * [sssssssss] not in Stand Translation Table | A | User Error Display | Specified stand was not found in stand translation table. **Collect supporting documents and call the Systems Administrator.** |
| * Stand sss already down | I | User Error | LAC sent L99 requiring that the stand be disabled, but stand was already down. |
| * Stand sss NOT Empty - Can't Request Module at this time | A | User Error Display | Request to deliver a module to a stand that is not empty. Perform site survey and take corrective action as necessary. |
| * Stand sss NOT Enabled - Can't Request Module at this time | A | User Error Display | Request to deliver a module to a stand that is not enabled. Perform site survey and take corrective action as necessary. |

| Message | Type | Log/ Display | Explanation/Action |
|---|---|---|---|
| * Stand sss Not In Database | A | User Error | Unable to read specified stand record. **Collect supporting documentation and the Systems Administrator.** |
| * Stand sss not in ECS Database | A | User Error | LAC sent L04 with Stand ID not in the ECS database. Verify Stand ID and **contact the Systems Administrator** to have the ECS database updated as necessary. |
| * Stand sss not in ECS Database | A | User Error | Stand ID in stand inquiry response is not in ECS Database. Verify Stand ID and **contact the Systems Administrator to have the ECS database updated as necessary.** |
| * Stand sss Not In LAC Database | A | User Error Display | LAC send L99 message status code 27 subcode 132. ECS requested a stand status inquiry for a stand not recognizable to the LAC. Verify stand number and try again. |
| * Stand sss NOT Occupied - Cannot Move Unknown Module | A | User Error | Request to move a module from an empty stand. Perform site survey and take corrective action as necessary. |
| * Stand sss NOT Occupied Cannot Remove Empty Module | A | User Error | Perform a site survey. Determine condition of the stand/module and take the necessary corrective action. |
| * Stand sss set to Auto Refill - Can't Request Module at this time | A | User Error Display | Request to deliver a module to a stand that has auto refill on. Perform site survey and take corrective action as necessary. |
| * Stand sss was Consigned for mmmmm from sss | A | User Error | Perform site survey and take corrective action as required. |

| Message | Type | Log/ Display | Explanation/Action |
|---|---|---|---|
| * Stand sss; Invalid Status x | A | User Error | LAC specified stand's status other than Empty ('E'), Occupied ('O') or Down ('X'). **Collect supporting documents and contact the Systems Administrator.** |
| * Transaction [tttt]; Status [nn]; Unknown SubCode [nnn] | A | User Error Display | LAC sent L99 with status code of 27 and status subcode of other than 116-121, 123-125,130 or 201**. Research log files to see what caused the error. Collect supporting documents and call the Systems Administrator.** |
| * Transaction Not Created for Seq # [ ] | A | User Error Display | DSS or User Interface Message instructing ECS to update the specified module LOADED while on an unspecified stand. Research log files to see what caused the error. **Collect supporting documents and call the Systems Administrator.** |
| * Transaction tttt erased | I | User | LAC sent L99 with status code of 30 requiring transaction to be erased. |
| * Transaction [tttt]; Status [nn]; Invalid SubCode [nnn] | A | User Error | LAC sent L99 with status code of 28 and status subcode of other than 128-129, 238-239, 328-329, or 338-339. **Collect supporting documents and call the Systems Administrator.** |
| * Unexpected Load on the Outer Double Deep Delivery Stand | A | User Error Display | LAC sent L99 with status code 28 and status subcode 238. **Correct the problem with the stand, update the status and request delivery.** |
| * Unexpected Load on the Outer Double Deep Delivery Stand sss | A | User Error Display | LAC sent L99 message with status code 28 and status subcode 238. Correct the problem with the stand, update the status and request delivery. |
| * Unexpected Load on the Outer Double Deep Pickup Stand | A | User Error Display | LAC sent L99 with status code 28 and status subcode 239. **Correct the problem with the stand, update the status and request movement of the mod/pallet.** |

| Message | Type | Log/ Display | Explanation/Action |
|---|---|---|---|
| * Unexpected Load on the Outer Double Deep Pickup Stand sss | A | User<br>Error Display | LAC sent L99 with status code 28 and status subcode 239. Correct the problem with the stand, update the status and request movement of the mod/pallet. |
| * Unknown AGV Status Code [nn] | A | User<br>Error Display | LAC specified AGV Status Code undocumented. **Collect supporting documents and call the Systems Administrator.** |
| * Workload Buffer is Full | A | User<br>Error Display | Workload Buffer has reached its current capacity. **Collect supporting documents and call the Systems Administrator to enlarge the Workload Buffer.** |
| = = = = = = = = = = = = = = = = = = = = =<br>*** AGV Subcontroller Activated ***<br>= = = = = = = = = = = = = = = = = = = = = | I | User | AGV Sub Controller has been activated. |
| ** AGVSTAND.DAT entry [dddddddddaaa] caused Stand Translation Table to overflow | F | User<br>Error Display | There was more data in stand translation table than memory allocated for it. **Collect supporting documents and call the Systems Administrator to increase size of stand translation table.** |
| ** Area [a] Empty Stand Set Linkage Requires Immediate Attention | F | User<br>Error Display | Specified Area's Empty Stand Set linkage is corrupted. **Collect supporting documents and call the Systems Administrator to correct Area Empty Stand Set Linkage.** |
| ** Connection to ECS Database failed; SQL error code and message | F | User<br>Error Display | Connection to the Oracle Database has failed. **Collect supporting documents and call the Systems Administrator to correct problem.** |
| ** Error Encountered Reading Stand Translation Table | F | User<br>Error Display | End of File encountered on first record read. **Collect supporting documents and call the Systems Administrator.** |
| ** Error reading System Record; SQL error code and message | A | User<br>Error | SQL Error encountered while trying to read the System record. **Collect supporting documents and call the Systems Administrator.** |

| Message | Type | Log/ Display | Explanation/Action |
|---|---|---|---|
| ** Host/AGV Communication Down | A | User Error Display | LAC reported Power Failure Detected. Determine problem and correct the power failure. |
| ** Inquiry Request Buffer is Full | A | User Error Display | More outstanding AGV and/or Stand Inquiries exist than were planned. Last inquiry **not** honored. **Wait for previous inquiries to be serviced and/or call the Systems Administrator to enlarge the inquiry request buffer.** |
| ** Module [mmmmm] Record contains bad data<br>-- Request NOT Processed - CreateRqstTran | A | Display | Notification of request not processed with culprit routine name. Research log files to see what caused the error. Collect supporting documents and **contact the Systems Administrator.** |
| ** Module [mmmmm] Record contains bad data<br>--mmmmmtttttasssadddafffsaaappppennnne ppppplnnnnlpppppnnnnp | I | User Error | Data used for possible problem resolution where:<br>mmmmm = module ID<br>tttt = transaction ID<br>asss = source area and stand<br>addd = destination area and stand<br>afff = final area and stand<br>ppppe = previous empty module<br>nnnne = next empty module<br>ppppl = previous loaded module<br>nnnnl = next loaded module<br>ppppp = previous module pending movement<br>nnnnp = next module pending movement |
| ** Pending Move Buffer Overflow | A | User Error Display | Pending Move Buffer is not large enough to contain all of the requests initiated by DSS, the User Interface and/or internal processing. **Collect supporting documents and call the Systems Administrator to enlarge the Pending Move Buffer.** |

| Message | Type | Log/ Display | Explanation/Action |
|---|---|---|---|
| ** Pending Request Buffer Overflow | A | User Error Display | Pending Request Buffer is not large enough to contain all of the requests initiated by DSS, the User Interface and/or internal processing. **Collect supporting documents and call the Systems Administrator to enlarge the Pending Request Buffer.** |
| ** Stand sss Loaded Module Set Linkage Requires Immediate Attention | I | User Error Display | Specified Stand's Loaded Module Set linkage is corrupted. **Collect supporting documents and call the Systems Administrator to correct Stand Loaded Module Set Linkage.** |
| ** Stand sss prev empty [sss] & next empty [sss] not compatible | A | User Error Display | Empty stand is not linkable due to only partial linkage (i.e. either next or previous empty stand specified, but not both). Run EMPTY STAND LINKAGE to correct the problem |
| ** System Pending Module Movement Set Linkage Requires Immediate Attention | A | User Error Display | The System's Pending Module Movement Set linkage is corrupted. **Collect supporting documents and call the Systems Administrator to correct System Pending Module Movement Set Linkage.** |
| ** Transaction [tttt] Record contains bad data<br>-- ttttasssadddmpmmmmmmaaassnnnnnnnn<br>-- Request NOT Processed - AgvErr27 | A | User Error Display | Insufficient data in transaction record. the transaction was NOT processed. Determine problem. Collect supporting documents and **contact the Systems Administrator** to correct problem |
| ** Transaction [tttt] Record contains bad data<br>-- ttttasssadddmpmmmmmmaaascsscnnnnnnnn<br>-- Request NOT Processed - ProcessMsg | A | User Error Display | DSS message generated transaction has either source, destination or both blank. Determine problem. Collect supporting documents and **contact the Systems Administrator** to correct problem |

| Message | Type | Log/ Display | Explanation/Action |
|---|---|---|---|
| ** Workload Buffer Overflow | A | User Error Display | Workload Buffer is not large enough to contain all of the requests initiated by DSS and the User Interface. **Collect supporting documents and call the Systems Administrator to enlarge the Workload Buffer.** |
| ** Workload Buffer Overflow; Sequence Nr [ssssssss] | A | User Error Display | Workload Buffer is not large enough to contain all of the requests initiated by DSS and the User Interface. **Collect supporting documents and call the Systems Administrator to enlarge the Workload Buffer.** |
| *** AGV Subcontroller Aborting***<br>\| \| \| \| \| \| \| \| \| \| \|<br>V V V V V V V V V V V | A | User Error Display | The AGV Stand Translation Table not loaded properly. Review log for reason and take corrective action. |
| ----------<br>*** AGV Subcontroller Shutting Down ***<br>---------- | I | User Error Display | Notification that the AGV Subcontroller is in the process of shutting down. |
| ! Transaction tttt inactive | A | User Error | Received LAC message with specified transaction no longer active. |
| <- L01 tttt aaa | I | User | LAC AGV Return to Service Message; where<br>aaa = AGV Number. |
| <- L02 tttt aaad | I | User | LAC AGV Out of Service Message; where<br>aaa = AGV Number and<br>d = destination; (B = Going to Battery, M = Going to Maintenance and O = Off Wire, Under User Control). |
| <- L03 tttt aaax | I | User | LAC AGV Inquiry Response Message; where:<br>tttt = transaction,<br>aaa = AGV number and<br>x = AGV Status<br>R = Requires Manual Assistance,<br>A = Active,<br>M = Going to/at Maintenance,<br>B = Going to/at Battery<br>O = Off Wire, Under User Control |

| Message | Type | Log/ Display | Explanation/Action |
|---|---|---|---|
| <- L04 tttt sssx sssx | I | User | LAC Stand Inquiry Response Message; where<br>tttt = transaction,<br>sss = stand<br>x = status<br>E = Empty<br>O = Occupied<br>X = Down<br>Second sssx may be zeros if status not requested for second stand. |
| <- L05 tttt sss | I | User | LAC Pickup/Delivery Confirmation Message; where<br>tttt = transaction and<br>sss = stand ID. |
| <- L06 | I | User | LAC End of Queued Transaction Flag. |
| <- L99 tttt ss aaa llllddddf | I | User | LAC Error Transaction Message; where<br>tttt = transaction,<br>ss = status code,<br>aaa = AGV number/Status SubCode,<br>llll = last tag read,<br>dddd = distance to last tag read and<br>f = current frequency. |
| << mmmmm removed from sss | A | User Error | Notification of specified module having been removed from the specified stand. Perform site survey to ascertain that the stand is indeed empty. |
| << mmmmm is on sss<br><< mmmmm removed from sss | A | User Error | While recreating Empty/Loaded Module Linkage, Module was determined to be on specified stand. Perform site survey to ascertain that module status is as specified. |
| << mmmmm thinks it's on sss<br><< mmmmm removed from sss | A | User Error | Module ID and Module record Source Stand record Module ID do not agree. Perform a site survey and take corrective action as necessary. |

| Message | Type | Log/ Display | Explanation/Action |
|---|---|---|---|
| << Physically check sss; status was 's' with mmmmm on it | A | User<br>Error | Notification of specified stand having specified module on it with the specified status was pending. Perform site survey to determine physical conditions and take corrective action as necessary. |
| << Physically check sss; was pending with mmmmm on it | A | User<br>Error | Notification of specified stand having specified module on it while the status was pending. Perform site survey to determine physical conditions and take corrective action as necessary. |
| <<<<<<<<<<<<<<<<<>>>>>>>>>>>>>><br><< Loaded Module Linkage Restoration >><br><< Initiated by uuuuu >><br><<********************************>> | I | User | Notification of loaded module linkage restoration initiated by the specified user. |
| <<<<<<<<<<<<<<<<<>>>>>>>>>>>>>>><br><< Empty Module Linkage Restoration >><br><< Initiated by uuuuu >><br><<********************************>> | I | User | Notification of empty module linkage restoration initiated by the specified user. |
| << Loaded Module Linkage Restoration >> | I | Display | Notification of loaded module linkage restoration being performed. |
| << Empty Module Linkage Restoration >> | I | Display | Notification of empty module linkage restoration being performed. |
| <<********************************>><br><< Physically verify above conditions >><br><<*******************************>> | A | User<br>Error | Directive to check and verify the listed conditions in the log of this empty module linkage restoration. |
| <<<<<<<<<<<<<<<<<>>>>>>>>>>>>>><br><< Empty Stand Linkage Restoration >><br><< Initiated by uuuuu >><br><<********************************>> | I | User | Notification of empty stand linkage restoration initiated by the specified user. |
| <<<<<<<<<<<<<<<<>>>>>>>>>>>>>>>>><br><< Empty Stand Linkage Restoration >><br><<********************************>> | I | Display | Notification of empty stand linkage restoration being performed. |
| <<<<<<<<<<<<<<>>>>>>>>>>>>>>>><br><< Restoration Finished >><br><<*****************************>> | I | User<br>Display | Notification that linkage restoration has finished. |

| Message | Type | Log/ Display | Explanation/Action |
|---|---|---|---|
| -> Msg: Update mmmmm to EMPTY on _____<br>* smm Msg: Flag [S]; Dest [ddddddddd]; Source [sssssssss]; Module [mmmmm]; WorkType [w]<br>* Destination [ ] invalid | I | User Error | Notification of message received with invalid destination. Transaction not created. |
| -> Msg: Update mmmmm to LOADED on _____<br>* smm Msg: Flag [S]; Dest [ddddddddd]; Source [sssssssss]; Module [mmmmm]; WorkType [w]<br>* Destination [ ] invalid | I | User Error | Notification of message received with invalid destination. Transaction not created. |
| -> smm Msg: Flag [A]; Dest [ ]; Source [ ]; Module [ ]<br>* Destination Stand [ ] NOT Recognizable!<br>* Message NOT Processed for Seq # [ ] | A | User Error Display | DSS or User Interface Message instructing ECS to perform a manual operation; but specified an invalid destination Stand ID. Verify Destination and try again. |
| -> smm Msg: Flag [A]; Dest [ ]; Source [ ]; Module [ ]<br>* Source Stand [ ] NOT Recognizable!<br>* Transaction Not Created for Seq # [ ] | A | User Error | Source stand Invalid. Research log files to see what caused the error. Resubmit with proper data. |
| -> smm Msg: Flag [A]; Dest [ ]; Source [ ]; Module [ ]-Module ID [ ] invalid<br>* Message NOT Processed for Seq # [ ] | A | User Error Display | DSS or User Interface Message instructing ECS to create an AGV move request or perform a manual operation; but specified an invalid Module/Pallet ID. Verify Mod/Pal ID and try again. |
| -> smm Msg: Send Empty Module to sss | I | User | DSS or User Interface Message instructing ECS to send an empty module to the specified stand. |
| -> smm Msg: Send Loaded mmmmm to sss | I | User | DSS or User Interface Message instructing ECS to send the specified loaded module to the specified stand. |
| -> smm Msg: Send Next Loaded Module to sss | I | User | DSS or User Interface Message instructing ECS to send the next loaded module to the specified stand. |
| -> ttt Msg: DISABLE sss | A | User Error | Invalid Stand ID. Verify Stand ID and try again. |

| Message | Type | Log/ Display | Explanation/Action |
|---|---|---|---|
| -> ttt Msg: DISABLE sss w/mmmmm on it | I | User | DSS or User Interface Message instructing ECS to disable the specified stand with the specified module on it; where ttt is the message type, sss is the stand and mmmmm is the module/pallet. |
| -> ttt Msg: DISABLE sss w/o a module on it | I | User | DSS or User Interface Message instructing ECS to disable the specified stand without a module on it; where ttt is the message type and sss is the stand. |
| -> ttt Msg: ENABLE sss | A | User Error | Invalid Stand ID. Verify Stand ID and try again. |
| -> ttt Msg: ENABLE sss w/mmmmm on it | I | User | DSS or User Interface Message instructing ECS to enable the specified stand with the specified module on it; where ttt is the message type, sss is the stand and mmmmm is the module/pallet. |
| -> ttt Msg: ENABLE sss w/o a module on it | I | User | DSS or User Interface Message instructing ECS to enable the specified stand without a module on it; where ttt is the message type and sss is the stand. |
| -> ttt Msg: Move Loaded mmmmm from sss to sss | I | User | DSS or User Interface Message instructing ECS to move specified module/pallet from specified one stand to another. |
| -> ttt Msg: Place Empty mmmmm on sss | I | User | DSS or User Interface Message instructing ECS to place the specified empty module on the specified stand; where ttt is the message type, mmmmm is the module/pallet and sss is the stand. |
| -> ttt Msg: Place LOADED mmmmm on sss | I | User | DSS or User Interface Message instructing ECS to place the specified loaded module on the specified stand; where ttt is the message type, mmmmm is the module/pallet and sss is the stand. |

| Message | Type | Log/ Display | Explanation/Action |
|---|---|---|---|
| -> ttt Msg: Remove EMPTY mmmmm from sss | I | User | DSS or User Interface Message instructing ECS to remove the specified empty module/pallet from the specified stand; where ttt is the message type, mmmmm is the module/pallet and sss is the stand. |
| -> ttt Msg: Remove LOADED mmmmm from sss | I | User | DSS or User Interface Message instructing ECS to remove the specified loaded module/pallet from the specified stand; where ttt is the message type, mmmmm is the module/pallet and sss is the stand. |
| -> ttt Msg: Set sss Auto Refill: x; Type: x | I | User | DSS or User Interface Message instructing ECS to set the specified stand's auto refill flag to Yes ('Y') or No ('N') and refill type to Empty ('E') or Loaded ('L'). |
| -> ttt Msg: What is the Status of AGV aaa | I | User | DSS or User Interface Message requesting status of the specified AGV. |
| -> ttt Msg: What is the Status of Stand sss | I | User | DSS or User Interface Message requesting status of the specified stand. |
| -> xxx Msg: Change mmmmm to EMPTY while on sss | I | User | DSS or User Interface Message instructing ECS to change the specified module to EMPTY while on the specified stand. |
| -> xxx Msg: Change mmmmm to LOADED while on sss | I | User | DSS or User Interface Message instructing ECS to change the specified module to LOADED while on the specified stand. |
| -> xxx Msg: Deliver mmmmm to sss | I | User | DSS or User Interface Message instructing ECS to Deliver specified module to the specified stand. |
| -> xxx Msg: Place EMPTY mmmmm on sss | I | User | DSS or User Interface Message instructing ECS to place the specified EMPTY module on the specified stand. |

| Message | Type | Log/ Display | Explanation/Action |
|---|---|---|---|
| -> xxx Msg: Place LOADED mmmmm on sss | I | User | DSS or User Interface Message instructing ECS to place the specified LOADED module on the specified stand. |
| AGV aaa going to Battery | I | User | Notification of specified AGV out of service and going to the battery station. |
| AGV aaa going to Maintenance | I | User | Notification of specified AGV out of service and going to the maintenance. |
| AGV aaa off wire, under user control | I | User | Notification of specified AGV having been taken offline and under user control. |
| AGV aaa required manual assistance | I | User | Notification of specified AGV out of service and requires manual assistance. |
| AGV aaa returned to service | I | User | Notification of specified AGV being returned to service. |
| AGV deposited mmmmm on sss | I | User | AGV delivered the specified module/pallet to the specified stand. |
| AGV Message [H01ttttasssadddmp] Pending | I | User | Notification that specified transaction is pending due to the Host/AGV |
| AGV Message [H02ttttdddaaa] Pending | I | User | Notification that specified transaction is pending due to the Host/AGV |
| AGV Message [H03ttttaaa] Pending | I | User | Notification that specified transaction is pending due to the Host/AGV |
| AGV Message [H04tttt111222] Pending | I | User | Notification that specified transaction is pending due to the Host/AGV |
| AGV picked up mmmmm from sss | I | User | AGV picked up the specified module/pallet from the specified stand. |
| AGV Set Offline by [uuuuu] | I | User | AGV Subcontroller set offline by specified user. |
| AGV Set Online by [uuuuu] | I | User | AGV Subcontroller set online by specified user. |
| AGV01USE01007K02OffF | I | User | Status Response where subcontroller status is Off. |
| AGV01USE01007K02On N | I | User | Status Response where subcontroller status is On. |

| Message | Type | Log/ Display | Explanation/Action |
|---|---|---|---|
| AGV01USE01011K62aaastttt | I | User | AGV Inquiry Response,<br>where<br>aaa = AGV number,<br>s = status and<br>tttt = transaction. |
| AGV01USE01011K64ssssttt | I | User | Stand Inquiry Response, where<br>sss = stand number,<br>s = status and<br>tttt = transaction. |
| Connected to ECS Database | I | User | Connection to the Oracle Database has been accomplished. |
| Crane deposited mmmmm on sss | I | User | Module/Pallet placed on the stand by the crane. |
| Crane deposited mmmmm on sss | I | User | Notification of Module/Pallet being removed from the specified stand by the HighRise crane. |
| Crane picked up mmmmm from sss | I | User | Module/Pallet removed from the stand by the crane. |
| Crane picked up mmmmm from sss | I | User | Module/Pallet removed from the stand by the crane. |
| ECS.INI file not found! | F | Display | ECS.INI file was not found. **Collect supporting documents and call the Systems Administrator.** |
| End of Data File Restoration | I | User | At start up time, transfer of data from flat files to memory has been completed. |
| End of Data File Storage | I | User | Any unfinished transactions in the workload, pending move and pending request buffers have been saved to flat files at shutdown time. |
| Locate mmmmm and place on stand sss; use RF/DSS/UI to update the stand. | A | Display | AGV returned to service without a load on its deck. |
| Logging Turned Off by [uuuuu] | I | User | Logging was turned off by specified user. |

| Message | Type | Log/ Display | Explanation/Action |
|---|---|---|---|
| mmmmm being used for picks | I | User | SMM stating module removed from HighRise stand by the crane when module is not on the HighRise stand is interpreted to mean that the module is being used for picks. |
| mmmmm deposited on 999; Call Maintenance | A | Display | Specified module has been delivered to the maintenance stand. **Notify maintenance of the occurrence**. |
| mmmmm has broken empty module linkage | A | User Error Display | Module is not linkable due to only partial linkage (i.e. either next or previous empty module specified, but not both). Run EMPTY MODULE LINKAGE to correct the problem |
| mmmmm is now EMPTY | I | User | Notification of specified module being changed to empty. |
| mmmmm is now LOADED | I | User | Notification of specified module being changed to loaded. |
| mmmmm linked to PACK | I | User | Notification of specified module being linked to the Packing Consolidation area. |
| mmmmm linked to PPPM | I | User | Notification of specified module being linked to the PPP&M area. |
| mmmmm linked to SHIP | I | User | Notification of specified module being linked to the Shipping area. |
| mmmmm linked to sss | I | User | Notification of specified module being linked to the specified stand. |
| mmmmm manually placed on sss | I | User | Notification of Module/Pallet being placed on the specified stand manually. |
| mmmmm manually removed from sss | I | User | Module/Pallet manually removed from the stand. |
| mmmmm rerouted from dest sss to sss | I | User Error | Notification of AGV/Module rerouting from one destination to another |
| mmmmm rerouted from destination sss to sss | I | User Error | Specified module/pallet was rerouted according to LAC instructions. |

| Message | Type | Log/ Display | Explanation/Action |
|---|---|---|---|
| mmmmm scheduled to 999; Call Maintenance | A | User Display | A module has been scheduled to the maintenance stand. **Notify maintenance of the impending occurrence** |
| mmmmm was removed from sss although scheduled for AGV pickup | D | Display | Notification that specified module was removed from specified stand although it was scheduled for AGV pick-up. |
| nnn AGV Stand IDs Loaded | I | User | Notification of the number of unique Stand IDs loaded into the Stand Translation Table from flat file (AGVSTAND.DAT) at start up time. |
| nnn DSS Stand IDs Loaded | I | User | Notification of the total number of stand IDs loaded into the Stand Translation Table from flat file (AGVSTAND.DAT) at start up time. |
| nnn Pending Moves Restored | I | User | Notification of the number of pending move entries that were restored from a flat file at startup time. |
| nnn Pending Moves Saved | I | User | Notification or the number of pending move entries that were saved to a flat file at shutdown time. |
| nnn Pending Requests Restored | I | User | Notification of the number of pending request entries that were restored from a flat file at startup time. |
| nnn Pending Requests Saved | I | User | Notification of the number of pending request entries that were saved to a flat file at shutdown time. |
| nnn Pending Transactions Restored | I | User | Notification of the number of pending transaction that were restored from a flat file at startup time. |
| nnn Pending Transactions Saved | I | User | Notification of the number of pending transactions entries that were saved to a flat file at shutdown time. |
| nnn Work Buffer Entries Restored | I | User | Notification of the number of workload buffer entries that were restored from a flat file at startup time. |
| nnn Work Buffer Entries Saved | I | User | Notification of the number of workload buffer entries that were saved to a flat file at shutdown time. |

| Message | Type | Log/ Display | Explanation/Action |
|---|---|---|---|
| Pending Move [mmmmmasssaddd] Cancelled | I | User | Specified Pending Move cancelled due to new request for module movement; where,<br>mmmmm = module/pallet,<br>asss = source area and stand ID and<br>addd = destination area and stand ID. |
| Pending Move [mmmmmasssaddd] Generated | I | User | Specified Pending Move generated; where,<br>mmmmm = module/pallet,<br>asss = source area and stand ID and<br>addd = destination area and stand ID. |
| Pending Move [mmmmmasssaddd] Preempted | I | User | Pending Move was deleted due to Module/Pallet already moved or removed from stand. |
| Pending Move [mmmmmasssaddd] Processed | I | User | Specified Pending Move processed; where,<br>mmmmm = module/pallet,<br>asss = source area and stand ID and<br>addd = destination area and stand ID. |
| Pending Move [mmmmmasssaddd] Restored | I | User | Specified Pending Move restored from flat file at startup; where,<br>mmmmm = module/pallet,<br>asss = source area and stand ID<br>addd = destination area and stand ID. |
| Pending Move [mmmmmasssaddd] saved | I | User | Pending Move Buffer entry was save to flat file (AGVPMOVE.DAT); where:<br>mmmmm = module/pallet<br>asss = source area and stand ID<br>addd = destination area and stand ID. |

| Message | Type | Log/ Display | Explanation/Action |
|---|---|---|---|
| Pending Request [ssst] Cancelled | I | User | Pending request cancelled due to change in auto refill flag, change of type, a new request of a different type, stand occupied or stand disabled or down;<br>where<br>sss = Stand ID and<br>t = type (L= loaded and E = Empty) |
| Pending Request [ssst] Generated | I | User | Specified Pending Request generated;<br>where<br>sss = stand ID and<br>t = type (L = loaded & E = empty). |
| Pending Request [ssst] Restored | I | User | Specified Pending Request restored from flat file at startup; where<br>sss = stand ID and<br>t = type (L = loaded & E = empty). |
| Pending Request [ssst] saved | I | User | Pending Request Buffer entry was saved to flat file (AGVPRQST.DAT); where<br>sss = stand ID and<br>t = type (L = loaded & E = empty). |
| Pending Request ssst Cancelled | I | User | Pending request cancelled due to change in auto refill flag and/or type or a new request for a different type; where<br>sss = stand ID and<br>t = type (L = loaded & E = empty). |
| Pending Request ssst Processed | I | User | The Pending Request was Completed. |
| Pending Transaction [H01ttttasssadddmp] Restored | I | User | Notification that pending transaction specified has been restores. |
| Pending Transaction [H01ttttasssadddmp] Saved | I | User | Pending Transaction was saved to flat file (AGVPTRAN.DAT); where:<br>tttt = transaction,<br>asss = source area and stand,<br>addd = destination area and stand,<br>m = mod/pallet indicator and<br>p = priority. |
| Pending Transaction [H02ttttsssaaa ] Restored | I | User | Notification that pending transaction specified has been restores. |

| Message | Type | Log/ Display | Explanation/Action |
|---|---|---|---|
| Pending Transaction [H02ttttsssaaa ] Saved | I | User | Pending Transaction was saved to flat file (AGVPTRAN.DAT);<br>where:<br>tttt = transaction,<br>sss = destination stand and<br>aaa = AGV number. |
| Pending Transaction [H03ttttaaa ] Restored | I | User | Notification that pending transaction specified has been restores. |
| Pending Transaction [H03ttttaaa ] Saved | I | User | Pending Transaction was saved to flat file (AGVPTRAN.DAT); where:<br>tttt = transaction<br>aaa = AGV number. |
| Pending Transaction [H04ttttsss000 ] Restored | I | User | Notification that pending transaction specified has been restores. |
| Pending Transaction [H04ttttsss000 ] Saved | I | User | Pending Transaction was saved to flat file (AGVPTRAN.DAT); where:<br>tttt = transaction,<br>asss = source area and stand,<br>addd = destination area and stand,<br>m = mod/pallet indicator and<br>p = priority. |
| Physically verify condition of stands specified in Log and make adjustments as necessary | A | Display | Directive to check and verify make necessary corrections for the listed conditions in the log of this empty module linkage restoration. |
| QQQH01ttttasssadddmpZZZ | I | User | Pickup/Delivery Transaction, where<br>tttt = transaction,<br>asss = source area and stand,<br>addd = destination area and stand,<br>m = module/pallet selection and<br>p = priority code. |
| QQQH02ttttsssaaaZZZ | I | User | Reroute Transaction,<br>where<br>tttt = transaction,<br>sss = delivery stand, and<br>aaa = AGV number. |
| QQQH03ttttaaaZZZ | I | User | AGV Inquiry Transaction, where<br>tttt = transaction and<br>aaa = AGV number |

| Message | Type | Log/ Display | Explanation/Action |
|---|---|---|---|
| QQQH04ttttsss000ZZZ | I | User | Stand Inquiry Transaction, where<br>tttt = transaction,<br>sss = stand number and 000 are always zeroes. |
| QQQH05ZZZ | I | User | Resume Communications Request. |
| QQQH07ZZZ | I | User | Power Failure Acknowledgement. |
| Request NOT Processed - CreateRqstTran | A | User<br>Error | Notification of request not processed with culprit routine name and the contents of module record, transaction record and the workload buffer at the time of observance. Research log files to see what caused the error. **Collect supporting documents and call the Systems Administrator.** |
| Shutting Down Subcontroller | A | Display | Could not find logging key or no value for logging key in ECS.INI. **Collect supporting documents and call the Systems Administrator.** |
| sss Disabled | I | User | Specified stand was disabled. |
| sss Enabled | I | User | Specified stand was enabled. |
| Stand [ ] Not in Transaction [ ] | A | User<br>Error<br>Display | L05 message contains stand not in specified transaction. Perform site inspection and rectify situation as necessary. |
| Stand [sss] is Currently Down; it CANNOT be Disabled! | I | User<br>Error<br>Display | The stand is currently DOWN. It can only be changed via LAC. |
| Stand sss Already Disabled | I | User | Attempting to disable a stand that is already disabled. |
| Stand sss Already Enabled | I | User | Attempting to enable a stand that is already enabled. |
| Stand sss auto refill flag set to [x] | I | User | Notification that the specified stand 's auto refill flag has been set to Yes ('Y') or No ('N'). |
| Stand sss is consigned and disabled | I | User | Notification of specified stand status due to an individual stand inquiry |
| Stand sss is consigned and down | I | User | Notification of specified stand status due to an individual stand inquiry |

| Message | Type | Log/ Display | Explanation/Action |
|---|---|---|---|
| Stand sss is consigned and enabled | I | User | Notification of specified stand status due to an individual stand inquiry |
| Stand sss is currently disabled | I | User<br>Error | The specified stand is currently disabled. |
| Stand sss is currently disabled<br>* Message not processed for Seq # [nnnnnnnn] | A | User<br>Error<br>Display | Perform a site survey and take corrective action as required. |
| Stand sss is currently down | I | User<br>Error | The specified stand is currently down. |
| Stand sss is currently down<br>* Message not processed for Seq # [nnnnnnnn] | A | User<br>Error<br>Display | Perform a site survey and take corrective action as required. |
| Stand sss is Currently Down; it CANNOT be Enabled! | I | User<br>Error<br>Display | The specified stand is currently DOWN. It can only be changed via LAC. |
| Stand sss is empty and disabled | I | User | Notification of specified stand status due to an individual stand inquiry |
| Stand sss is empty and down | I | User | Notification of specified stand status due to an individual stand inquiry |
| Stand sss is empty and enabled | I | User | Notification of specified stand status due to an individual stand inquiry |
| Stand sss is occupied and disabled | I | User | Notification of specified stand status due to an individual stand inquiry |
| Stand sss is occupied and down | I | User | Notification of specified stand status due to an individual stand inquiry |
| Stand sss is occupied and enabled | I | User | Notification of specified stand status due to an individual stand inquiry |
| Stand sss is pending and disabled | I | User | Notification of specified stand status due to an individual stand inquiry |
| Stand sss is pending and down | I | User | Notification of specified stand status due to an individual stand inquiry |
| Stand sss is pending and enabled | I | User | Notification of specified stand status due to an individual stand inquiry |
| Stand sss is scheduled and disabled | I | User | Notification of specified stand status due to an individual stand inquiry |

| Message | Type | Log/ Display | Explanation/Action |
|---|---|---|---|
| Stand sss is scheduled and down | I | User | Notification of specified stand status due to an individual stand inquiry |
| Stand sss is scheduled and enabled | I | User | Notification of specified stand status due to an individual stand inquiry |
| Stand sss refill type set to x | I | User | Notification that the specified stand 's auto refill type has been set to Empty ('E') or Loaded ('L'). |
| Stand Translation Table Loaded | I | User | Stand Translation Table loaded from flat file (AGVSTAND.DAT) at startup time. |
| Transaction [QQQH01ttttasssadddmpZZZ] Pending | I | User | Notification that specified Pickup/Delivery Transaction is pending due to the Host/AGV Communications not being Up. |
| Transaction [QQQH02ttttsssaaaZZZ] Pending | I | User | Notification that specified Reroute Transaction is pending due to the Host/AGV Communications not being Up. |
| Transaction [QQQH03ttttaaaZZZ] Pending | I | User | Notification that specified AGV Inquiry Transaction is pending due to the Host/AGV Communications not being Up. |
| Transaction [QQQH04ttttsss000ZZZ] Pending | I | User | Notification that specified Stand Inquiry Transaction is pending due to the Host/AGV Communications not being Up. |
| ttttasssadddmpmmmmmaaascsscnnnnnnnn | I | User Error | Data used for possible problem resolution where:<br>tttt = transaction ID<br>asss = source area and stand<br>addd = destination area and stand<br>m = module/pallet indicator<br>p = priority<br>mmmmm = module ID<br>aaa = agv number<br>sc = status code<br>ssc = status subcode<br>nnnnnnnn = sequence number |

| Message | Type | Log/ Display | Explanation/Action |
|---|---|---|---|
| Unknown Message Type [ttttsssssssssfffffffffffffffllllllllllllllllddddddddddsssssssssaaaaaaaaa222222222cccc1111122222hpfoowqqddddddddd] | A | User Error Display | SMM Message type **not** A01, A07, A09, J01, J61, J63, J65, M01, or SMM. **Collect supporting documents and call the Systems Administrator.** |
| Workload Buffer [ssssssssdddddddddsssssssssccccc ft] restored | I | User | Workload buffer restored from flat file at startup, where<br>ssssssss = sequence number,<br>ddddddddd = destination,<br>sssssssss = source,<br>ccccc = conveyance,<br>f = flag and<br>t = WorkType. |
| Workload Buffer [ssssssssdddddddddsssssssssccccc ft] saved | I | User | Workload buffer saved to flat file at shutdown, where<br>ssssssss = sequence number,<br>ddddddddd = destination,<br>sssssssss = source,<br>ccccc = conveyance,<br>f = flag and<br>t = WorkType. |
| Workload Buffer is blank or -- nnnnnnnnddddddddsssssssssccccc fw | | | where:<br>nnnnnnnn = sequence number<br>ddddddddd = destination<br>sssssssss = source<br>ccccc = conveyance<br>f = flag<br>w = WorkType |

Table G - 1-1 Mechanicsburg AGV Messages

# APPENDIX H MECHANICSBURG HPM MESSAGES

## 1.0 MECHANICSBURG HPM MESSAGES

The following table represents a list of all messages from the HPM subcontroller. The Message column represents the text of the message as displayed on the screen. The Type column represents the type of the message: "I" indicates informational, “A” indicates action required and “F” indicates fatal situation, immediate action is required before further processing. Action messages will include the action to be performed. The Log/Display column represents where the message will be displayed: the annotation of "Error" means the message will be logged to the error log, the annotation of "User" means the message will be logged to the message log, and the annotation of "Display" means the message will be displayed through the UI on the screen as an Alert Message. The Explanation/Action column represents the action the user will perform when the message is displayed or an explanation of a Type “I” message.

***Note:** Variable text, depending on circumstance, is enclosed within brackets, [ ]. The text within the brackets describes the item that will appear in the error message.

| Message | Type | Log/Display | Explanation/Action |
|---|---|---|---|
| Attempt to change lane count is out of valid range | A | User, Error, Display | Attempted lane count change is out of valid range. **Enter a numeric value**. |
| Carousel Location not Found For Tote [toteID] | I | User, Error | Carousel Location was not found for specified Tote ID. |
| Carousel Location Update Failed. Location is [location] | I | User, Error | Carousel Location contains invalid tote information in the Database. |
| Connected to database | I | User | The program has connected to the database. |
| Connection to database failed | I | User, Error | Connection to the database failed. |
| Count [number] exceeds lane capacity, Lane [laneNumber] changed | I | User, Error, Display | Tote will not be sent to lane until lane count is modified to a lower number. **No Action Required.** |
| HP::RMVCHNSRecord - Tote Record ID not found - [toteID] | I | User, Error | Invalid tote ID supplied to function HP:: RMVCHNS Record. Tote is not in Database |
| Invalid Accept Flag or Sequence Character | I | User, Error | Expecting an Accept from HP, but received a data message or message on out of sequence. |
| Invalid Check Characters | I | User, Error | Computed checksum does not match checksum in message received |

| Message | Type | Log/Display | Explanation/Action |
|---|---|---|---|
| Invalid destination supplied: [invalidDestination] | I | User, Error | An SMM has been received with an invalid destination. |
| | I | User, Error, Display | An SMM has been received with an invalid number of items in the chain. **No Action Required.** |
| Invalid or no chain supplied | I | User, Error, Display | An SMM has been received with an invalid chain ID. **No Action Required.** |
| Invalid Set Logging Flag [invalidFlag] by [userID] | I | User, Error | An invalid logging flag has been received. |
| Invalid source supplied: [invalidSource] | I | User, Error | An SMM has been received with an invalid source |
| Invalid XXX Message | I | User, Error | An invalid message has been received from the H-P Controller. |
| Invalid XXX Message Flag [flag] from [ ] | I | User, Error | An SMM has been received with an invalid flag. |
| Lane [laneNumber] count changed to [number] | I | User, Error, Display | Lane count was changed by user. **No Action Required.** |
| Logging Turned OFF by [userID] | I | User | Logging has been turned off by User ID. |
| Logging Turned ON by [userID] | I | User | Logging has been turned on by User ID. |
| No Conveyance ID supplied | I | User, Error, Display | An SMM has been received without a conveyance. **No Action Required.** |
| No destination supplied | I | User, Error, Display | An SMM has been received without a destination. **No Action Required.** |
| No Reply Received from HP | I | User, Error | No response was received from the H-P on the primary connection. Secondary connection is being utilized |
| No Source Translation in Mnemonics Table | I | User, Error, Display | An SMM has been received and the source has no table translation. **No Action Required.** |
| Unknown Message Type [type] from [ ] | I | User, Error, Display | **No Action Required.** |

Table H - 1-1 Mechanicsburg HPM Messages

# APPENDIX I RICHMOND ABP MESSAGES

## 1.0 RICHMOND ABP MESSAGES

The following table represents a list of all messages from the ABP subcontroller. The Message column represents the text of the message as displayed on the screen. The Type column represents the type of the message: "I" indicates informational, “A” indicates action required and “F” indicates fatal situation, immediate action is required before further processing. Action messages will include the action to be performed. The Log/Display column represents where the message will be displayed: the annotation of "Error" means the message will be logged to the error log, the annotation of "User" means the message will be logged to the message log, and the annotation of "Display" means the message will be displayed through the UI on the screen as an Alert Message. The Explanation/Action column represents the action the user will perform when the message is displayed or an explanation of a Type “I” message.

