JD Edwards World

Computer Aided Software Engineering Guide

Release A9.4

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Describes how to work with Program Generator, Program Design Language, Source Modifications, CASE Programs, Additional Tools, and Source Code Inventory and Database.

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Preface

Welcome to the JD Edwards World Computer Aided Software Engineering Guide.

Audience

This guide is intended for implementers and end users of JD Edwards World Computer Aided Software Engineering.

Documentation Accessibility

For information about Oracle's commitment to accessibility, visit the Oracle Accessibility Program website at http://www.oracle.com/pls/topic/lookup?ctx=acc&id=docacc.

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Related Information

For additional information about JD Edwards World applications, features, content, and training, visit the JD Edwards World pages on the JD Edwards Resource Library located at:

http://learnjde.com

Conventions

The following text conventions are used in this document:

Convention	Meaning
boldface	Indicates cautionary information or terms defined in the glossary.
italic	Indicates book titles or emphasis.

1

Overview to Computer Aided Software Engineering (CASE)

This chapter contains these topics:

1.1 System Integration

Computer Aided Software Engineering (CASE) covers the entire application development life cycle, including:

- Design tools
- Code generation
- Automatic documentation generation
- Prototyping
- Repositories
- Other productivity improvement tools

You use these tools to develop, operate, and maintain flexible, business application software.

Application Development Cycle

There are three technical levels in the JD Edwards World Application Development Cycle (A/D Cycle):

Level	A/D Cycle
Level 1	The Application Platform, which represents the Technical Foundation Guide.
Level 2	The Design Platform, which represents the Advanced Programming Concepts and Skills (APCS) Guide.

Level	A/D Cycle
Level 3	The Development Platform, which represents the Program Generator (CASE) Guide.

1.1.1 Specifications

You define a program using various Program Generator specifications. You perform the following:

- Define program purpose and type
- Specify the files
- Create help text
- Define function exits and options
- Add field-specific logic

You can also create processing options and document Automatic Accounting Instructions (AAIs). After you define the specifications, the Program Generator creates the program, adding the correct validation files and servers to complete the program.

1.1.2 Fundamentals

There are basic building blocks for a program. Program types are basic definitions of the programs. Using the Question and Answer facility, the system determines, based upon your answers, which program type to select. The program generator builds the program using primary and detail logic modules. You can add AAIs to your programs and create Control Language (CL) programs to launch programs from menu options.

1.1.3 History of the Program Generator

- Development started in 1984
- First called Clone
- First program generation was in April, 1985
- Rewrite of all systems (World Systems) done through Clone I & II
- Became known as the KBG (Knowledge Based Generator) in 1991
- Became known as the Program Generator in 1992

1.1.4 Evolution of the Program Generator

Clone II Programs

- Dynamic Data Dictionary
- Dynamic totaling and page skipping - created 39 lines of code per field which caused large S002 subroutines

Clone II.5 Programs

- Started in 1989
- Dynamic totaling and page skipping - creates 80 lines of code for ALL fields
- No more "?" code generated
- Cursor Sensitive Help (F1)

- F24 Window
- Code for subfile option processing generated

Current Program Generator Programs

- More utilization of file servers
- Use of the Program