***Note:** Variable text, depending on circumstance, is enclosed within brackets, [ ]. The text within the brackets describes the item that will appear in the error message.

| Message | Type | Log/Display | Explanation/Action |
|---|---|---|---|
| BarCode 3X delete from database: [controlNumber] | I | User, Error | A barcode has been scanned 3 times and the movement has not occurred. |
| BarCode deleted from database: [controlNumber] | I | User, Error | After being scanned 3 times the barcode and move record are deleted. |
| Barcode Not in DB, BC: [barcode] | I | User, Error | A scan has occurred on a barcode that is not in the database. |
| Connected to database | I | User | The program has connected to the database. |
| Connection to database failed | I | User | Connection to the database failed. |
| Invalid destination supplied: [invalidDestination] | I | User, Error | An SMM has been received with an invalid destination. |
| Invalid number of items in chain | I | User, Error | An SMM has been received with an invalid number of items in the chain. |
| Invalid or no chain supplied | I | User, Error | An SMM has been received with an invalid chain ID. |
| Invalid Set Logging Flag [flag] by [userID] | I | User, Error | An invalid logging flag has been received. |
| Invalid source supplied: [source] | I | User, Error | An SMM has been received with an invalid source. |
| Invalid XXX Message | I | User, Error | An invalid message has been received from the PLC. |
| Invalid XXX Message Flag [flag] from [userID] | I | User, Error | An SMM has been received with an invalid flag. |

| Message | Type | Log/Display | Explanation/Action |
|---|---|---|---|
| Logging Turned OFF by [userID] | I | User | Logging has been turned off by User ID. |
| Logging Turned ON by [userID] | I | User | Logging has been turned on by User ID. |
| No control number supplied | I | User, Error | An SMM has been received without a CN. |
| No Conveyance ID supplied | I | User, Error | An SMM has been received without a conveyance. |
| No destination supplied | I | User, Error | An SMM has been received without a destination. |
| No Source Translation in Mnemonics Table | I | User, Error | An SMM has been received and the source has no table translation. |
| Problems loading ID xref table | I | User, Error | A problem has occurred when the ID Cross-Reference table was loaded. |
| Problems loading mnemonic xref table | I | User, Error | A problem has occurred loading the Cross-Reference table. |
| Unknown Message Type [messageType] from [userID] | I | User, Error | An unknown message has been received. |

Table I - 1-1 Richmond ABP Messages

# APPENDIX J SAN DIEGO STACKMAN MESSAGES

## 1.0 SAN DIEGO STACKMAN MESSAGES

The following table represents a list of all messages from the Stackman subcontroller. The Message column represents the text of the message as displayed on the screen. The Type column represents the type of the message: "I" indicates informational, “A” indicates action required and “F” indicates fatal situation, immediate action is required before further processing. Action messages will include the action to be performed. The Log/Display column represents where the message will be displayed: the annotation of "Error" means the message will be logged to the error log, the annotation of "User" means the message will be logged to the message log, and the annotation of "Display" means the message will be displayed through the UI on the screen as an Alert Message. The Explanation/Action column represents the action the user will perform when the message is displayed or an explanation of a Type “I” message.

***Note:** Variable text, depending on circumstance, is enclosed within brackets, [ ]. The text within the brackets describes the item that will appear in the error message.

| Message | Type | Log/Display | Explanation/Action |
|---|---|---|---|
| Full Bin Message Received | I | User, Error, Display | Stackman reported a Full Bin |
| Empty Bin Message Received | I | User, Error, Display | Stackman reported an Empty Bin |
| Store Pallet Transaction Failure | I | User, Error, Display | Stackman reported a Store Pallet Transaction Failure |
| Retrieve Pallet Transaction Failure | I | User, Error, Display | Stackman reported a Retrieve Pallet Transaction Failure |
| Bypass Spur Transaction Failure | I | User, Error, Display | Stackman reported a Bypass Spur Transaction Failure |
| Unknown Transaction Failure | I | User, Error, Display | Stackman reported an Unknown Transaction Failure |
| Link Table is Full | A | User, Error, Display | Link Table is full.<br>Stop sending requests from DSS until Stackman processes the backlog in the link table. |

| Message | Type | Log/Display | Explanation/Action |
|---|---|---|---|
| Link Table Capacity Exceeded | A | User, Error, Display | Link Table did not store the last message received. Stop sending requests from DSS until Stackman processes the backlog in the link table. |
| Send Table is Full | A | User, Error, Display | Send Table is full. Stop sending requests from DSS until Stackman processes the backlog in the send table. |
| Send Table Capacity Exceeded | A | User, Error, Display | Send Table did not store the last message received. Stop sending requests from DSS until Stackman processes the backlog in the send table. |
| Unknown Pallet ID in Message from Stackman | I | User, Error | Pallet ID in message from Stackman was not in the ECS link table. |
| Inconsistent Output Message from Stackman | I | User, Error | The message from Stackman does not match the record in the ECS link table. |
| Logging Turned ON by [user] | I | User, Error | Logging has been turned on by User. |
| Logging Turned OFF by [user] | I | User, Error | Logging has been turned off by User. |
| Invalid Set Logging Flag | I | User, Error | An invalid logging flag has been received |
| Invalid Message Type from Stackman | I | User, Error | An invalid message type has been received from the Stackman controller. |
| Unknown Message Type [ ] from | I | User, Error | An unknown message has been received |

Table J - 1-1 San Diego Stackman Messages

# APPENDIX K NISTARS MINISTACKER CONTROLLER (NMC) MESSAGES

## 1.0 NMC MESSAGES

The following table represents a list of all messages from the NMC subcontroller. The Message column represents the text of the message as displayed on the screen or log file. The Type column represents the type of the message: "I" indicates informational, "A" indicates action required and "F" indicates a fatal situation, immediate action is required before further processing. Action and Fatal messages will include the action to be performed. The Log/Display column represents where the message will be displayed: the annotation of "Error" means the message will be logged to the error log, the annotation of "User" means the message will be logged to the message log, and the annotation of "Display" means the message will be displayed through the UI on the screen as an Alert Message. The Explanation/Action column represents the action the user will perform when the message is displayed or an explanation of a Type "I" message.

***Note:** Variable text, depending on circumstance, is enclosed within brackets, [ ]. The text within the brackets describes the item that will appear in the error message.

| Message | Type | Log/Display | Explanation/Action |
|---|---|---|---|
| 0 M01nnYYYYYYYY | I | User | Host to NMC Workstation Assignment where:<br>0 = sequence number (0-7)<br>M01 = command field<br>nn = Workstation<br>Y = Active Flag<br>Y = Divert Flag<br>Y = Pick Function Flag<br>Y = Inventory Function Flag<br>Y = Location Survey Function Flag<br>Y = Bin Strip Change Notice Flag<br>Y = Emergency Function Flag<br>Y = Error Processing Function Flag |

| Message | Type | Log/Display | Explanation/Action |
|---|---|---|---|
| 0 M02FFVVHHHffpt | I | User | Host to NMC Tray Request ; where:<br>0 = sequence number (0-7)<br>M01 = command field<br>FF = Face position<br>VV = Vertical Position<br>HHH = Horizontal Position<br>ff = Function Name<br>p = Priority<br>t = Weighing Factor |
| 0 M03FFVVHHHff | I | User | Host to NMC Tray Cancellation; where:<br>0 = sequence number (0-7)<br>M01 = command field<br>FF = Face position<br>VV = Vertical Position<br>HHH = Horizontal Position<br>ff = Function Name |
| 0 M04WW 1111111111111111TFFVVHHH | I | User | Host to NMC Workstation Tray Release where:<br>0 = sequence number (0-7)<br>M04 = command field<br>WW = workstation<br>1111111111111111 = functions performed<br>T = tray directed to workstation flag<br>FF = face position<br>VV = vertical position<br>HHH = horizontal position |
| 0 M05 | I | User | Host to NMC NCC Restart; where:<br>0 = sequence number (0-7)<br>M05 = command field |
| 0 M09 | I | User | Host to NMC PC Initialize; where:<br>0 = sequence number (0-7)<br>M09 = command field |
| M51FFVVHHHWW | I | User | NMC to Host Tray Arrival at Work Position; where:<br>M51 = command field<br>FF = face position<br>VV = vertical position<br>HHH = horizontal position<br>WW = Workstation |

| Message | Type | Log/Display | Explanation/Action |
|---|---|---|---|
| M54FF111111 | I | User | NMC to Host Tray Transaction Request where:<br>M54 = command field<br>FF = function or workstation<br>111111= stackers count pending retrieval |
| M55FFVVHHH | I | User | NMC to Host Tray Arrival At Workstation Queue where:<br>M55 = command field<br>FF = face position<br>VV = vertical position<br>HHH = horizontal position |
| M57FFVVHHHRR | I | User | NMC to Host Tray Request Reject where:<br>M57 = command field<br>FF = face position<br>VV = vertical position<br>HHH = horizontal position<br>RR = reject reason |
| Blank Tray ID in M55 Message; Set to [????????] | A | User, Error | Tray arrival at workstation queue message contained a blank tray ID. |
| Control Number [ControlNr] not found | A | User, Error, Display | Control number not in request buffer. |
| Control Number and Tray ID both blank | A | User, Error, Display | In the A05 message (Delete SMM) neither the control number or tray was specified. |
| Delete Only by Tray OR Control Number; NOT Both | A | User, Error, Display | In the A05 message (Delete SMM) both the control number and tray ID was specified. |

| Message | Type | Log/Display | Explanation/Action |
|---|---|---|---|
| ECS.INI file not found! Initialization Error. | F | User, Error, Display | ECS.INI file was not found. Collect supporting documents and **contact the Systems Administrator.** Restore ECS.INI from backup copy. |
| Extract Cycle Stacker Error [Pn] | A | User, Error | [P1] - The stacker from which the tray has been requested in down.<br>[P2] - The tray has been relocated and the stacker to which it has been relocated is down.<br>[P3] - The Work Matrix already contains the maximum number of entries for a given function or dedicated workstation (15 is the maximum). |
| Invalid Aisle/Side [aisle/side] from [userName] | A | User, Error, Display | Specified Stacker aisle not within the range of valid units. Verify unit number and try again. |
| Invalid Destination [Destination] for Tray [trayNr] | A | User, Error, Display | Invalid SMM Work Type [x] other than:<br>Pick ('P')<br>Inventory ('C')<br>Location Surveys ('L')<br>Bin Strip ('B')<br>Emergency Issues ('E') &<br>Error Processing ('X') |
| Invalid Destination [Destination] | A | User, Error, Display | Terminal/WS not in Translation Table (NMCTABLE.DAT) Verify Terminal ID. If correct, add to table and restart NMC. If incorrect, use correct Terminal ID. |
| Invalid M01 Message Flag [flag] from [userName] | A | User, Error, Display | M01 Message Flag other than ('C') Completion, ('D') Dummy Move, ('K') Pick Completion, ('L') Location Survey, Emergency Request ('E'), ('R') Request, ('W') Clear Workstation, or ('Z') Workstation Designation. Collect supporting documents and **contact the Systems Administrator.** |
| Invalid Message Flag [flag] from [userName] | A | User, Error, Display | Pack Arrival; Flag ('P') not used at this site. |

| Message | Type | Log/Display | Explanation/Action |
|---|---|---|---|
| Invalid Message Type [type] from [userName] | A | User, Error, Display | Message Type not valid for the NLSC. Collect supporting documents and **contact the Systems Administrator.** |
| Invalid NMC Message Type [type] | A | User, Error, Display | NMC sent message type other than M51, M52, M54, M55 or M57. |
| Invalid Restart for Unit [unitNumber] Requested by [userName] | A | User, Error, Display | Stacker aisle Unit number is not within the range of valid unit numbers. Verify stacker aisle unit number and try again. |
| Invalid Set Logging Flag [flag] by [userName] | A | User, Error, Display | Set Logging Flag not On ('N') or Off ('F'). Collect supporting documents and **contact Systems Administrator.** |
| Invalid SMM Message Flag [flag] from [userName] | A | User, Error, Display | SMM Message Flag other than ('C') Completion, ('D') Dummy Move, ('K') Pick Completion, ('L') Location Survey, Emergency Request ('E'), ('R') Request, ('W') Clear Workstation, or ('Z') Workstation Designation. Collect supporting documents and **contact Systems Administrator.** |
| Invalid SMM Work Type [type] | A | User, Error, Display | Invalid SMM Work Type [x] other than:<br>Pick ('P')<br>Inventory ('C')<br>Location Surveys ('L')<br>Bin Strip ('B')<br>Emergency Issues ('E') &<br>Error Processing ('X') |
| Invalid Start/Stop Code [code] from [userName] | A | User, Error, Display | Start/Stop Code other than Start ('1') or Stop ('0') entered by specified user. Collect supporting documents and **contact Systems Administrator.** |
| Invalid SubSystem Start/Stop Code [code] from [userName] | A | User, Error, Display | Start/Stop Code other than Start ('1') or Stop ('0') entered by specified user. Collect supporting documents and **contact Systems Administrator.** |
| Invalid Terminal ID [Terminal] sent by [userName] | A | User, Error, Display | Terminal/WS not in Translation Table (NMCTABLE.DAT) Verify Terminal ID. If correct, add to table and restart NMC. If incorrect, use correct Terminal ID. |

| Message | Type | Log/Display | Explanation/Action |
|---|---|---|---|
| Invalid Terminal ID [terminalID] | A | User, Error, Display | Terminal/WS not in Translation Table (NMCTABLE.DAT) Verify Terminal ID. If correct, add to table and restart NMC. If incorrect, use correct Terminal ID. |
| Invalid Tray ID [trayID] | A | User, Error, Display | Tray ID not numeric. |
| Invalid Unit Number [unitNumber] from [userName] | A | User, Error, Display | Specified Unit Number is outside the range of valid unit numbers. Verify unit number and try again. |
| Invalid Workstation [workstation] Requested by [userName] | A | User, Error, Display | Workstation not between 1 & 6. |
| Invalid Workstation Number [WorkstationNr] in M51 Message | A | User, Error | Workstation not between 1 & 6 in tray arrival at Work Position Message. |
| Invalid Workstation Number [WorkstationNr] in M55 Message | A | User, Error | Workstation not between 1 & 6 in tray arrival at Workstation Queue Message. |
| Logging Turned OFF by [userName] | I | User | Logging in User Log turned off by specified user. |
| Logging Turned ON by [userName] | I | User | Logging in User Log turned on by specified user. |
| NMC Set Offline by [userID] | I | User | NMC Subcontroller Status Set to Offline. |
| NMC Stacker Error Message Table not loaded | A | User, Error | Error Message Table not loaded. |
| NMC Started by [userID] | I | User | NMC Subcontroller Started by User Number. |
| Queue currently contains [trayNr], [trayNr] and [trayNr] | A | User, Error | Sequence of trays assumed in the workstation queue. If actual sequence differs, take corrective action. |
| Request Buffer is Full | A | User, Error, Display | Request Buffer is on the verge of overflow. |
| Request Buffer Overflow; Sequence Number [sequenceNr] Ignored | A | User, Error, Display | Request Buffer capacity unable to handle indicated SMM sequence number. Inform DSS to resend, starting with that request after allowing NMC to process some of their earlier requests. |

| Message | Type | Log/Display | Explanation/Action |
|---|---|---|---|
| Request Queue is Full | A | User, Error, Display | Request Queue on the verge of overflowing. |
| Request Queue Overflow Sequence Number [sequenceNr] Ignored | A | User, Error, Display | Request Queue Capacity unable to handle SMM sequences # nnnnnnnn, Inform DSS to resend, starting with that request after allowing NMC to process some of their earlier requests. |
| Restore Cycle Stacker Error [nn] | A | User, Error, Display | [03] = limit switch will not reset;<br>[07] = stacker safety;<br>[19] = rear door open on diagnostic panel;<br>[30] = restore to occupied shelf;<br>[32] = cycle time too long;<br>[34] = stacker exit at wrong level;<br>[43] = stacker in overdrive;<br>[44] = lost 220V power; |
| Scheduled Queue Overflow enlarge Queue before proceeding | A | User, Error | Scheduled Queue of insufficient capacity. |
| Set Offline Invalid for Unit [unit] requested by [userID] | A | User, Error, Display | Specified Unit Number is outside the range of valid unit numbers. Verify unit number and try again. |
| Shutting Down Subcontroller | A | Display | Logging Parameter not found in INI file. Update INI file. |
| SubSystem Shut Down by [userName] | I | User | Stacker aisle Subsystem was shut down by the specified user. |
| Terminal ID/Workstation Table Not Loaded Properly | A | User, Error | Check NMCTABLE.DAT file and try again. |
| There is no Tray at Workstation [WorkstationNr], tray NOT released | A | User, Error, Display | NMC Subcontroller does not acknowledge a tray at the workstation. |
| Tray [trayNr] advanced past Tray [trayNr] to work position. | A | User, Error | Tray arrived at work position out of sequence. |
| Tray [trayNr] is at Workstation [workstation] Work Position | I | User | Tray arrival at the workstation work position. |
| Tray [trayNr] is currently at Workstation [workstation]; Tray [trayNr] released | A | User, Error, Display | Clarification of which tray is at workstation work position. |
| Tray [trayNr] Not Active | I | User, Display | Tray not in input queue. |

| Message | Type | Log/Display | Explanation/Action |
|---|---|---|---|
| Tray [trayNr] requested to be released from Workstation [workstation]. | I | User, Error, Display | Operator requested tray [nnnnnnn] to be released. |
| Tray [trayNr], scheduled to [workstation]; deleted | I | User, Display | Tray deleted. |
| Tray [trayNr] was identified as being at Work Position; but not found in Workstation [workstation] queue, which contains trays [trayNr], [trayNr] and [trayNr]. | A | User, Error | Tray appeared at work position without arriving at and entering the workstation queue. |
| Tray [trayNr] yet to be Scheduled to [workstation] Deleted | I | User, Display | A tray that had not been scheduled was deleted. |
| Tray Sequence Error, Workstation [workstation] Check Log for details | A | Display | Alert message to inform operator to check log for detail as to a tray problem at the specified workstation. |
| Tray xx xx xxx: Unspecified Error [Err] | A | User, Error, Display | Currently undocumented error code occurred with movement of specified tray. |
| Unit [unitNumber] Started by [userName] | I | User | Specified stacker aisle started by specified user. |
| Unknown Message Type [type] from [userName] | A | User, Error, Display | Message type other than ('A01') hardware unit restart, ('A03') Clear Buffers, ('A05') Delete SMM, ('A07') Set Logging, ('A09') System Stop, ('A21') Initial Device, ('A41') Workstation Assignment, ('J01') Status Request, ('J31') Send Errors Request, ('J33') Send Status Request, ('J41') Tray at Workstation request, ('M01') User Interface originated Standard Movement Message, ('SMM') DSS originated Stand Movement Message. Select appropriate message type and try again. |
| Warning -- Scheduled Queue Full enlarge Queue | A | User, Error | Scheduled queue at capacity. Queue should be enlarged. |
| WARNING: Tray [trayNr] arrived at Workstation [workstation]; scheduled for [function] | A | User, Error, Display | A tray scheduled for one workstation arrived at some other workstation. |

| Message | Type | Log/Display | Explanation/Action |
|---|---|---|---|
| WARNING: Tray [trayNr] arriving at Workstation [workstation] already in Queue | A | User, Error, Display | Notice of tray arrival when already in queue. |
| WARNING: Unscheduled Tray [trayNr] arrived at Workstation [workstation] | A | User, Error, Display | A tray that was not scheduled was delivered to specified workstation. |
| Workload Buffers for All Units Cleared by [userName] | I | User | All units had their Workload Buffers cleared by specified user. |
| Workstation [workstation] Queue contains trays [trayNr], [trayNr] and [trayNr]; with tray [trayNr] arriving! | I | User, Error | Assumed sequence of trays in workstation queue. |
| Workstation [workstation] Queue Overflow Error Check Log for details | A | Display | Alert message to operator as to workstation queue problem and to check log for details. |
| Workstation [workstation] Queue Overflow; contains trays [trayNr], [trayNr] and [trayNr]; with tray [trayNr] arriving! | A | User, Error | Workstation queue has more trays than it can physically hold. |
| Workstation [workstation] Trays out of sequence error; with trays [trayNr], [trayNr] and [trayNr]; and tray [trayNr] specified at Work Position! | A | User, Error | Trays out of sequence error. |

Table K - 1-1 NMC Messages

# APPENDIX L V52 STACKER (V52) MESSAGES

## 1.0 V52 STACKER MESSAGES

The following table represents a list of all messages from the V52 Stacker subcontroller. The Message column represents the text of the message as displayed on the screen or log file. The Type column represents the type of the message: "I" indicates informational, "A" indicates action required and "F" indicates fatal situation, immediate action is required before further processing. Action and Fatal messages will include the action to be performed. The Log/Display column represents where the message will be displayed: the annotation of "Error" means the message will be logged to the error log, the annotation of "User" means the message will be logged to the message log, and the annotation of "Display" means the message will be displayed through the UI on the screen as an Alert Message. The Explanation/Action column represents the action the user will perform when the message is displayed or an explanation of a Type "I" message.

***Note:** Variable text, depending on circumstance, is enclosed within brackets, [ ]. The text within the brackets describes the item that will appear in the error message.

| Message | Type | Log/Display | Explanation/Action |
|---|---|---|---|
| 000410147600001RBC 821001010 821D 00 | I | User | Host to Stacker Aisle Retrieve By Carrier Message; where:<br>00041 = message length,<br>01476 = message checksum,<br>00001 = message sequence number<br>RBC = message type<br>821001010 = location/carrier<br>821D = delivery station ID<br>00 = priority |
| 000390144600001RTCP821001 010 821D | I | User | Stacker to Host Retrieve By Carrier Completed Message; where:<br>00039 = message length,<br>01446 = message checksum<br>00001 = message sequence number<br>RTCP = message type<br>821001010 = location/carrier<br>821D = delivery station ID |

| Message | Type | Log/Display | Explanation/Action |
|---|---|---|---|
| 000390144700001STCP821001 010 821D | I | User | Stacker to Host Store Complete Message; where:<br>00039 = message length,<br>01447 = message checksum<br>00001 = message sequence number<br>STCP = message type<br>821001010 = location/carrier<br>821D = delivery station ID |
| 000610144700001ARBC82100 1010 821D 00oper order to abort | I | User | Stacker to Host Abort Retrieve By Carrier Message; where:<br>00039 = message length,<br>01447 = message checksum<br>00001 = message sequence number<br>ARBC = message type<br>821001010 = location/carrier<br>821D = delivery station ID<br>00 = priority<br>oper order to abort = abort reason |
| 000270048000001CRN 821IN | I | User | Stacker to Host Crane Status Message Codes:<br>IN = In Service<br>OUT = Out of Service<br>where:<br>00019 = message length,<br>00480 = message checksum<br>00001 = message sequence number<br>CRN = message type<br>821 = message aisle<br>IN = In or Out of Service Flag |
| 000190048000001ACK | I | User | Host to Stacker and Stacker to Host Acknowledge Message where:<br>00019 = message length,<br>00480 = message checksum<br>00001 = message sequence number<br>ACK = message type |

| Message | Type | Log/Display | Explanation/Action |
|---|---|---|---|
| 000220063600001NAK 001 | A | User,<br>Error,<br>Display | Host to Stacker and Stacker to Host Nonacknowledge Message where:<br>00022 = message length,<br>00636 = message checksum<br>00001 = message sequence number<br>NAK = message type<br>001 = message error code<br><br>These codes cause a retransmit or deletion of the message.<br><br>Codes:<br>000 - Invalid Message Format<br>001 - Invalid Message Type<br>002 - Invalid Checksum<br>010 - Invalid Carrier ID<br>011 - Invalid Destination<br>012 - Invalid Priority<br>013 - Carrier Not Available<br>024 - Duplicate Sequence Number Received<br>025 - Communications are Disabled |
| All Units Set Offline by [userName] | I | User | All Stacker Aisles were set offline as requested by specified user. |
| All Units Started by [userName] | I | User | All Stacker aisles were started as requested by specified user. |
| ECS.INI file not found! | F | User,<br>Error,<br>Display | ECS.INI file was not found. Collect supporting documents and **contact Systems Administrator.** Restore ECS.INI from backup copy. |
| Invalid Aisle/Side [aisle/side] from [userName] | A | User,<br>Error,<br>Display | Specified Stacker aisle not within the range of valid units. Verify unit number and try again. |
| Invalid Stacker aisle Source Field [stacker aisle ] | A | User,<br>Error | Stacker aisle to Host Message contains data in the source field not in linkage table. Collect supporting documents and **contact Systems Administrator.** |
| Invalid SMM Message Flag [D] from [userName] | A | User,<br>Error,<br>Display | Ad Hoc Move was received from DSS. A D flag is invalid for this subsystem. Collect supporting documents and **contact Systems Administrator.** |

| Message | Type | Log/Display | Explanation/Action |
|---|---|---|---|
| Invalid SMM Message Flag [Z] from [userName] | A | User, Error, Display | SMM Message Flag "Z" (Workstation Designation) not valid for Stacker aisle. Collect supporting documents and **contact Systems Administrator.** |
| Invalid Message Type [A05] from [userName] | A | User, Error, Display | Message Type "A05" (Delete SMM) not valid for the Stacker aisle. Collect supporting documents and **contact Systems Administrator.** |
| Invalid Message Type [A41] from [userName] | A | User, Error, Display | Message Type "A41" (Workstation Assignment) not valid for stacker aisle. Collect supporting documents and **contact Systems Administrator.** |
| Invalid Message Type [J41] from [userName] | A | User, Error, Display | Message Type "J41" (NMC at Workstation Request) not valid for the Stacker aisle. Collect supporting documents and **contact Systems Administrator.** |
| Invalid Message Type [A21] from [userName] | A | User, Error, Display | Message Type "A21" (Initialize Device) not valid for the Stacker aisle. Collect supporting documents and **contact Systems Administrator.** |
| Invalid Restart for Unit [unitNumber] Requested by [userName] | A | User, Error, Display | Stacker aisle Unit number is not within the range of valid unit numbers. Verify stacker aisle unit number and try again. |
| Invalid Set Logging Flag [flag] by [userName] | A | User, Error, Display | Set Logging Flag not On ('N') or Off ('F'). Collect supporting documents and **contact Systems Administrator.** |
| Invalid Start/Stop Code [code] from [userName] | A | User, Error, Display | Start/Stop Code other than Start ('1') or Stop ('0') entered by specified user. Collect supporting documents and **contact Systems Administrator.** |
| Invalid SubSystem Start/Stop Code [code] from [userName] | A | User, Error, Display | Start/Stop Code other than Start ('1') or Stop ('0') entered by specified user. Collect supporting documents and **contact Systems Administrator.** |
| Invalid Unit Number [unitNumber] from [userName] | A | User, Error, Display | Specified Unit Number is outside the range of valid unit numbers. Verify unit number and try again. |

| Message | Type | Log/Display | Explanation/Action |
|---|---|---|---|
| Invalid SMM Message Flag [flag] from [userName] | A | User, Error, Display | SMM Message Flag other than ('C') Completion, ('D') Dummy Move, ('K') Pick Completion, ('L') Location Survey, ('P') Pack Arrival, ('R') Request, ('W') Clear, or ('Z') Workstation Designation. Collect supporting documents and **contact Systems Administrator.** |
| Logging Turned OFF by [userName] | I | User | Logging in User Log turned off by specified user. |
| Logging Turned ON by [userName] | I | User | Logging in User Log turned on by specified user. |
| Message Request Buffer is Full | A | User, Error, Display | Message Request Buffer has reached its current capacity. Collect supporting documents and **contact Systems Administrator** to enlarge the Message Request Buffer. Log off DSS, clear buffers on user interface and re-request DSS workload. |
| Message Request Buffer Overflow, Request Ignored | A | User, Error, Display | Ad Hoc Request Buffer is not large enough to contain all of the requests initiated. Collect supporting **contact Systems Administrator** to enlarge the Ad Hoc Request Buffer. Log off DSS, clear buffers on user interface and re-request DSS workload. |
| Pick Complete Out of Sequence [ | I | User, Error | Pick complete message received for other than the next pick in the queue. |
| Shutting Down Subcontroller | F | Display | Couldn't find logging key or no value for logging key in ECS.INI. Collect supporting documents and **contact Systems Administrator.** |
| Subcontroller Set Offline | I | User, Error | During check of the status for all stacker aisles it was determined that they were all offline; consequently, the subcontroller was set offline. |
| SubSystem Shut Down by [userName] | I | User | Stacker aisle Subsystem was shut down by the specified user. |
| Unit [unitNumber] Set Offline by [userName] | I | User | Specified user requested specified unit to be set offline. |
| Unit [unitNumber] Started by [userName] | I | User | Specified stacker aisle started by specified user. |
| Unit [unitNumber] Workload Buffers Cleared by [userName] | I | User | The specified unit had its Workload Buffers cleared by the specified user. |

| Message | Type | Log/Display | Explanation/Action |
|---|---|---|---|
| Unit [unitNumber] Set Offline | A | User, Error | Stacker aisle to Host Message in response to Send Status Message indicates that stacker aisle is in manual mode; therefore, stacker aisle is set offline. Determine if Stacker aisle should be offline, and set online if applicable. |
| Unknown Message Type [type] from [userName] | A | User, Error, Display | Message type other than ('A01') hardware unit restart, ('A03') Clear Buffers, ('A05') Delete SMM, ('A07') Set Logging, ('A09') System Stop, ('A21') Initial Device, ('A41') Workstation Assignment, ('J01') Status Request, ('J31') Send Errors Request, ('J33') Send Status Request, ('J41') Tray at Workstation request, ('M01') User Interface originated Standard Movement Message, ('SMM') DSS originated Stand Movement Message. Select appropriate message type and try again. |
| Workload Buffers for All Units Cleared by [userName] | I | User | All units had their Workload Buffers cleared by specified user. |

Table L - 1-1 V52 Stacker Messages

# APPENDIX M STACKER (NFS) MESSAGES

## 1.0 STACKER (NFS) MESSAGES

The following table represents a list of all messages from the Stacker subcontroller. The Message column represents the text of the message as displayed on the screen or log file. The Type column represents the type of the message: "I" indicates informational, "A" indicates action required and "F" indicates fatal situation, immediate action is required before further processing. Action and Fatal messages will include the action to be performed. The Log/Display column represents where the message will be displayed: the annotation of "Error" means the message will be logged to the error log, the annotation of "User" means the message will be logged to the message log, and the annotation of "Display" means the message will be displayed through the UI on the screen as an Alert Message. The Explanation/Action column represents the action the user will perform when the message is displayed or an explanation of a Type "I" message.

***Note:** Variable text, depending on circumstance, is enclosed within brackets, [ ]. The text within the brackets describes the item that will appear in the error message.

| Message | Type | Log/Display | Explanation/Action |
|---|---|---|---|
| 63500 12 | I | User, Display, Error | Stacker Controller to Host Status Message; where:<br>6 = message type<br>35 = message diagnostic bitmap<br>00 = status code<br>12 = LRC<br><br>The message diagnostic bitmap informs the user whether the crane is in automatic or idle, there are bins in the left or right workstation and if the crane is ready for retrieve or restore.<br><br>The status code informs the user about the status of the crane. The messages will be logged and displayed on the user interface screen. The following status are possible: |

| Message | Type | Log/Display | Explanation/Action |
|---|---|---|---|
| 63500 12 (continued) | I | User, Display, Error | 00 - No error condition exists.<br>01 - Illegal tray address requested.<br>02 - Limit switch detected. H/V limit reached.<br>03 - Limit switch will not reset.<br>05 - Illegal tray address restored.<br>07 - Platform safety. Tray improperly positioned.<br>09 - Restore attempted from empty position.<br>10 - Extraction pins sensed in multiple positions.<br>14 - Left or right is not defined on request.<br>15 - Illegal BCD code read by read head.<br>16 - Invalid serial data received. LRC error.<br>17 - Extraction attempted but no tray on platform.<br>18 - Requested tray is out of storage racks.<br>19 - Rear door open or diagnostic panel active.<br>20 - Extraction pins in unknown position.<br>21 - Microprocessor powered up with load on board.<br>22 - Tray on side shuttle is misaligned.<br>26 - Invalid data received. Violates last status.<br>30 - Restore attempted to an occupied shelf.<br>32 - Timeout error.<br>34 - Platform move other than preprogrammed level.<br>36 - Retrieve requested while buffer is full.<br>43 - Stacker traveling in overdrive.<br>44 - Loss of 220v power.<br><br>See Stacker Controller documentation for further details. |

| Message | Type | Log/Display | Explanation/Action |
|---|---|---|---|
| A010200304 | I | User | Stacker Controller to Host Bin Arrival Message; where:<br>A = message type<br>01 = face<br>02 = level<br>003 = bay<br>04 = LRC<br><br>A message type signifies a bin arrival in the right workstation.<br><br>B message type signifies a bin arrival in the left workstation. |
| 10203003405 | I | User | Host to Stacker Controller Move Message; where:<br>1 = message type<br>02 = face<br>03 = level<br>004 = bay<br>05 = LRC<br><br>0-message type signifies a pull tray to the right workstation.<br><br>1 message type signifies a pull tray to the left workstation. |
| All Units Set Offline by [userName] | I | User | All Stacker Aisles were set offline as requested by specified user. |
| All Units Started by [userName] | I | User | All Stacker aisles were started as requested by specified user. |
| ECS.INI file not found! Initialization Error. | F | User, Error, Display | ECS.INI file was not found**. Collect supporting documents and contact Systems Administrator.** Restore ECS.INI from backup copy. |
| Invalid Aisle/Side [aisle/side] from [userName] | A | User, Error, Display | Specified Stacker aisle not within the range of valid units. Verify unit number and try again. |
| Invalid Stacker aisle Source Field [stacker aisle ] | A | User, Error | Stacker aisle to Host Message contains data in the source field not in linkage table**. Collect supporting documents and contact Systems Administrator.** |

| Message | Type | Log/Display | Explanation/Action |
|---|---|---|---|
| Invalid SMM Message Flag [D] from [userName] | A | User, Error, Display | Ad Hoc Move was received from DSS. A D flag is invalid for this subsystem. **Collect supporting documents and contact Systems Administrator.** |
| Invalid SMM Message Flag [Z] from [userName] | A | User, Error, Display | SMM Message Flag "Z" (Workstation Designation) not valid for Stacker aisle. **Collect supporting documents and contact Systems Administrator.** |
| Invalid Message Type [A05] from [userName] | A | User, Error, Display | Message Type "A05" (Delete SMM) not valid for the Stacker aisle. **Collect supporting documents and contact Systems Administrator.** |
| Invalid Message Type [A41] from [userName] | A | User, Error, Display | Message Type "A41" (Workstation Assignment) not valid for stacker aisle. **Collect supporting documents and contact Systems Administrator.** |
| Invalid Message Type [J41] from [userName] | A | User, Error, Display | Message Type "J41" (NMC at Workstation Request) not valid for the Stacker aisle. **Collect supporting documents and contact Systems Administrator.** |
| Invalid Message Type [A21] from [userName] | A | User, Error, Display | Message Type "A21" (Initialize Device) not valid for the Stacker aisle. **Collect supporting documents and contact Systems Administrator.** |
| Invalid Restart for Unit [unitNumber] Requested by [userName] | A | User, Error, Display | Stacker aisle Unit number is not within the range of valid unit numbers. Verify stacker aisle unit number and try again. |
| Invalid Set Logging Flag [flag] by [userName] | A | User, Error, Display | Set Logging Flag not On ('N') or Off ('F'). **Collect supporting documents and contact Systems Administrator.** |
| Invalid Start/Stop Code [code] from [userName] | A | User, Error, Display | Start/Stop Code other than Start ('1') or Stop ('0') entered by specified user. **Collect supporting documents and contact Systems Administrator.** |
| Invalid SubSystem Start/Stop Code [code] from [userName] | A | User, Error, Display | Start/Stop Code other than Start ('1') or Stop ('0') entered by specified user. **Collect supporting documents and contact Systems Administrator.** |
| Invalid Unit Number [unitNumber] from [userName] | A | User, Error, Display | Specified Unit Number is outside the range of valid unit numbers. Verify unit number and try again. |

| Message | Type | Log/Display | Explanation/Action |
|---|---|---|---|
| Invalid SMM Message Flag [flag] from [userName] | A | User, Error, Display | SMM Message Flag other than ('C') Completion, ('D') Dummy Move, ('K') Pick Completion, ('L') Location Survey, ('P') Pack Arrival, ('R') Request, ('W') Clear, or ('Z') Workstation Designation. **Collect supporting documents and contact Systems Administrator.** |
| Logging Turned OFF by [userName] | I | User | Logging in User Log turned off by specified user. |
| Logging Turned ON by [userName] | I | User | Logging in User Log turned on by specified user. |
| Message Request Buffer is Full | A | User, Error, Display | Message Request Buffer has reached its current capacity. **Collect supporting documents and contact Systems Administrator** to enlarge the Message Request Buffer. Log off DSS, clear buffers on user interface and re-request DSS workload. |
| Message Request Buffer Overflow, Request Ignored | A | User, Error, Display | Ad Hoc Request Buffer is not large enough to contain all of the requests initiated. **Collect supporting documents and contact Systems Administrator** to enlarge the Ad Hoc Request Buffer. Log off DSS, clear buffers on user interface and re-request DSS workload. |
| Pick Complete Out of Sequence [ | I | User, Error | Pick complete message received for other than the next pick in the queue. |
| Shutting Down Subcontroller | F | Display | Couldn't find logging key or no value for logging key in ECS.INI. **Collect supporting documents and contact Systems Administrator.** |
| Stacker Status Code [ ] Invalid | I | User | An invalid status code was received from the stacker. This condition should resolve itself on the next status cycle. |
| Stacker Error Message Table Not Loaded Properly | A | User, Error | The Error Message Table is not in place. Restore it from a backup. |
| Stacker Linkage Table Not Loaded Properly | A | User, Error | The Linkage Table is not in place. Restore it from a backup. |
| Stacker [unitNumber] Set Offline | I | User | Specified stacker set offline. |

| Message | Type | Log/Display | Explanation/Action |
|---|---|---|---|
| Subcontroller Set Offline | I | User, Error | During check of the status for all stacker aisles it was determined that they were all offline; consequently, the subcontroller was set offline. |
| SubSystem Shut Down by [userName] | I | User | Stacker aisle Subsystem was shut down by the specified user. |
| Unit [unitNumber] Set Offline by [userName] | I | User | Specified user requested specified unit to be set offline. |
| Unit [unitNumber] Started by [userName] | I | User | Specified stacker aisle started by specified user. |
| Unit [unitNumber] Workload Buffers Cleared by [userName] | I | User | The specified unit had its Workload Buffers cleared by the specified user. |
| Unit [unitNumber] Set Offline | A | User, Error | Stacker aisle to Host Message in response to Send Status Message indicates that stacker aisle is in manual mode; therefore, stacker aisle is set offline. Determine if Stacker aisle should be offline, and set online if applicable. |
| Unknown Message Type [type] from [userName] | A | User, Error, Display | Message type other than ('A01') hardware unit restart, ('A03') Clear Buffers, ('A05') Delete SMM, ('A07') Set Logging, ('A09') System Stop, ('A21') Initial Device, ('A41') Workstation Assignment, ('J01') Status Request, ('J31') Send Errors Request, ('J33') Send Status Request, ('J41') Tray at Workstation request , ('M01') User Interface originated Standard Movement Message, ('SMM') DSS originated Stand Movement Message. Select appropriate message type and try again. |
| Workload Buffers for All Units Cleared by [userName] | I | User | All units had their Workload Buffers cleared by specified user. |

Table M - 1-1 Norfolk Stacker (NFS) Messages

# APPENDIX N NISTARS LASER SCANNER CONTROLLER (NLSC) MESSAGES

## 1.0 NISTARS LASER SCANNER CONTROLLER (NLSC) MESSAGES

The following table represents a list of all messages from the NLSC subcontroller. The Message column represents the text of the message as displayed on the screen or log file. The Type column represents the type of the message: "I" indicates informational, "A" indicates action required and "F" indicates a fatal situation, immediate action is required before further processing. Action and Fatal messages will include the action to be performed. The Log/Display column represents where the message will be displayed: the annotation of "Error" means the message will be logged to the error log, the annotation of "User" means the message will be logged to the message log, and the annotation of "Display" means the message will be displayed through the UI on the screen as an Alert Message. The Explanation/Action column represents the action the user will perform when the message is displayed or an explanation of a Type "I" message.

***Note:** Variable text, depending on circumstance, is enclosed within brackets, [ ]. The text within the brackets describes the item that will appear in the error message.

| Message | Type | Log/Display | Explanation/Action |
|---|---|---|---|
| S01 | I | User | Host to NLSC Startup Message |
| S02 | I | User | Host to NLSC Initialize Message |
| S03CCCCCCCDDDSSS | I | User | Host to NLSC Move Message; where:<br><br>S02 = message type<br>CCCCCCC = control number<br>DDD = destination<br>SSS = source |
| S05CCCCCCC | I | User | Host to NLSC Delete Move Message; where:<br><br>S05 = message type<br>CCCCCCC = control number |
| S52CCCCCCC | I | User | NLSC to Host Deletion Message; where:<br><br>S52 = message type<br>CCCCCCC = control number |

| Message | Type | Log/Display | Explanation/Action |
|---|---|---|---|
| S53CCCCCCCDDD | I | User | NLSC to Host Divert Accomplished where:<br><br>S53 = message type<br>CCCCCCC = control number<br>DDD = divert destination |
| S5514001D | I | User, Display, Error | NLSC to Host Status Message; where:<br><br>S55 = message type<br>14 = status code<br>001 = equipment ID<br>D = equipment type<br><br>The status code informs the user about the status of the NLSC. The messages will be logged and displayed on the user interface screen. The following status are possible:<br><br>01 - Jam/Divert Photo-Eye Failure.<br>02 - Verification Photo-Eye Failure.<br>03 - Diverter Failure.<br>04 - Spur Full.<br>05 - Induction Photo-Eye Failure.<br>06 - Pulse Position Indicator Failure.<br>07 - Conveyor Failure.<br>08 - Laser Degradation.<br>09 - Excessive No-Reads.<br>10 - Cube Weight Sensor Failure.<br>11 - Decoder Failure.<br>12 - Controller Failure.<br>13 - Memory Full.<br>14 - NLSC Failure.<br>15 - NLSC IN SYNC.<br>16 - Controller Ini<br><br>See Stacker Controller documentation for further details. |

| Message | Type | Log/Display | Explanation/Action |
|---|---|---|---|
| S5614001D | I | User, Display, Error | NLSC to Host Status Reversal Message; where:<br><br>S56 = message type<br>14 = status code<br>001 = equipment ID<br>D = equipment type<br><br>The status code informs the user about the status reversal on the NLSC. The messages will be logged and displayed on the user interface screen. The word REVERSAL will precede the status text. The following status are possible:<br><br>01 - Jam/Divert Photo-Eye Failure.<br>02 - Verification Photo-Eye Failure<br>03 - Diverter Failure.<br>04 - Spur Full.<br>05 - Induction Photo-Eye Failure.<br>06 - Pulse Position Indicator Failure.<br>07 - Conveyor Failure.<br>08 - Laser Degradation.<br>09 - Excessive No-Reads.<br>10 - Cube Weight Sensor Failure.<br>11 - Decoder Failure.<br>12 - Controller Failure.<br>13 - Memory Full.<br>14 - NLSC Failure.<br>15 - NLSC IN SYNC.<br>16 - Controller Ini<br><br>See Stacker Controller documentation for further details. |
| S58DDDDDDDDDDD | I | User | NLSC to Host Invalid Data Message; where:<br><br>S58 = message type<br>DDDDDDD = invalid data |
| S59PN | I | User | NLSC to Host Primary/Secondary Unit Indication Message; where:<br>S59 = message type<br>P = primary/secondary flag<br>N = unit number |

| Message | Type | Log/Display | Explanation/Action |
|---|---|---|---|
| All Units shutdown by [userName] | I | User | All Stacker Aisles were set offline as requested by specified user. |
| All Units Started by [userName] | I | User | All Stacker aisles were started as requested by specified user. |
| ECS.INI file not found! Initialization Error. | F | User, Error, Display | ECS.INI file was not found. **Collect supporting documents and contact Systems Administrator.** Restore ECS.INI from backup copy. |
| Invalid Aisle/Side [aisle/side] from [userName] | A | User, Error, Display | Specified Stacker aisle not within the range of valid units. Verify unit number and try again. |
| Invalid SMM Message Flag [ ] from [userName] | A | User, Error, Display | SMM Message Flag not valid for NLSC. **Collect supporting documents and contact Systems Administrator.** |
| Invalid Message Type [ ] from [userName] | A | User, Error, Display | Message Type not valid for the NLSC. Collect supporting documents and **contact Systems Administrator.** |
| Invalid Restart for Unit [unitNumber] Requested by [userName] | A | User, Error, Display | Stacker aisle Unit number is not within the range of valid unit numbers. Verify stacker aisle unit number and try again. |
| Invalid Set Logging Flag [flag] by [userName] | A | User, Error, Display | Set Logging Flag not On ('N') or Off ('F'). **Collect supporting documents and contact Systems Administrator.** |
| Invalid Start/Stop Code [code] from [userName] | A | User, Error, Display | Start/Stop Code other than Start ('1') or Stop ('0') entered by specified user. **Collect supporting documents and contact Systems Administrator.** |
| Invalid SubSystem Start/Stop Code [code] from [userName] | A | User, Error, Display | Start/Stop Code other than Start ('1') or Stop ('0') entered by specified user. **Collect supporting documents and contact Systems Administrator.** |
| Invalid Unit Number [unitNumber] from [userName] | A | User, Error, Display | Specified Unit Number is outside the range of valid unit numbers. Verify unit number and try again. |
| Invalid SMM Message Flag [flag] from [userName] | A | User, Error, Display | SMM Message Flag other than ('C') Completion, ('D') Dummy Move, ('K') Pick Completion, ('L') Location Survey, ('P') Pack Arrival, ('R') Request, ('W') Clear, or ('Z') Workstation Designation. **Collect supporting documents and contact Systems Administrator.** |
| Logging Turned OFF by [userName] | I | User | Logging in User Log turned off by specified user. |

| Message | Type | Log/Display | Explanation/Action |
|---|---|---|---|
| Logging Turned ON by [userName] | I | User | Logging in User Log turned on by specified user. |
| NLSC Status Code [] Invalid | I | User | An invalid status code was received from the stacker. This condition should resolve itself on the next status cycle. |
| SMM invalid source field - XXXXXXXXX | I | User | An invalid source field was detected in the SMM. **Collect supporting documentation and contact Systems Administrator.** Bypass this transaction. |
| SMM route not found - XXXXXXXXX | I | User | An invalid route was detected in the SMM. **Collect supporting documentation and contact Systems Administrator.** Bypass this transaction. |
| SubSystem Shut Down by [userName] | I | User | Stacker aisle Subsystem was shut down by the specified user. |
| Unit [unitNumber] shutdown by [userName] | I | User | Specified user requested specified unit to be set offline. |
| Unit [unitNumber] Started by [userName] | I | User | Specified stacker aisle started by specified user. |
| Unknown Message Type [type] from [userName] | A | User, Error, Display | Message type other than ('A01') hardware unit restart, ('A03') Clear Buffers, ('A05') Delete SMM, ('A07') Set Logging, ('A09') System Stop, ('A21') Initial Device, ('A41') Workstation Assignment, ('J01') Status Request, ('J31') Send Errors Request, ('J33') Send Status Request, ('J41') Tray at Workstation request , ('M01') User Interface originated Standard Movement Message, ('SMM') DSS originated Stand Movement Message. Select appropriate message type and try again. |
| Workload Buffers for All Units Cleared by [userName] | I | User | All units had their Workload Buffers cleared by specified user. |

Table N - 1-1 Nistars Laser Scanner Controller (NLSC) Messages

# APPENDIX O NEW CUMBERLAND SORTER MESSAGES

## 1.0 NEW CUMBERLAND SORTER MESSAGES

The following table represents a list of all messages from the Sorter. The Message column represents the text of the message as displayed on the screen or log file. The Type column represents the type of the message: "I" indicates informational, "A" indicates action required and "F" indicates a fatal situation, immediate action is required before further processing. Action and Fatal messages will include the action to be performed. The Log/Display column represents where the message will be displayed: the annotation of "Error" means the message will be logged to the error log, the annotation of "User" means the message will be logged to the message log, and the annotation of "Display" means the message will be displayed through the UI on the screen as an Alert Message. The Explanation/Action column represents the action the user will perform when the message is displayed or an explanation of a Type "I" message.

***Note:** Variable text, depending on circumstance, is enclosed within brackets, [ ]. The text within the brackets describes the item that will appear in the error message.

| Message | Type | Log/Display | Explanation/Action |
|---|---|---|---|
| [ccc] is an unknown chute. Package Arrival Message ignored | I | User | Unknown chute. Error in message. Received from sorter MHE. Not processed. |
| [p] is an invalid pack area. [p] was expected. | I | User<br>Error | Invalid pack area. May need to reinduct package. |
| [uuuuu] has reinitialized all chutes for this sorter | I | User | Chutes reinitialized |
| A Package Arrival Message was received with an invalid status of __ | I | User<br>Error<br>Display | Unsuccessful package arrival. An error in status of message from sorter MHE. Not processed. |
| A total of entries have been read from the Backlog File | I | User | Saves all backlogged package delivery requests that had been stored in a queue into a file at the time a subcontroller shuts down |
| A total of entries have been written to the Backlog File. | I | User | Number of entries written to backlog file |
| A total of ddddd move records were resent | I | User | Gives the total for control numbers resent upon table purged. |
| A tripper or cart failure occurred for package [ ] at chute [ ] | I | User<br>Error<br>Display | Tripper /cart failure. Received from sorter MHE. |

| Message | Type | Log/Display | Explanation/Action |
|---|---|---|---|
| All backlogged packages have been sent to the sorter | I | User | When a Sorter notifies ECS that it has come online, at this time all Backlogged Package Delivery Requests are read from the Backlog Queue and sent to the Sorter. |
| An A01 was received with a invalid code of [c] | I | User Error | A01 Msg. code is not 1 or 0. Invalid code. |
| An invalid status of [s] was reported by the Sorter | I | User | Illegal status |
| An Oracle database error was found of type - | I | User Error | Oracle database error |
| An Oracle database error while updating chute totals was found | I | User Error | Database error |
| An Oracle database error while updating the MOVE record was found | I | User Error | Database error |
| An SMM with an invalid flag of [f] received for Sequence Number[ssssssss] | I | User Error Display | Warning - SMM is invalid. |
| At startup time, the sorter has been requested to start up | I | User | Autostart chosen, sorter requested to start up |
| At startup time, the sorter has been asked for its current status | I | User | PLC status set to offline (5), not autostart |
| Backlogging package [ppppp] for chute [ccc] with h/l [i] | I | User | Backlogging message. |
| Beginning to resend all applicable MOVE records to the sorter | I | User | Resending MOVE records |
| Cart broken - [ ] is trapped in the cart | I A | User Error Display | Broken cart. Received from sorter MHE. **Document and Call Maintenance** |
| Chute [ccc] contains an illegal, non-numeric character | I | User Error | Illegal character. May need to reinduct package. |
| Chute [ccc] does not exist in the database. Unable to update chute totals | I A | User Error | Database hasn't been properly initialized. **Document and contact Database Administrator** |
| Chute [ccc] is not a known chute for this sorter | I | User Error | Invalid chute message. May need to reinduct package. |
| Chute ccc does not exist in the database. Unable to update chute totals | I A | User Error | 1403 - Chute not in database. **Document and contact Database Administrator.** |
| Chute totals can't be updated due to database error | I A | User Error | Database error updating CHUT record. **Document and contact Database Administrator.** |

| Message | Type | Log/Display | Explanation/Action |
|---|---|---|---|
| Connection to ECS Database failed | F | User Error | Cannot connect to database. **Document and contact Database Administrator.** |
| Control number ppppppp couldn't be deleted upon pack arrival due to database error | I A | User Error | Database error flag. **Document and contact Database Administrator.** |
| Control number ppppppp did not exist in the database upon pack arrival | I | User | Record not found. |
| Control number ppppppp has been deleted from the database upon pack arrival | I | User | Successful deletion of MOVE record. |
| Ending the resending of all applicable MOVE records to the sorter | I | User | Ending resending MOVE records |
| Error: Unable to write to file for a total of entries that are lost. | I A | User Error | Unable to open a write file. **Contact Systems Administrator.** |
| Error-message is too short to be valid | I A | User Error | Up process message length less than 2. **Document and contact Systems Administrator.** |
| Failure reading Destination Chute File. MHExx shutting down. | I A | User Error Display | Error reading file. **Document and contact Systems Administrator.** |
| Illegal Entry Found in Destination Chute File. MHExx shutting down. Please verify line number xxxxx | I A | User Error Display | Illegal entry. **Document and contact Systems Administrator.** |
| Invalid Destination [ddddddddd] received for Sequence Number [ssssssss] | I | User Error Display | Warning - Destination is invalid for SMM. |
| Invalid entry for the user key. No reject chute UI assigned | I A | User Error | Ini file's username invalid. **Document and contact Systems Administrator.** |
| Invalid message received (dnMsg) | I A | User Error | Invalid message, not A01, A07, A09, T15, U18, SMM or M01. **Document and contact Systems Administrator.** |
| Invalid Message Received (upMsg) | I A | User Error | Invalid up process message received. **Document and contact Systems Administrator.** |
| Invalid Set Logging Flag [ ] by [ ] | I | User Display | Invalid A07 flag, value other than on or off. |
| Invalid spur ID (contains blanks) for chute ccc of spur sss | I A | User Error | Correct the appropriate line in the srtxx_dest_chute.dat file and restart Sorter software. |

| Message | Type | Log/Display | Explanation/Action |
|---|---|---|---|
| Invalid spur ID (contains nulls) for chute ccc of spur sss | I<br>A | User<br>Error | Correct the appropriate line in the srtxx_dest_chute.dat file and restart Sorter software. |
| It has an illegal (non-alphanumeric) control number | I | User<br>Error | Bad control number |
| It has an illegal chute ID | I | User<br>Error | Bad chute ID |
| Logging Turned Off by [ ] | I | User | A07 flag is F - logging turned off |
| Logging Turned ON by [ ] | I | User | A07 flag is N - logging turned on |
| MHExx is Shutting Down | I | Display | Sorter shutdown - Broadcast |
| MHEXX Shutting Down by request of USExx | I | User | Shutdown subcontroller by user (A09) |
| No cart for label [ ] | I | User<br>Error<br>Display | No cart for label. Received from sorter MHE. |
| Oracle Error on inserting chute record: XXXXX Oracle Description | I<br>A | User<br>Error | Unable to add record to CHUT database table. **Document and contact Database Administrator.** |
| Oracle error upon opening move cursor | I<br>A | User<br>Error | Error identifying which record. Action-may need to reinitiate table purge. |
| Package [ ] was not found in sorter database | I | User<br>Error<br>Display | Package not in database. Received from sorter MHE. |
| Package [ ] couldn't be dropped because chute [ ] is full | I | User<br>Error<br>Display | Chute full. Received from sorter MHE. |
| Package [ccccccc] was destined for the sorter but failed to arrive in the time-out interval"; | I | User | 03 Message from the Sorter that indicates that a package has timed out (i.e. the status of the delivery is '7'). |
| Package [pppppppp] has successfully arrived at chute [ccc] | I | User | Indicates a successful delivery |
| Package pppppppp was not found in database upon being sent to the sorter | I | User<br>Error | Package not in database |
| Package pppppppp was not found in database upon pack arrival | I<br>A | User<br>Error | Package not in database. **Document and contact Database Administrator.** |
| Relatch failure - [ ] is trapped in the netting | I<br>A | User<br>Error<br>Display | Relatch failure. Received from sorter MHE. |
| S01Message chuteID Field[4] | I | User | Indicates if package is Heavy (1) or Light (2) (control number, chute ID, heavy/light) |

| Message | Type | Log/Display | Explanation/Action |
|---|---|---|---|
| S04Message type status | I | User | Request to change the operational status of the sorter |
| S06Message - Sending acknowledgement that Product File Table Download has been completed | I | User | Indicates that all backlogged records have been sent |
| S07Message type - online/offline | I | User | Indicates if sorter is on-line or off-line |
| Shutdown message received with an invalid code of [c] | I | User Error | Invalid shutdown message |
| Shutting Down this subcontroller now ********** | I | User | Sorter shutdown |
| Sorter is going from semi-automatic to automatic mode | I | User Error Display | Change from Semi-automatic mode to Automatic mode |
| Sorter is Going online All backlogged packages will be sent to the sorter | I | User | Sorter notifies ECS that it has come Online. At this time all Backlogged Package Delivery Requests are read from the Backlog Queue and sent to the Sorter. |
| Sorter user recipient for error messages has been set to [xxxxx] | I | User | A UI to receive Sorter errors (coming from MHE) has been designated. |
| Successfully connected to ECS database | I | User | Connected to database |
| T15 - All chute totals have been updated by the request of [uuuuu] | I | User | Chute totals updated by user. |
| The attempt to read the TotalChutes key failed at startup | I A | User Error | ecs.ini TotalChutes key failed at startup. **Document and contact Systems Administrator.** |
| The attempt to read the User key failed at startup. | I | User Error | Attempt to read this key failed |
| The mode key contained an illegal value at startup. The subcontroller will shut down now | I A | User Error | Mode key is not Mission or CPP. Illegal value. Subcontroller will shut down. **Document and contact Systems Administrator.** |
| The sorter has been requested to shut down | I | User | PLC status is F. Waiting For Shutdown Request Response |
| The sorter has been requested to start up | I | User | PLC status is N. Waiting For Startup Enable Response |
| The sorter has completed shutdown | I | User | Sorter shutdown. |

| Message | Type | Log/Display | Explanation/Action |
|---|---|---|---|
| The sorter has completed startup | I | User | Sorter started. |
| The sorter reports that Chute [ ] is an invalid chute address | I | User Error Display | Invalid chute address. Received from sorter MHE. |
| The sorter reports that is in Manual/Maintenance mode | I | User | Sorter in Manual/Maintenance mode. |
| The sorter reports that is in Semi-Automatic mode | I | User | Sorter in Semi-Automatic mode. |
| The sorter reports that it is in Online mode | I | User | Sorter online. |
| The total number of chutes selected exceeds allowable amount 300 | I A | User Error | The ini file's total number of chutes is 300 or more. **Document and contact Systems Administrator.** |
| U16Message (to, from, length, type, status, mode) | I | User | U16 Response to UI request for sorter chute totals update |
| U18 Message - Package [ppppppp] has been hand carried to chute [ccc] | I | User | Request to manually arrive a package. It builds a fictitious Package Arrival Message from the sorter ('03') and sends this message to ProcessPackageArrival. |
| Unable to connect to ECS Database. Shutting down this subcontroller now. | I A | User Error | Have Database Administrator correct database problem, then restart Sorter software. |
| Unable to deliver package[ppppppp] for chute [ccc] with h/l [i] | I | User Error | Unable to deliver message, bad control number, bad chute ID |
| Unable to open Destination Chute File. MHExx shutting down. | I A | User Error Display | Unable to open file. **Document and contact Systems Administrator.** |
| Unable to update the PLCs record. Record not found! | A | User Error | Record not found **Document and contact Database Administrator.** |
| USE subsystem Z04 text | I | Display | Warning Message To One UI |
| USE99 subsystem Z04 text | I | Display | Warning message to all UI |
| Username subsystem Z04 text | I | Display | Warning Message To The Appropriate Reject Chute UI |
| Waiting for shutdown complete acknowledgement from Sorter to shut down | I | User | A request to shutdown Sorter software has been received and will be finished after Sorter MHE acknowledges shutting down. |

Table O - 1-1 New Cumberland Sorter Messages

# APPENDIX P NEW CUMBERLAND TOTE CONVEYOR MESSAGES

## 1.0 TOTE CONVEYOR MESSAGES

The following table represents a list of all messages from the Tote. The Message column represents the text of the message as displayed on the screen or log file. The Type column represents the type of the message: "I" indicates informational, "A" indicates action required and "F" indicates a fatal situation, immediate action is required before further processing. Action and Fatal messages will include the action to be performed. The Log/Display column represents where the message will be displayed: the annotation of "Error" means the message will be logged to the error log, the annotation of "User" means the message will be logged to the message log, and the annotation of "Display" means the message will be displayed through the UI on the screen as an Alert Message. The Explanation/Action column represents the action the user will perform when the message is displayed or an explanation of a Type "I" message.

***Note:** Variable text, depending on circumstance, is enclosed within brackets, [ ]. The text within the brackets describes the item that will appear in the error message.

| Message | Type | Log/Display | Explanation/Action |
|---|---|---|---|
| Connected to ECS Database | I | User | Tote Conveyor Software has successfully connected to the ECS Database. |
| Connection to ECS Database failed; xxxxxxxxxxx | F | User Error | Tote Conveyor Software has not been able to connect to the ECS Database. The software will automatically shutdown. Research will be needed to determine why the connection has not been made. (xxxxxxxxxx represents the oracle error message.) **For assistance, contact the Systems Administrator.** |
| CONV Record Not Found For Conveyance ID [ccccccc] | I | User Error | A record in the CONV table has not been found for the conveyance ID ccccccc. |
| ECS Database Connection Problem | I | User Error | A database operation has been attempted when there is currently no connection to the database. The software will attempt to re-establish a connection. |

| Message | Type | Log/Display | Explanation/Action |
|---|---|---|---|
| ECS.INI file not found! Initialization Error | F | Display | The ECS.INI could not be found or read from the appropriate directory. The Tote Conveyor Software will automatically shutdown when this error occurs. Determine the correct location of the ECS.INI file and make sure that the file exists within the directory. **For assistance, contact the Systems Administrator.** |
| Error Initializing PLC Array; Message Not Processed | A | User Error | The PLC Array could not be initialized from the PLCs table in the database. Check the database and make sure all records for the Tote Conveyor are present. This message occurs when the Tote Conveyor Software receives a shutdown message (A09). The message will not be processed. **For assistance, contact the Systems Administrator.** |
| FUNC Record Not Found For Function [ffff] | I | User Error | A record has been selected from the ECS Database in the FUNC table for a functional area (ffff) that is not found. |
| FUNC record not updated; No move made | I | User Error | The FUNC table could not be updated due to any number of reasons. Therefore the SMM/M01 was not processed and tote movement did not occur. Check the previous messages in the log to determine the reason for the problem. |
| Invalid [xxx] Flag [f] Work Type [w] From [sssss]; Message Not Processed | I | User Error | Tote Conveyor Software receives either an M01 or an SMM (xxx) having an invalid flag (f) and work type (w). |
| Invalid Lane Status [c] For J73 Message | I | User Error | An Update Station Status Message (J73) has been received from UI. However, the status is invalid (not an 'A' for active or an 'I' for inactive). The Message will not be processed for that particular lane. |
| Invalid Logging Code [c] from [xxxxx]; Message Not Processed | I | User Error | A logging message has been sent to the Tote Conveyor Subcontroller from xxxxx, however the status of logging is invalid (not a 'N' for logging or a 'F' for not logging). |

| Message | Type | Log/Display | Explanation/Action |
|---|---|---|---|
| Invalid Message Type [xxx] From [sssss]; Message Not Processed | I | User Error | Tote Conveyor Software receives an invalid DnProcess Message (xxx). |
| Invalid PLC Address [pp] From [fffff] | I | User Error | An invalid PLC Address has been from sent fffff as part of an A01 message. The message will not be processed. |
| Invalid PLC Tote Conveyor Message Type [xx]; Message Not Processed | I | User Error | Tote Conveyor Software receives an invalid UpProcess Message (xx) that it does not process. |
| Invalid Software Start/Stop Code [c] From [xxxxx] | I | User Error | The Tote Conveyor Software has received a shutdown message (A09) from xxxxx. However the start/stop code is not valid (a '0' for shutdown), so the message will not be processed. |
| Invalid Start/Stop Code [c] sent from [fffff] | I | User Error | An Invalid Start/Stop Code c has been sent from fffff as part of an A01 message. The message will not be processed. |
| Invalid Startup Status [c] For PLC Number [pp]; Message Not Processed | I | User Error | The PLC has been asked to startup via the UI. However, the database does not have the PLC set to a valid mode for startup (either '1', '5', or 'N'), so the message will not be processed. |
| Invalid Status [c] sent in PLC Message; Message Not Processed | I | User Error | An invalid status c was sent in a PLC 09 Message. The message will not be processed. |
| LANE Record Not Found For Lane ID [xxxx] | I | User Error | A record has been selected from the ECS Database in the LANE table for a lane (xxxx) which is not found. |
| Logging Turned OFF by [xxxxx] | I | User | Logging has been turned off for the Tote Conveyor Subcontroller by xxxxx. |
| Logging Turned ON by [xxxxx] | I | User | Logging has been turned on for the Tote Conveyor Subcontroller by xxxxx. |
| Message received to shutdown all Tote Conveyor PLCS | I | User | A message has been sent to shutdown all Tote Conveyor PLCs. This message could come from either the UI, or it could be created internally. |
| Message received to startup all Tote Conveyor PLCs | I | User | A message has been sent to startup all Tote Conveyor PLCs. This message could come from either the UI, or it could be created internally. |

| Message | Type | Log/Display | Explanation/Action |
|---|---|---|---|
| No corresponding address for dest [xxxx]; No move made | I | User Error | A PLC address could not be determined for the destination (xxxx) in the SMM/M01. Check to see if the destination is a valid destination and that it is found in the FUNC table with a FUNC_PLC_NO. |
| No Corresponding Workstation For Source [xxxxxxxxx] | A | User Error | Tote Conveyor Software has tried to convert a SMM Source into a known Functional Area. This conversion has not been successful. The source and corresponding functional area need to be added to the TOTEID.DAT file found in the C:\ECS_LOGS directory. **For assistance, contact the Systems Administrator.** |
| Oracle Error Occurred: xxxxxxxxxxx | I | User Error | A miscellaneous oracle error has occurred when an oracle operation has been attempted on the database. (xxxxxxxxx represents the oracle error message.) |
| PLC-->TOTE Message [09pp1]: Update PLC Conveyor Status to Automatic | I | User | The Tote Conveyor Software has received an UpProcess message from the PLC to change the PLC to an automatic mode. The format is: 09pp1<br>09 = message type (09)<br>pp = PLC address<br>1 = PLC status of automatic (1) |
| PLC-->TOTE Message [09pp2]: Update PLC Conveyor Status to Semi-Automatic | I | User | The Tote Conveyor Software has received an UpProcess message from the PLC to change the PLC to a semi-automatic mode. The format is: 09pp2<br>09 = message type (09)<br>pp = plc address<br>2 = plc status of semi-automatic (2) |

| Message | Type | Log/Display | Explanation/Action |
|---|---|---|---|
| PLC-->TOTE Message [09pp3]: Update PLC Conveyor Status to Manual | I | User | The Tote Conveyor Software has received an UpProcess message from the PLC to change the PLC to a manual mode. The format is:<br>09pp3<br>09 = message type (09)<br>pp = plc address<br>3 = plc status of manual (3) |
| PLC-->TOTE Message [09pp4]: Received PLC [pp] Startup Acknowledgement | I | User | The Tote Conveyor Software has received an UpProcess message from the PLC to acknowledge that it is now in a startup mode. The format is:<br>09pp4<br>09 = message type (09)<br>pp = plc address<br>4 = plc status of online (4) |
| PLC-->TOTE Message [09pp5]: Received PLC [pp] Shutdown Acknowledgement | I | User | The Tote Conveyor Software has received an UpProcess message from the PLC to acknowledge that it is now in a shutdown mode. The format is:<br>09pp5<br>09 = message type (09)<br>pp = plc address<br>4 = plc status of offline (5) |
| PLC-->TOTE MESSAGE [09ppx]: Conveyor PLC Zone Status Message | I | User | The Tote Conveyor Software has received an UpProcess message from the PLC to change the PLC mode to an unknown status.<br>09ppx<br>09 = message type (09)<br>pp = plc address<br>x = plc status |
| PLC-->TOTE Message: [xxxxxx] | I | User | Tote Conveyor Software receives an UpProcess Message (xxxxx). |
| PLCS Record Not Found For TOTE | I | User Error | A record in the PLCS table has not been found for the TOTE Conveyor. |
| PLCS Record Not Found For TOTE PLC Number [xx] | I | User Error | A record in the PLCS table has not been found for the TOTE Conveyor PLC Number xx. |
| Processing a xxx of Flag 'D'; Moving Tote | I | User | Tote Conveyor Software receives either an MO1 or an SMM (xxx) having a flag of ‘D’ to move a tote. |

| Message | Type | Log/Display | Explanation/Action |
|---|---|---|---|
| Processing Modify Damaged Tote [xxxxx] Message | I | User | A Modify Damaged Tote Message (T29) has been received from the UI to mark Tote ID xxxxx as damaged. |
| Processing request to Shutdown Software from [xxxxx] | I | User | The Tote Conveyor Software has received a shutdown message (A09) from xxxxx. |
| Shutting Down Subcontroller INI File Logging Indicator Error | F | Display | There is a problem reading the ECS.INI file. The Tote Conveyor Software will automatically shutdown when this error occurs. Check the ECS.INI file and make sure it is in the appropriate directory and the appropriate sections are found within the file. **For assistance, contact the Systems Administrator.** |
| Terminal ID Error<br>Error Opening Terminal ID Table | F | Display | There is a problem opening the terminal ID table (TOTEID.DAT). The Tote Conveyor Software will automatically shutdown when this error occurs. Check to make sure the TOTEID.DAT file is present in the ECS_LOGS directory and that the data within the file is in the proper format. **For assistance, contact the Systems Administrator.** |
| Tote Conveyor Software Shutting Down | I | User<br>Display | The Tote Conveyor Software is shutting down in an orderly manner. |
| Tote Conveyor Subcontroller Starting Up | I | User | The Tote Conveyor Software is started up. |
| Tote ID [xxxxx] Not Modified | I | User<br>Error | The Tote ID xxxxx which has been designated as damaged via the UI (in a T29 Message) has not been modified in the database due to any number of database errors. Check the previous entries in the log to determine the reason for the problem. |
| TOTE-->PLC Message [0207lltt]: Sending Inspection Lane Configuration to PLC 02 | I | User | A Set Workstation Type Message (07) has been sent to PLC 2 in the format: 0207lltt<br>02 = the PLC address (02)<br>07 = the message type (07)<br>ll = the lane ID<br>tt = the lane type |

| Message | Type | Log/Display | Explanation/Action |
|---|---|---|---|
| TOTE->PLC Message [pp010001dddttttt]: Sending Tote Move Message | I | User | A Tote Move Message (01) has been sent to PLC (pp) giving a chain ID of '000' with a chain length of 1, a destination (ddd) and a tote ID (ttttt). |
| TOTE->PLC Message [pp04ppaaabbbcccddd]: Sending Active Lane Status For PLC [pp] | I | User | A Station Enable /Disable Message (04) has been sent to a PLC in the format:<br>pp04ppaaabbbcccddd<br>pp = the PLC address<br>04 = the message type (04)<br>aaa = an integer representing status 1<br>bbb = an integer representing status 2<br>ccc = an integer representing status 3<br>ddd = an integer representing status 4 |
| TOTE-->PLC Message [pp08pp1]: Sending Startup Message To PLC [pp] | I | User | A Startup/Shutdown PLC Conveyor Message (08) has been sent to startup the PLC in the format:<br>pp08pp1<br>pp = the PLC address<br>08 = the message type (08)<br>1 = the PLC status of startup (1) |
| TOTE-->PLC Message [pp08pp2]: Sending Shutdown Message To PLC [pp] | I | User | A Startup/Shutdown PLC Conveyor Message (08) has been sent to shutdown the PLC in the format:<br>pp08pp2<br>pp = the PLC address<br>08 = the message type (08)<br>2 = the PLC status of shutdown (2) |

| Message | Type | Log/Display | Explanation/Action |
|---|---|---|---|
| TRF->TOTE:xxxxxxxxxxxxxxxxxxxx | I | User | Tote Conveyor Software receives a DnProcess message xxxxxxxxxxxxxxxxxx from the Traffic Controller. Possible valid DnProcess messages are:<br><br>TOT01USE01006A01cxx - startup/shutdown the PLC conveyor (xx = the PLC address and c = the start/stop code)<br><br>TOT01USE01004A07x - turn logging on/off for the tote conveyor subcontroller (x = logging status)<br><br>TOT01USE01004A090 - shutdown the tote conveyor software<br><br>TOT01USE01011J75LNxxINtt - change the inspection type (tt) of an inspection lane (xx)<br><br>TOT01USE01168J73CV01ACV02ACV03ACV04ACV05ACV06ACV07ACV08A - change the lanes in CVIP area to active/inactive<br><br>TOT01USE01113M01AdHocMovHLK01 HAZD K101 00101 D 06110939 - an example of a valid ‘D’ type adhoc move from UI |

Table P - 1-1 New Cumberland Tote Messages

# APPENDIX Q NEW CUMBERLAND PALLET MESSAGES

## 1.0 PALLET MESSAGES

The following table represents a list of all messages from the Pallet. The Message column represents the text of the message as displayed on the screen or log file. The Type column represents the type of the message: "I" indicates informational, "A" indicates action required and "F" indicates a fatal situation, immediate action is required before further processing. Action and Fatal messages will include the action to be performed. The Log/Display column represents where the message will be displayed: the annotation of "Error" means the message will be logged to the error log, the annotation of "User" means the message will be logged to the message log, and the annotation of "Display" means the message will be displayed through the UI on the screen as an Alert Message. The Explanation/Action column represents the action the user will perform when the message is displayed or an explanation of a Type "I" message.

***Note:** Variable text, depending on circumstance, is enclosed within brackets, [ ]. The text within the brackets describes the item that will appear in the error message.

| Message | Type | Log/Display | Explanation/Action |
|---|---|---|---|
| Connected to ECS Database | I | User | Pallet Conveyor Software has successfully connected to the ECS Database. |
| Connection to ECS Database failed; xxxxxxxxxxxxxxxxx | A | User Error | Pallet Conveyor Software has not been able to connect to the ECS Database. The software will automatically shutdown. Research will be needed to determine why the connection has not been made. (xxxxxxxxxxxxxxxxx represents the oracle error message.) **For assistance, contact the Systems Administrator.** |
| CONV Record Not Found For Conveyance ID [ccccccc] | I | User Error | A record in the CONV table is not found for the conveyance ID ccccccc. |
| ECS Database Connection Problem | I | User Error | A database operation has been attempted when there is currently no connection to the database. The software will attempt to establish a connection to the database. |

| Message | Type | Log/Display | Explanation/Action |
|---|---|---|---|
| ECS.INI file not found! Initialization Error | F | Display | The ECS.INI file could not be found or read from the appropriate directory. The Pallet Conveyor Software will automatically shutdown when this error occurs. Determine the correct location of the ECS.INI file and make sure that the file exists within the directory. **For assistance, contact the Systems Administrator.** |
| Error Initializing PLC Array; Message Not Processed | A<br>I | User<br>Error | The PLC Array could not be initialized from the PLCS table in the database. Check the database and make sure all records for the Pallet Conveyor are present. This message occurs when the Pallet Conveyor Software receives a shutdown message (A09). The message will not be processed. **For assistance, contact the Systems Administrator.** |
| IDOC Lane Statuses Have Changed; WKST Record Updated Accordingly | I | User | The Pallet Conveyor Subcontroller has received a Transporter Status Message (14) from the PLC to change the status of the IDOC lanes. (The IDOC lanes can be set to either Inbound or Outbound.) |
| IDOC WKST Record Not Found | A | User<br>Error | An IDOC record is missing from the WKST record. There should be 8 IDOC Workstations (V150-V157) for the WKST_AREA 'IDOC' in the ECS Database. **For assistance, contact the Systems Administrator.** |
| Invalid [sss] with Flag of [f] and Work Type of [w] | I | User<br>Error | The Pallet Conveyor Software has received an invalid SMM/M01 (sss) with a Flag of f and a Work Type of w. |
| Invalid Intermediate Destination [ddddddddd] For Wkst [wwww]; [mmm] Not Processed | I | User<br>Error | When processing a SMM/M01 (mmm) at either S010, S031, or S032 (wwww), an invalid intermediate destination (ddddddddd) has been given. The SMM/M01(mmm) will be ignored and no movement will occur. |

| Message | Type | Log/Display | Explanation/Action |
|---|---|---|---|
| Invalid Lane ID sss; Pickup Request Not Processed | A | User Error | The Pallet Conveyor Software has received a SMM/M01 (sss) with a flag of 'H' and a WorkType of 'A' to process a "pickup request". However, the sources sent in the request has no corresponding workstation in the palid.dat file (found in the ECS_LOGS director). Modify the file accordingly. **For assistance, contact the Systems Administrator.** |
| Invalid Location [sss]; No Corresponding Workstation | A | User Error | The Pallet Conveyor Subcontroller has received a Load Present Message (11) from the Pallet Conveyor PLC with an invalid location (sss). If the location is indeed valid for receiving a Load Present, make sure the location and corresponding workstation ID are entered into theWKST.DAT file found in the ECS_LOGS directory. **For assistance, contact the Systems Administrator.** |
| Invalid Logging Code [c] from [xxxxx]; Message Not Processed | I | User Error | A logging message has been sent to the Pallet Conveyor Subcontroller from xxxxx, however the status of logging is invalid (not a 'N' for logging or a 'F' for not logging). |
| Invalid Message Type [sss] From [fffff] | I | User Error | The Pallet Conveyor Software has received an invalid DnProcess message type of sss from fffff. |
| Invalid PLC Address [pp] From [xxxxx]; Message Not Processed | I | User Error | The Pallet Conveyor Subcontroller is processing an 09 Message from the PLC (xxxxx) where the address sent (pp) is invalid. |
| Invalid PLC Pallet Conveyor Message Type [xx]; Message Not Processed | I | User Error | The Pallet Conveyor Software has receive an invalid UpProcess message type (xx) from the PLC. The Message will not be processed. |
| Invalid Start/Stop Code [c] sent from [wwwww]; Message Not Processed | I | User Error | The Pallet Conveyor Subcontroller is processing an A09 from xxxxx. The Start/Stop Code c is invalid (not a '0' for shutdown). The message will not be processed. |

| Message | Type | Log/Display | Explanation/Action |
|---|---|---|---|
| Invalid Startup Status [c] For PLC Number [pp]; Message Not Processed | I | User Error | The PLC has been asked to startup via the UI. However, the database does not have the PLC set to a valid mode for startup (either '1', '5', or 'N'), so the message will not be processed. |
| Invalid Status [c] sent in PLC Message; Message Not Processed | I | User Error | An invalid status c was sent in the PLC 09 Message. The message will not be processed. |
| Invalid Workstation [ssss] For CORPALMOV; No Move Made | I | User Error | The Pallet Conveyor Subcontroller is attempting to move a pallet with bad data to the nearest redirect spur. However, an invalid wkst (ssss) has been sent up from the Pallet Conveyor PLC in the Pallet Arrival Message (13). The message will be ignored and no movement will occur. |
| Invalid Workstation Type [tt] For Message Type 13 | I | User Error | The Pallet Conveyor Subcontroller has received a Pallet Arrival Message (13) from the PLC for a workstation that is not a Loader Type Workstation. (The workstation type is represented by tt.) |
| Logging Turned OFF by [xxxxx] | I | User | Logging has been turned off for the Pallet Conveyor Subcontroller by xxxxx. |
| Logging Turned ON by [xxxxx] | I | User | Logging has been turned on for the Pallet Conveyor Subcontroller by xxxxx. |
| Message received to shutdown all Pallet Conveyor PLCs | I | User | A message has been sent to shutdown all Pall Conveyor PLCs. This message could come from either the UI, or it could be create internally. |
| Message received to shutdown Pallet Conveyor PLC [pp] | I | User | A message has been sent to shutdown Pallet Conveyor PLC pp. |
| Message received to startup all Pallet Conveyor PLCs | I | User | A message has been sent to startup all Pallet Conveyor PLCs. This message could come from either the UI, or it could be created internally. |
| Message received to startup Pallet Conveyor PLC [pp] | I | User | A message has been sent to startup Pallet Conveyor PLC pp. |
| Missing Information In WKST Record; Load Present Not Processed | I | User Error | When processing a Pallet Move, needed information is missing from the WKST record. No pallet movement is made. |
| MOVE Record Not Found For Control Number [ccccccc] | I | User Error | A record has not been found in the MOVE table for the control number [ccccccc]. |

| Message | Type | Log/Display | Explanation/Action |
|---|---|---|---|
| Moving Pallet To Intermediate Dest From WKST [wwww] | I | User | The Pallet Conveyor Software has received an SMM/M01 to move a pallet from a source workstation that is S010, S031, or S032 (wwww) to go to an intermediate destination. |
| No Corresponding Workstation For Source [ssss] | A | User Error | Pallet Conveyor Software has tried to convert a SMM Source into a known destination. This conversion has not been successful. The source and corresponding destination need to be added to the PALID.DAT file found in the C:\ECS_LOGS directory. **For assistance, contact the Systems Administrator.** |
| No Move Record Found For WKST [wwww] Control Number [ccccccc] | I | User Error | The Workstation (wwww) Record contains a control number (ccccccc) which has no corresponding MOVE record. |
| No Move Record Found For WKST [wwww] Control Number [ccccccc]; Load Present Not Processed | I | User Error | When processing a Load Present sent from the PLC, the Workstation (wwww) Record contains a control number (ccccccc) which has no corresponding MOVE record. The Load Present is not processed, and no movement is made. |
| Oracle Error Occurred: xxxxxxxxxxxx | I | User Error | A miscellaneous oracle error has occurred when an oracle operation has been attempted on the database. (xxxxxxxxxxxx represents the oracle error message.) |
| Pallet Arrival (13) Message Not Processed; No CONV [ccccccc] Record Found | I | User Error | A Pallet Arrival (13) Message has been received from the PLC. There is a cart at the location, however the cart ID in the WKST record is not found in the CONV record. |
| Pallet Conveyor Software Shutting Down | I | User Display | The Pallet Conveyor Software is shutting down in an orderly manner. It has been shutdown via the UI or from the Shutdown option on the icon. |
| Pallet Conveyor Subcontroller Starting Up | I | User | The Pallet Conveyor Software is started up. |
| Pallet Load Present Message Not Processed | I | User Error | A Load Present (11) Message was received from the PLC for an unknown workstation. The message will not be processed. |

| Message | Type | Log/Display | Explanation/Action |
|---|---|---|---|
| PALLET-->ECM Message: [ECM01PAL01014T03PALwwwwttccccc] | I | User | A T03 message is sent to Empty Cart Manager when a special type is needed to be moved (suc as a LS, LX, or LD). The message is in the format:<br>ECM01PAL01014T03PALwwwwttccccc<br>ECM01 = to address (ECM01)<br>PAL01 = from address (PAL01)<br>014 = length of message<br>PAL = subcontroller generating message (PAL)<br>T03 = message type (T03)<br>wwww = workstation<br>ttt = cart type<br>ccccc = conveyance ID |
| PALLET-->M/H Queue Manager: [TOW01PAL01007T17wwww] | I | User | A Wakeup M/H Queue Manager (T17) Message is sent to the Towline in the format:<br>TOW01PAL01007T17wwww<br>TOW01 = to address (TOW01)<br>PAL01 = from address (PAL01)<br>007 = message length (7)<br>T17 = message type (T17)<br>wwww = workstation ID |
| PALLET-->PLC Message [pp08pp1]: Sending Startup Message To PLC [pp] | I | User | The Pallet Conveyor Subcontroller is processing an A01 from the UI to startup a Pallet Conveyor PLC. A message is sent down to the PLC in the format:<br>pp08pp1<br>pp = plc address<br>08 = message type (08)<br>1 = startup status (1) |
| PALLET-->PLC Message [pp08pp2]: Sending Shutdown Message To PLC [pp] | I | User | The Pallet Conveyor Subcontroller is processing an A01 from the UI to shutdown a Pallet Conveyor PLC. A message is sent down to the PLC in the format:<br>pp08pp2<br>pp = plc address<br>08 = message type (08)<br>2 = startup status (2) |

| Message | Type | Log/Display | Explanation/Action |
|---|---|---|---|
| PALLET-->PLC Message: [pp12dddcccccsss] | I | User | A message is going down to the PLC to move a pallet. The message format is:<br>pp12dddcccccsss<br>pp = plc address<br>12 = message type (12)<br>ddd = destination<br>ccccc = control number<br>sss = source |
| PALLET-->TOWLINE MESSAGE:<br>[TOW01PAL01113M01<br>ccccc<br>ddddddddsssssssss<br>vvvvv D ] | I | User | A M01 message is formatted and sent to the Towline Subcontroller to generate cart movement. The M01 message will contain the following fields:<br>TOW01 = to field (TOW01)<br>PAL01 = from field (PAL01)<br>113 = length of message (113)<br>M01 = message type (M01)<br>ccccc = control number<br>ddddddddd = destination<br>sssssssss = source<br>vvvvv = conveyance ID<br>D = flag type (D) |
| PLC-->PALLET Message [09pp1]: Update PLC [pp] Status to Automatic | I | User | The Pallet Conveyor Software has received an UpProcess message from the PLC to change the PLC to an automatic mode. The format is:<br>09pp1<br>09 = message type (09)<br>pp = plc address<br>1 = plc status of automatic (1) |
| PLC-->PALLET Message [09pp2]: Update PLC [pp] Status to Semi-Automatic | I | User | The Pallet Conveyor Software has received an UpProcess message from the PLC to change the PLC to a semi-automatic mode. The format is:<br>09pp2<br>09 = message type (09)<br>pp = plc address<br>2 = plc status of semi-automatic (2) |

| Message | Type | Log/Display | Explanation/Action |
|---|---|---|---|
| PLC-->PALLET Message [09pp3]: Update PLC [pp] Status to Manual | I | User | The Pallet Conveyor Software has received an UpProcess message from the PLC to change the PLC to a manual mode. The format is:<br>09pp3<br>09 = message type (09)<br>pp = plc address<br>1 = plc status of manual (3) |
| PLC-->PALLET Message [09pp4]: Received PLC [pp] Startup Acknowledgement | I | User | The Pallet Conveyor Software has received an UpProcess message from the PLC to acknowledge that it is now in a startup mode. The format is:<br>09pp4<br>09 = message type (09)<br>pp = plc address<br>4 = plc status of online (4) |
| PLC-->PALLET Message [09pp5]: Received PLC [pp] Shutdown Acknowledgement | I | User | The Pallet Conveyor Software has received an UpProcess message from the PLC to acknowledge that it is now in a shutdown mode. The format is:<br>09pp5<br>09 = message type (09)<br>pp = plc address<br>5 = plc status of offline (5) |
| PLC-->PALLET MESSAGE [09ppx]: Conveyor PLC Zone Status Message | I | User | The Pallet Conveyor Software has received an UpProcess message from the PLC to change the PLC mode to an unknown status.<br>09ppx<br>09 = message type (09)<br>pp = plc address<br>x = plc status |
| PLC-->PALLET Message: [11xxx] | I | User | The Pallet Conveyor Software has received a Load Present Message (11) from the PLC for the location xxx. |
| PLC-->PALLET Message: [13xxxccccc] | I | User | The Pallet Conveyor Software has received a Pallet Arrival Message (13) from the PLC for the location xxx and with the control number ccccc. |
| PLC-->PALLET Message: [14xxxxx] | I | User | The Pallet Conveyor Software has received a Transporter Status Message (14) from the PLC giving the new status (xxxxx). |

| Message | Type | Log/Display | Explanation/Action |
|---|---|---|---|
| PLC-->PALLET Message: [xxxxxxxx] | I | User | The Pallet Conveyor Software has received an unknown message (xxxxxxxx) from the PLC. |
| PLCS Record Not Found For PALLET | A | User Error | A PALLET record is missing from the PLCS table. There should be 8 rows for the subsystem 'W' (Pallet). **For assistance, contact the Systems Administrator.** |
| PLCS Record Not Found For PALLET PLC Number [pp] | I | User Error | A record in the PLCS table has not been found for the Pallet Conveyor PLC pp. |
| Process Pallet Arrival; No Cart At Workstation | I | User | The Pallet Conveyor Subcontroller has received a Pallet Arrival Message (13) from the PLC for a workstation that contains no conveyance ID in the WKST record. |
| Processing a Pallet Move Request From [sssss] | I | User | The Pallet Conveyor Software has received an Move Pallet Message (T23) from the sssss. |
| Processing a Pickup Request sss; Creating Move Record | I | User | The Pallet Conveyor Software has received an SMM/M01 (sss) with a flag of ‘H’ and a work type of ‘A’ to process a pickup request from RF or an adhoc move. |
| Processing a sss of Flag 'C'; Deleting Move Record | I | User | The Pallet Conveyor Software has received an SMM/M01 (sss) with a flag of ‘C’ to delete the move record from the database for the sent control number. |
| Processing a sss of Flag 'D'; Creating Move Record | I | User | The Pallet Conveyor Software has received an SMM/M01 (sss) with a flag of ‘D’. The Pallet Conveyor Software will then attempt to create a move record with the sent information. |
| Processing Load Present at Rack Storage [wwww] | I | User | A Load Present (11) Message was received from the PLC for a Workstation (wwww) which is at Rack Storage. |
| Processing Load Present at Unloaders @ IDOC [wwww] turned off | I | User | A Load Present (11) Message was received from the PLC for a Workstation (wwww) which is an Unloader at IDOC. |

| Message | Type | Log/Display | Explanation/Action |
|---|---|---|---|
| Processing Load Present at Unloaders @ M/H [wwww] | I | User | A Load Present (11) Message was received from the PLC for a Workstation (wwww) which is an Unloader at M/H. |
| Processing Load Present at Unloaders @ Rack Storage [wwww] turned off | I | User | A Load Present (11) Message was received from the PLC for a Workstation (wwww) which is an Unloader at Rack Storage. |
| Processing Pallet Arrival; Cart At Workstation | I | User | The Pallet Conveyor Subcontroller has received a Pallet Arrival Message (13) from the PLC for a workstation that does contain a conveyance ID in the WKST record. |
| Processing request to Shutdown Software from [xxxxx] | I | User | The Pallet Conveyor Software has received a shutdown message (A09) from xxxxx. |
| Shutting Down Subcontroller INI File Logging Indicator Error | F | Display | The Logging entry within the ECS.INI file is not found or in an incorrect format. The Pallet Conveyor Software will automatically shutdown when this error occurs. Insert the appropriate logging entry within the ECS.INI file. **For assistance, contact the Systems Administrator.** |
| Status Not Determined for PLC Number [pp]; Message Not Processed | I | User Error | PLC pp is set to an unknown status in the PLCS table in the ECS database. |
| Terminal ID Error Error Opening Terminal ID Table | F | Display | There is a problem opening the terminal ID table (TOTEID.DAT). The Pallet Conveyor Software will automatically shutdown when this error occurs. Check to make sure the TOTEID.DAT file is present in the ECS_LOGS directory and that the data within the file is in the proper format. **For assistance, contact the Systems Administrator.** |
| TRF-->PALLET: xxxxxxxxxxxxxxxxx | I | User | Pallet Conveyor Software receives a DnProcess message xxxxxxxxxxxxxxxxxxxx from the Traffic Controller. Possible DnProcess Messages are: |

| Message | Type | Log/Display | Explanation/Action |
|---|---|---|---|
| Unable To Create MOVE Record; mmm Not Processed | I | User Error | A SMM/M01 (mmm) was received and the Pallet Conveyor Software attempted to insert/update a MOVE record. This attempt was unsuccessful and the SMM/M01 (mmm) was not processed. |
| WKST [wwww] Contains Invalid Control Number [ccccc] | I | User Error | The Workstation (wwww) Record contains an invalid Control Number (ccccc). |
| WKST [wwww] Contains Invalid Control Number [ccccc]; Load Present Not Processed | I | User Error | When processing a Load Present sent from the PLC, the Workstation (wwww) Record contains an invalid control number (ccccc). The Load Present is not processed, and no movement is made. |
| WKST [wwww] Contains No Control Number; Load Present Not Processed | I | User Error | When processing a Load Present sent from the PLC, the Workstation (wwww) Record does not contain the needed control number. The Load Present is not processed, and no movement is made. |
| WKST Record Not Found For Workstation ID [wwww] | I | User Error | A record in the WKST table has not been found for the workstation wwww. |
| Workstation Table Error Error Opening Workstation ID Table | F | Display | There is a problem opening the workstation table (WKST.DAT). The Pallet Conveyor Software will automatically shutdown when this error occurs. Check to make sure the WKST.DAT file is present in the ECS_LOGS directory and that the data within the file is in the proper format. **For assistance, contact the Systems Administrator.** |

Table Q - 1-1 New Cumberland Pallet Messages

# APPENDIX R NEW CUMBERLAND EMPTY CART MANAGER MESSAGES

## 1.0 EMPTY CART MANAGER

The following table represents a list of all messages from the Empty Cart Manager. The Message column represents the text of the message as displayed on the screen or log file. The Type column represents the type of the message: "I" indicates informational, "A" indicates action required and "F" indicates a fatal situation, immediate action is required before further processing. Action and Fatal messages will include the action to be performed. The Log/Display column represents where the message will be displayed: the annotation of "Error" means the message will be logged to the error log, the annotation of "User" means the message will be logged to the message log, and the annotation of "Display" means the message will be displayed through the UI on the screen as an Alert Message. The Explanation/Action column represents the action the user will perform when the message is displayed or an explanation of a Type "I" message.

***Note:** Variable text, depending on circumstance, is enclosed within brackets, [ ]. The text within the brackets describes the item that will appear in the error message.

| Message | Type | Log/Display | Explanation/Action |
|---|---|---|---|
| ____ can't be moved because it does not exist in ECS database | I | User<br>Error<br>Display | Conveyance can't be found. |
| ____ can't be moved because it is offline | I | User<br>Error<br>Display | Cart is offline. |
| ____ is at not at ____ . It can't be moved. | I | User<br>Error<br>Display | Cart is not at the workstation indicated. |
| ____ is in use with a final destination of ____. It can't be moved. | I | User<br>Error<br>Display | Cart has a non-blank final destination field therefore, it must be in use. |
| ____ is in use with a next destination of _____. It can't be moved. | I | User<br>Error<br>Display | Cart has a non-blank next destination field therefore, it must be in use |
| _____ is a ____ so it can't be moved as a caged cart. | I | User<br>Error<br>Display | Conveyance is of another type than caged therefore disallow a transition to make this a caged cart. |
| _____ is a caged cart so it can't be moved as a _____. | I | User<br>Error<br>Display | Conveyance is a caged cart so don't want to permit this to move as anything but a caged cart. |
| _____belongs to ____ queue. It can't be moved. | I | User<br>Error<br>Display | Cart is member of a queue therefore, it must be in use. |

| Message | Type | Log/Display | Explanation/Action |
|---|---|---|---|
| ____does not exist in ECS database. Unable to move cart ___from there. | I | User Error Display | Workstation can't be found. |
| A request for [tt] was satisfied for [wwww] with request number | I | User | Another satisfied customer. |
| A request for [tt] has been added for [wwww] | I | User | Added request. |
| An Oracle database error was found of type | I A | User Error | Database error. **Document and contact Database administrator.** |
| Area [aaaa] has no workstations associated with it in the database. Therefore, it can't be used as a round robin area. | I | User Error | Can't send to this area - log an error. |
| Area [aaaa] isn't found in the database so it can't be used to round robin | I | User Error | Can't find this functional area in the database so won't add it to the robin list. |
| Area [aaaa] was not found in the ECS database. It can't be a round-robin destination. | I A | User Error | Bad area message. **Contact Database** Administrator to modify from/to table. |
| As a result of this absence cart [ccccc] can't be moved | I A | User Error | No default message for Cart in from/to table. **Document and contact Database Administrator.** |
| Can't use a destination of [dddd] because no workstations are available | I | User Error | Default message. Due to inactive or offline spur(s) a default destination must be used. |
| Cart [ccccc] couldn't be updated because it wasn't found in the database" | I A | User Error | Cart record not found in database. **Document and contact Systems Administrator.** |
| Connection to ECS Database failed; | F | User Error | Cannot connect to Database. **Contact Database Administrator.** |
| Control number [ppppppp] couldn't be deleted due to database error | I A | User Error | Database error. **Document and contact Database Administrator.** |
| Control number [ppppppp] did not exist in the database | I | User | Record not found. |
| Control number [ppppppp] has been deleted from the database | I | User | Move record successfully deleted. |
| DSS/RF at [wwww] queues cart [ccccc] of type [tt] | I | User | Available cart message. |
| Error reading From/To Table more 'FROMs' found than the given total | I A F | User Error | Found more "froms" than the total states so treat this as a failure. **Document and contact Systems Administrator.** |

| Message | Type | Log/Display | Explanation/Action |
|---|---|---|---|
| Error Reading Parm record | I<br>A | User<br>Error | Unable to read Parm file. **Document and contact Systems Administrator**. |
| Error:Unable to set the next workstation in area [aaaa] | I | User<br>Error | Unable to set the next workstation in round robin area. |
| Failure reading From/To File. ECM01 shutting down. | F | User<br>Error<br>Display | Error reading msg. Found a bad file entry so terminate this process. **Document and contact Systems Administrator.** |
| From/to table lacks a default (DFLT) section! Fix this immediately | I<br>A | User<br>Error | Error in the table making this cart unmovable. **Document and contact Database Administrator.** |
| Illegal Entry Found in line From/To File. ECM01 shutting down. | F | User<br>Error<br>Display | Illegal Entry msg. Illegal entry triggers termination. **Document and contact Systems Administrator.** |
| Ini entry for spur ssss has an invalid destination of ffff . As a result, a default destination of ffff will be used. | I | User | ini entry is invalid so log that and keep the default value as the destination. |
| Invalid Message Received (dnMsg) | I<br>A | User<br>Error | Invalid down process message. **Document and contact Systems Administrator.** |
| Invalid Set Logging Flag [ ] by [ ] | | User<br>Error<br>Display | Invalid A07 flag - value other than on or off. |
| Keypad at [wwww] queues cart [ccccc] of type [tt] | I | User | Process a Queue Empty Cart (QEC) by a keypad. |
| Logging Turned Off by [ ] | I | User | User log turned off. |
| Logging Turned ON by [ ] | I | User | User and error logs turned on. |
| ECM01 is Starting Up | I | User | ECM software is starting up |
| ECM01 Shutting Down | I | User | ECM software is shutting down |
| ECM01 Shutting Down by request of USExx | I | User | User desires to shutdown subcontroller. |
| No match for an operator request was found for this available cart | I | User | Nobody had requested a cart of this type. |
| No from/to match could be made. A default destination must be used | I | User | No match for this source workstation in the from/to table then use a generic default destination. |
| Redirect Spur Destinations have been reinitialized | I | User | As a result of a User action the table of redirect spur empty standard cart destinations has been changed. |
| [ssss] is sending an empty standard cart to [dddd] | I | User | Redirect message. Successful ECM move from source to destination. |

| Message | Type | Log/Display | Explanation/Action |
|---|---|---|---|
| Shutdown message received with an invalid code of [c] | I<br>A | User<br>Error | A09 message is invalid. **Document and contact Systems Administrator.** |
| source = xxxx destination area = xxxx destination spur = xxxx | I | User | Found destination spur within the destination area. |
| Successfully connected to ECS database | I | User | Connect successful. |
| The cart type [tt] made available is invalid | I | User<br>Error<br>Display | Bad cart type. Type of the queued cart is one that ECM cannot handle. |
| The cart type requested [tt] is invalid | I | Error | Bad request. |
| The desired request didn't exist in the database! | I<br>A | User | Record not found. **Document and contact Database Administrator.** |
| The from/to table has been successfully read in from file | I | User | Table read successfully. |
| The message to queue a cart by keypad [xxx] is invalid and will not be processed by [ECM01] | I | User | Invalid queue from keypad. |
| The request by keypad [xxx] is invalid and will not be processed by [ECM01] | I | User | Invalid keypad request. |
| The SMM with sequence number [ssssssss] is invalid and will not be processed by [ECM01] | I | User<br>Error | Invalid SMM. |
| To satisfy an operator request [ccccc] of type [tt] is moved from [ssss] to [dddd] | I | User | Satisfied message. Successful ECM move to satisfy operator request. |
| Unable to find PARM record-can't obtain data | I | User<br>Error | Unable to find desired record. |
| Unable to find PARM record-can't obtain request number | I<br>A | User<br>Error | The request number didn't exist in the database. **Document and contact Database Administrator.** |
| Unable to move [ccccc] from [ssss] because no workstations are available in area [aaaa] | I | User<br>Error | Bad move message. Unable to move cart because from/to destinations and default destinations are unavailable. |
| Unable to Open From/To File. ECM01 shutting down. | F | User<br>Error<br>Display | Unable to open the file so terminate this process. **Document and contact Systems Administrator.** |
| Unable to read From/To Table. ECM01 will shut down. | F | User<br>Error<br>Display | Error trying to read table. **Document and contact Systems Administrator.** |

| Message | Type | Log/Display | Explanation/Action |
|---|---|---|---|
| Unable to update PARM Control Number Sequence Number | I | User Error | Unable to update sequence number. |
| Unable to update the Parm record. Record not found! | I | User Error | Error trying to update table. **Document and contact Database Administrator.** |
| Unexpected Oracle error reading QUES record | I | User Error | Could not read Ques record. **Contact Database Administrator.** |
| Unexpected Oracle error while opening first request cursor | A | User Error | Unperceived error occurred in reading the RQST Record. **Contact Database Administrator.** |
| Verboseness has been set to OFF | I | User | Extra logging (for troubleshooting only) has been turned off. |
| Verboseness has been set to ON | I | User | Extra logging (for troubleshooting only) has been turned on. This can be changed in the ECM01 section of the ini file on the machine that ECM resides. |
| Workstation [wwww] already has a request of type [tt] | I | User | Request already exists. |
| Workstation [wwww] belongs to functional area [cccc]. It can't request caged carts | I | User Error | Cannot request caged cart. |
| Workstation [wwww] is invalid-it couldn't be found in the ECS database | I | User Error | Workstation does not exist. |

Table R - 1-1 New Cumberland Empty Cart Manager Messages

# APPENDIX SNEW CUMBERLAND KEYPAD MESSAGES

## 1.0 KEYPAD MESSAGES

The following table represents a list of all messages from the Keypad. The Message column represents the text of the message as displayed on the screen or log file. The Type column represents the type of the message: "I" indicates informational, "A" indicates action required and "F" indicates a fatal situation, immediate action is required before further processing. Action and Fatal messages will include the action to be performed. The Log/Display column represents where the message will be displayed: the annotation of "Error" means the message will be logged to the error log, the annotation of "User" means the message will be logged to the message log, and the annotation of "Display" means the message will be displayed through the UI on the screen as an Alert Message. The Explanation/Action column represents the action the user will perform when the message is displayed or an explanation of a Type "I" message.

***Note:** Variable text, depending on circumstance, is enclosed within brackets, [ ]. The text within the brackets describes the item that will appear in the error message.

| Message | Type | Log/Display | Explanation/Action |
|---|---|---|---|
| Authorization Key is [xx] | I | User | Displays the authorization key for KCA. |
| CHNS Create Failed. Chain ID is xxxx | I | User | CHNS record xxxx could not be created. |
| CHNS Fetch Failed. Chain ID is xxxx | I | User | CHNS record xxxx could not be retrieved. |
| CHNS Update Failed. Chain ID is xxxx | I | User | CHNS record xxxx could not be updated. |
| Connected to database | I | User | Application successfully logged onto the database. |
| Connection to database failed | I | User | Application could not log onto the database. |
| CONV Fetch Failed. CONVEYANCE ID is xxxx | I | User | CONV record xxxx could not be retrieved. |
| CONV Update Failed. Conveyance ID is xxxx | I | User | CONV record xxxxxxx could not be updated |
| FUNC Fetch Failed. FUNC Workarea is xxxx | I | User | FUNC record xxxxxxx could not be retrieved |
| GCCN Fetch Failed. CN is xxxxxxx | I | User | GCCN record xxxx could not be retrieved |
| Invalid KEY message [xxx] by [xxxxx] | I | User Error | Attempt to perform a TIM function on a Keypad connection. |
| Invalid set logging flag [x] by [yyyy] | I | User Error | Turn on logging message is invalid. |

| Message | Type | Log/Display | Explanation/Action |
|---|---|---|---|
| Invalid Subsystem Start/Stop Code | I | User Error | Invalid start or stop of subsystem was attempted. |
| Logging turned off by [xxxxx] | I | User | Logging was turned off by xxxxx. |
| Logging turned on by [xxxxx] | I | User | Logging was turned on by xxxxx. |
| MOVE Create Failed. Control Number is xxxxxxx | I | User | MOVE record xxxx could not be created. |
| MOVE Fetch Failed. MOVE Control Number is xxxxxxx | I | User | MOVE record xxxx could not be retrieved |
| MOVE Update Failed. Control Number is xxxx | I | User | Move record xxxx could not be updated. |
| PARM Fetch Failed. | I | User | PARM record could not be retrieved |
| PARM Update Failed. | I | User | PARM record could not be updated |
| SQL CODE dddd | I | User | Data base error has occurred. This message displays the reason code associated with the text messages that follow. |
| Subsystem shut down by [xxxxx] | I | User | Subsystem shutdown by xxxxx. |
| T01 | I | User | Queue Empty Request message sent to Empty Cart Manager. Refer to appendix B for record layout. |
| T03 | I | User | Queue Empty Cart message sent to Empty Cart Manager. Refer to appendix B for record layout. |
| T05 | I | User | Request Cart Routing message sent to towline. Refer to appendix B for record layout. |
| U06 | I | User | Cart Routing message returned from towline. Refer to appendix B for record layout. |
| Unknown message type [xx] from [yyyy] | I | User Error | Application did not process a message of type xx sent by yyyy because the message type is not an appropriate message type for the application. |
| WKST Fetch Failed. Workstation ID is xxxx | I | User | WKST record xxxx could not be retrieved |
| WKST Update Failed. Workstation ID is xxxx | I | User | WKST record xxxx could not be updated |
| Z08 | I | User | M01 validation response message returned from towline. Refer to appendix B for record layout. |

Table S - 1-1 New Cumberland Key Pad Messages

# APPENDIX T NEW CUMBERLAND TOWLINE MESSAGES

## 1.0 TOWLINE MESSAGES

The following table represents a list of all messages from the Towline. The Message column represents the text of the message as displayed on the screen or log file. The Type column represents the type of the message: "I" indicates informational, "A" indicates action required and "F" indicates a fatal situation, immediate action is required before further processing. Action and Fatal messages will include the action to be performed. The Log/Display column represents where the message will be displayed: the annotation of "Error" means the message will be logged to the error log, the annotation of "User" means the message will be logged to the message log, and the annotation of "Display" means the message will be displayed through the UI on the screen as an Alert Message. The Explanation/Action column represents the action the user will perform when the message is displayed or an explanation of a Type "I" message.

***Note:** Variable text, depending on circumstance, is enclosed within brackets, [ ]. The text within the brackets describes the item that will appear in the error message.

| Message | Type | Log/Display | Explanation/Action |
|---|---|---|---|
| --- Routing Table Selected __/__ | I | User | Notification of which routing table was selected. |
| - Snnn translated to Snnn for PLC First Available Routing | I | User | Notification of destination conversion to PLC required data. |
| ! Area [aaaa] has no database workstation records associated with it. Therefore, it cannot be used as a round robin area. | I | User Error | This message explains that a given functional area has no workstations in it and that as a result, the Towline system cannot send a cart to this area. |
| !! fnProcessA09Msg: Towline Software Shutting Down | I | Display | Notification of Towline software shutting down. |
| !! Towline:ShutDown complete | I | User | Notification the towline shutdown is complete. |
| * Area [aaaa] is not in the database can't be used to round-robin. | I | User Error | The functional area, aaaa, is not in the ECS database. |
| * Area [aaaa] was not found in the ECS database. It cannot be a round-robin destination. | I | User Error | The functional area, aaaa, is not in the ECS database. |
| * CAR - 1st CONV_NEXT_DEST Contains Blanks for <Cxxxx> | I | User Error | Cart arrived at location other than zone transfer, but database field, CONV_NEXT_DEST, contained blanks in the first next destination. |

| Message | Type | Log/Display | Explanation/Action |
|---|---|---|---|
| * CAR - 1st or 2nd CONV_NEXT_DEST Contains Blanks for <Cxxxx> | I | User Error | Cart arrived at location other than zone transfer, but database field, CONV_NEXT_DEST, contained blanks in the first or second next destination. |
| * CAR - At Zone Transfer, Redirecting <xxxx> to <xxxx>: Not Enough Info in CONV_NEXT_DEST | I | User Error | Cart arrived a zone transfer, but database field, CONV_NEXT_DEST, contained blanks in the first and/or second next destinations. Cart is being sent to redirect for processing. |
| * CAR - Blanks in TMsg->caLocatn: <xxxx> | A | User Error | Corrupt message received **- contact ECS system support** |
| * CAR - CONV not in Database: <Cxxxx> | A | User Error | Cart ID is not in the database **- contact ECS System Support** |
| * CAR - CONV_AREA <xxxx> Does Not Match Arrival Area <xxxx> for Cart <Cxxxx> | A | User Error | Cart arrived at either a DCCN, INxx, or PSHP location, but location is not the ECS database **-** **- contact ECS System Support** |
| * CAR - Move Cart Error <Cxxxx> Error <nnn> : Attempt to Redirect Cart to <xxxx> | I | User Error | ECS could not route cart for the zone transfer case above. |
| * CAR - No TowWKst for <xxxxx> | A | User Error | Cart arrived at either a DCCN, INxx, or PSHP location, but location is not in the ECS database and is not initialized **- contact ECS system support.** |
| * CAR - Unexpected Arrival Case | I | User Error | Cart arrived at a location that the PLC does not send a Cart Arrival message |
| * CAR - WKST not in Database: <xxxx> | A | User Error | Wkst ID is not in the database **- contact ECS system support** |
| * Cart CCCCC can't be queued for wwww. It is already in a queue. | A | User Error | Locate the actual location of the specified cart and update the carts location by using SCL (Set Cart Location) or by reordering a queue. |
| * Cart ccccc did not belong to a queue | I | User | Since the cart was not considered to be part of a queue it could not be deleted from one. |
| * Cart ccccc has successfully been removed from queue ssss | I | User | A normal, successful removal of a cart from a Queue has been accomplished. |

| Message | Type | Log/Display | Explanation/Action |
|---|---|---|---|
| * Cart ccccc not found in database | A | User Error Display | This message indicates that a Cart ID could not be found in the ECS database. If desired, the chosen action should be repeated. **If this problem persists contact Database Administrator for assistance** |
| * Cart ID ccccc is invalid. | I | User Error | Notification that cart ID is now in database. |
| * Cart request list is full! Notify Administrator | I A | User Error | The maximum number of cart information requests has been reached. This is indicative of a communication problem with PLCs. |
| * CAW - Blanks in TMsg->caLocatn: <xxxx> | A | User Error | This message indicates that the PLC or UI FH CAW conversation has sent blanks in the location field of Cart At Workstation message. **Contact system support.** |
| * CAW - CONV not in Database: <ccccc> | A | User Error | The database record for CONV ccccc has not been found. **Contact system support.** |
| * CAW - Move Cart Error <nn> | A | User Error | Attempt to move cart but received at fnMovSglCrt error, nn **Contact system support.** |
| * CAW - Msg not expected for <Cxxxx> at <xxxx> | I | User Error | Cart arrived at a location that the PLC does not send a Cart At Workstation message |
| * CAW - WKST not in Database: <xxxx> | A | User Error | Wkst ID is not in the database. **Contact ECS system support.** |
| * CAW: CONV_CHAIN_LEN out of bounds | | User Error | The database field CONV_CHAIN_LEN is greater than 4. **Contact system support.** |
| * CAWPAR - CONV RECORD WAS NOT FOUND - cccc" | A | User Error | The database record for CONV ccccc has not been found. **Contact system support.** |
| * ccccc -> ssss; mmmmmmmmmmmmmmmmmmmmmmmm | I | User Error | The status of the move came back as not successful. This message gives the cart ID (ccccc), the destination workstation (ssss) and the reason for the unsuccessful move (mmmmmmmmmmmmmmmmmmmmmmmm). |
| * Chain Cart Move NOT Processed!! | A | User Error | Notification of chained cart move not being processed due to previously logged message. **Call Systems Administrator for appropriate action.** |

| Message | Type | Log/Display | Explanation/Action |
|---|---|---|---|
| * Error adding CHNS [Cnnn] Record; nnnn cccccccccccccccccccc | A | User Error Display | An error was encountered while trying to add a Chain record where:<br>Cnnn = Chain Number<br>ccccc = Cart ID,<br>nnnn = Oracle Error Code and<br>ccccc… = Oracle Error Message.<br>**Call Systems Administrator for appropriate action.** |
| * Error adding CONV [Cnnnn ] Record; nnnn cccccccccccccccccccccc | A | User Error Display | An error was encountered while trying to add a Conveyance record where:<br>Cnnnn = Cart ID,<br>Nnnn = Oracle Error Code and<br>ccccc… = Oracle Error Message.<br>**Call Systems Administrator for appropriate action.** |
| * Error adding FUNC [ffff] Record; nnnn cccccccccccccccccccc | A | User Error Display | An error was encountered while trying to add a Function record where:<br>ffff = function,<br>nnnn= Oracle Error Code and<br>ccccc…= Oracle Error Message.<br>**Call Systems Administrator for appropriate action.** |
| * Error adding GCCN [ccccc] Record; nnnn cccccccccccccccccccc | A | User Error Display | An error was encountered while trying to add a Intradepot Recirculation Control Number record where:<br>ccccc = Control Number,<br>nnnn = Oracle Error Code and<br>ccccc… = Oracle Error Message.<br>**Call Systems Administrator for appropriate action.** |
| * Error adding MOVE [ccccc] Record; nnnn cccccccccccccccccccccc | A | User Error Display | An error was encountered while trying to add a Move record where:<br>ccccc = Control Number,<br>nnnn = Oracle Error Code and<br>ccccc… = Oracle Error Message.<br>**Call Systems Administrator for appropriate action.** |
| * Error adding QUES [ ] Record; | A | User Error | **If unexpected Oracle errors persist notify Database Administrator.** |
| * Error adding WHSE [nn] Record; nnnn cccccccccccccccccccccc | A | User Error Display | An error was encountered while trying to add a Warehouse record where:<br>nn = Warehouse Number,<br>nnnn = Oracle Error Code and<br>ccccc. = Oracle Error Message.<br>**Call Systems Administrator for appropriate action.** |

| Message | Type | Log/Display | Explanation/Action |
|---|---|---|---|
| * Error adding WKST [ssss] Record; nnnn cccccccccccccccccccccc | A | User Error Display | An error was encountered while trying to add a Workstation record where:<br>ssss = Workstation ID,<br>nnnn = Oracle Error Code and<br>ccccc = Oracle Error Message.<br>**Call Systems Administrator for appropriate action.** |
| * Error deleting CHNS [Cnnn] Record; nnnn cccccccccccccccccccccc | A | User Error Display | An error was encountered while trying to delete a Chain record where:<br>Cnnn = Chain Number,<br>nnnn = Oracle Error Code and<br>ccccc = Oracle Error Message.<br>**Call Systems Administrator for appropriate action.** |
| * Error deleting CONV [Cnnnn] Record; nnnn cccccccccccccccccccccc | A | User Error Display | An error was encountered while trying to delete a Conveyance record where:<br>Cnnnn = Cart ID,<br>nnnn = Oracle Error Code and<br>ccccc = Oracle Error Message.<br>**Call Systems Administrator for appropriate action.** |
| * Error deleting FUNC [ffff] Record; nnnn cccccccccccccccccccccc | A | User Error Display | An error was encountered while trying to delete a Function record where:<br>ffff = Function<br>nnnn = Oracle Error Code and<br>ccccc = Oracle Error Message.<br>**Call Systems Administrator for appropriate action.** |
| * Error deleting MOVE [ccccc] Record; nnnn cccccccccccccccccccccc | A | User Error Display | An error was encountered while trying to delete a Move record where:<br>ccccc = Control Number,<br>nnnn = Oracle Error Code and<br>ccccc = Oracle Error Message.<br>**Call Systems Administrator for appropriate action.** |
| * Error deleting QUES [ ] Record; | A | User Error | **If unexpected Oracle errors persist notify Database Administrator.** |
| * Error deleting WHSE [nn] Record; nnnn cccccccccccccccccccccc | A | User Error Display | An error was encountered while trying to delete a Warehouse record where:<br>nn = Warehouse Number,<br>nnnn = Oracle Error Code and<br>ccccc = Oracle Error Message.<br>**Call Systems Administrator for appropriate action.** |

| Message | Type | Log/Display | Explanation/Action |
|---|---|---|---|
| * Error deleting WKST [ssss] Record; nnnn cccccccccccccccccccccc | A | User Error Display | An error was encountered while trying to delete a Workstation record where:<br>ssss = Workstation ID<br>nnnn = Oracle Error Code and<br>ccccc = Oracle Error Message.<br>**Call Systems Administrator for appropriate action.** |
| * Error reading CHNS [Cnnn] Record; nnnn cccccccccccccccccccccc | A | User Error Display | An error was encountered while trying to read a Chain record where:<br>Cnnn = Chain ID,<br>nnnn = Oracle Error Code and<br>ccccc… = Oracle Error Message.<br>**Call Systems Administrator for appropriate action.** |
| * Error reading CHUT [Tnnn] Record; nnnn cccccccccccccccccccccc | A | User Error Display | An error was encountered while trying to read a Sorter Chute record where:<br>Tnnn = Sorter Type and Chute Number,<br>nnnn = Oracle Error Code and<br>ccccc… = Oracle Error Message.<br>**Call Systems Administrator for appropriate action.** |
| * Error reading CONV [Cnnnn] Record; nnnn cccccccccccccccccccccc | A | User Error Display | An error was encountered while trying to read a Conveyance record where:<br>Cnnnn = Cart ID,<br>nnnn = Oracle Error Code and<br>ccccc… = Oracle Error Message.<br>**Call Systems Administrator for appropriate action.** |
| * Error reading FUNC [ffff] Record; nnnn cccccccccccccccccccccc | A | User Error Display | An error was encountered while trying to read a Function record where:<br>ffff = Function,<br>nnnn = Oracle Error Code and<br>ccccc… = Oracle Error Message.<br>**Call Systems Administrator for appropriate action.** |
| * Error reading GCCN [ccccc] Record; nnnn cccccccccccccccccccccc | A | User Error Display | An error was encountered while trying to read the Intradepot Recirculation Control Numbers record where:<br>ccccc = Control Number,<br>nnnn = Oracle Error Code and<br>ccccc… = Oracle Error Message.<br>**Call Systems Administrator for appropriate action.** |

| Message | Type | Log/Display | Explanation/Action |
|---|---|---|---|
| * Error reading MOVE [ccccc] Record; nnnn cccccccccccccccccccccc | A | User Error Display | An error was encountered while trying to read a Move record where:<br>ccccc = Control Number,<br>nnnn = Oracle Error Code and<br>ccccc… = Oracle Error Message.<br>**Call Systems Administrator for appropriate action.** |
| * Error reading Parameter Record; nnnn cccccccccccccccccccccc | A | User Error Display | An error was encountered while trying to read a Parameter record where:<br>nnnn = Oracle Error Code and<br>ccccc… = Oracle Error Message.<br>**Call Systems Administrator for appropriate action.** |
| * Error reading PLCS [nn] Record; nnnn cccccccccccccccccccccc | A | User Error Display | An error was encountered while trying to read a PLC Status record where:<br>nn = PLC Number<br>nnnn = Oracle Error Code and<br>ccccc… = Oracle Error Message.<br>**Call Systems Administrator for appropriate action.** |
| * Error reading QUES [ ] Record; | A | User Error | **If unexpected Oracle errors persist notify Database Administrator.** |
| * Error reading Queue record qqqq | A | User Error | **If unexpected Oracle errors persist notify Database Administrator.** |
| * Error reading TOWC [nn] Record; nnnn cccccccccccccccccccccc | A | User Error Display | An error was encountered while trying to read a Towline Counts record where:<br>nn = Loop Number<br>nnnn = Oracle Error Code and<br>ccccc… = Oracle Error Message.<br>**Call Systems Administrator for appropriate action.** |
| * Error reading TOWS [nnn] Record; nnnn cccccccccccccccccccccc | A | User Error Display | An error was encountered while trying to read a Towline Status record where:<br>nnn = Loop Number,<br>nnnn = Oracle Error Code and<br>ccccc… = Oracle Error Message.<br>**Call Systems Administrator for appropriate action.** |
| * Error reading WHSE [nn] Record; nnnn cccccccccccccccccccccc | A | User Error Display | An error was encountered while trying to read a warehouse record where:<br>nn = Warehouse Number<br>nnnn = Oracle Error Code and<br>ccccc… = Oracle Error Message.<br>**Call Systems Administrator for appropriate action.** |

| Message | Type | Log/Display | Explanation/Action |
|---|---|---|---|
| * Error reading WKST [ssss] Record; nnnn cccccccccccccccccccccc | A | User Error Display | An error was encountered while trying to read a Workstation record where:<br>ssss = Workstation ID<br>nnnn = Oracle Error Code and<br>ccccc… = Oracle Error Message.<br>**Call Systems Administrator for appropriate action.** |
| * Error updating CHNS [Cnnn] Record; nnnn cccccccccccccccccccccc | A | User Error Display | An error was encountered while trying to update a Chain record where:<br>Cnnn = Chain ID,<br>nnnn = Oracle Error Code and<br>ccccc… = Oracle Error Message.<br>**Call Systems Administrator for appropriate action.** |
| * Error updating CHUT [Tnnn] Record; nnnn cccccccccccccccccccccc | A | User Error Display | An error was encountered while trying to update a Chute record where:<br>Tnnn = Chute ID,<br>nnnn = Oracle Error Code and<br>ccccc… = Oracle Error Message.<br>**Call Systems Administrator for appropriate action.** |
| * Error updating CONV [Cnnnn] Record; nnnn cccccccccccccccccccccc | A | User Error Display | An error was encountered while trying to update a Conveyance record where:<br>Cnnnn = Cart ID,<br>nnnn = Oracle Error Code and<br>ccccc… = Oracle Error Message.<br>**Call Systems Administrator for appropriate action.** |
| * Error updating CONV Record to remove chain: | A | User Error | Unexpected database error encountered. If the problem persists **notify Database Administrator.** |
| * Error updating FUNC [ffff] Record; nnnn cccccccccccccccccccccc | A | User Error Display | An error was encountered while trying to update a Function record where:<br>ffff = Function,<br>nnnn = Oracle Error Code and<br>ccccc… = Oracle Error Message.<br>**Call Systems Administrator for appropriate action.** |
| * Error updating GCCN [ccccc] Record; nnnn cccccccccccccccccccccc | A | User Error Display | An error was encountered while trying to update an Intradepot Recirculation Control Number record<br>ccccc = Control Number<br>nnnn = Oracle Error Code and<br>ccccc… = Oracle Error Message.<br>**Call Systems Administrator for appropriate action.** |

| Message | Type | Log/Display | Explanation/Action |
|---|---|---|---|
| * Error updating MOVE [ccccc] Record; nnnn cccccccccccccccccccccc | A | User Error Display | An error was encountered while trying to update a Move record where:<br>ccccc = Control Number,<br>nnnn = Oracle Error Code and<br>ccccc… = Oracle Error Message.<br>**Call Systems Administrator for appropriate action.** |
| * Error updating Parameter Record; nnnn cccccccccccccccccccccc | A | User Error Display | An error was encountered while trying to update the Parameter record where:<br>nnnn = Oracle Error Code and<br>ccccc… = Oracle Error Message.<br>**Call Systems Administrator for appropriate action.** |
| * Error updating PLCS [nnt] Record; nnnn cccccccccccccccccccccc | A | User Error Display | An error was encountered while trying to update a Conveyance record where:<br>nnt = PLC Number and Type,<br>nnnn = Oracle Error Code and<br>ccccc = Oracle Error Message.<br>**Call Systems Administrator for appropriate action.** |
| * Error updating QUES [ ] Record; | A | User Error | **If unexpected Oracle errors persist notify Database Administrator.** |
| * Error updating TOWC [nn] Record; nnnn cccccccccccccccccccccc | A | User Error Display | An error was encountered while trying to update a Towline Count record where:<br>nn = Towline Main Loop Number,<br>nnnn = Oracle Error Code and<br>ccccc = Oracle Error Message.<br>**Call Systems Administrator for appropriate action.** |
| * Error updating TOWFUNC [ffff] Record; | A | User Error | An error was encountered while trying to update a Function record where:<br>ffff = Function,<br>nnnn = Oracle Error Code and<br>ccccc… = Oracle Error Message.<br>**Call Systems Administrator for appropriate action.** |
| * Error updating TOWWHSE nn] Record; | A | User Error | An error was encountered while trying to update a Warehouse record where:<br>nn = Warehouse Number,<br>nnnn = Oracle Error Code and<br>ccccc… = Oracle Error Message.<br>**Call Systems Administrator for appropriate action.** |

| Message | Type | Log/Display | Explanation/Action |
|---|---|---|---|
| * Error updating TOWWKST [ssss] Record; | A | User Error | An error was encountered while trying to update a Workstation record where:<br>ssss = Workstation ID,<br>nnnn = Oracle Error Code and<br>ccccc… = Oracle Error Message.<br>**Call Systems Administrator for appropriate action.** |
| * Error updating WHSE [nn] Record; nnnn cccccccccccccccccccccc | A | User Error Display | An error was encountered while trying to update a Warehouse record where:<br>nn = Warehouse Number,<br>nnnn = Oracle Error Code and<br>ccccc = Oracle Error Message.<br>**Call Systems Administrator for appropriate action.** |
| * Error updating WKST [ssss] Record; nnnn cccccccccccccccccccccc | A | User Error Display | An error was encountered while trying to update a Workstation record where:<br>ssss = Workstation ID,<br>nnnn = Oracle Error Code and<br>ccccc = Oracle Error Message.<br>**Call Systems Administrator for appropriate action.** |
| * fdCAR - Cart <Cxxxx> at <xxxxx>; Cart is Already a QUES Member CAR - ** Stop Run Reorder Queue for <xxxx> | A | User Error | This set of two messages indicates that the cart arrived at a queue workstation, but the cart was already a member of a queue workstation. Run UI Fault Handling conversation to reorder the appropriate queue. |
| * fdCAR - No CHNS record found <Cxxx> > for Cart <Cxxxx> at <xxxxx. | A | User Error | Cart arrived at a location. Cart database record indicates that the cart is chained, but no corresponding chain record exists. **Contact ECS System Support.** |
| * fdCAR - Removed Queue Member <Cxxxx>> Upon Arrival at <xxxx> | I | User Error | Cart which was still a member of a queue arrived at Unloader at Intradepot, Receiving North, Receiving South, or ALOC, and successfully removed the cart from the queue. |
| * fdCAR - Unable to Enqueue Cart <Cxxxx> at <xxxx>; DB error | A | User Error | Database problem when cart arrived at a queue workstation **- contact ECS system support** |
| * fdCAR - Unable to Remove Queue Member <Cxxxx>> Upon Arrival at <xxxx> | I | User Error | Cart which was still a member of a queue arrived at Unloader at Intradepot, Receiving North, Receiving South, or ALOC, but unable to remove the cart from the queue. |

| Message | Type | Log/Display | Explanation/Action |
|---|---|---|---|
| * idCAR - Move Cart Error <Cxxxx> Error <nnn> : Redirecting Cart at S060 | I | User Error | ECS could not route cart for the case concerning S060 above. |
| * idCAR - Redirecting <Cxxxx> to <xxxx> : Blank CONV_CON_NO -> IDWQ | I | User Error | This message appears when a cart destined for the Intradepot Queues arrives a transfer spur , S060, without a control number in the CONV database record. The cart will be automatically redirected to a location specified in the ecs.ini. |
| * idCAR - Redirecting <Cxxxx> to <xxxx> : Missing MOVE_CON_NO for IDWQ | I | User Error | This message appears when a cart destined for the Intradepot Queues arrives a transfer spur , S060, without a control number in the MOVE database record. The cart will be automatically redirected to a location specified in the ecs.ini. |
| * Invalid 2nd Conveyance [Cnnnn] | A | User Error | Cart ID Not between C000001 and C001121 inclusive. Verify Cart ID and try again. **If problem persists, call Systems Administrator for appropriate action.** |
| * Invalid Cart ID [Cnnnn] | A | User Error | Cart ID Not between C000001 and C001121 inclusive. Verify Cart ID and try again. **If problem persists, call Systems Administrator for appropriate action.** |
| * Invalid Chain ID [Cnnn] | A | User Error | While parsing the SMM/M01 message, the chain structure field (chain number 'nnn' and number in chain 'n') was found to have non-numeric character(s) in it. **Call Systems Administrator for appropriate action.** |
| * Invalid Consolidation Field [XXXXXXXXXXXXXXX] | A | User Error | While parsing the SMM/M01 message, the consolidation field was found to have non-alphanumeric character(s) in it. **Call Systems Administrator for appropriate action.** |
| * Invalid Control Number [XXXXX] | A | User Error | While parsing the SMM/M01 message, the control number field was found to have non-alphanumeric character(s) in it, or starts with a reserved letter 'O' or 'I'. Verify control number and try again. **Call Systems Administrator for appropriate action.** |

| Message | Type | Log/Display | Explanation/Action |
|---|---|---|---|
| * Invalid Datetime Stamp [MMDDHHMM] | A | User Error | Non-numeric character(s) found in Datetime stamp. **Call Systems Administrator for appropriate action.** |
| * Invalid Handling Unit [x] | A | User Error | While parsing the SMM/M01 message, the handling unit field was found to be other than 'L', 'N', 'O' or 'P'. Verify handling unit and try again. **If error persists, call Systems Administrator for appropriate action.** |
| * Invalid number of carts [n] in Chain [Cnnn] | A | User Error | While parsing the SMM/M01 message, the chain structure field (chain number 'nnn' and number in chain 'n') was found to have non-numeric character(s) in it. **Call Systems Administrator for appropriate action.** |
| * Invalid Quantity [nn] | A | User Error | While parsing the SMM/M01 message, the quantity field was found to contain non-numeric character(s). Verify quantity and try again. **If error persists, call Systems Administrator for appropriate action.** |
| * Invalid Second Alternate Destination [XXXXXXXXX] | A | User Error | While parsing the SMM/M01 message, the second alternate destination field was found to have non-alphanumeric character(s) in it. **Call Systems Administrator for appropriate action.** |
| * Invalid Set Logging Flag [f ] by [uuuuu] | A | User Error Display | Notification of erroneous logging flag specified by user. **Call Systems Administrator for appropriate action.** |
| * Invalid Start/Stop Code [X] by [NNNNN] | A | User Error | Invalid start/stop code 'X' requested by user "NNNNN". Should be '0' for offline or '1' for online. Use proper code. **If condition persists, call Systems Administrator for appropriate action.** |
| * Invalid SubSystem Start/Stop Code [ ] | I | User Error Display | The Towline Subcontroller is responding to an A09 message. However, the message contains an invalid Start/Stop code. The message is not processed. |
| * Invalid Towline Message Flag [X] | A | User Error | **Call Systems Administrator for appropriate action.** |
| * Invalid Towline Message Type [ ] | I | User Error | The Towline Subcontroller has received an invalid message from the Towline PLC. The message will not be processed. |

| Message | Type | Log/Display | Explanation/Action |
|---|---|---|---|
| * LdrCAW - Problem CN at <xxxx>; Cart <ccccc >; CN <CCCCC > | I | User Error | A Cart At Workstation message was received at a loader, but the control number was blank, incomplete, not destined for a loading workstation. |
| * LdrCaw: Move Dest is DSCP | I | User Error | At a Loader Workstation, the DSS provided destination is 'DSCP'. |
| * LdrCaw: Move Destination is Blank | I | User Error | At a Loader Workstation, the destination in the move record (i.e., MOVE_DEST is blank). |
| * Loader Failure ccccc -> ssssssssss; mmmmmmmmmmmmmmmmmmmmmmmm | I | User Error | At the Loader Workstation, ECS is unable to send a 03 message to move the cart. See further information messages in the User log. |
| * MID - Bad Cart ID cccc | A | User Error | Received PLC type "002" message with Cart ID that is not in the database. Verify Cart ID and **call Systems Administrator for appropriate action.** |
| * MID - ccccccc at unknown station [ssss] | A | User Error | Received PLC type "002" message with Spur ID that is not in the database. **Call Systems Administrator for appropriate action.** |
| * MID - ccccc Dest: ssss missed the divert at ssss | I | User Error | Received PLC type "002" message that cart ccccc whose next destination was ssss missed a divert at some other spur ssss. |
| * MID - ccccc missed the divert at ssss; next dest ssss unknown | I | User Error | Notification that cart ccccc missed its divert at spur ssss and the selected new destination is not known to the system. No new routing was made. |
| * MID - Cnnnn misread at ssss | I | User Error | Received PLC type "002"message that cart number was misread at spur ssss. |
| * Non-Alpha/Numeric character(s) in Location [xxxxxxxxxxxxxxxx] | A | User Error | While parsing the SMM/M01 message, the location field was found to have special character(s) in it. Verify location and try again. **If error persists, call Systems Administrator for appropriate action.** |
| * Non-Alphanumeric character(s) in Alternate Destination [xxxxxxxxx] | A | User Error | While parsing the SMM/M01 message, the alternate destination field was found to have non-alphanumeric character(s) in it. **Call Systems Administrator for appropriate action.** |
| * PLC Zone 'xx' is not On-line | A | User Error Display | The chosen action requires that a given PLC be online for the action to be taken. Once the PLC comes online repeat this action, if desired. |

| Message | Type | Log/Display | Explanation/Action |
|---|---|---|---|
| * Priority [x] undefined; MHP4 assigned | I | User Error | Notification of invalid or missing priority - lowest priority assigned to allow continued processing. |
| * QiCAW - Process continuing with cart Cxxxx in queue | I | User Error | Information message indicating that process is continuing with the card ID known to ECS, which may not be the one specified by the UI FH CAW. |
| * QmCAW - at <ssss> - No CHNS record to match CONV_CHAIN_ID <Cxxx> ->S082 | I | User Error | At Medium/Heavy Queue, the cart at the head of queue has a chain ID which is missing from the CHNS table in the database. The cart will be sent to the loop 7 redirect spur. |
| * QmCAW: CONV_CHAIN_LEN out of bounds | I | User Error | At the Medium/Heavy queue, the cart database record, CONV_CHAIN_LEN is greater than 4. |
| * Spur wwww invalid | I | User Error Display | The specified spur (that bas been chosen) on a UI screen is invalid. |
| * UldrCAW - at <xxxx> > No MOVE_CON_NO->S194 | A | User Error | At Intradepot Queue, the cart at the head of queue has a control number which is missing from the MOVE table in the database. The cart will be sent to the loop 4 redirect spur. |
| * UldrCAW - at <xxxx> No MOVE_CON_NO->S082 | A | User Error | At Medium/Heavy Queue, the cart at the head of queue has a control number which is missing from the MOVE table in the database. The cart will be sent to the loop 7 redirect spur. |
| * UldrCAW - Cart <Cxxxx> has blanks in CONV_CON_NO or MOVE_CON_NO not found at S29A | I | User Error | A cart has arrived at Intradepot Unloader (S29A) with blanks in the CONV_CON_NO or associated MOVE_CON_NO. |
| * UldrCAW - Missing MOVE Info, T23 to move pallet using OBAD1 at S29A | A | User Error | At Intradepot Unloader, unable to send a T23 Pallet Move message because either the Move Record was not found or that the Move record was found, but the destination was not one of the lanes (V150-V157) |
| * UldrCAW - Towline Can Not Read Cart <C7777> at S29A | I | User Error | At Intradepot Unloader, the towline reader could not cart ID. **Contact Systems Administrator or EDC maintenance.** |
| * UldrCAW - Wrong Chain <Cxxx> > at <llll> > on <Cxxxx>; expected chain <Cxxx> | I | User Error | At Unloaders at Medium/Heavy Pack, a cart, Cxxxx, arrived with a Chain ID, but the chain ID is not the expected one. **Contact system support.** |

| Message | Type | Log/Display | Explanation/Action |
|---|---|---|---|
| * Unable to Process Request; ccccc to ssss | I | User Error | Attempted to route a cart identified as a cage cart to a non-cage cart destination. |
| * Unable to set the next workstation in area [aaaa] | I A | User Error | Database error in round-robining. **Notify Database Administrator.** |
| * Unexpected Down Process Message | I | User Error | The Towline Subcontroller has received an invalid DnProcess message. The message will not be processed. |
| * Unexpected Oracle error reading QUES record | A | User Error | **If unexpected Oracle errors persist notify Database Administrator.** |
| * Unexpected Oracle Error while Adding to a Queue | A | User Error | **If unexpected Oracle errors persist notify Database Administrator.** |
| * Unexpected Oracle Error while Counting a Queue | A | User Error | **If unexpected Oracle errors persist notify Database Administrator.** |
| * Unexpected Oracle error while decrementing a Queue: | A | User Error | **If unexpected Oracle errors persist notify Database Administrator.** |
| * Unexpected Oracle Error while Deleting a Queue | A | User Error | **If unexpected Oracle errors persist notify Database Administrator.** |
| * Unexpected Oracle error while getting WKST status | A | User Error | This message reveals an inability to complete the Update Spur Status conversation. This conversation may need to be rerun. |
| * Unexpected Oracle Error while reading a Queue cursor | A | User Error | **If unexpected Oracle errors persist notify Database Administrator.** |
| * Unsolicited Cart Information Request: … | I | User | This message indicates that a cart information reply was received for which there is no record of receiving. |
| * WlRdCAR - Cart <Cxxxx> at <xxxx>>; Cart is Already a QUES Member. CAR - ** ERROR - Run Reorder Queue for <xxxx> | A | User Error | A double set of messages is generated for this error. A cart destined for xxxx is probably a member of another queue spur. **Contact system support** |
| * WlRdCAR - Unable to Enqueue Cart <Cxxxx> at <xxxx>; DB error | A | User Error | Database problem when cart arrived at a queue workstation **- contact ECS system support** |
| ** CAR - CONV_FNL_DEST Contains Blanks for <Cxxxx> - No Further Processing | A | User Error | Cart arrived at location, but the CONV_FNL_DEST contained blanks - report to **ECS Functional Analyst** |
| ** CAW - Not Processed; No cart in queue | I | User Error | ECS did not process a cart arrival message. The result is that more carts are physically in the queue than are logically in the queue. Please use UI FH Medium/Heavy Pack queues to reorder the queues. |

| Message | Type | Log/Display | Explanation/Action |
|---|---|---|---|
| ** CAW - Unable to remove cart <Cxxxx> > from queue <xxxx> | A | User Error | Cart has arrived at the head of a queue workstation, but ECS is unable to remove it from the queue. **Contact system support.** |
| ** CawPar - Cart ccccc Record Not Found | I | User Error | Cart record not found in database. **Contact Systems Administrator.** |
| ** Cawpar - CONV ccccc Record Not Found | I | User Error | At an automatic loader, the ECS could not find the cart record in the database. **Contact Systems Administrator.** |
| ** CawPar - Move ccccc Record Not Found | I | User Error | At an automatic loader, the ECS could not find the move record in the database. **Contact Systems Administrator.** |
| ** CawPar failed - status = nn for ccccc at llll for xxxxx:ddddddddd | I | User Error | At an automatic loader, the ECS could not send the PLC a cart move message. |
| ** CawPar: Move Unsuccessful | I | User Error | At an automatic loader, the Move message was not sent. |
| ** Connection to Database failed; nnnn cccccccccccccccccccccc | A | User Error Display | An error was encountered while trying to connect to Database where: nnnn = Oracle Error Code and ccccc = Oracle Error Message. **Call Systems Administrator for appropriate action.** |
| ** Connection to NEW Database failed; | A | User Error | Notification of failure to connect to database. **Call Systems Administrator for appropriate action.** |
| ** Dummy Move NOT Processed | A | User Error | Notification of dummy move not being processed due to previously logged message. **Call Systems Administrator for appropriate action.** |
| ** fnLMH - sleeping fitfully ** | I | User | The M/H Queue Manager has not found any carts in the queue to release to a pack lane. It will now conclude processing until the next time it is awakened. |

| Message | Type | Log/Display | Explanation/Action |
|---|---|---|---|
| ** MID - MOVCRT error - nn ********** | I | User Error | In attempt to reroute the miss divert cart, error nn occurred.<br>Error Codes:<br>2 = Destination Inactive<br>3 = Destination Offline<br>4 = Destination Down<br>5 = Destination Locked<br>6 = No Work Stat'n Available<br>7 = Destination Not Defined<br>8 = Current Loc Not Defined<br>9 = 1st Loop Not Available<br>10 = Path Not Available<br>11 = MOVE Record Not Found<br>12 = Can't Chain to This Dest<br>13 = Work Station Unavailable<br>14 = STOP, you MUST run UCT<br>15 = Cart Record Not Found<br>16 = CHNS Record Not Found<br>17 = Illegal Cage Cart Move<br>18 = Invalid Priority<br>19 = Spur Only Destination<br>20 = No Spur Assoc w/function<br>21 = Invalid Destination<br>22 = SMM Contains Null(s)<br>23 = Invalid Control Number<br>24 = Invalid Present Location<br>25 = Invalid Conveyance ID<br>26 = Invalid SMM Flag<br>27 = Invalid Chain Number<br>28 = Invalid for this WKST<br>29 = Specify Specific Spur |
| ** mmm nnnnnnnn Not Processed | A | User Error | Notification of message not processed. **Call Systems Administrator for appropriate action.** |
| ** QiCAW - Cart NOT found in queue | I | User Error | At the Intradepot Queues, ECS could not find the cart record. **Call Systems Administrator for appropriate action.** |
| ** QiCAW - NOT Processed: No carts in queue | I | User Error | At the Intradepot Queues, ECS did not process the cart arrival message. More carts are physically in the queue than are logically in the queue. |
| ** QmCAW - STOP! Reorder queue | I | User Error | See above message. Run UI FH Intradepot receiving queues to reorder the queues. |

| Message | Type | Log/Display | Explanation/Action |
|---|---|---|---|
| ** smm Seq# nnnnnnnn ignored | A | User Error | Notification of SMM from DSS with specified sequence number was not processed due to null character(s) within the message. **Call Systems Administrator for appropriate action.** |
| ** TOW DnProcess: Cannot Process M01 | I | User Error | Notification that after parsing the M01 message it was determined that message is unprocessable. Originator was notified. |
| ** UldrCAW - Chns Record <Cxxx> Not Found For Workstation <xxxx> - No Further CHNS Processing | A | User Error | At Unloaders at Medium/Heavy Pack, a cart, Cxxxx, arrived with a Chain ID, but the chain ID is not in the database. **Contact system support.** |
| ** UldrCAW - Unexpected Chain | I | User Error | At Medium/Heavy Pack Lanes, (S07A-S07J) a chained cart has arrived and the CHNS record does not exist in the ECS database. |
| *** fnFACMHC: Unknown M/H QUEUE: wwww | A | User Error Display | The Towline Subcontroller is within the function fnFACMHC and has called fnFetWrk with an unknown workstation (wwww). If the workstation is a valid workstation, then check the WKST record in the ECS database to make sure the workstation record is included. **For assistance, contact the Systems Administrator.** The J97 Message will not be processed. |
| *** fnLcaLssSub2 - Unknown Workstation: wwww | A | Error User | The Towline Subcontroller has received a PLC XFER Loop Status Message (005) from the PLC. However, the workstation wwww has not been found in the global memory area. If this is a valid workstation , check to see if the workstation is found in the database. **For assistance, contact the Systems Administrator.** |
| *** fnLMH - Unknown Workstation: wwww | F | Error User | The workstation ID wwww has not been found by the function fnFetWrk. If the workstation is indeed a valid workstation, then check the WKST record in the ECS database to make sure the workstation ID is included. **For assistance, contact the Systems Administrator.** This error message will stop the M/H Queue Manager from processing. |

| Message | Type | Log/Display | Explanation/Action |
|---|---|---|---|
| *** fnLMHCIQ: wwww down or inactive | I | Error<br>User | The M/H Queue Manager is in the function fnLMHCIQ and has found that the workstation wwww is either Not Active or Not Online. |
| *** fnLMHDSL: Next Wkst is blank | I | Error<br>User | The M/H Queue Manager is in the function fnLMHDSL and has found that the next workstation in the round robin structure is blank. |
| *** fnLMHDSL: Unknown M/H Pack Lane:wwww | A | Error<br>User | The M/H Queue Manager is within the function fnLMHDSL and has called fnFetWrk with an unknown workstation (wwww). If the workstation is indeed a valid workstation, then check the WKST record in the ECS database to make sure the workstation ID is included. **For assistance, contact the Systems Administrator.** |
| *** fnLMHDSL: wwww COUNT_IN + COUNT_ENRT = c | I | User | The M/H Queue Manager is within the function fnLMHDSL and has found that the workstation wwww has a count total of c. |
| *** fnLMHTSL: NEXT_WKST is blank | I | Error<br>User | The M/H Queue Manager is within the function fnLMHTSL and has found that the next workstation in the round robin structure is blank. |
| *** fnLMHTSL: Unknown M/H Pack Lane: wwww | A | Error<br>User | The M/H Queue Manager is within the function fnLMHTSL and has called fnFetWrk with an unknown workstation (wwww). If the workstation is indeed a valid workstation, then check the WKST record in the ECS database to make sure the workstation ID is included. **For assistance, contact the Systems Administrator.** This error message will stop the M/H Queue Manager from processing. |
| +n EC to ssss DEP | I | User | n carts destined for spur ssss; enroute count for spur ssss was incremented by n. |
| +n Loop ssss DEP | I | User | n carts released onto Loop ssss; loop count for main loop ssss was incremented by n. |

| Message | Type | Log/Display | Explanation/Action |
|---|---|---|---|
| -- Lp ll pp wwww s ppp s; Xfr ttt wwww s ppp s<br><br>(sample of good message)<br><br>-- Lp 20 10 S010 N 06L 4; Xfr 507 S507 N 06L 4<br><br>(sample of bad message)<br><br>* Lp 18 08 S008 N 04L 5; Xfr<br>--- ---- - --- -<br><br>PLC 04 is in Offline Mode | A | User<br>Error | Debugging Tool. Activated by turning RteCrt/Nodes Validation Logging Flag (PARM_G_C13) to 'On' (1); where:<br><br>-- Lp<br>ll = logical Loop (1-24)<br>pp = Physical Loop (1-10, 41 & 43)<br>wwww = Loop Workstation Number<br>s = Workstation Status<br>D = Down<br>F = Offline<br>N = OnLine<br>Ppp = PLC Number<br>S = PLC Status<br>1 = Automatic Mode<br>2 = Semi-Automatic Mode<br>3 = Manual Mode<br>4 = Online Mode<br>5 = Offline Mode<br>N = Startup Mode<br>F = Shutdown Mode<br>Xfr<br>ttt = Transfer Number<br>wwww = Transfer Workstation Number<br>s = Transfer Status (same as for loop)<br>ppp = Plc Number<br>s = Plc Status (same as for loop) |
| -> LS Cnnnn Snnn->Snnn->…->Snnn CCCCC cnnn<br><br>-> ty ccccc ploc->next->finl cntrl chns | I | User | Loaded Standard (or other cart type) cart Cnnnn routed from Snnn (first Snnn) to Snnn (last Snnn) via any transfers between loops (all intermediate Snnn's) with control number CCCCC and chain Cnnn (if either are applicable)<br><br>Further routing of a cart arriving at a zone transfer where:<br><br>ty = Cart Type<br>ccccc = Cart ID<br>ploc = Present Location<br>next = next destination (transfer or final)<br>finl = final destination<br>cntrl = control number (if applicable)<br>chns = chain number (if applicable) |

| Message | Type | Log/Display | Explanation/Action |
|---|---|---|---|
| -> User [USExx] requests changing cart ccccc to type tt | I | User | This message describes the request and requestor for updating a cart type. |
| ->USExx requests Cart ccccc to Arrive at ssss | I | User | This message describes the request and requestor for a fault handling cart arrival. |
| ->USExx requests to abort chain cccc in zone z | I | User | This message describes the request and requestor for aborting a chain using the chain ID. |
| ->USExx requests unlocking workstation wwww | I | User | This message describes the request and requestor to unlock a workstation using the workstation ID. |
| A01 - Start Zone xx | I | User | A User Interface has started a Towline zone. |
| A01 - Start Zone xx | I | User | A User Interface has stopped a Towline zone. |
| All carts in chain cccc have had records corrected | I | User | This message indicates that any cart associated with a given chain ID have had their database records updated. |
| All database references to chain cccc have been removed | I | User | All references to a chain found in the ECS database have been removed. |
| An Oracle database error was found of type: ccccc | I | User Error | A miscellaneous oracle error has occurred when an oracle operation has been attempted. (ccccc represents the oracle error) |
| Area ffff is an invalid Inspection Work area for spur ssss | A | User Error Display | The chosen functional area for an update inspection spur conversation is invalid. This is probably indicative of a program error. |
| Assertion failed; AutoReleaseSpursList.IsEmpty; Newmain.cpp; line # | F | Display | No data in auto release spur in ecs.ini file. Without this information Towline will fail at startup. **Contact Systems Administrator.** |
| Assertion failed; caAitmSpur !=0; newmain.cpp; line # | F | Display | Active Item Spur ID is not specified in ecs.ini file. Without this information Towline will fail at startup. **Contact Systems Administrator.** |
| Assertion failed; caInitPathName !=0; Newmain.cpp; line # | F | Display | Logging path has not been specified under [Towline] section in the ecs.ini file. Without this information Towline will fail at startup. **Contact Systems Administrator.** |
| Assertion failed; caNoOutlyWhseSpur !=0; newmain.cpp; line # | F | Display | No spur is specified as a default for outlying warehouses. Without this information Towline will fail at startup. **Contact Systems Administrator.** |

| Message | Type | Log/Display | Explanation/Action |
|---|---|---|---|
| Assertion failed; caS503MTDest !=0; newmain.cpp; line # | F | Display | Empty Cart Destination for S503 is missing from the ecs.ini file. Without this information Towline will fail at startup. **Contact Systems Administrator.** |
| Assertion failed; caS511MTDest !=0; newmain.cpp; line # | F | Display | Empty Cart Destination for S511 is missing from the ecs.ini file. Without this information Towline will fail at startup. **Contact Systems Administrator.** |
| Assertion failed; caTempSpurFile !=0; newmain.cpp; line # | F | Display | The file name for the DSS SMM Destination to EDC location file has not been specified in the ecs.ini file. Without this information Towline will fail at startup. **Contact Systems Administrator.** |
| Assertion failed; caTempString4 !=0; newmain.cpp; line # | F | Display | Enable S511 is missing from ecs.ini file. **Contact Systems Administrator** **OR** Enable S503 is missing from ecs.ini file. **Contact Systems Administrator** **OR** Rack Addition Online missing from the ecs.ini file. **Contact Systems Administrator** **OR** Empty Cart Destination for S511 is missing from the ecs.ini file. **Contact Systems Administrator** **OR** Empty Cart Destination for S503 is missing from the ecs.ini file. Enable the proposed new Towline loop temporarily named S043 in ecs.ini file. **Contact Systems Administrator** **OR** Send a message to the PLC when the User Interface sends a Towline Inspection Spur Reconfiguration message to the towline. Without this information Towline will fail at startup. **Contact Systems Administrator.** |

| Message | Type | Log/Display | Explanation/Action |
|---|---|---|---|
| Assertion failed; caTempTermFile !=0; newmain.cpp; line # | F | Display | The file name for the DSS Terminal ID to EDC location file has not been specified in the ecs.ini file. Without this information Towline will fail at startup. **Contact Systems Administrator.** |
| Assertion failed; caValidDccAreas !=0; newmain.cpp; line # | F | Display | Number of Valid Pack areas within the EDC not in ecs.ini file. Without this information Towline will fail at startup. **Contact Systems Administrator.** |
| Assertion failed; caValidStorageTypes !=0; newmain.cpp; line # | F | Display | Types of Valid Storage areas not in ecs.ini file. Without this information Towline will fail at startup. **Contact Systems Administrator.** |
| Assertion failed; iLastAisleRackAddition !=0; newmain.cpp; line # | F | Display | Highest number of rack addition is missing in ecs.ini file. Without this information Towline will fail at startup. **Contact Systems Administrator.** |
| Assertion failed; iLastAisleS503 !=0; newmain.cpp; line # | F | Display | Highest numbered aisle to go to S503 is missing in ecs.ini file. Without this information Towline will fail at startup. **Contact Systems Administrator.** |
| Assertion failed; iLastAisleS511 !=0; newmain.cpp; line # | F | Display | Highest numbered aisle to go to S511 is missing in ecs.ini file. Without this information Towline will fail at startup. **Contact Systems Administrator.** |
| Assertion failed; iNrDccAreas !=0; newmain.cpp; line # | F | Display | Number of Pack areas within the EDC not in ecs.ini file. Without this information Towline will fail at startup. **Contact Systems Administrator.** |
| Assertion failed; iNrDKxxAreas !=0; newmain.cpp; line # | F | Display | Active Item Bulk Storage Area not in ecs.ini file. Without this information Towline will fail at startup. **Contact Systems Administrator.** |
| Assertion failed; iNrDpxxAreas !=0; newmain.cpp; line # | F | Display | Active Item Pallet not specified in ecs.ini file. Without this information Towline will fail at startup. **Contact Systems Administrator.** |
| Assertion failed; iNrLinesAutoRelease !=0; Newmain.cpp; line # | F | Display | No auto release spurs in ecs.ini file. Without this information Towline will fail at startup. **Contact Systems Administrator.** |
| Assertion failed; iNrStorageTypes !=0; newmain.cpp; line # | F | Display | Number of Valid Storage areas not in ecs.ini file. Without this information Towline will fail at startup.**Contact Systems Administrator.** |

| Message | Type | Log/Display | Explanation/Action |
|---|---|---|---|
| Attempt to continue move unsuccessful; CAWPAR failed - status = -7 for ccccc at llll | A | User Error | ECS could not move a cart, ccccc, at location, llll because the destination was invalid. **Contact system support.** |
| Attempt to continue move unsuccessful; CAWPAR failed - status = -xx for ccccc at llll | A | User Error | ECS could not move a cart, ccccc, at location, llll for fnMovCrtErr reason xx. **Contact system support.** |
| Attempt to make a disallowed Cart Type Change for ccccc to [tt] | I | User Error Display | The chosen cart ID is invalid to have its cart type updated to the desired type because caged carts aren't allowed to be updated to non-caged and vice-versa. |
| Bad Status from fnLMHCRT -- Rolling Back | I | User | The M/H Queue Manager has called the function fnLMHCRT to move a cart out of the queue, but a bad status has been returned. Database changes will be rolled back. |
| BEGIN fnLMH | I | User | The M/H Queue Manager has been called and is beginning to perform its function. |
| Begin Priority Override Processing: wwww | I | User | The M/H Queue Manager has found a workstation (wwww) that has the priority override set to on. It is attempting to process the override. |
| Cannot release a chained cart | I | User Error Display | The cart that is to be released is a chained cart, and therefore can not be released. The J79 message will not be processed. |
| Can't satisfy IDOC Fault Handling Change for wwww-Database error | A | User | There was an unexpected database error that resulted in inability to process a request to reorder a queue. |
| Can't update the cart type of ccccc due to database error | A | User Error Display | The chosen cart ID couldn't be updated due to a database error. Repeat conversation. **If error persists contact Database administrator.** |
| CAR - <Cxxxx> going to <ssss> Arrived at <wwww> | I | User Error | A cart destined for ssss has arrived at wwww. |
| CAR - Cart Arrived at <xxxx> | I | User Error | If logging flag is set (PARM_G_C2), this message is logged when a cart arrives at a Medium/Heavy Queue or Intradepot Queue |
| CAR - Processing Msg Type <xxx> for cart <Cxxxx> at <xxxx> | I | User Error | Informational message indicating entry into fnLcaCar subroutine |
| Cart at unrecognized location wwww | I | User Error Display | The cart is at a location that is not found in the WKST record in the ECS database. The J79 message will not be processed. |

| Message | Type | Log/Display | Explanation/Action |
|---|---|---|---|
| Cart ccccc at head of queue is missing a CN. It will go to redirect spur | A | User Error Display | The cart at the front of a queue lacks a control number and is being sent to a redirect spur. When it arrives at the redirect spur identify the material. |
| Cart ccccc has already been released from this spur | I | User Error Display | The cart ID ccccc has already been marked as being released from the workstation. The J79 Message will not be processed. |
| Cart ccccc has been changed from [tt] to [tt] | I | User | A cart has been successfully changed from one type to another. |
| Cart ccccc is already of type [tt] | I | User | This message indicates that a cart was already of the type it was requested to be changed to. |
| Cart ccccc is invalid for ssss in position x | A | User | There was a database error reading the desired new carts in a queue. **See Database Administrator.** |
| Cart ccccc is not yet physically located at the Merge Stop - Wait and try again | A | User Error Display | A cart at workstation message must be received for the given cart before it is considered to be at the merge stop. Wait until this occurs and repeat this conversation. |
| Cart ccccc is offline - cannot change cart type | A | User Error Display | The chosen cart is offline. **See an Administrator to return this cart to an online state**. |
| Cart ccccc is queued for MHPQ or IDWQ | I | User Error Display | The chosen cart ID is invalid to have its cart type updated because it is in a queue. |
| Cart ccccc not disconnected from wwww | I | Error User | Because the move status is unsuccessful, the cart ccccc has not been removed from the queue workstation wwww. |
| Cart ccccc not first cart in queue | I | Error User | The cart to be released (ccccc) is not the first cart found in the QUES table for the workstation. The function will rollback database changes made. |
| Cart ccccc Not Found in CONV Record | I | User Error | The cart ID ccccc is not found in the CONV table in the ECS Database. |
| Cart ccccc: + EC at ssss | I | User | Cart ccccc destined for Spur ssss; enroute count for ssss was incremented by 1. |
| Cart ccccc: + Loop ssss | I | User | Cart ccccc entered Loop ssss; loop count was incremented by 1. |
| Cart ID ccccc is at invalid Workstation wwww | I | User Error Display | The cart ID ccccc is at an invalid workstation wwww. The J79 message will not be processed. |

| Message | Type | Log/Display | Explanation/Action |
|---|---|---|---|
| Cart ID ccccc is not at M/H Pack Queue | I | User Error Display | The cart ID ccccc has a CONV_PRES_LOC (in the ECS Database) that is not at the M/H Pack Queue. The J79 message will not be processed. |
| Cart ID ccccc Not Found | I | User Error Display | The Towline Subcontroller is processing a J79 to release the cart ccccc , but the cart ID is not found in the database in the CONV record. The J79 message will not be processed. |
| CAW - Processing Msg Type <xxx> for cart <Cxxxx> at <xxxx> | I | User Error | Informational message indicating entry into fnLcaCaw subroutine |
| CAW - WKST not in TowWkst: <xxxx> | A | User Error | Wkst ID not properly initialized from database **- contact ECS system support** |
| Cccc1 can't be moved because cccc2 in position x lacks a move record" | A | User Error Display | A cart cannot be moved because there is a cart in front of it in the queue without a move record. Add a move record for the lacking cart and reinitiate. |
| ccccc -> ssss; Invalid Present Location | A | User Error | Attempted to move cart ccccc from workstation ssss that is not in the database. Verify source workstation and try again. WKST record may be missing from the database. **If error persists, call Systems Administrator for appropriate action.** |
| ccccc -> ssss; 1st Loop Not Available | A | User Error | Cart ccccc routed to Spur ssss. **Call Systems Administrator to set Loop Online** |
| ccccc -> ssss; Can’t Chain to This Dest | A | User Error | Cart ccccc routed to Spur ssss. Can’t chain to any other destination than M/H Pack (“DCCM”). Enter correct destination. **If error continues, call Systems Administrator for appropriate action.** |
| ccccc -> ssss; Cart Record Not Found. | A | User Error | Cart ccccc routed to Spur ssss. Conveyance record not found in database. Check validity of Cart ID and try again! |
| ccccc -> ssss; CHNS Record Not Found. | A | User Error | Cart ccccc routed to Spur ssss. Associated chain record not found in database. Check validity and try again. |

| Message | Type | Log/Display | Explanation/Action |
|---|---|---|---|
| ccccc -> ssss; Current Loc Not Defined | A | User Error | Cart ccccc routed to Spur ssss. Current Location is not in translation table. **Call Systems Administrator for appropriate action.** |
| ccccc -> ssss; Destination Down | A | User Error | Cart ccccc routed to Spur ssss. Select another destination or **call Systems Administrator**. |
| ccccc -> ssss; Destination Inactive | A | User Error | Cart ccccc routed to Spur ssss. Selected Destination is Inactive. Either set destination to active or select another destination |
| ccccc -> ssss; Destination Locked | A | User Error | Cart ccccc routed to Spur ssss. Select another destination or **call Systems Administrator to unlock specified destination.** |
| ccccc -> ssss; Destination Not Defined | A | User Error | Cart ccccc routed to Spur ssss. Destination not in database. Select valid destination or **call Systems Administrator for appropriate action.** |
| ccccc -> ssss; Destination Offline | A | User Error | Cart ccccc routed to Spur ssss. Selected Destination is Offline. Either turn destination online or select another destination |
| ccccc -> ssss; Illegal Cage Cart Move | A | User Error | Cart ccccc routed to Spur ssss. Attempted to move cage cart ccccc to destination spur ssss. Check Cart ID and destination for illegal combination. |
| ccccc -> ssss; Invalid Destination | A | User Error | Cart ccccc routed to Spur ssss. Verify destination and try again. **If problem continues, call Systems Administrator** |
| ccccc -> ssss; Invalid Priority | A | User Error | Cart ccccc routed to Spur ssss. Priority not ‘S’, ‘1’, ‘2’, ‘3’ or blank. Enter proper priority. **If problem continues, call Systems Administrator.** |
| ccccc -> ssss; MOVE Record Not Found | A | User Error | Cart ccccc routed to Spur ssss. Move Record in database does not exist. Check for valid control number. If correct control number, **call Systems Administrator to create move record.** |
| ccccc -> ssss; No Spur Associated w/function | A | User Error | Cart ccccc routed to Spur ssss. Verify correct function. Specify correct function or select another function or specific spur. **If necessary, call Systems Administrator** |

| Message | Type | Log/Display | Explanation/Action |
|---|---|---|---|
| ccccc -> ssss; No Work Stat'n Available | A | User Error | Cart ccccc routed to Spur ssss. There is no workstation available within the function specified. Select another destination or **call Systems Administrator**. |
| ccccc -> ssss; Path Not Available | A | User Error | Cart ccccc routed to Spur ssss. Some loop and/or transfer(s) are unavailable at the present time. Wait a short time and try again. **If condition continues, call Systems Administrator.** |
| ccccc -> ssss; Spur Only Destination | A | User Error | Cart ccccc routed to Spur ssss. This destination must be addressed by spur number only. |
| ccccc -> ssss; STOP you MUST run UCT | A | User Error | Cart ccccc routed to Spur ssss. Trying to send other than stand cart to M/H Pack. If actual cart type is "Standard" then run "Update Cart Type" to inform the system of the proper cart type. |
| ccccc -> ssss; Work Station Unavailable | A | User Error | Cart ccccc routed to Spur ssss. Workstation specified is unavailable at the present time. Wait a short time, select another destination or **call the Systems Administrator.** |
| ccccc -> sssssssss; Invalid Destination | A | User Error | Attempted to move cart ccccc to invalid destination sssssssss. Verify destination and try again. **If error persists, call Systems Administrator for appropriate action.** |
| ccccc is removed from a tt spur while being added to queue wwww | I | User | In order to add a cart to a queue it had to be removed from another queue. |
| ccccc missed its divert at Ssss | I | User | Notification that specified cart missed the specified spur as routed. |
| ccccc NOT routed from ssss | I | User Error | Unable to route cart ccccc from spur ssss. Refer to a previous message for reason and appropriate action. |
| ccccc queued to ECM | I | User | Notification of specified cart queued to Empty Cart Management. |
| Chain cccc doesn't belong at Workstation wwww | A | User Error Display | The CHNS record indicates that a workstation is locked but that workstation is considered unlocked or locked for a different chain ID. This conversation couldn't be completed- **See Administrator.** |

| Message | Type | Log/Display | Explanation/Action |
|---|---|---|---|
| Chain cccc is invalid | A | User Error Display | The given chain , which had been chosen to be aborted, doesn't exist in the ECS database. **See Administrator**. |
| Chain information removed from Workstation ssss | I | User | This message indicates that any workstations that are locked with a given chain ID are now unlocked. |
| Chain Record cnnn NOT Found | A | User Error | Chain record not found in database. Check validity and try again. |
| Chain safety override is on, so an Unlock Message will be sent | I | User | The requested action will be carried out despite its mismatch with the ECS database. If this is not desired then the chain safety override key of the ecs.ini should be reset to its default value. |
| Changes to ssss would leave functional work area ffff totally inactive | A | User Error Display | A workstation may not be made inactive if there doesn't exist another workstation in the same functional area which is both active and online.<br>If this workstation is desired to be inactive then ensure that some other workstation in this area meets the above criteria and try again. |
| Changing the M/H Queue Priority, Wkst ID wwww | I | User | The Towline Subcontroller has received a J85 from UI to modify the M/H Queue priority for workstation wwww. |
| Cnnnn destination dest [ ] | I | User | PLC has responded to request for cart information with a known destination. |
| Cnnnn destination dest unknown | | User | PLC has responded to request for cart information with an unknown destination. |
| Connected to Database | I | User | Notification of successful connection to the database. |
| Connected to NEW Database via fnConnectToDB | | User | Use method in fnConnectToDB to connect to the ECS Database, NEWDB |
| Control Number ccccc is invalid | I | User | The control number chosen to be released from an Intradepot Queue spur is invalid (not found in the ECS database). |
| Control numbers differ for WKST and CONV records | I | User Error Display | The Control Numbers in the WKST record and the CONV record are different. The J79 Message will not be processed. |
| CORPAL - ccccc at: ssss - moving bad CN/Dest pallet to ssss | I | User | Notification of Cart ID ccccc at Spur ssss being moved to Spur ssss with a bad control number associated with it. |

| Message | Type | Log/Display | Explanation/Action |
|---|---|---|---|
| CORPAL - MOVCRT failed - status = nn at ssss | A | User Error | MOVCRT failed to route the cart at Spur ssss returning status nn. **Call Systems Administrator for appropriate action.** |
| Database Connection Problem | I | User Error | A database operation has been attempted when there is currently no connection to the database. The software will attempt to re-establish a connection. |
| Database Error: PLCS Records not found | A | User Error | This message indicates that the PLCS record for a given PLC could not be found. **See Database Administrator**. |
| Decrementing Wkst In Count for wwww | I | User | Towline is decrementing the In Counts for the workstation wwww. |
| Dest Wkst ssss and its previous loop counts NOT adjusted | A | User Error | In count for spur ssss was not incremented and the associated loop count was not decremented. The counts may need to be adjusted. |
| Dest Wkst ssss count enroute NOT incremented | A | User Error | Enroute count for destination workstation ssss was NOT incremented. Workstation counts may need to be adjusted. |
| Dest Wkst ssss in and enroute counts NOT adjusted | A | User Error | Destination workstation ssss in and enroute counts were not adjusted. Check counts and make adjustments as necessary. |
| ECM01TOW01017T03ssssttccccc | I | User | Notification of T03 Message sent to Empty Cart Management where ssss is present location, tt is type of cart and ccccc is cart ID. |
| ECS Database Connection Problem | I | User Error | A database operation has been attempted when there is currently no connection to the database. The software will attempt to re-establish a connection. |
| Entering fnFACMHC: Processing an Update M/H Pack Lane Counts at wwww | I | User | The Towline Subcontroller has received a J97 message to update counts at the M/H Pack Lane wwww. |
| Entering fnFACMHQ: Processing Update M/H Pack Queue For wwww | I | User | The Towline Subcontroller has received a J95 Message from UI to Update the Queue information for Workstation wwww. |

| Message | Type | Log/Display | Explanation/Action |
|---|---|---|---|
| Entering fnLMHCRT for ccccc ; CN:nnnnn; Chain:xxxx; Source Wkst:ssss; Dest Wkst:dddd | I | User | The M/H Queue Manager is entering the function fnLMHCRT to process the move of cart ccccc from the source workstation ssss to the destination workstation dddd. The control number associated is nnnnn and the chain ID is xxxx. |
| Entering fnLMHDSL, cart: ccccc from wwww; chain: nnnn | I | User | The M/H Queue Manager has entered the function fnLMHDSL to process the cart ccccc which is at workstation wwww and is part of chain nnnn. |
| Entering fnLMHNRP | I | User | The M/H Queue Manager has entered the function fnLMHNRP. |
| Entering fnLMHRPQ | I | User | The M/H Queue Manager has entered the function fnLMHRPQ. |
| Entering fnLMHRSC_DB for cccc | I | User | The M/H Queue Manager is entering the function fnLMHRSC_DB to update the database for the chain ID cccc. |
| Entering fnLMHRSC_GC | I | User | The M/H Queue Manager has just entered the function fnLMHRSC_GC. |
| Entering fnLMHTSL, Testing for Space on the M/H Pack Lanes. | I | User | The M/H Queue Manager has entered the function fnLMHTSL. It is checking the counts for the workstations to see if any have room for another cart. |
| Entering fnLMHUGC | I | User | The M/H Queue Manager has just entered the function fnLMHUGC. |
| Entering TowDataMan Constructor | I | User | Starting to initialize. |
| Error Adding Move Record xxxxx | A | User Error | Notification of error trying to add specified move record. **Notify Systems Administrator**. |
| Error Updating Move Record xxxxx | A | User Error | Notification of error trying to update specified move record. **Notify Systems Administrator**. |
| Error:Unable to set the next workstation in area [aaaa] | A | User Error | Probable database error **Call system support.** |
| Exiting TowDataMan Constructor | F | User | Cannot initialize. **Contact Systems Administrator.** |
| fnFACMHC - Attempt to remove existing Chain ID cccc for wwww | I | User Error Display | In processing a J97 Message from UI, the Towline Subcontroller has determined that the chain to be removed (cccc) for the workstation wwww is an existing chain in the CHNS table that can not be removed. |

| Message | Type | Log/Display | Explanation/Action |
|---|---|---|---|
| fnFetWrk: Cannot process <Vxxx>as a Towline Workstation | I | User | The workstation, Vxxx, is not a towline workstation. |
| fnFetWrk: Invalid Active Item Pallet Area: xxxx | I | User Error | The active item pallet aisle is either a character, less than 0, or greater than the highest numbered active item pallet aisle. |
| fnFetWrk: Invalid Bin Aisle: xxxx | I | User Error | The rack bin is either a character, less than 0, or greater than the highest numbered bin aisle.<br>The bin aisle is not a configurable number because the addition of bin aisles would require major changes to the building. |
| fnFetWrk: Invalid Bulk Area: xxxx | I | User | The active item bulk location is either a character, less than 0, or greater than the highest numbered active item bulk location. |
| fnFetWrk: Invalid Rack Aisle: xxxx | I | User Error | The rack aisle is either a character, less than 0, or greater than the highest numbered rack aisle as specified in ECS initialization file (ecs.ini)<br>The maximum rack aisles is configurable in anticipation of the Rack Addition. |
| fnGetCcNo - No PARM record found | A | Error | Notification of error trying to read parameter record. **Notify Systems Administrator**. |
| fnLcalss: [Sxxxx] has changed to FAULTED | I | User | The status for this spur has changed to FAULTED. |
| fnLcalss: [Sxxxx] has changed to OFFLINE | I | User | The status for this spur has changed to OFFLINE. |
| fnLcalss: [Sxxxx] has changed to ONLINE | I | User | Spur, Sxxxx has changed to ONLINE. |
| fnLcalss: [Sxxxx] is EMPTY | I | User | Spur, Sxxxx, is now EMPTY. |
| fnLcalss: [Sxxxx] is FULL | I | User | Spur, Sxxxx, is now FULL. |
| fnLcalss: [Sxxxx] is LOCKED at the PLC Level | I | User | Spur, Sxxxx, is locked at the PLC level. |
| fnLcalss: [Sxxxx] is not EMPTY | I | User | Spur Sxxxx, is not longer EMPTY (i.e., not full) |
| fnLcalss: [Sxxxx] is not FULL | I | User | Spur Sxxxx, is not longer FULL (i.e., empty or not full) |
| fnLcalss: [Sxxxx] is UNLOCKED at the PLC Level | I | User | The PLC has unlocked spur, Sxxxx |

| Message | Type | Log/Display | Explanation/Action |
|---|---|---|---|
| fnLcalss: [Sxxxx] Workstation does NOT have a chain ID | I | User | The PLC has unlocked spur, Sxxxx, but ECS does not believe this workstation was locked. |
| fnLcalss: [Sxxxx] Workstation remains chained - [Cxxxx] | I | User | This workstation Sxxxx, remains locked at the PLC level. |
| fnLcalss: S043 is now ONLINE | I | User | Until the new Towline loop, S043, comes on line this message will appear. It needs always be online for routing in the 24 logical loop model. |
| fnLMH - Begin normal release by priorities | I | User | The M/H Queue Manager will begin to process the queues by normal release. There had been no chains to be released and no priority overrides. |
| fnLMH - MHP Override Structure Not Initialized; Message Not Processed | A | Error<br>User | The M/H Queue Manager is attempting to initialize an array containing the MHP workstations with the workstation override code. A database error has probably occurred, preventing the initialization to occur. This error message will stop the M/H Queue Manager from processing. **Contact the Systems Administrator for assistance**. |
| fnLMH - Not Enough Room - Sleeping Fitfully | I | User | The M/H Queue Manager has been awakened, however there is no room available. The M/H Queue Manager has now concluded processing until the next time it is awakened. |
| fnLMH - OOPS, Walked outside of strRrobin | A | Error<br>User | The area 'DCCM' is not setup in the database as a round robin area. Check the FUNC table and modify as needed. **For assistance, contact the Systems Administrator.** This error message will stop the M/H Queue Manager from processing. |
| fnLMH - OOPS, Walked outside of strTowStatus | A | Error<br>User | The towline PLC 05 has an unknown status or is not found in the ECS Database. Check the PLCS table in the database. **For assistance, contact the Systems Administrator.** This error message will stop the M/H Queue Manager from processing. |
| fnLMH - Workstation is not active and online | I | User | Notification of workstation not being logically active and physically online. |

| Message | Type | Log/Display | Explanation/Action |
|---|---|---|---|
| fnLMHCIQ -- CONV_CONVEY_ID: ccccc NOT AT wwww; IS at xxxx | I | User | The M/H Queue Manager is in the function fnLMHCIQ and has determined that the cart ID ccccc is not at the workstation wwww but rather has a present location of xxxx. |
| fnLMHCIQ -- CONV_CONVEY_ID: ccccc ; CHAIN_ID: xxxx at wwww | I | User | The M/H Queue Manager is in the function fnLMHCIQ and has determined that the cart ID ccccc with the chain xxxx is presently at the workstation wwww. |
| fnLMHDCM - Processing Chain ID: cccc All Here | I | User | The M/H Queue Manager is within the function fnLMHDCM and has processed all carts in the chain xxxx. |
| fnLMHDCM - Set Lock Flag wwww With Chain ID = cccc | I | User | The M/H Queue Manager is within the function fnLMHDCM and is locking the workstation wwww for the chain ID cccc. |
| fnLMHDCM: ccccc CONV Record Not Found | I | Error<br>User | The M/H Queue Manager is within the function fnLMHDCM and has failed in the attempt to read the database (CONV table) for the conveyance ID ccccc . |
| fnLMHDCM: fnFetWrk Failed: wwww | A | Error<br>User | The M/H Queue Manager is within the function fnLMHDCM and has called fnFetWrk with an unknown workstation (wwww). If the workstation is indeed a valid workstation, then check the WKST record in the ECS database to make sure the workstation ID is included. **For assistance, contact the Systems Administrator.** |
| fnLMHDCM: Not All Carts Have Arrived For cccc; No Processing | I | User | The M/H Queue Manager is within the function fnLMHDCM. Not all the carts for chain ID cccc have arrived to the workstation so no further processing will occur at this time. |
| fnLMHDCM: xxxx CHNS Record Not Found For Cart ccccc | I | Error<br>User | The M/H Queue Manager is within the function fnLMHDCM and has failed in the attempt to read the database (CHNS table) for the chain ID xxxx. |
| fnLMHDSL - Enuf Room at wwww; Chain: cccc | I | User | The M/H Queue Manager is in the function fnLMHDSL and has found enough room for the chain cccc at the workstation wwww. |

| Message | Type | Log/Display | Explanation/Action |
|---|---|---|---|
| fnLMHDSL - Not Enuf Room at wwww; Chain:cccc; Spaces:x | I | User | The M/H Queue Manager is in the function fnLMHDSL and has not found enough room at the workstation wwww for the chain cccc. There are only x spaces available. |
| fnLMHDSL: Begin Chain Processing - cccc | I | User | The M/H Queue Manager is beginning to process the chain cccc within the function fnLMHDSL. |
| fnLMHDSL: CHNS Record: cccc not found in database | I | User | The M/H Queue Manger is in the function fnLMHDSL and has not been able to read the chain record for chain cccc. |
| fnLMHDSL: Found Room for cccc at wwww | I | User | The M/H Queue Manager has found space for the cart cccc at the workstation wwww. |
| fnLMHNRP Walked Out of strRrobin | A | Error<br>User | The MHP areas area not setup in the database as a round robin area. Check the FUNC table and modify as needed. **For assistance, contact the Systems Administrator.** This error message is generated within the fnLMHNRP function. |
| fnLMHNRP Workstation: wwww; Pri:p | I | User | The M/H Queue Manager is within the function fnLMHNRP and is attempting to determine if the workstation wwww with priority p has a cart in the queue. |
| fnLMHRPQ - fnFetWrk Failed wwww | A | Error<br>User | The M/H Queue Manager is within the function fnLMHRPQ and has called fnFetWrk with an unknown workstation (wwww). If the workstation is indeed a valid workstation, then check the WKST record in the ECS database to make sure the workstation ID is included. **For assistance, contact the Systems Administrator.** This error message will stop the M/H Queue Manager from processing. |
| fnLMHRSC_DB: cccc CHNS Record Not Found | I | Error<br>User | The M/H Queue Manager is in the function fnLMHRSC_DB and has not been able to read the ECS Database record for the chain ID cccc in the table CHNS. |

| Message | Type | Log/Display | Explanation/Action |
|---|---|---|---|
| fnLMHRSC_DB: ccccc CONV Record Not Found | I | Error<br>User | The M/H Queue Manager is in the function fnLMHRSC_DB and has not been able to read the ECS Database record for the conveyance ID ccccc in the table CONV. |
| fnLMHRSC_DB: Chain cccc has already been released | I | User | The M/H Queue Manager is in the function fnLMHRSC_DB and has determined that the chain cccc has already been released. (The ECS Database has the CHNS_REL_IND set to 'Y' for the chain cccc.) |
| fnLMHRSC_DB: Conveyance ccccc at Invalid Wkst wwww | I | Error<br>User | The M/H Queue Manager is in the function fnLMHRSC_DB and has found that the conveyance ID ccccc is at the workstation wwww. |
| fnLMHRSC_DB: LMH has not assigned wwww to CHNS: cccc | I | User | The M/H Queue Manager is in the function fnLMHRSC_DB and has determined that the chain cccc is not assigned to the workstation wwww. |
| fnLMHRSC_DB: Not enough room to release cccc to wwww | I | User | The M/H Queue Manager is in the function fnLMHRSC_DB and has determined that there is not enough room at the workstation wwww to release the chain cccc. |
| fnLMHRSC_DB: Release Chain is True; ssss to dddd | I | User | The M/H Queue Manager is in the function fnLMHRSC_DB. The function will release a chain from source workstation ssss to the destination workstation dddd. |
| fnLMHRSC_DB: wwww WKST Record Not Found | I | Error<br>User | The M/H Queue Manager is in the function fnLMHRSC_DB and has not been able to read the ECS Database record for the workstation wwww. |
| fnLMHRSC_GC: fnFetWrk Failed wwww | A | Error<br>User | The M/H Queue Manager is within the function fnLMHRSC_GC and has called fnFetWrk with an unknown workstation (wwww). If the workstation is indeed a valid workstation, then check the WKST record in the ECS database to make sure the workstation ID is included. **For assistance, contact the Systems Administrator.** |

| Message | Type | Log/Display | Explanation/Action |
|---|---|---|---|
| fnLMHTSL: Found Room for ccccc at wwww | I | User | The M/H Queue Manager is within the function fnLMHTSL and has found available room for the cart ccccc at workstation wwww. |
| fnLMHUGC - Locking wwww WITH cccc | I | User | The M/H Queue Manager is in the function fnLMHUGC and is locking the workstation wwww with the chain cccc. |
| fnLMHUGC - Turning Prior Override Off At wwww | I | User | The M/H Queue Manager is in the function fnLMHUGC and is turning off the override switch for the workstation wwww, since processing of it is now complete. |
| Found Locked Lane wwww For Chain cccc | I | User | The M/H Queue Manager has found a workstation wwww that is locked for the chain ID cccc. |
| Illegal Cage Cart Move; cccc to ssss | A | User Error | Attempted to move cage cart ccccc to destination spur ssss. Check Cart ID and destination for illegal combination. |
| Initialization File Error | F | User | Cannot initialize. **Contact Systems Administrator.** |
| Invalid Cart ID ccccc (enroute) | I | User Error Display | The chosen cart ID is invalid to have its cart type updated because it is enroute. |
| Invalid Character in Cart ID ccccc | I | User Error Display | The cart ID ccccc sent from the UI in a J95 Message has an invalid character c within in. |
| Invalid Dest Snnn; Cnnnn routed to Snnn | I | User Error | Towline destination was in discernable. The cart has been routed to the current loop redirect spur. |
| Lane is inbound only - choose another | A | User Error Display | The Intradepot pallet conveyor lane chosen is inbound only. Choose another lane (which is outbound) or set the given lane to be outbound and reinitiate this conversation. |
| Lane x is an invalid lane for the IDOC workarea | A | User Error Display | The chosen lane in the Release from Intradepot Queue screen is invalid. |
| Logging Turned Off by [ ] | I | User | Notification that logging to the User Log has been turned off by specified user. |
| Logging Turned ON by [ ] | I | User | Notification that logging to the User Log has been turned on by specified user. |

| Message | Type | Log/Display | Explanation/Action |
|---|---|---|---|
| Loop nn In Count NOT incremented | I | User Error | Main loop nn in count not adjusted when cart entered it. Loop counts may need to be adjusted. |
| Loop ss count in NOT incremented | I | User Error | Main Loop ss in count was NOT incremented when cart entered it. Loop counts may need to be adjusted. |
| Loop ss in count NOT decremented | I | User Error | Main Loop ss in count was NOT decremented when cart left it. Loop counts may need to be adjusted. |
| Lss - Processing PLC XFER Loop Status Message ('005') For Zone [ ] | I | User | Informational message indicating that ECS has received a Towline status message from the PLC. |
| MID - cccc missed its divert at ssss | I | User Error | Received PLC type “002” message that cart cccc missed its divert at Spur ssss". |
| MID - PARM Table NOT Available; Bleed Off switches assumed Zero | A | Error | Database Parameter Record could not be opened. Bleed off of empty carts to other areas will not occur. **Call Systems Administrator for appropriate action.** |
| Move Empty ccccc from Ssss to Ssss | | User | Anglicized version of current SMM/M01 message |
| Move N cart chain Cccc from Ssss to Ssss w/Pri X | | User | Anglicized version of current SMM/M01 message |
| -n IC at ssss DEP | I | User | N carts departed spur ssss; in count for spur ssss was decremeted by n. |
| No carts found in priority p queues | I | User | The M/H Queue Manager has not found a cart in the queue for workstation of priority p. |
| No carts have records associated with chain cccc | I | User | This message indicates that no carts have records that are related to the given chain. |
| No Carts in Queue wwww | I | User Error Display | The cart to be released thinks it is at queue wwww. However, the QUES table in the database does not have any carts in it. The J79 message will not be processed. |
| No Queue Data Entered by uuuuu | A | User Error Display | This message indicates that no Intradepot Queue information was given in a message sent to reorder. Error checking within the UI program should make this message unlikely to be observed. |
| No workstation records contained chain cccc information | I | User | This message indicates that no workstations in the ECS database were considered locked with the given chain. |

| Message | Type | Log/Display | Explanation/Action |
|---|---|---|---|
| No, Most Space s Chain Len c --> Did Not Modify CHNS | I | User | The M/H Queue Manager did not find enough space s for a chain of length c. It will not update the CHNS table. |
| Nonexistent or Invalid Move Record xxxxx For Cart ccccc | I | User Error Display | The control number in the WKST record (xxxxx) for the cart ID ccccc does not have a corresponding MOVE record in the ECS Database. The J79 Message will not be processed. |
| Only first cart within each queue may be released | I | User Error Display | The cart to be released is not the first cart in the queue. Therefore the cart can not be released, and the J79 message will not be processed. |
| Oracle Error Occurred: xxxxxxxxxxxxxxxxxxxxxxx | I | User Error | A miscellaneous oracle error has occurred when an oracle operation has been attempted on the database. (xxxxxxxxxxxxxxxx represents the oracle error message.) |
| PARM Table NOT Available; Logging switches assumed OFF | A | Error | Database Parameter Record could not be opened. All logging switched area assumed to be off to prevent log files overflowing. **Call Systems Administrator for appropriate action.** |
| PLC Zone [x] was not shutdown properly, x=1-6 | I | User Error | When the Traffic Controller sent a shutdown request, this PLC was not in an OFFLINE status. |
| PLC zone 0x can't be started because it is in Manual mode | I | User Error Display | The Towline Subcontroller is processing an A01 to turn the PLC x to an online mode. However, the PLC is in a manual mode and can not be turned to online from that mode. |
| PLC zone 0x can't be started because it is in Online xxxxxxxx mode | I | User Error Display | The Towline Subcontroller is processing an A01 to turn the PLC x to an online mode. However, the PLC is in an invalid startup mode of xxxxxxxx. |
| PLC zone 0x can't be started because it is in Semi-Auto mode | I | User Error Display | The Towline Subcontroller is processing an A01 to turn the PLC x to an online mode. However, the PLC is in a semi-auto mode and can not be turned to online from that mode. |
| PLC zone 0x can't be started because it is in Shutdown mode | I | User Error Display | The Towline Subcontroller is processing an A01 to turn the PLC x to an online mode. However, the PLC is in a shutdown mode and can not be turned to online from that mode. |

| Message | Type | Log/Display | Explanation/Action |
|---|---|---|---|
| PLC Zone 'xx' has been requested to reset its file | I | User | This message describes the request and requestor for resetting a specific PLC's file. |
| PLC Zone 'xx' is invalid | A | User Error Display | This message indicates that the PLC zone chosen in a conversation is invalid. This should be corrected and the conversation repeated. |
| PLC Zone 'xx' is On-line; Cannot Run Conversation | A | User Error Display | This message indicates that a particular conversation can only be run when a given PLC is offline. Wait until a PLC goes offline and repeat this conversation, if desired. |
| PLC0525030002006202150001 | I | User | PLC Routing Message (sample, actual message will vary) where:<br>PLC = PLC Message,<br>052 = PLC Number,<br>5 = Data Highway,<br>03 = Message Type (MOVE),<br>0002 = Cart Number,<br>0062 = PLC next destination (may be final or intermediate spur),<br>0215 = present location (auto release if present, otherwise “0000”),<br>000 = chain number,<br>1 = number in chain (2, 3 or 4; if chain number is “000”, the number in the chain is 1). |
| PLCpppz06s000 | I | User | A PLC zone has been asked to go Online of Offline. |
| Pri:p; found ccccc at wwww; CHNS:xxxx | I | User | The M/H Queue Manager has found a cart (ccccc ) at workstation (wwww) which has a priority of p and a chain number of xxxx. |
| Priority [x] undefined; MHP4 assigned | A | User Error | Specified priority x is not ‘S’, ‘1’, ‘2’ or ‘3’. If higher priority is required, the cart must be moved to the appropriate queue and the queue contents adjusted via User Interface conversation. |
| Processing PLC XFER Loop Status Message ('005') For PLCS pp | I | User | The Towline Subcontroller has received a PLC XFER Loop Status Message (005) from PLC pp. |

| Message | Type | Log/Display | Explanation/Action |
|---|---|---|---|
| Processing Release Request For Cart ID ccccc | I | User | The Towline Subcontroller has received a J79 Message from UI to release the cart ccccc . |
| Processing Request To Shutdown Towline Software | I | User | Notification of processing shut down procedure for Towline Subsystem. |
| Processing Towline Reinitialization String | I | User Error | At Medium/Heavy Queues, this message indicates that fnLMH (M/H Manager) processing has been completed. |
| QEMPTY - ccccc record Not Found | A | User Error | In an attempt to queue cart ccccc to empty cart management, an error was encountered in trying to read the cart record in the database. Verify cart number and try again. **If error persists, notify Systems Administrator.** |
| QmCAW - Returned from fnLMH | I | User | At Medium/Heavy Queue, this message indicates that fnLMH (M/H Queue manager) processing has been completed. |
| QmCAW - Waking LMH | I | User Error | At Medium/Heavy Queue, all initial validation is completed by the Cart At Workstation process and Medium/Heavy Queue Manager is called to continue processing. |
| QUED not cleared from S29B | | User Error | Database workstation record not updated. **Contact Systems Administrator for assistance.** |
| Re-Create Chain Cart Move; ccccc from Ssss to Ssss | I | User | Anglicized version of current SMM/M01 |
| Release ccccc from Ssss to Ssss carrying XXXXX | I | User | Anglicized version of current SMM/M01 |
| Requesting Towline Spur Status Bitmap for PLC x | I | User | The Towline Subcontroller is responding to an 08 message and is requesting the bitmap status from PLC x. |
| RIQ failure - | I<br>A | User Error Display | The release from Intradepot Queue screen has failed for the specified reason. |
| RIQ failure -Moving cart [ ] from [ ] to S194 | I | User Error Display | By UI action a cart at Intradepot Queue has been moved to redirect spur for reidentification. |
| RIQ success - Moving cart [ ] from [ ] to [ ] | I | User Display | By UI action a cart has been moved to its destination. |

| Message | Type | Log/Display | Explanation/Action |
|---|---|---|---|
| RIQ-The chosen control number appears in multiple conveyance records. | I | User Error | This message indicates a database error arising from multiple, unchained conveyances having the same control number. |
| RIQ-The first cart ID found will be moved. | I | User Error | This message indicates that due to an error situation the first cart ID found will be moved. |
| S29B default dest not set to 'QUED' | I | User Error | An error was encountered attempting to read workstation S29B; therefore, the system is not informed that the cart at S29B is queued for empty cart management. |
| SglCrt - PARM Table NOT Available;<br>Logging switches assumed OFF | A | Error | Database Parameter Record could not be opened. All logging switched area assumed to be off to prevent log files overflowing. **Call Systems Administrator for appropriate action.** |
| Shutdown Towline Software | I | User Error | This message indicates that an ECS Internal Message, A09, has been received to shutdown the Towline software. |
| Spur ssss already belongs to workarea ffff | A | User Error Display | The given inspection spur will not have its functional area changed because it already belongs to the desired area. |
| Spur ssss is an illegal destination for Warehouse ww | A | User Error Display | Only a few EDC destinations are valid for material destined for outlying warehouses and the chosen spur was not on this list. **Notify administrator about this problem.** |
| Spur ssss now belongs to Workarea ffff, instead of ffff | I | User | This message indicates that an inspection spur has been shifted to a new area. |
| Src Wkst ssss and its 1st loop counts NOT adjusted | A | User Error | In count for spur ssss was not decremented and the associated loop count was not incremented. The counts may need to be adjusted. |
| Src Wkst ssss count in NOT decremented | A | User Error | Workstation ssss database record was NOT updated with decremented count. Workstation in counts may need to be updated. |
| ssss counts not saved | A | User Error | Medium/Heavy Pack Lane ssss in counts were not saved at shutdown. Counts may have to be reset after startup. |
| Standard Movement Message (SMM) | I | User | See Appendix A - STANDARD MOVEMENT MESSAGE (SMM) FORMAT/RULES |

| Message | Type | Log/Display | Explanation/Action |
|---|---|---|---|
| Status response received from PLC x with an unknown status of s | I | User Error | The Towline Subcontroller is responding to an 08 message to change PLC x to a new status. However, the new status is an unknown status s so the message will not be processed. |
| Sum of counts is greater than maximum allowed at wwww | I | User Error Display | The UI has sent a J97 Message to the Subcontroller to update counts at Workstation wwww. However, the total of in counts and enroute counts must be <= 6, and in this case the total is greater than 6. The message will not be processed. |
| The contents of spur has been released including: [ ] | I | User | An entire Intradepot Queue spur has been released by UI. |
| The requested status [s] for workstation wwww is invalid | A | User Error Display | A workstation has been requested to be changed to an invalid logical status (other than 'A' or 'I').<br>This is not a user-editable field so it is indicative of a program error. **Notify administrator.** |
| The requested upload type, tt, is invalid | A | User Error Display | A file of an unknown type has been requested. The probable cause is an error in the UI program. **Notify administrator.** |
| The status of PLC x has been changed to s | I | User | The Towline Subcontroller is responding to an 08 messages and is changing PLC x status to the new status of s. |
| To release a middle cart of [ ] with control number [ ] from spur [ ] carts are being recirculated | I | User | A UI release from Intradepot Queue cart movement has been set in motion. |
| TOW01USEXXJ77Control Number (or spur ID) | I | User | This message contains the actual message which is used to release a cart or entire spur of carts from an Intradepot Queue. |
| TOW01USExxT27SpurCartID Array | I | User | This is the actual message received by Towline to reorder an Intradepot Queue spur. |
| TowDataMan constructor: ecs.ini Initialization failed | A | Error | The ECS.INI file has not been able to be opened or read. Make sure the file is found in the proper location and contains the appropriate information. **For assistance, contact the Systems Administrator.** |
| Towline Error Logging Enabled from Constructor | I | Error | Notification of Error Logging being enabled. |

| Message | Type | Log/Display | Explanation/Action |
|---|---|---|---|
| Towline Logging Turned OFF by uuuuu | I | User | Notification that logging to the User Log has been turned OFF by specified user. |
| Towline Logging Turned ON by uuuuu | I | User | Notification that logging to the User Log has been turned ON by specified user. |
| Towline Software Shutting Down | I | Display | The Towline Subcontroller is shutting down because all the PLCs have responded that they are now offline. |
| Towline User Logging Disabled From Constructor | I | User | Notification of User Logging being disabled. |
| Towline User Logging Enabled from Constructor | I | User | Notification of User Logging being enabled. |
| Towline::TimeOut complete | I | User | Notification of completion of TIMEOUT. |
| Transfer ccccc from Ssss to Ssss | I | User | Anglicized version of current SMM/M01 message. |
| Turn ON Towline User Logging | I | User | Anglicized version of current M01 message. |
| ty ccccc ploc->next->finl cntrl chns | I | User | Anglicized version of current message to the PLC |
| UldrCAW - Deleting Chain | I | User | At Medium/Heavy, all carts on chain have arrived at the unloading stations and the chain is no longer needed. |
| UldrCAW - Moving Pallet at " "S29A under 'LP' case - CN | I | User | This informational message indicates that the pallet load present has initiated the pallet move. |
| Unable to add ccccc to a queue - invalid cart ID | A | User Error | Make sure that the cart ID is valid by doing a conveyance inquiry. If it is valid then **see your Database Administrator**. |
| Unable to 'Find' Parm Table | A | Error | Database Parameter Record could not be opened. **Call Systems Administrator for appropriate action.** |
| Unable to process J93 Message with a type of [x] | I | User Error Display | The Towline Subcontroller has received a J93 (Fault Handling Cart Arrival) with an invalid message type of x. The Message will not be processed. |
| Unexpected Oracle error reading CONV, QUES tables | A | User Error | **If unexpected Oracle errors persist notify Database Administrator.** |
| Unexpected Oracle error while getting PLC status | A | User Error | This message indicates that the PLCS record for a given PLC could not be read successfully. **See Database Administrator.** |

| Message | Type | Log/Display | Explanation/Action |
|---|---|---|---|
| Unknown Error Code nnn | A | User Error | Specified Error Code nnn not in error message table (fnMovCrtErr). **Call Systems Administrator for appropriate action.** |
| Unlocked M/H Lane wwww, Chain cccc | I | User | The Towline Subcontroller has successfully unlocked the chain cccc from workstation wwww in the processing of a J97 Message. |
| Update of Counts Not Successful for wwww | A | User Error Display | The counts have not been updated in the database for workstation wwww in the processing of a J97 Message due to an internal error (or database problem). Further processing of the J97 Message will not continue. Check the logs and **Contact the Systems Administrator for assistance**. |
| Updating WKST wwww COUNT_IN From n To 0 | I | User | Towline is processing a J95 Message and is updating the workstation (wwww) counts from n to 0 because the carts in the queue have been removed for rebuilding the queue with the new information. |
| USExx initiated a Cart At Workstation for ccccc at ssss | I | User | UI has sent fault handling cart at workstation message. |
| USExx initiated Cart Arrival for ccccc at ssss | I | User | UI has sent fault handling cart arrival message. |
| USExx requests Cart Information for CCCCC in zone x | I | User | UI has requested cart information from a given Towline zone. |
| USExx requests upload of Cart Destination File for zone xx | I | User | This message describes the request and requestor for uploading a cart destination file from a PLC. |
| USExx requests upload of First Loop Tracking File for zone xx | I | User | This message describes the request and requestor for uploading a first loop tracking file from a PLC. |
| USExx requests upload of Second Loop Tracking File for zone xx | I | User | This message describes the request and requestor for uploading a second loop tracking file from a PLC. |
| USExxTOW01U12+Cart Information | I | User Display | This message is sent to a UI, reformatted and then displayed onscreen. |

| Message | Type | Log/Display | Explanation/Action |
|---|---|---|---|
| Warehouse [ww] is invalid | A | User Error Display | The warehouse which has been selected to have its EDC destination changed is invalid. This is probably indicative of a program error. |
| Warehouse ww material has a new EDC destination of Spur ssss | I | User | This message indicates that a warehouse has had its EDC destination successfully modified. |
| Warehouse ww material is already destined for ssss | A | User Error Display | Since the given warehouse is already associated with a given EDC destination it will not be changed. |
| Wkst ID wwww not found in WKST Record | I | User Error Display | The workstation ID (wwww) sent in the J85 Message from UI to modify the M/H Queue priority is not found with the ECS database. |
| WKST record wwww not found | A | User Error Display | The appropriate workstation record could not be found. Retry conversation and **if problem persists notify administrator**. |
| WKST wwww is EMPTY | I | User | The Towline Subcontroller has received a PLC XFER Loop Status Message (005) from the PLC. The workstation wwww has been set to empty in the workstation record and Towline RAM memory. |
| WKST wwww is FAULTED | I | User | The Towline Subcontroller has received a PLC XFER Loop Status Message (005) from the PLC. The workstation wwww has been set to faulted in the workstation record and Towline RAM memory. |
| WKST wwww is FULL | I | User | The Towline Subcontroller has received a PLC XFER Loop Status Message (005) from the PLC. The workstation wwww has been set to full in the workstation record and Towline RAM memory. |
| WKST wwww is LOCKED at the PLC Level - check the database | A | User Error | The Towline Subcontroller has received a PLC XFER Loop Status Message (005) from the PLC. The status for the workstation wwww is set to locked at the PLC level, but not according to the WKST database. **For assistance, contact the Systems Administrator.** |

| Message | Type | Log/Display | Explanation/Action |
|---|---|---|---|
| WKST wwww is OFFLINE | I | User | The Towline Subcontroller has received a PLC XFER Loop Status Message (005) from the PLC. The workstation wwww has been set to offline in the workstation record and Towline RAM memory. |
| WKST wwww is ONLINE | I | User | The Towline Subcontroller has received a PLC XFER Loop Status Message (005) from the PLC. The workstation wwww has been set to online in the workstation record and Towline RAM memory. |
| WKST wwww Not Found In Database | A | User Error Display | UI has sent a J95 Message to the Towline Subcontroller to update Queue information. However, the Workstation sent in the message is not found in the database. Check the database and logs to determine the cause of the problem. **For assistance, contact the Systems Administrator.** |
| Workstation wwww already has a status of [s] | I | User | This message indicates that a spur already had the logical status that it was requested to be changed to. |
| Workstation wwww associated with chain cccc is invalid | A | User Error Display | The workstation contained in the CHNS record is invalid. **See administrator**. |
| Workstation wwww can't have its logical status altered | A | User Error Display | Any workstation which doesn't belong to any functional area can't have its logical status altered. |
| Workstation wwww has its logical status changed to [s] | I | User | Based on a UI request, a workstation has been made active. |
| Workstation wwww is an invalid inspection spur | A | User Error Display | The chosen workstation isn't considered to be an inspection spur and can't therefore be added as one. This is probably indicative of a program error. |
| Workstation wwww is invalid | I | User Error Display | The workstation chosen on UI screen is invalid. If desired correct workstation repeat action. |
| Workstation wwww is unlocked | A | User Error Display | This workstation couldn't be unlocked because in the ECS database it is already considered unlocked. |
| wwww has a new queue of : … | I | User | The chosen Intradepot Queue has been reordered. |

| Message | Type | Log/Display | Explanation/Action |
|---|---|---|---|
| wwww is an invalid Intradepot Queue spur | I<br>A | User<br>Error | UI user has chosen an invalid spur. Choose a spur that belongs to the Intradepot Queue area. **If problem persist, contact Database Administrator for assistance.** |
| wwww is an invalid spur number | A | User<br>Error<br>Display | This message indicates that a Workstation ID could not be found in the database. If this workstation is correct, retry the chosen action **or see a Database Administrator.** |
| Yes, Most Space s Chain Length c Modify CHNS | I | User | The M/H Queue Manager found enough space s for a chain of length c. It is updating the CHNS table accordingly. |

Table T - 1-1 New Cumberland Towline Messages

# APPENDIX U AWOS MESSAGES

## 1.0 AWOS MESSAGES

The following table represents a list of all messages from the Awos subcontroller. The Message column represents the text of the message as displayed on the screen or log file. The Type column represents the type of the message: "I" indicates informational, "A" indicates action required and "F" indicates a fatal situation. Immediate action is required before further processing. Action and Fatal messages will include the action to be performed. The Log/Display column represents where the message will be displayed: the annotation of "Error" means the message will be logged to the error log, the annotation of "User" means the message will be logged to the message log, the annotation of "Own GUI" will be displayed as Alert Message on this Awos subcontroller's own process and the annotation of "Display" means the message will be displayed through the UI on the screen as an Alert Message. The Explanation/Action column represents the action the user will perform when the message is displayed or an explanation of a Type "I" message.

***Note:** Variable text, depending on circumstance, is enclosed within brackets, [ ]. The text within the brackets describes the item that will appear in the error message.

| Message | Type | Log/Display | Explanation/Action |
|---|---|---|---|
| * AWSxx has received a start/stop MHE message , this message type can't be processed by this Awos subcontroller | I | User/Error/ Display | Some Awoses , including Mechanicsburg and New Cumberland, don't provide this start/stop functionality. |
| * Invalid Scan - control number contains a non-alphanumeric character | I | User | A control number scan with an invalid character was received. Adjacent log messages may convey more information. |
| * Invalid Set Logging Flag [ ] by [ ] | A | User/Error/ Display | An attempt to turn logging on or off has resulted in an invalid message being sent. This may indicate a communications problem or a software bug. |
| A total of x entries have been read from the Recipient File | I | User | At software startup time, as many UI's as mentioned are currently on a start stop control panel screen. |
| A total of x entries have been saved to the Recipient File | I | User | When shutting down, this Awos subcontroller successfully wrote the specified number of entries to the recipient file. |

| Message | Type | Log/Display | Explanation/Action |
|---|---|---|---|
| Adding control number [] to the DSS Transmitted Queue | I | User | **(For Send Immediate Awoses only)** This message indicates that a control number was added to the queue of records transmitted to DSS. A control number of "*******" is a special placeholder for an invalid (and therefore NOT transmitted to DSS) record which must go in the queue to maintain ordering. |
| ALAN Record Not Found | I | User | An ALAN record was searched for, but couldn't be located in the database. This is logged only when the verbose logging level is used. |
| ALAN Record Not Found - unable to update | I | User | An ALAN record couldn't be found to be updated. If this problem persists notify the Database Administrator. |
| * An internal message was received with an invalid type of [ttt] | I | User/Error | Someone has attempted to use a UI screen with an AWOS subcontroller which doesn't support this particular functionality. This message will be ignored and no harm will be done. |
| An invalid start control panel message was received from xxxxx | I | User | A start/stop control panel message was received from an unknown source. This may indicate communication problems. |
| An Oracle database error was found while … of type: | I/A/F | User/Error | An Oracle of the type identified as occurring within the particular software module identified in this message. Depending on the particular database error reported no action may be needed, some error may need to be corrected, or a fatal error has occurred mandating that the software be shutdown. Reference the Oracle Server Messages Documentation book for a description of the error and Oracle's recommended solution. |
| An unknown message type has been received | I | User/Error | **(Tracy Only)** An unknown message type has been received from the PLC. |
| A tare weight of www.ww pounds is used for this AWOS subcontroller. | I | User | This is the tare weight used by this tare-performing AWOS subcontroller. |

| Message | Type | Log/Display | Explanation/Action |
|---|---|---|---|
| AWOS config file not found | F | Own GUI | The required "AWSxx plc.cfg" file couldn't be located. This fatal error will cause this Awos subcontroller to shut down. Locate the proper version of this file and place it in the startup directory of this subcontroller. Contact Software Maintenance if a copy of this file cannot be located. |
| AWOS Record Not Found- unable to update | I | User | An AWOS record couldn't be found to be updated. The absence of this record may result in an otherwise valid package being routed to a reject lane. |
| AWOS station x is changed to [] scan mode | I | User | **(Tracy Only)** The PLC has reported a scan mode change to a valid scan mode (either handheld, overhead, or null). |
| AWOS station x remains in [] scan mode | I | User | **(Tracy Only)** The PLC has reported a scan mode change that matches the previously existing mode. There is no resulting change. |
| Awos to DSS: … | I | User | This is an M02 message being logged. It contains information about a package including control number, AWOS station number, weight, and (optionally) length, width and height. |
| Awos to Fairbanks: =# (restarting conveyor x) | I | User | This message tells the Fairbanks to restart its conveyor. It is sent after an expected Dimension and Weight message is received or a User Interface- MHE menu- Workstation Control Message is sent for this Awos station |
| Awos to Fairbanks: =@ ( host is ready for next transaction for station x) | I | User | This message tells the Fairbanks that the Awos subcontroller is expecting a dimension and weight transaction. It is sent after a control number scan is performed. |
| Awos to PLC: … | I | User | This message is either a lane assignment message or other message used at a particular Awos site. Refer to the ECS Interface Design Document (IDD) for the exact format used at each site |

| Message | Type | Log/Display | Explanation/Action |
|---|---|---|---|
| Awos to UI: … | I | User | This message is a response to a particular User Interface action. Additionally, adjacent log messages may clarify the message being sent. Refer to the section in this User Manual containing ECS Internal messages for a description of the particular message type being logged. |
| AWSxx does not utilize tote default weight | I | User/Error/ Display | This Awos subcontroller doesn't provide a taring function for tote weight so the Set Tote Weight UI screen can't be used. |
| AWSxx doesn't have a station numbered xx to be started or stopped | I/A | User/Error/ Display | A UI Workstation Control Screen has read the ini to find the total number of workstations and a workstation found by this screen is not considered valid by the Awos Subcontroller. Find the total number of Awos Stations for this Awos subcontroller and make sure it matches the workstations available through the Workstation Control Screen. |
| AWSxx is shutting down | I | User | An Awos subcontroller has shut down. |
| AWSxx is Starting Up | I | User | An Awos subcontroller has started up. |
| AWSXX Shutting Down by request of USExx | I | User/Error | The Awos subcontroller is shutting down because of a UI request. |
| Based on the new scan/weight, package ccccc is treated as not in a tote. | I | User | No tote scan was received so the given package was treated as not being in a tote. |
| Because consecutive CN scans are received a lane assignment message will be sent for the first scan | I | User | **(For Send Immediate Awoses only)** For AWOSes that do talk to a plc but don't have a downstream scanner consecutive control number scans have been received. In order to maintain a queue with the PLC a send package to reject lane message is sent for the first package. |
| Because consecutive weights are received lane assignment message will be sent for the first weight | I | User | **(For Send Immediate Awoses only)** For AWOSes that do talk to a plc but don't have a downstream scanner consecutive control number scans have been received. In order to maintain a queue with the PLC a send package to reject lane message is sent for the first package. |

| Message | Type | Log/Display | Explanation/Action |
|---|---|---|---|
| Because lane lll is full package is being sent to a reject lane | I | User/Error | The assigned lane is full and as a result this package will be sent to a reject lane. |
| Because no AWOS record found package is being sent to a reject lane | I | User/Error | This message indicate that a package must be sent to the reject lane. If no previous log message provide a different explanation (e.g. invalid control number scan, dss has not sent an SMM) then the package actually couldn't be found in the database. |
| Because lane lll is invalid package is being sent to a reject lane | I | User/Error | A lane assignment was sent for this package which doesn't match the lanes in the database. As a result, this package will be sent to a reject lane. |
| Because no destination sent by DSS package is being sent to a reject lane | I | User/Error | This message indicates that DSS has not provided lane assignments for a package. As a result, this package will be sent to a reject lane. |
| CN Scanner to AWOS: | I | User | This is a control number scanner by an overhead scanner. |
| Control Number [ccccc ] already exists in the database-overwriting old record | I | User | The control number being added was already found in the database. Some loss of information may result. Recurrence of this problem may indicate that some problem exists. |
| Control Number [ccccc] is already in its queue for station x, waiting for dimension information" | I | User/Error | The control number that was scanned already existed in the queue for this station. Its latest scan will be ignored. |
| Control Number [ccccc] is invalid and its package must be re-scanned | A | User/Error | A bad scan was received for this control number. Rescan this package. |
| Control Number [ccccc ] is invalid because it contains non-alphanumeric characters | I | User/Error | A control number that was received is invalid. Adjacent log messages should contain information concerning the causes and effects of this message. |
| divert x has a reject lane of lll | I | User | At software startup time the reject lane for a particular divert is the specified lane. |
| Divert x has multiple reject lanes in database, lane lll will be used | A | User | A particular divert for an Awos has multiple reject lanes assigned. Run the set reject lane screen to select the correct reject lane. |

| Message | Type | Log/Display | Explanation/Action |
|---|---|---|---|
| DownstreamScannerx AWOS ini entry missing or invalid | F | User/Error/ Own GUI | The specified site_AWOS.ini key couldn't be found and the Awos subcontroller will shut down. Notify Administrator or refer to training documentation. |
| DownstreamScannerxLink entry missing or invalid | F | User/Error/ Own GUI | The specified site_AWOS.ini key couldn't be found and the Awos subcontroller will shut down. Notify Administrator or refer to training documentation. |
| DSS to Awos: … | | | This is an SMM being logged. An SMM with a flag of 'G' provides a lane assignment and an SMM with a flag of 'S' signals that an old record can be deleted. |
| Due to a misread, information about this package will not go to DSS | I | User | A bad device read at this station has caused this package to be routed to a reject lane and not sent to DSS. |
| Fairbanks to Awos: LLWWHHppppp | I | User | This is a dimension and weight message providing, in order, length, width, height, and weight (without its decimal point) |
| Hand Scanner to Awos: … | I | User | This is a control number scanned by a hand scanner. |
| Internal Error: Unable to find a link for category [%c], type [%c], and location number [%d] | A | User/Error | Indicates bug- notify Software Maintenance |
| Internal Warning - [] has a weight of www.ww but won't be processed | A | User | This indicates a bug. Notify Software Maintenance. |
| Internal Warning - station s has time data but no device data | A | User | This indicates a bug. Notify Software Maintenance. |
| Internal Warning –[] is in a tote and has a weight of www.ww but won't be processed | A | User | This indicates a bug. Notify Software Maintenance. |
| Invalid character of c received in dimension message of [] | I | User/Error | An invalid character was received in a dimension and weight message. |
| Invalid character of c received in weight of www.ww | I | User/Error | A weight with an invalid character was received. Adjacent log messages may convey more information. |
| Invalid Scan - control number doesn't contain enough characters | I | User | A control number scan with too few characters was received. Adjacent log messages may convey more information. |

| Message | Type | Log/Display | Explanation/Action |
|---|---|---|---|
| Invalid scan mode command code of c | I | User/Error | **(Tracy Only)** The PLC has reported a scan mode change to an invalid mode. The original mode will still be considered valid. |
| Lane ID lll has an invalid divert of x (must be between 1 and x) | A | User | An ALAN record was located with an invalid divert field. Notify database administrator to correct this problem. |
| lane lll status has been changed from full to non-full | I | User | **(Mechanicsburg only)** Based on a lane-full message, the database has successfully updated the status of the lane. |
| lane lll status has been changed from non-full to full | I | User | **(Mechanicsburg only)** Based on a lane-full message, the database has successfully updated the status of the lane. |
| Logging Turned Off by [ ] | I | User | A specific UI has turned off user logging for this subcontroller. |
| Logging Turned ON by [ ] | I | User | A specific UI has turned user logging on for this subcontroller. |
| Matching CN and weight for package not in a tote | I | User | A station has received control number and weight information but not a tote scan. It is considered to be a package not in a tote and taring will not be performed. |
| No Control Number was read for package. No further information will be stored | I | User | (**Tracy only)** A "no read" control number scan occurred. This package will be ignored by the Awos and not sent to DSS. |
| No reject lane found for divert x | A | User | A particular divert for an Awos doesn't have a reject lane assigned. Run the set reject lane screen to assign a reject lane. |
| Old HIST records have been purged | I | User | Records older than the ini-specified threshold time have been successfully deleted from the HIST table. |
| Package %s was rejected with an error code of … | I | User | **(Mechanicsburg, New Cumberland Only)** The scanner has reported an error of either Double Container, Double Read, No Read, or Unknown error. Recurrence of this problem indicates that this scanner needs to be adjusted or repaired. |
| PLC to Awos: … | I | User | This is a message received from a PLC. Refer to the ECS Interface Design Document (IDD) for the exact format used at each site. |

| Message | Type | Log/Display | Explanation/Action |
|---|---|---|---|
| Scale reports error - … | A | User/Error | **(Mechanicsburg, New Cumberland only)** The scale has reported one of the following errors : Negative Weight, Short Weight, Scale Error: Too Many Packages, Scale Format Error, Scale Fault, Scale Comm Fault, or Unknown Error. Recurrence of this problem indicates that this scale needs to be adjusted or repaired. |
| Scale to Awos: … | I | User | This message contains a weight read by a scale. |
| Shutdown message received with an invalid code of [c] | A | User/Error | A Startup/Shutdown Subcontroller message (A09) was received within an invalid code (something other than start or stop). |
| site_AWOS ini entry missing or invalid | F | User/Error/ Own GUI | The specified site_AWOS.ini key couldn't be found and the Awos subcontroller will shut down. Notify Administrator or refer to training documentation. |
| site_AWOS ini invalid input type | F | User/Error/ Own GUI | The specified site_AWOS.ini key couldn't be found and the Awos subcontroller will shut down. Notify Administrator or refer to training documentation. |
| site_AWOS.ini has a missing or an empty %s section | F | User/Error/ Own GUI | The specified ini file (with full directory path information) lacks a section for this subcontroller |
| Station x has been configured to only accept scans and clear its queue from USExx- unable to process this message" | I | User/Error/ Display | This UI is not configured for this Awos Station Queue screen. Use the UI that has been configured for this station. |
| Station x has been configured to only clear its queue from USExx- unable to process this message | I | User/Error/ Display | This UI is not configured for this Awos Station Queue screen. Use the UI that has been configured for this station. |
| Station %d has received a control number scan of ccccccc but no weight | I/A | User/Error | A station has received a control number scan but not a weight. This will result in this package being routed to a reject lane. If this problem persists physical connectivity to a scale may need to be verified or repaired. |

| Message | Type | Log/Display | Explanation/Action |
|---|---|---|---|
| Station %d has received a weight of www.ww but no control number | I/A | User | A station has received a weight but not a control number scan. This will result in this package being routed to a reject lane. If this problem persists physical connectivity to a control number scanner may need to be verified or repaired. |
| Station s has received only tote scan data in its timeout interval | I | User/Error | A station has received a tote scan but no control number scan or weight in its timeout interval. The Awos subcontroller will ignore this tote scan. |
| Station x is not a valid station for AWSxx subcontroller | I/A | User/Error | A UI has attempted to use a Queue Screen which doesn't apply to this Awos subcontroller. This is probably caused by an error on the Okla_awos.ini file found on the machine of the sending UI. |
| Station x Size AWOS ini entry missing or invalid | F | User/Error/ Own GUI | The specified site_AWOS.ini key couldn't be found and the Awos subcontroller will shut down. Notify Administrator or refer to training documentation. |
| Station x UserName AWOS ini entry missing | F | User/ Error/ Own GUI | Add a correct entry for this station with its value being that of a correct User Interface number. Look in the traffic section of the ecs.ini and the linkname fields for valid User Interface numbers |
| Station x UserName AWOS ini entry is invalid – must begin with USE | F | User/Error/ Own GUI | Correct this entry so that is a valid User Interface number of the form "USExx". See the traffic section of the ecs.ini and the linkname fields for valid User Interface numbers |
| Station x UserName AWOS ini entry is invalid – must contain exactly 5 alphanumeric characters | F | User/Error/O wn GUI | Correct this entry so that is a valid User Interface number of the form "USExx". See the traffic section of the ecs.ini and the linkname fields for valid User Interface numbers |
| Successfully deleted AWOS Record | I | User | An Awos record has been deleted. This is logged only when the verbose logging level is used. |
| Successfully deleted HIST Record | I | User | A HIST record has been deleted. This is logged only when the verbose logging level is used. |

| Message | Type | Log/Display | Explanation/Action |
|---|---|---|---|
| Tare weight is required but can't be found in ecs.ini | F | User/Error/ Own GUI | The specified site_AWOS.ini key couldn't be found and the Awos subcontroller will shut down. Notify Administrator or refer to training documentation. |
| The AWOS record didn't exist in the database | I | User | An attempt was made to delete an Awos record that didn't exist. This is logged only when the verbose logging level is used. |
| The Default tote weight has been changed from www.ww to www.ww | I | User | The tote default weight has successfully been changed through the Set Tote Weight UI screen. |
| The desired new error lane of ll is invalid | I | User/Error/ Display | The UI set error lane screen has selected an invalid lane for a particular divert of a given Awos subcontroller. If changing the reject lane is desired repeat usage of the Set Error Lane screen. If this problem recurs notify Software Maintenance. |
| The fairbanks queue for station x has had x entries cleared | I | User | Through UI activity, a station has had its entries cleared. |
| The HIST record didn't exist in the database | I | User | An attempt was made to delete a HIST record that didn't exist. This is logged only when the verbose logging level is used. |
| The maximum time (in seconds) to hold responses for devices at a station is x | I | User | At startup time the time to hold device responses |
| The reject lane for divert x has been changed from oo to nn | I | User | The UI set error lane screen has successfully changed a reject lane. |
| The scan mode for station x is [], not [] | I | User | **(Tracy Only)** Input has been received which is of an inappropriate type. In null mode nothing is received and in hand-held and overhead modes only input of those respective types are accepted. |

| Message | Type | Log/Display | Explanation/Action |
|---|---|---|---|
| The start/stop control panel message has an invalid flag of [f] | I/A | User/Error/ Display | The start/stop control panel message received has an invalid value (anything other than the code for start and stop). Verify that the Awos subcontroller has the correct impression of the Control Panel's status (i.e. for an open control panel stop then restart this panel and for a closed control panel start then restop this panel). If this problem repeats itself in the verification process then there may be a problem with the UI control panel screen or with communications. If this is the case, notify the system administrator. |
| Timing thread in action for queue of DSS transmissions | I/A | User | This message applies to an Awos subcontroller that does talk to a PLC but doesn't have a downstream scanner. For such an Awos subcontroller records can be held waiting for a DSS response for only so long. The fact that DSS hasn't responded in this time frame may mean that DSS is running slowly or communication to DSS has been lost. If this problem persists notify the administrator to have DSS connectivity be verified through SNA Server Message (ECS Side) and the DSS Megacenter (DSS Side). |
| Timing thread in action for stations | I/A | User | This message indicates that some of the device reads (scans, weights etc.) have been received but others have not been received. Subsequent adjacent log messages will indicate whether or not will result in a package be routed to a reject lane. If this problem persists physical connectivity to a particular device may need to be verified or repaired. |

| Message | Type | Log/Display | Explanation/Action |
|---|---|---|---|
| To maintain the transmitted queue cccccc must precede cccccc | I/A | User | **(For Send Immediate Awoses only)** For AWOSes that do talk to a PLC but don't have a downstream scanner it is necessary to maintain a queue of records between the PLC and ECS. As a result it is necessary to send lane assignment messages to the PLC in the order that they were transmitted to DSS. In this error message, DSS has either ignored a message or processed records out of sequence. If this problem persists notify Software Maintenance |
| TotalAwosStations AWOS ini entry missing or invalid | F | User/Error/ Own GUI | The specified site_AWOS.ini key couldn't be found and the Awos subcontroller will shut down. Notify Administrator or refer to training documentation. |
| TotalDownstreamScanners AWOS ini entry missing or invalid | F | User/Error/ Own GUI | The specified site_AWOS.ini key couldn't be found and the Awos subcontroller will shut down. Notify Administrator or refer to training documentation. |
| Tote Scanner to Awos: … | I | User | (Mechanicsburg only) This message contains a tote ID read by a tote scanner. |
| Traffic to Awos: … | I | User | This message contains a message sent by the Traffic Controller. This will typically be an A09 Shutdown the Awos subcontroller message. |
| UI to Awos: … | I | User | This message is request for action from a specific UI screen. Additionally, adjacent log messages may clarify the message being sent. Refer to the section in this User Manual containing ECS Internal messages for a description of the particular message type being logged. |
| Unable to Clear reject lane statuses | I | User | No lanes were found in the database to clear the reject lane statuses yet the ini indicates that lanes should exist. Notify the administrator that these sources of information (database, ini) don't match up. |

| Message | Type | Log/Display | Explanation/Action |
|---|---|---|---|
| Unable to create mutex to control multithreading -results may be unpredictable! | F | User | An error has occurred creating a Windows NT kernel object. This object is used to ensure the Awos Subcontroller behaves reliably. It is recommended that this subcontroller be stopped and the machine rebooted. |
| Unable to locate a record for ccccc .It can't be added to the history table | I | User | It was time to move a record from the Awos to the Hist table but no record was found. |
| Unable to locate the site_AWOS.ini file | F | User/Error/ Own GUI | The specified site_AWOS.ini key couldn't be found and the Awos subcontroller will shut down. Notify Administrator or refer to training documentation. |
| Unable to save mailing list due to windows error number x = | I/A | User/Error | When shutting down, this Awos subcontroller could not write to the AWSxx_recipients.dat file. As a result UI's that are on a control panel screen for this AWOS are no longer considered to be so. This is not a critical error in and of itself but may be symptomatic of a more general problem. |
| Unable to write [] into the ini key of kkkkkk due to windows error: | I/A | User/Error | The specified ini entry couldn’t be updated. If updating this entry is still desired then the underlying action must be repeated. If this problem persists notify the System Administrator. |
| Unknown Device: | I/A | User | A message was received for which a sender couldn't be identified. If this sender is valid then an ini change may be required to the ecs.ini and/or site_AWOS.ini files. However, if the sender is invalid then there may be a communication problem. |
| USExx already receives control panel information for AWSxx | I | User/Error/ Display | A User Interface has notified this Awos subcontroller that it has entered the Control Panel screen but the Awos subcontroller believes that User Interface already had entered the Control Panel screen. |
| [USExx] has been authorized for Station x Queue screen | I | User | This authorized UI has opened its Station Queue screen |
| USExx has been successfully added to the control panel mailing list | I | User | A User Interface has opened a Control Panel screen. |

| Message | Type | Log/Display | Explanation/Action |
|---|---|---|---|
| USExx has been successfully removed from the control panel mailing list | I | User | A UI has left its control panel screen. |
| [USExx] has exited the Station x Queue screen" | I | User | This UI has exited its Station Queue screen |
| x consecutive scans have been received by station s Shutting down station | A | User/Error/ Display | **(Tracy only)** The (ini selected-MaxConsecNoReads entry) maximum allowable consecutive control numbers scans for a station without receiving any weights having been received. This station is then shut down. Once this problem is corrected use the UI Workstation Control Screen on the MHE Menu to restart this station. |
| x consecutive weights have been received by station s- Shutting down station | A | User/Error/ Display | **(Tracy only)** The (ini selected-MaxConsecNoReads entry) maximum allowable consecutive weights for a station without receiving any control numbers having been received. This station is then shut down. Once this problem is corrected use the UI Workstation Control Screen on the MHE Menu to restart this station. |

Table U - 1-1 AWOS MESSAGES

# APPENDIX V TRAFFIC MESSAGES

## 1.0 TRAFFIC MESSAGES

The following table represents a list of all messages from the Traffic Controller. The Message column represents the text of the message as displayed on the screen or log file. The Type column represents the type of the message: "I" indicates informational, "A" indicates action required and "F" indicates a fatal situation, immediate action is required before further processing. Action and Fatal messages will include the action to be performed. The Log/Display column represents where the message will be displayed: the annotation of "Error" means the message will be logged to the error log, the annotation of "User" means the message will be logged to the message log, the annotation of "Own GUI" will be displayed as Alert Message on this Traffic Controller's own process and the annotation of "Display" means the message will be displayed through the UI on the screen as an Alert Message. The Explanation/Action column represents the action the user will perform when the message is displayed or an explanation of a Type "I" message.

***Note:** Variable text, depending on circumstance, is enclosed within brackets, [ ]. The text within the brackets describes the item that will appear in the error message.

| Message | Type | Log/Display | Explanation/Action |
|---|---|---|---|
| Cross Reference File TRF_TABLE1 not found. | I/A | User/Error | The first traffic table couldn't be located. Contact the system administrator or software maintenance for a copy of this file. Until this problem is fixed some SMM's that should be processed at this site may not be. |
| Cross Reference File TRF_TABLE2 not found. | I/A | User/Error | The first traffic table couldn't be located. Contact the system administrator or software maintenance for a copy of this file. Until this problem is fixed some SMM's that should be processed at this site may not be. |
| ECS.INI file not found! | F | Own GUI | An ecs.ini file couldn't be located in the directory referred to by the home key of the [ECS] section of the win.ini. One common cause of this problem is not including the final backslash after the directory name. For example c:\ecs would cause an error. |
| INI File Logging Flag Error | F | Own GUI | The logging value for Traffic in the ecs.ini is missing. Add Yes or No for the Logging key in the [TRF01] section and restart Traffic. |

| Message | Type | Log/Display | Explanation/Action |
|---|---|---|---|
| Invalid destination, Destination - xxxxx. | I/A | User/Error | A UI or subcontroller has sent a message to a recipient that is unrecognized by Traffic. If the specified recipient should be recognized then change the [TRF01] section of the ecs.ini file on the traffic machine and restart the Traffic Controller. |
| Invalid message for traffic controller, type xxx. | I | User/Error | A UI or subcontroller has sent a message destined specifically for the Traffic Controller of a type which Traffic doesn't know how to process. |
| Invalid sender, Sender - xxxxx. | I/A | User/Error | An unrecognized AWOS subcontroller has sent an M02 message to traffic. Ensure that in the [TRF01] section a link of type RSMM exists with an M02Name value for the desired sending AWOS subcontroller. |
| Sequence File SEQ_TABLE not found. | I/A/F | User/Error | A sequence number file couldn't be located in the designated ECS startup directory. Create a file with this name in the startup directory containing only an 8 character all-numeric sequence number |
| Site Name Error in .INI file | F | Own GUI | The site key of the [SITE] section of the ecs.ini was missing. Enter a value for this section and key in the ecs.ini file and restart traffic. |
| SMM flag field invalid at site MECH, Flag - x . | I | User | An SMM was received with a flag field that was unexpected for this site. This probably occurred because of DSS code that transmits message of a given flag regardless of the site. |
| SMM flag field invalid, Flag - x. | I | User | An SMM was received with a flag field that was unexpected for this site. This probably occurred because of DSS code that transmits message of a given flag regardless of the site. |
| SMM no destination found. | I | User | No destination subcontroller could be found for a given SMM. If an SMM with the flag, source, and destination specified should be routed to a subcontroller than add this information to the TRF_TABLE1. |
| Traffic Controller shutdown. | I | User | The Traffic Controller has been shut down normally. |

| Message | Type | Log/Display | Explanation/Action |
|---|---|---|---|
| Traffic Controller shutting down due to UPS interrupt. | I | User | Traffic has shut down due to a interruption to the power supply. |
| Traffic Log Turned Off by [ ]. | I | User | The Traffic User Logging has been turned off by a User Interface. |
| Traffic Log Turned On by [ ]. | I | User | The Traffic User Logging has been turned on by a User Interface. |

Table V - 1 Traffic Messages

# APPENDIX W RAYMOND CAROUSEL MESSAGES

## 1.0 RAYMOND CAROUSEL MESSAGES

The following table represents a list of all messages from the Raymond Carousel subcontroller. The Message column represents the text of the message as displayed on the screen. The Type column represents the type of the message: "I" indicates informational, "A" indicates action required and "F" indicates fatal situation, immediate action is required before further processing. Action and Fatal messages will include the action to be performed. The Log/Display column represents where the message will be displayed: the annotation of "Error" means the message will be logged to the error log, the annotation of "User" means the message will be logged to the message log, and the annotation of "Display" means the message will be displayed through the UI on the screen as an Alert Message. The Explanation/Action column represents the action the user will perform when the message is displayed or an explanation of a Type “I” message.

***Note:** Variable text, depending on circumstance, is enclosed within brackets, [ ]. The text within the brackets describes the item that will appear in the error message.

| Message | Type | Log/Display | Explanation/Action |
|---|---|---|---|
| Ad Hoc Request Buffer is Full | A | User<br>Error<br>Display | Ad Hoc Request Buffer has reached its current capacity. **Collect supporting documents and call the Systems Administrator to enlarge the Ad Hoc Request Buffer.** |
| Ad Hoc Request Buffer Overflow, Request Ignored | A | User<br>Error<br>Display | Ad Hoc Request Buffer is not large enough to contain all of the requests initiated. **Collect supporting documents and call the Systems Administrator to enlarge the Ad Hoc Request Buffer.** |
| All Units Set Offline by [userName] | I | User | All Carousels were set offline as requested by specified user. |
| All Units Started by [userName] | I | User | All Carousels were started as requested by specified user. |
| Carousel Software shut down | I | User<br>Display | Software was shutdown. |
| ECS.INI file not found! | F | User<br>Error<br>Display | ECS.INI file was not found. **Collect supporting documents and call the Systems Administrator.** |
| Invalid Aisle/Side [aisle/side] from [userName] | A | User<br>Error<br>Display | Specified Carousel not within the range of valid units. **Verify unit number and try again.** |

| Message | Type | Log/Display | Explanation/Action |
|---|---|---|---|
| Invalid Carousel Source Field [carousel ] | A | User Error | Carousel to Host Message contains data in the source field not in linkage table (RAYTABLE.DAT). **Collect supporting documents and call the Systems Administrator.** |
| Invalid Message Format from Unit [unitNumber] | A | User Error Display | First character of Carousel to Host Message is neither an "A" for Automatic Mode, an "M" for Manual Mode, or numeric for number of CIB power cycles. **Collect supporting documents and call the Systems Administrator.** |
| Invalid Message Type [A05] from [userName] | A | User Error Display | Message Type "A05" (Delete SMM) not valid for the Carousel. **Collect supporting documents and call the Systems Administrator.** |
| Invalid Message Type [A21] from [userName] | A | User Error Display | Message Type "A21" (Initialize Device) not valid for the Carousel. **Collect supporting documents and call the Systems Administrator.** |
| Invalid Message Type [A41] from [userName] | A | User Error Display | Message Type "A41" (Workstation Assignment) not valid for carousel. **Collect supporting documents and call the Systems Administrator.** |
| Invalid Message Type [J41] from [userName] | A | User Error Display | Message Type "J41" (NMC at Workstation Request) not valid for the Carousel. **Collect supporting documents and call the Systems Administrator.** |
| Invalid Restart for Unit [UnitNumber] Requested by [userName] | A | User Error Display | Carousel Unit number is not within the range of valid unit numbers. **Verify carousel unit number and try again.** |
| Invalid Set Logging Flag [flag] by [userName] | A | User Error Display | Set Logging Flag not On ('N') or Off ('F'). **Collect supporting documents and call the Systems Administrator.** |
| Invalid SMM Message Flag [D] from [userName] | A | User Error Display | Ad Hoc Move was received from DSS. An Ad Hoc Move is accepted from User Interface ONLY. **Collect supporting documents and call the Systems Administrator.** |

| Message | Type | Log/Display | Explanation/Action |
|---|---|---|---|
| Invalid SMM Message Flag [flag] from [userName] | A | User Error Display | SMM Message Flag other than ('C') Completion, ('D') Dummy Move, ('K') Pick Completion, ('L') Location Survey, ('P') Pack Arrival, ('R') Request, ('W') Clear, or ('Z') Workstation Designation. **Collect supporting documents and call the Systems Administrator.** |
| Invalid SMM Message Flag [Z] from [userName] | A | User Error Display | SMM Message Flag "Z" (Workstation Designation) not valid for Carousel. **Collect supporting documents and call the Systems Administrator.** |
| Invalid Start/Stop Code [code] from [userName] | A | User Error Display | Start/Stop Code other than Start ('1') or Stop ('0') entered by specified user. **Collect supporting documents and call the Systems Administrator.** |
| Invalid Subsystem Start/Stop Code [code] from [userName] | A | User Error Display | Start/Stop Code other than Start ('1') or Stop ('0') entered by specified user. **Collect supporting documents and call the Systems Administrator.** |
| Invalid Unit Number [unitNumber] from [userName] | A | User Error Display | Specified Unit Number is outside the range of valid unit numbers. **Verify unit number and try again.** |
| Linkage Table Not Loaded Properly | F | User Error Display | Premature End of File encountered reading the Carousel Unit Hardware Linkage Table. **Collect supporting documents and call the Systems Administrator.** |
| Logging Turned OFF by [userName] | I | User | Logging in User Log turned off by specified user. |
| Logging Turned ON by [userName] | I | User | Logging in User Log turned on by specified user. |
| Message Request Buffer is Full | A | User Error Display | The Message Request Buffer has reached its current capacity. **Either wait a few minutes to let the current requests be satisfied; thus, clearing the buffer, or collect supporting documents and call the Systems Administrator to enlarge the Message Buffer.** |
| Pick Complete Out of Sequence [ ] | I | User Error | Pick complete message received for other than the next pick in the queue. |

| Message | Type | Log/Display | Explanation/Action |
|---|---|---|---|
| Request Buffer is Full | A | User Error Display | The Request Buffer has reached its current capacity. **Collect supporting documents and call the Systems Administrator to enlarge the Request Buffer** |
| Request Buffer Overflow; Sequence Nr [Sequence] Ignored | A | User Error Display | The Request Buffer has overflowed trying to add the request from message with specified sequence number. **Inform DSS to re-transmit message at a later time. Collect supporting documents and call the Systems Administrator to enlarge the Request Buffer** |
| Set Offline Invalid for Unit [unitNumber] Requested by [userName] | A | User Error Display | Specified Unit Number is outside the range of valid unit numbers. **Select valid unit number and try again. If error continues, collect supporting documents and call the Systems Administrator.** |
| Shutting Down Subcontroller | F | Display | Couldn't find logging key or no value for logging key in ECS.INI. **Collect supporting documents and call the Systems Administrator.** |
| Subcontroller Set Offline | I | User Error | During check of the status for all carousels it was determined that they were all offline; consequently, the subcontroller was set offline. |
| Subsystem Shut Down by [userName] | I | User | Carousel Subsystem was shut down by the specified user. |
| This Function is not enabled for this site | I | User Display | Function not utilitzed for this site. |
| Unit [unitNumber] Set Offline | A | User Error | Carousel to Host Message in response to Send Status Message indicates that carousel is in manual mode; therefore, carousel is set offline. **Determine if Carousel should be offline, and set online if applicable.** |
| Unit [unitNumber] Set Offline by [userName] | I | User | Specified user requested specified unit to be set offline. |
| Unit [unitNumber] Started by [userName] | I | User | Specified carousel started by specified user. |
| Unit [unitNumber] Workload Buffers Cleared by [userName] | I | User | The specified unit had its Workload Buffers cleared by the specified user. |

| Message | Type | Log/Display | Explanation/Action |
|---|---|---|---|
| Unknown Message Type [type] from [userName] | A | User Error Display | Message type other than ('A01') hardware unit restart, ('A03') Clear Buffers, ('A05') Delete SMM, ('A07') Set Logging, ('A09') System Stop, ('A21') Initial Device, ('A41') Workstation Assignment, ('J01') Status Request, ('J31') Send Errors Request, ('J33') Send Status Request, ('J41') Tray at Workstation request , ('M01') User Interface originated Standard Movement Message, ('SMM') DSS originated Stand Movement Message. **Select appropriate message type and try again.** |
| Workload Buffers for All Units Cleared by [userName] | I | User | All units had their Workload Buffers cleared by specified user. |

Table W - 1-1 Carousel Messages

## 1.1 SECS-RI27.0: Tracy Raymond Carousel Interface

The Tracy Carousel Interface establishes communications between the ECS and the Tracy Raymond Carousels.

Communications protocol - RS-232 Serial ASCII-7 bit 9600-Baud Asynchronous

### 1.1.1 Tracy Host to Carousel Message Formats

| MESSAGE TYPE | MESSAGE DESCRIPTION | MESSAGE FORMAT |
|---|---|---|
| Header *1 | Beginning of message.<br>Controller identification and redundant identification are selected by the user and depend on the configuration of the carousel. | 1 EOT<br>2 Controller Identification (0-9, A-F)<br>3 Redundant Identification (0-9, A-F)<br>4 s<br>5 STX |
| Footer *2 | End of message.<br>Message identification is selected by the user. This character can be used in a long series of commands to verify visually, using a monitor, that the commands are sent. | 1 Message Identification (0-9, A-Z)<br>2 ETX<br>3 CR |
| C | Clear<br>Pending work is purged.<br>Returned to FIFO state. | 1-5 Header *1<br>6 Command Type – C<br>7-10 Four Zeroes (0000)<br>11-13Footer *2 |
| g | Goto1 Requested Carousel Bin<br>Carousel is sent to the bin number specified. | 1-5 Header *1<br>6 Command Type – g<br>7 Zero (0)<br>8-10 Three Digit Bin Number (000-999)<br>11-13Footer *2 |
| h | Home<br>Smallest numbered bin is brought to the present offset position. | 1-5 Header *1<br>6 Command Type - h<br>7-10 Four Zeroes(0000)<br>11-13Footer *2 |

| MESSAGE TYPE | MESSAGE DESCRIPTION | MESSAGE FORMAT |
|---|---|---|
| p | Poll 1<br>This command causes the controller to send out Status for Axis #1. | 1 EOT<br>2 Controller Id (0-9,A-F)<br>3 Redundant Id (0-9,A-F)<br>4 Command Type (p)<br>5 ENQ |
| q | Poll 2<br>This command causes the controller to send out Status for Axis #2. | 1 EOT<br>2 Controller Id (0-9,A-F)<br>3 Redundant Id (0-9,A-F)<br>4 Command Type (q)<br>5 ENQ |
| r | Poll 3<br>This command causes the controller to send out Status for Axis #3. | 1 EOT<br>2 Controller Id (0-9,A-F)<br>3 Redundant Id (0-9,A-F)<br>4 Command Type (r)<br>5 ENQ |
| t | Poll 4<br>This command causes the controller to send out Status for Axis #4. | 1. EOT<br>2. Controller Id (0-9,A-F)<br>3. Redundant Id (0-9,A-F)<br>4. Command Type (t)<br>5. ENQ |
| R | Reset<br>Clears all error conditions and resets status bits. | 1-5 Header *1<br>6 Command Type – R<br>7-10 Four Zeroes (0000)<br>11-13 Footer *2 |
| S | Stop<br>Unconditionally stops carousel. Will reset bit 1 of the 2nd status word. To resume processing, a reset command must be sent to the controller. | 1-5 Header *1<br>6 Command Type - S<br>7-10 Four Zeroes (0000)<br>11-13 Footer *2 |

Table W-1-2 Tracy Host to Carousel Message Formats

### 1.1.2 Tracy Carousel to Host Message Formats

| MESSAGE TYPE | MESSAGE DESCRIPTION | MESSAGE FORMAT |
|---|---|---|
| ACK | Response sent to the host when message received properly. (Valid) | DLE<br>ACK<br>CR |
| NAK | Response sent to the host when message received improperly. (Invalid) | DLE<br>NAK<br>CR |
| | Status response to POLL1 command type p. | 1 STX<br>2 Controller Id (0-9,A-F)<br>3 Redundant Id (0-9,A-F)<br>4-6 Three Status Words<br>7-9 Three Digit Bin Number (000-999)<br>10 Message Id (0-9,A-F)<br>11 ETX |
| | Status response to POLL2 command type q. | 1 STX<br>2 Controller Id (0-9,A-F)<br>3 Redundant Id (0-9,A-F)<br>4-6 Three Status Words<br>7-9 Three Digit Bin Number (000-999)<br>10 Message Id (0-9,A-F)<br>11 ETX |
| | Status response to POLL3 command type r. | 1 TX<br>2 Controller Id (0-9,A-F)<br>3 Redundant Id (0-9,A-F)<br>4-6 Three Status Words<br>7-9 Three Digit Bin Number (000-999)<br>10 Message Id (0-9,A-F)<br>11 ETX |
| | Serial<br>Response to Poll4. The controller's serial number is sent to the computer. | 1 EOT<br>2. Controller Id (0-9,A-F)<br>3. Redundant Id (0-9,A-F)<br>4. STX<br>5-7 Three Digit Serial Number MSD(000-999)<br>8-10. Three Zeroes (000)<br>11 Message Id (0-9,A-F)<br>12 ETX<br>13 CR |

| MESSAGE TYPE | MESSAGE DESCRIPTION | MESSAGE FORMAT |
|---|---|---|
| | 1st Status Word<br>Binary | 0 Data Error (1) - Incorrect bin number, axis not on-line.<br>1 Command Error (1) - Controller busy, axis busy , axis position unknown, bpi is not on-line.<br>2 Last Command Overflowed File (1) - File queue cannot exceed 99 pending file transactions<br>3 Transmission Error (1)<br>4 Controller Failure (1) - Failed self diagnostics<br>5 Run mode (1)/Program mode (0)<br>6 1 (Always) |
| | 2nd Status Word<br>Binary | 0 External Control (1) - Controller is set to respond to inputs from an external source through its communication ports.<br>1 Received Stop Command (1) - Received stop command from host, portable hand controller stop button depressed, detected any fatal conditions.<br>2 Move completed successfully (1) - the carousel is in position.<br>3 Axis Busy (1) - Acting on command.<br>4 Home Failure (1) - Failed to detect the home sensor within the active window zone. The active window zone is confined to the absolute reference point and has a width of +/- 1024 encoder pulses.<br>5 Encoder Failure (1) - Cannot detect encoder-pulse feedback upon motion command, detected a loss of encoder-pulse feedback during motion, direction sense error.<br>6 1 (Always) |

| MESSAGE TYPE | MESSAGE DESCRIPTION | MESSAGE FORMAT |
|---|---|---|
| | 3rd Status Word<br>Binary | 0 Controller Busy (1) - Processing request<br>1 Axis On-line (1) - Axis turned on.<br>2 Positioning error (1) - Carousel overshot destination and is outside of allowable positioning tolerance. The active acceptable positioning window has a width of +/- 256 encoder pulses.<br>3 Position Unknown (1) - All positioning data lost due to power outage, controller reset from reset button on back of portable hand controller, raised in conjunction with bit 4 of the 2nd status word above.<br>4 Go button depressed (1) - Raised when the go button located on the remote go switch has been depressed.<br>5 BPI Utility Busy (1) - Processing request.<br>6 1 (Always) |

Table W-1-3 Tracy Carousel to Host Message Formats

# APPENDIX X CSF STACKER ERROR MESSAGES

## 1.0 STACKER ERROR MESSAGES

This appendix is a summary of all ECS-specific SR/M error messages. As with the previous VAX system, errors 0-599 are generated by the SR/M itself and errors 600-999 are generated by the VAX system or ECS. Errors 0 –599 are left as described in the Excell 4000 S/RM Operation and Maintenance Manual Appendix B – EOA Software. Any reference in that Appendix B saying a variant of "Consult Harnischfeger Engineers service personnel for further assistance" can't be directed to ECS technical support for assistance. ECS simply has no information to assist with in these cases beyond the existing Appendix B.

Errors 600-999 are all ECS generated and supported. These errors are a mix of existing VAX errors and new ECS errors. There are also numerous VAX specific error numbers and error descriptions which are not supported by ECS. All such deleted errors are not listed here but, to avoid any confusion, ECS doesn't reuse the same number for a different error.

| Error Number | Brief Description | Detailed Description | New/Existing Error |
|---|---|---|---|
| 602 | PLC battery low | The stacker has a status field in its responses that indicates battery status. It has reported that the battery is low. Unlike other error conditions, this a warning not an error. The stacker will not go offline as a result. | existing |
| 603 | Stacker not in Auto mode | The stacker has a status field in its responses indicating whether it is in Auto or Manual mode. ECS has received a report that stacker is in manual mode. | existing |
| 604 | Shuttle not centered | The stacker has a status field in its responses indicating whether its shuttle is centered. ECS has received a report that the shuttle isn't centered. | existing |
| 605 | Electronic Distance Meter not warmed up | The stacker has a status field in its responses indicating whether the EDM is warmed. ECS has received a report that the EDM isn't warmed. | existing |

| Error Number | Brief Description | Detailed Description | New/Existing Error |
|---|---|---|---|
| 606 | Command Timeout | A message was sent from ECS to the SR/M and it wasn't processed in the timeout interval. CSF logs should indicate which message timed out. | existing |
| 607 | No Acknowledgement | A repeated attempt has been made to communicate a message from ECS to the SR/M. Since the SR/M failed to follow the acknowledgement protocol this stacker goes offline. | existing |
| 751 | Unknown Movement Command complete | A stacker response has received which indicates that a movement command has been completed but with other mixed signals sent in the status. The ECS database doesn't have record of a transaction with this number. | new |
| 752 | Unknown Pickup Command complete | A stacker response has been received which indicates that a movement command has completed with a load being present on the stacker. The ECS database doesn't have record of a transaction with this number. | new |
| 753 | Unknown Deposit Command complete | A stacker response has been received which indicates that a movement command has completed without a load being present on the stacker. The ECS database doesn't have record of a transaction with this number. | new |
| 754 | Multiple Active ECS Database Loads for Aisle | When a stacker goes online ECS will try to recover (i.e. get to intended destination) a load found in the database. However, since 2 or more loads were found the stacker goes offline. This situation requires further analysis. The STKQ database table and the CSF logs should help figure things out. The delete stacker transaction and the clear load from PLC UI screens can help the database clean up. | new |

| Error Number | Brief Description | Detailed Description | New/Existing Error |
|---|---|---|---|
| 755 | Unknown Load on Stacker | In the process of a stacker going online, the stacker has reported that there is a load on it. However, the ECS database doesn't show any matching record. This load must be visually inspected and research done to ensure it gets where it needs to go. | new |

Table X - 1-1 Stacker Error Messages

# APPENDIX Y NORFOLK HKS Crane (HKS) MESSAGES

## 1.0 NORFOLK HKS Crane (HKS) MESSAGES

The following table represents a list of all messages from the Norfolk HKS Crane subcontroller. The Message column represents the text of the message as displayed on the screen or log file. The Type column represents the type of the message: "I" indicates informational, "A" indicates action required and "F" indicates fatal situation, immediate action is required before further processing. Action and Fatal messages will include the action to be performed. The Log/Display column represents where the message will be displayed: the annotation of "Error" means the message will be logged to the error log, the annotation of "User" means the message will be logged to the message log, the annotation of "Link" means the message will be logged to the link log, the annotation of "ASM" means the message will be displayed on the End of Aisle PC using the ASM subcontroller and the annotation of "Display" means the message will be displayed through the UI on the screen as an Alert Message. . The Explanation/Action column represents the action the user will perform when the message is displayed or an explanation of a Type "I" message.

***Note:** Variable text, depending on circumstance, is enclosed within brackets, [ ]. The text within the brackets describes the item that will appear in the error message.

| Message | Type | Log/Display | Explanation/Action |
|---|---|---|---|
| <- 01 79<br>OR<br><- 02 7A | I | Link | HKS Crane to Host Acknowledgement message |
| <- 0ZRR2008081 CC | I | Link | Crane to Host Response<br>Z = Alternating sequence indicator, value is either Y or Z<br>RR = Response Codes<br>CC = Checksum |
| -> 0Q 99 | I | Link | Host to HKS Crane Query Message |
| -> 0ZKI CC | I | Link | Host to Crane RESET message:<br>Z = Alternating sequence indicator, value is either Y or Z<br>KI = Reset Command<br>CC = Checksum |

| Message | Type | Log/Display | Explanation/Action |
|---|---|---|---|
| -> 0ZP1S07104 CC | I | Link | Motion Command from Host to Crane:<br>Z = Alternating sequence indicator, value is either Y or Z<br>P = Action, value is either P (Pick) or D (Deposit)<br>1 = Side, value is either 1 (left from the operator location) or 2 (right)<br>071 = Column<br>04 = Height<br>CC = Checksum |
| ECS.INI file not found! Initialization Error. | F | User, Display | ECS.INI file was not found**. Collect supporting documents and contact Systems Administrator.** Restore ECS.INI from backup copy. |
| Invalid Message Type [xxx] from [userName] | I | User, Error, Display | Message Type "xxx" not valid for the HKS subcontroller. |
| Invalid Set Logging Flag [flag] by [userName] | I | User, Error, Display | Set Logging Flag not On ('N') or Off ('F'). |
| Invalid SMM Message Flag [?] from [userName] | I | User, Error, Display | SMM Message Flag "?" not valid for HKS Crane. HKS subcontroller handles type "W", "R" and "C" SMMs. Other types of SMMs are discarded. |
| Invalid Start/Stop Code [code] from [userName] | I | User, Error, Display | Start/Stop Code other than Start ('1') or Stop ('0') entered by specified user. |
| LINKxx 01 CC<br>OR<br>LINKxx 02 CC | I | User | HKS Crane to Host Acknowledgement; where:<br>xx = Communication Link Number<br>02 = ACK to a type Z message<br>01 = ACK to a type Y message<br>CC = Checksum<br><br>These messages indicate that the HKS Crane has received a message from the HKS subcontroller and acknowledges receiving the message. |

| Message | Type | Log/Display | Explanation/Action |
|---|---|---|---|
| LINKxx 0YRR2004060 CC<br>OR<br>LINKxx 0ZRR2004060 CC | I | User | Crane to Host Response:<br>xx = Communication Link Number<br>Y or Z = Message Sequence Indicator<br>RR = Response Codes<br>Response Code Values are<br>01 complete_resp_c<br>02 e_stop_resp_c<br>03 misalign_load_resp_c<br>05 motion_timeout_resp_c<br>06 lost_load_resp_c<br>07 unknown_load_resp_c<br>13 vert_err_resp_c<br>18 horiz_err_resp_c<br>23 bin_full_err_resp_c<br>24 retr_center_err_resp_c<br>25 slow_zone_err_resp_c<br>27 bin_empty_err_resp_c<br>29 retr_motion_err_resp_c<br>30 horiz_overspeed_resp_c<br>31 vert_overspeed_resp_c<br>32 shut_overspeed_resp_c<br>40 x1_sync_bar_err_c<br>41 x2_sync_bar_err_c<br>42 x3_sync_bar_err_c<br>43 x4_sync_bar_err_c<br>44 y1_sync_bar_err_c<br>45 y2_sync_bar_err_c<br>46 z1_sync_bar_err_c<br>50 weight_err_resp_c<br>52 P_D_comm_err_resp_c<br>60 inv_cmd_resp_c<br>61 inv_mov_resp_c<br>66 manual_resp_c<br>68 busy_resp_c<br>90 encod_FIFO_err_resp_c<br>91 lock_FIFO_err_resp_c<br>99 shut_err_resp_c<br><br>See HKS Crane documentation for further details. |
| Logging Turned OFF by [userName] | I | User | Logging in User Log turned off by specified user. |
| Logging Turned ON by [userName] | I | User | Logging in User Log turned on by specified user. |

| Message | Type | Log/Display | Explanation/Action |
|---|---|---|---|
| Response to Motion Command is an error condition<br>CALL Maintenance<br>motion_timeout_resp_c<br>Attempting Pick from<br>Side 1 Column 002 Tier 02<br>Clear Error<br>Return Trays (MADC)<br><br>(Employee's Action Item)<br>WAIT for Maintenance to return Trays Delete Workload Request New Workload | F | User, ASM | HKS Crane has sent an unrecoverable error.<br>Operator's action is to call maintenance. Maintenance will correct the problem then use MADC to return all trays to storage.<br>The operator will then use DSS to delete workload and request new work. |
| Stacker [unitNumber] Set Offline | I | User | Specified stacker set offline. |
| Stacker Error Message Table Not Loaded Properly | A | User, Error | The Error Message Table is not in place. Restore it from a backup. |
| Stacker Linkage Table Not Loaded Properly | A | User, Error | The Linkage Table is not in place. Restore it from a backup. |
| Subcontroller Set Offline | I | User, Error | During check of the status for all stacker aisles it was determined that they were all offline; consequently, the subcontroller was set offline. |
| SubSystem Shut Down by [userName] | I | User | Stacker aisle Subsystem was shut down by the specified user. |
| The operation completed successfully. | I | Link | The communication port has been initialized. |
| Unit [unitNumber] Set Offline by [userName] | I | User | Specified user requested specified unit to be set offline. |
| Unit [unitNumber] Started by [userName] | I | User | Specified stacker aisle started by specified user. |
| Unit [unitNumber] Workload Buffers Cleared by [userName] | I | User | The specified unit had its Workload Buffers cleared by the specified user. |
| Unknown Message Type [type] from [userName] | I | User, Error, Display | Message type other than ('A01') hardware unit restart, ('A03') Clear Buffers, ('A07') Set Logging, ('A09') System Stop, ('J01') Status Request, ('M01') User Interface originated Standard Movement Message, ('SMM') DSS originated Stand Movement Message. |

Table Y - 1-1 Norfolk HKS Crane (HKS) Messages

# APPENDIX Z OKLAHOMA CITY TOTE PACKAGE CONVEYOR MESSAGES

## 1.0 TOTE/PACKAGE CONVEYOR MESSAGES

The following table represents a list of all messages from the Tote Package. The Message column represents the text of the message as displayed on the screen or log file. The Type column represents the type of the message: "I" indicates informational, "A" indicates action required and "F" indicates a fatal situation, immediate action is required before further processing. Action and Fatal messages will include the action to be performed. The Log/Display column represents where the message will be displayed: the annotation of "Error" means the message will be logged to the error log, the annotation of "User" means the message will be logged to the message log, and the annotation of "Display" means the message will be displayed through the UI on the screen as an Alert Message. The Explanation/Action column represents the action the user will perform when the message is displayed or an explanation of a Type "I" message.

***Note:** Variable text, depending on circumstance, is enclosed within brackets, [ ]. The text within the brackets describes the item that will appear in the error message.

| Message | Type | Log/Display | Explanation/Action |
|---|---|---|---|
| Connected to ECS Database | I | User | Tote Package Conveyor Software has successfully connected to the ECS Database. |
| Connection to ECS Database failed; xxxxxxxxxxx | F | User Error | Tote Package Conveyor Software has not been able to connect to the ECS Database. The software will automatically shutdown. Research will be needed to determine why the connection has not been made. (xxxxxxxxxx represents the oracle error message.) **For assistance, contact the Systems Administrator.** |
| ECS Database Connection Problem | I | User Error | A database operation has been attempted when there is currently no connection to the database. The software will attempt to re-establish a connection. |

| Message | Type | Log/Display | Explanation/Action |
|---|---|---|---|
| ECS.INI file not found! Initialization Error | F | Display | The ECS.INI could not be found or read from the appropriate directory. The Tote Package Conveyor Software will automatically shutdown when this error occurs. Determine the correct location of the ECS.INI file and make sure that the file exists within the directory. **For assistance, contact the Systems Administrator.** |
| Invalid [xxx] Flag [f] Work Type [w] From [sssss]; Message Not Processed | I | User Error | Tote Package Conveyor Software receives either an M01 or an SMM (xxx) having an invalid flag (f) and work type (w). |
| Invalid Message Type [xxx] From [sssss]; Message Not Processed | I | User Error | Tote Package Conveyor Software receives an invalid DnProcess Message (xxx). |
| Invalid PLC Address [pp] From [fffff] | I | User Error | An invalid PLC Address has been from sent fffff as part of an A01 message. The message will not be processed. |
| Invalid PLC Tote Package Conveyor Message Type [xx]; Message Not Processed | I | User Error | Tote Package Conveyor Software receives an invalid UpProcess Message (xx) that it does not process. |
| Invalid Software Start/Stop Code [c] From [xxxxx] | I | User Error | The Tote Package Conveyor Software has received a shutdown message (A09) from xxxxx. However the start/stop code is not valid (a ‘0’ for shutdown), so the message will not be processed. |
| Invalid Start/Stop Code [c] sent from [fffff] | I | User Error | An Invalid Start/Stop Code c has been sent from fffff as part of an A01 message. The message will not be processed. |
| Logging Turned OFF by [xxxxx] | I | User | Logging has been turned off for the Tote Package Conveyor Subcontroller by xxxxx. |
| Logging Turned ON by [xxxxx] | I | User | Logging has been turned on for the Tote Package Conveyor Subcontroller by xxxxx. |
| Message received to shutdown all Tote Package Conveyor PLCS | I | User | A message has been sent to shutdown all Tote Package Conveyor PLCs. This message could come from either the UI, or it could be created internally. |
| Message received to startup all Tote Package Conveyor PLCs | I | User | A message has been sent to startup all Tote Package Conveyor PLCs. This message could come from either the UI, or it could be created internally. |

| Message | Type | Log/Display | Explanation/Action |
|---|---|---|---|
| No corresponding address for dest [xxxx]; No move made | I | User Error | A PLC address could not be determined for the destination (xxxx) in the SMM/M01. Check to see if the destination is a valid destination and that it is found in the FUNC table with a FUNC_PLC_NO. |
| Oracle Error Occurred: xxxxxxxxxxx | I | User Error | A miscellaneous oracle error has occurred when an oracle operation has been attempted on the database. (xxxxxxxxx represents the oracle error message.) |
| PLC-->TOTE PACKAGE Message: [xxxxxx] | I | User | Tote Package Conveyor Software receives an UpProcess Message (xxxxx). |
| Processing a xxx of Flag 'D'; Moving Tote Package | I | User | Tote Package Conveyor Software receives either an MO1 or an SMM (xxx) having a flag of 'D' to move a Tote Package. |
| Processing request to Shutdown Software from [xxxxx] | I | User | The Tote Package Conveyor Software has received a shutdown message (A09) from xxxxx. |
| Shutting Down Subcontroller INI File Logging Indicator Error | F | Display | There is a problem reading the ECS.INI file. The Tote Package Conveyor Software will automatically shutdown when this error occurs. Check the ECS.INI file and make sure it is in the appropriate directory and the appropriate sections are found within the file. **For assistance, contact the Systems Administrator.** |
| TPKID.DAT Error Error Opening TPKID.DAT Table | F | Display | There is a problem opening the terminal ID table (TPKID.DAT). The Tote Package Conveyor Software will automatically shutdown when this error occurs. Check to make sure the TPKID.DAT file is present in the ECS_LOGS directory and that the data within the file is in the proper format. **For assistance, contact the Systems Administrator.** |
| Tote Package Conveyor Software Shutting Down | I | User Display | The Tote Package Conveyor Software is shutting down in an orderly manner. |
| Tote Package Conveyor Subcontroller Starting Up | I | User | The Tote Package Conveyor Software is started up. |

| Message | Type | Log/Display | Explanation/Action |
|---|---|---|---|
| TRF->TOTE PACKAGE:xxxxxxxxxxxxxxxxxxxx | I | User | Tote Package Conveyor Software receives a DnProcess message xxxxxxxxxxxxxxxxxx from the Traffic Controller. Possible valid DnProcess messages are:<br><br>TPK01USE01004A07x - turn logging on/off for the Tote Package conveyor subcontroller (x = logging status)<br><br>TPK01USE01004A090 - shutdown the Tote Package conveyor software<br><br>TPK01USE01113M01AdHocMovHLK 01 HAZD K101 00101 D 06110939 - an example of a valid 'D' type adhoc move from UI |

Table Z - 1-1 Oklahoma City Tote Package Messages

# APPENDIX AA DDPW PS TOTE CONVEYOR MESSAGES

## 1.0 DDPW PS TOTE CONVEYOR MESSAGES

The following table represents a list of all messages from the DDPW PS Tote. The Message column represents the text of the message as displayed on the screen or log file. The Type column represents the type of the message: "I" indicates informational, "A" indicates action required and "F" indicates a fatal situation, immediate action is required before further processing. Action and Fatal messages will include the action to be performed. The Log/Display column represents where the message will be displayed: the annotation of "Error" means the message will be logged to the error log, the annotation of "User" means the message will be logged to the message log, and the annotation of "Display" means the message will be displayed through the UI on the screen as an Alert Message. The Explanation/Action column represents the action the user will perform when the message is displayed or an explanation of a Type "I" message.

***Note:** Variable text, depending on circumstance, is enclosed within brackets, [ ]. The text within the brackets describes the item that will appear in the error message.

| Message | Type | Log/Display | Explanation/Action |
|---|---|---|---|
| Connected to ECS Database | I | User | DDPW PS Tote Conveyor Software has successfully connected to the ECS Database. |
| Connection to ECS Database failed; xxxxxxxxxxx | F | User Error | DDPW PS Tote Conveyor Software has not been able to connect to the ECS Database. The software will automatically shutdown. Research will be needed to determine why the connection has not been made. (xxxxxxxxxx represents the oracle error message.) **For assistance, contact the Systems Administrator.** |
| ECS Database Connection Problem | I | User Error | A database operation has been attempted when there is currently no connection to the database. The software will attempt to re-establish a connection. |

| Message | Type | Log/Display | Explanation/Action |
|---|---|---|---|
| ECS.INI file not found! Initialization Error | F | Display | The ECS.INI could not be found or read from the appropriate directory. The DDPW PS Tote Conveyor Software will automatically shutdown when this error occurs. Determine the correct location of the ECS.INI file and make sure that the file exists within the directory. **For assistance, contact the Systems Administrator.** |
| Invalid [xxx] Flag [f] Work Type [w] From [sssss]; Message Not Processed | I | User Error | DDPW PS Tote Conveyor Software receives either an M01 or an SMM (xxx) having an invalid flag (f) and work type (w). |
| Invalid Message Type [xxx] From [sssss]; Message Not Processed | I | User Error | DDPW PS Tote Conveyor Software receives an invalid DnProcess Message (xxx). |
| Invalid PLC DDPW PS Tote Conveyor Message Type [xx]; Message Not Processed | I | User Error | DDPW PS Tote Conveyor Software receives an invalid UpProcess Message (xx) that it does not process. |
| Invalid Start/Stop Code [c] sent from [fffff] | I | User Error | An Invalid Start/Stop Code c has been sent from fffff as part of an A01 message. The message will not be processed. |
| Logging Turned OFF by [xxxxx] | I | User | Logging has been turned off for the DDPW PS Tote Conveyor Subcontroller by xxxxx. |
| Logging Turned ON by [xxxxx] | I | User | Logging has been turned on for the DDPW PS Tote Conveyor Subcontroller by xxxxx. |
| Oracle Error Occurred: xxxxxxxxxxx | I | User Error | A miscellaneous oracle error has occurred when an oracle operation has been attempted on the database. (xxxxxxxxx represents the oracle error message.) |
| PLC-->DDPW PS TOTE Message: [xxxxxx] | I | User | DDPW PS Tote Conveyor Software receives an UpProcess Message (xxxxx). |
| Processing a xxx of Flag 'D'; Moving DDPW PS Tote | I | User | DDPW PS Tote Conveyor Software receives either an MO1 or an SMM (xxx) having a flag of ‘D’ to move a DDPW PS Tote. |

| Message | Type | Log/Display | Explanation/Action |
|---|---|---|---|
| Processing request to Shutdown Software from [xxxxx] | I | User | The DDPW PS Tote Conveyor Software has received a shutdown message (A09) from xxxxx. |
| Shutting Down Subcontroller INI File Logging Indicator Error | F | Display | There is a problem reading the ECS.INI file. The DDPW PS Tote Conveyor Software will automatically shutdown when this error occurs. Check the ECS.INI file and make sure it is in the appropriate directory and the appropriate sections are found within the file. **For assistance, contact the Systems Administrator.** |
| PSTID.DAT Error<br>Error Opening PSTID.DAT Table | F | Display | There is a problem opening the terminal ID table (PSTID.DAT). The DDPW PS Tote Conveyor Software will automatically shutdown when this error occurs. Check to make sure the PSTID.DAT file is present in the ECS_LOGS directory and that the data within the file is in the proper format. **For assistance, contact the Systems Administrator.** |
| DDPW PS Tote Conveyor Software Shutting Down | I | User<br>Display | The DDPW PS Tote Conveyor Software is shutting down in an orderly manner. |
| DDPW PS Tote Conveyor Subcontroller Starting Up | I | User | The DDPW PS Tote Conveyor Software is started up. |

| Message | Type | Log/Display | Explanation/Action |
|---|---|---|---|
| TRF->DDPW PS TOTE:xxxxxxxxxxxxxxxxxxxx | I | User | DDPW PS Tote Conveyor Software receives a DnProcess message xxxxxxxxxxxxxxxxxx from the Traffic Controller. Possible valid DnProcess messages are:<br><br>TPK01USE01004A07x - turn logging on/off for the DDPW PS Tote conveyor subcontroller (x = logging status)<br><br>TPK01USE01004A090 - shutdown the DDPW PS Tote conveyor software<br><br>TPK01USE01113M01AdHocMovHLK 01 HAZD K101 00101 D 06110939 - an example of a valid 'D' type adhoc move from UI |

Table AA - 1-1 DDPW PS Tote Messages

# APPENDIX BB DDJC MISSION/CCP SORTER MESSAGES

## 1.0 DDJC SORTER MESSAGES

The following table represents a list of all messages from the Sorter subcontroller. The Message column represents the text of the message as displayed on the screen. The Type column represents the type of the message: "I" indicates informational, "A" indicates action required and "F" indicates fatal situation, immediate action is required before further processing. Action and Fatal messages will include the action to be performed. The Log/Display column represents where the message will be displayed: the annotation of "Error" means the message will be logged to the error log, the annotation of "User" means the message will be logged to the message log, and the annotation of "Display" means the message will be displayed through the UI on the screen as an Alert Message. The Explanation/Action column represents the action the user will perform when the message is displayed or an explanation of a Type “I” message.

***Note:** Variable text, depending on circumstance, is enclosed within brackets, [ ]. The text within the brackets describes the item that will appear in the error message.

| Message | Type | Log/ Display | Explanation/Action |
|---|---|---|---|
| ECS.INI file not found! | F | User Error Display | ECS.INI file was not found. **Collect supporting documents and call the Systems Administrator.** |
| Invalid SMM Message Flag [Z] from [userName] | A | User Error Display | SMM Message Flag "Z" (Workstation Designation) not valid for Sorter. **Collect supporting documents and call the Systems Administrator.** |
| Invalid Message Type [A05] from [userName] | A | User Error Display | Message Type "A05" (Delete SMM) not valid for the Sorter. **Collect supporting documents and call the Systems Administrator.** |
| Invalid Message Type [A41] from [userName] | A | User Error Display | Message Type "A41" (Workstation Assignment) not valid for Sorter. **Collect supporting documents and call the Systems Administrator.** |
| Invalid Message Type [J41] from [userName] | A | User Error Display | Message Type "J41" (NMC at Workstation Request) not valid for the Sorter. **Collect supporting documents and call the Systems Administrator.** |
| Invalid Message Type [A21] from [userName] | A | User Error Display | Message Type "A21" (Initialize Device) not valid for the Sorter. **Collect supporting documents and call the Systems Administrator.** |

| Message | Type | Log/ Display | Explanation/Action |
|---|---|---|---|
| Invalid Set Logging Flag [flag] by [userName] | A | User Error Display | Set Logging Flag not On ('N') or Off ('F'). **Collect supporting documents and call the Systems Administrator.** |
| Invalid SMM Message Flag [flag] from [userName] | A | User Error Display | SMM Message Flag other than ('C') Completion, ('D') Dummy Move, ('K') Pick Completion, ('L') Location Survey, ('P') Pack Arrival, ('R') Request, ('W') Clear, or ('Z') Workstation Designation. **Collect supporting documents and call the Systems Administrator.** |
| Logging Turned OFF by [userName] | I | User | Logging in User Log turned off by specified user. |
| Logging Turned ON by [userName] | I | User | Logging in User Log turned on by specified user. |
| Shutting Down Subcontroller | F | Display | Couldn't find logging key or no value for logging key in ECS.INI. **Collect supporting documents and call the Systems Administrator.** |
| Subsystem Shut Down by [userName] | I | User | Sorter Subsystem was shut down by the specified user. |
| Unknown Message Type [type] from [userName] | A | User Error Display | Message type other than ('A07') Set Logging, ('A09') System Stop, ('M01') User Interface originated Standard Movement Message, ('SMM') DSS originated Stand Movement Message. **Select appropriate message type and try again.** |

Table BB - 1-1 DDJC Mission/CCP Sorter Messages

**LIST OF EFFECTIVE PAGES**
Software User Manual

Replaces Revision 6/Change 0 in association with SCR DSS-TR9-939 and DSS-TR9-940
Date of issue for revision and changed pages is:

Revision 2/Change 0.....010/16/97
Revision 3/Change 0.....03/31/98
*Revision 3/Change 2.....Not distributed/document was split into two section, main document & Appendix A-N due to corruption error.
*Revision 3/Change 3.....06/08/98 Distributed to Mechanicsburg and HQ.
Revision 4a/Change 0.....10/15/99 Distributed to Oklahoma City and HQ. Includes OCONUS references but NOT 7 position data.
Revision 5/Change 0.....2/27/99 Distributed to OCONUS(7)
Revision 6/Change 0.....01/25/00 Distributed without CSF changes
Revision 7/Change 0.....04/05/01 in association with SCR DSS-TR9-939 and DSS-TR9-940

**Note**: TOTAL NUMBER OF PAGES IN THIS REVISION IS THE ENTIRE DOCUMENT, CONSISTING OF THE FOLLOWING CHANGES:

| PAGE NO. | REV. NO. | REASON FOR CHANGE |
|---|---|---|
| COVER | 7/Change 0 | Changed Revision/Change number, and the date. |
| ii-xii | 7/Change 0 | TOC reflects changes and realignments throughout document. Changes for SCR DSS-TR9-939 and DSS-TR9-940 |
| 5-12 through 5-17 | 7/Change 0 | Added Raymond Carousel screens and data. |
| 5-91 through 5-137 | 7/Change 0 | Added ASRS menu screens and data. |
| Appendix E-1 through E-12 | 7/Change 0 | Added CSF messages to User Interface message table. |
| Appendix W | 7/Change 0 | Added new Appendix W - Raymond Carousel Messages. |
| Appendix X | 7/Change 0 | Added new Appendix X - Stacker Error Messages in association with SCR DSS-TR9-939 and DSS-TR9-940 |

**LIST OF EFFECTIVE PAGES**
Software User Manual

Replaces Revision 7/Change 0 in association with SCR DSS-RE0-089
Date of issue for revision and changed pages is:

Revision 7/Change 1 .....05/14/01 in association with SCR DSS-RE0-089

**Note**: TOTAL NUMBER OF PAGES IN THIS REVISION IS THE ENTIRE DOCUMENT, CONSISTING OF THE FOLLOWING CHANGES:

| PAGE NO. | REV. NO. | REASON FOR CHANGE |
|---|---|---|
| COVER | 7/Change 1 | Changed Revision/Change number, and the date. |
| ii-xii | 7/Change 1 | TOC reflects changes and realignments throughout document. |
| 1-2 | 7/Change 1 | Added missing references to Appendix W, and Appendix X. Added new reference to Appendix Y. |
| 3-2 | 7/Change 1 | Updated paragraph 3.1.2 - Uses of the Software, bullet list of automated facilities, using standard text from System/Subsystem Specification (SSS) document for consistency. |
| 3-5 | 7/Change 1 | Deleted reference to ECS_USER3 from paragraph 3.4.12 in association with SRC DSS-RE0-089 |
| 3-8 through 3-9 | 7/Change 1 | Updated paragraph 3.6.1 Doctor Watson Recovery Procedures. Deleted paragraph referencing Sequence Number Mismatch. |
| 3-10 | 7/Change 1 | Deleted list items 2, 3 and sub items a, b, c, and d, from paragraph 3.6.2 - Daily System Activity Procedures. |
| 4-1 | 7/Change 1 | Updated list item 3 in paragraph 4.1.2 Access Control. |
| 4-4 | 7/Change 1 | Updated paragraph 4.2.1 Logging onto Windows NT |
| 6-1 | 7/Change 1 | Added DAWS description to paragraph 6.1. |

| PAGE NO. | REV. NO. | REASON FOR CHANGE |
|---|---|---|
| X-1 and X-3 | 7/Change 1 | Updated APPENDIX X, section title to read CSF STACKER ERROR MESSAGES, and Table caption X - 1-1 to read CSF STACKER ERROR MESSAGES(added CSF) |
| Appendix M | 7/Change 1 | Returned to this document in its original location APPENDIX M - STACKER (NFS) MESSAGES which was incorrectly removed from this document. Moved the section referencing NORFOLK HKS Crane (HKS) MESSAGES from Appendix M to APPENDIX Y. This appendix was originally added in association with SCR DSS-RE0-089 (incorrectly replacing NFS Messages). |

**LIST OF EFFECTIVE PAGES**
Software User Manual

Replaces Revision 7/Change 1 in association with SCR DSS-NC0-158
Date of issue for revision and changed pages is:

Revision 7/Change 2 .....08/02/01 in association with SCR DSS-NC0-158

**Note**: TOTAL NUMBER OF PAGES IN THIS REVISION IS THE ENTIRE DOCUMENT, CONSISTING OF THE FOLLOWING CHANGES:

| PAGE NO. | REV. NO. | REASON FOR CHANGE |
|---|---|---|
| COVER | 7/Change 2 | Changed Revision/Change number, and the date. |
| ii-xii | 7/Change 2 | TOC reflects changes and realignments throughout document. |
| Throughout Document | 7/Change 2 | Added changes in association with SCR DSS-NC0-158 |

**LIST OF EFFECTIVE PAGES**
Software User Manual

Replaces Revision 7/Change 2 and placed on the web
Date of issue for revision and changed pages is:

Revision 7/Change 3.....10/05/01 returned doc to original status from 2 sections to 1. Not distributed - placed on web

**Note**: TOTAL NUMBER OF PAGES IN THIS REVISION IS THE ENTIRE DOCUMENT, CONSISTING OF THE FOLLOWING CHANGES:

| PAGE NO. | REV. NO. | REASON FOR CHANGE |
|---|---|---|
| COVER | 7/Change 3 | Changed Revision/Change number, and the date. |
| ii-xii | 7/Change 3 | TOC reflects changes and realignments throughout document. |
| Entire document | 7/Change 3 | Changed document from 2 sections (Main and appendix) to 1 document. |

**LIST OF EFFECTIVE PAGES**
Software User Manual

Replaces Revision 7/Change 3 and placed on the web
Date of issue for revision and changed pages is:

Revision 7/Change 4.....3/15/02 Changes in association with SCR #DSS-NC0-038

**Note**: TOTAL NUMBER OF PAGES IN THIS REVISION IS THE ENTIRE DOCUMENT, CONSISTING OF THE FOLLOWING CHANGES:

| PAGE NO. | REV. NO. | REASON FOR CHANGE |
|---|---|---|
| COVER | 7/Change 4 | Changed Revision/Change number, and the date. |
| ii-xii | 7/Change 4 | TOC reflects changes and realignments throughout document. |
| **Error! Bookmark not defined.** | 7/Change 4 | Updated User Interface graphics in association with SCR #DSS-NC0-038 |

**LIST OF EFFECTIVE PAGES**
Software User Manual

Replaces Revision 7/Change 4 and placed on the web
Date of issue for revision and changed pages is:

Revision 7/Change 5.....5/22/02 Changes in association with SCR #DSS-NC0-104

**Note**: TOTAL NUMBER OF PAGES IN THIS REVISION IS THE ENTIRE DOCUMENT, CONSISTING OF THE FOLLOWING CHANGES:

| PAGE NO. | REV. NO. | REASON FOR CHANGE |
|---|---|---|
| COVER | 7/Change 5 | Changed Revision/Change number, and the date. |
| ii-xii | 7/Change 5 | TOC reflects changes and realignments throughout document. |
| 1-2 | 7/Change 5 | Update paragraph 1.3 in association with SCR# DSS-OO0-132 at DDOO |
| F-11 | 7/Change 5 | Updated paragraph 3.1 Doctor Watson Recovery. |
| V-2 | 7/Change 5 | Deleted ‘Sequence Number mismatch message’ from table. |
| Appendix Z | 7/Change 5 | Added APPENDIX Z OKLAHOMA CITY TOTE PACKAGE CONVEYOR MESSAGES in association with SCR# DSS-OO0-132 at DDOO. |

**LIST OF EFFECTIVE PAGES**
Software User Manual

Replaces Revision 7/Change 5 and placed on the web
Date of issue for revision and changed pages is:

Revision 7/Change 6.....7/12/02 Changes in association with PTR #110807

**Note**: TOTAL NUMBER OF PAGES IN THIS REVISION IS THE ENTIRE DOCUMENT, CONSISTING OF THE FOLLOWING CHANGES:

| PAGE NO. | REV. NO. | REASON FOR CHANGE |
|---|---|---|
| COVER | 7/Change 6 | Changed Revision/Change number and the date. |
| ii-xii | 7/Change 6 | Updated table of contents. |
| 2-1 | 7/Change 6 | Updated entire section 2.0 Referenced Documents. |
| 5-1 thru 5-4 | 7/Change 6 | Updated paragraphs 5.0 and 5.3.2 in association with PTR# 110807 |
| 5-5 thru 5-9 | 7/Change 6 | Updated paragraphs 5.3.4 and 5.3.4.1 in association with PTR# 110807 |
| Appendix A | 7/Change 6 | Added Appendix AA PS Tote Conveyor messages. Changes in association with SCR# DSS-PW0-131 |

**LIST OF EFFECTIVE PAGES**
Software User Manual

Replaces Revision 7/Change 6 and placed on the web
Date of issue for revision and changed pages is:

Revision 7/Change 7 .....10/18/02 Changes in association with SCR# DSS-NV2-003

**Note**: TOTAL NUMBER OF PAGES IN THIS REVISION IS THE ENTIRE DOCUMENT, CONSISTING OF THE FOLLOWING CHANGES:

| PAGE NO. | REV. NO. | REASON FOR CHANGE |
|---|---|---|
| COVER | 7/Change 7 | Changed Revision/Change number and the date. |
| ii-xii | 7/Change 7 | Updated table of contents. |
| 3-185 thru 3-189 | 7/Change 7 | Added Ministacker Handling System for Norfolk Only. Changes in association with SCR# DSS-NV2-003 |

**LIST OF EFFECTIVE PAGES**
Software User Manual

Replaces Revision 7/Change 7 and placed on the web
Date of issue for revision and changed pages is:

Revision 7/Change 8 .....10/28/02 Changes in association with SCR# DSS-RE2-021

**Note**: TOTAL NUMBER OF PAGES IN THIS REVISION IS THE ENTIRE DOCUMENT, CONSISTING OF THE FOLLOWING CHANGES:

| PAGE NO. | REV. NO. | REASON FOR CHANGE |
|---|---|---|
| COVER | 7/Change 8 | Changed Revision/Change number and the date. |
| ii-xii | 7/Change 8 | Updated table of contents. |
| 1-2 | 7/Change 8 | Added reference to Appendix AA that was omitted in revision 7/change 6. Changes in association with SCR# DSS-PW0-131. |
| 5-5 thru 5-11 | 7/Change 8 | Updated section 5.3.4 File menu screens adding Hill Stacker Stats. Changes in association with SCR# DSS-RE2-021 |
| Change page for Revision 7/Change 6 | 7/Change 8 | Added the Appendix AA update information that was omitted in revision 7/change 6. |

**LIST OF EFFECTIVE PAGES**
Software User Manual

Replaces Revision 7/Change 8 and placed on the web
Date of issue for revision and changed pages is:

Revision 7/Change 9 .....11/04/02 Changes to clarify DDNV Mini Stacker procedures.

**Note**: TOTAL NUMBER OF PAGES IN THIS REVISION IS THE ENTIRE DOCUMENT, CONSISTING OF THE FOLLOWING CHANGES:

| PAGE NO. | REV. NO. | REASON FOR CHANGE |
|---|---|---|
| COVER | 7/Change 9 | Changed Revision/Change number and the date. |
| ii-xii | 7/Change 9 | Updated table of contents. |
| 5-187 | 7/Change 9 | Changed from 16 to 12 character DSS location. Changes in association with SCR# DSS-RE3-007. |
| 5-189 thru 5-190 | 7/Change 9 | Corrections to clarify DDNV Mini Stacker procedures. |

**LIST OF EFFECTIVE PAGES**
Software User Manual

Replaces Revision 7/Change 9 and placed on the web
Date of issue for revision and changed pages is:

Revision 7/Change 10.....03/03/03

**Note**: TOTAL NUMBER OF PAGES IN THIS REVISION IS THE ENTIRE DOCUMENT, CONSISTING OF THE FOLLOWING CHANGES:

| PAGE NO. | REV. NO. | REASON FOR CHANGE |
|---|---|---|
| COVER | 7/Change 10 | Changed Revision/Change number and the date. |
| ii-xiii | 7/Change 10 | Updated table of contents. |
| 5-11 | 7/Change 10 | Replaced Stacker Stat graphic in association with SCR# DSS-RE2-021 DDHU Crane. |

**LIST OF EFFECTIVE PAGES**
Software User Manual

Replaces Revision 7/Change 10 and placed on the web
Date of issue for revision and changed pages is:

Revision 7/Change 11 .....05/07/03

**Note**: TOTAL NUMBER OF PAGES IN THIS REVISION IS THE ENTIRE DOCUMENT, CONSISTING OF THE FOLLOWING CHANGES:

| PAGE NO. | REV. NO. | REASON FOR CHANGE |
|---|---|---|
| COVER | 7/Change 11 | Changed Revision/Change number and the date. |
| ii-xiii | 7/Change 11 | Updated table of contents. |
| 5-126 | 7/Change 11 | Updated Towline section in association with PTR# 115098. |

**LIST OF EFFECTIVE PAGES**
Software User Manual

Replaces Revision 7/Change 11 and placed on the web
Date of issue for revision and changed pages is:

Revision 7/Change 12.....06/09/03

**Note**: TOTAL NUMBER OF PAGES IN THIS REVISION IS THE ENTIRE DOCUMENT, CONSISTING OF THE FOLLOWING CHANGES:

| PAGE NO. | REV. NO. | REASON FOR CHANGE |
|---|---|---|
| COVER | 7/Change 12 | Changed Revision/Change number and the date. |
| ii-xii | 7/Change 12 | Updated table of contents. |
| 5-147 Thru 5-157 | 7/Change 12 | Added Sortation System Tracy. Changes in association with SCR# DSS-JC3-008, SCR# DSS-TR1-036. |

**LIST OF EFFECTIVE PAGES**
Software User Manual

Replaces Revision 7/Change 12 and placed on the web
Date of issue for revision and changed pages is:

Revision 7/Change 13.....07/15/03

**Note**: TOTAL NUMBER OF PAGES IN THIS REVISION IS THE ENTIRE DOCUMENT, CONSISTING OF THE FOLLOWING CHANGES:

| PAGE NO. | REV. NO. | REASON FOR CHANGE |
|---|---|---|
| COVER | 7/Change 13 | Changed Revision/Change number and the date. |
| ii-xii | 7/Change 13 | Updated table of contents. |
| 2-1 | 7/Change 13 | Updated section 2.0 in association with SCR# DSS-JC3-008. |
| Appendix BB | 7/Change 13 | Added DDJC Mission/CCP Sorter Messages. Changes in association with SCR# DSS-JC3-008. |

**LIST OF EFFECTIVE PAGES**
Software User Manual

Replaces Revision 7/Change 13 and placed on the web
Date of issue for revision and changed pages is:

Revision 7/Change 14.....08/01/03

**Note**: TOTAL NUMBER OF PAGES IN THIS REVISION IS THE ENTIRE DOCUMENT, CONSISTING OF THE FOLLOWING CHANGES:

| PAGE NO. | REV. NO. | REASON FOR CHANGE |
|---|---|---|
| COVER | 7/Change 14 | Changed Revision/Change number and the date. |
| ii-xii | 7/Change 14 | Updated table of contents. |
| 5-155 thru 5-157 | 7/Change 14 | Updated documentation for Sortation System at Tracy. |

**LIST OF EFFECTIVE PAGES**
Software User Manual

Replaces Revision 7/Change 14 and placed on the web
Date of issue for revision and changed pages is:

Revision 7/Change 15.....04/14/04

**Note**: TOTAL NUMBER OF PAGES IN THIS REVISION IS THE ENTIRE DOCUMENT, CONSISTING OF THE FOLLOWING CHANGES:

| PAGE NO. | REV. NO. | REASON FOR CHANGE |
|---|---|---|
| COVER | 7/Change 15 | Changed Revision/Change number and the date. |
| i-xiii | 7/Change 15 | Updated table of contents. |
| 5-80 thru 5-93 | 7/Change 15 | Updated documentation to include AWOS change for DDSP, changes in association with SCR# DSS-SP3-106. |

**LIST OF EFFECTIVE PAGES**
Software User Manual

Replaces Revision 7/Change 15 and placed on the web
Date of issue for revision and changed pages is:

Revision 7/Change 16.....09/16/04

**Note**: TOTAL NUMBER OF PAGES IN THIS REVISION IS THE ENTIRE DOCUMENT, CONSISTING OF THE FOLLOWING CHANGES:

| PAGE NO. | REV. NO. | REASON FOR CHANGE |
|---|---|---|
| COVER | 7/Change 16 | Changed Revision/Change number and the date. |
| i-xiii | 7/Change 16 | Updated table of contents. |
| Section 5 | 7/Change 16 | Updated documentation to update DDNV only data that now to includes DDMA. |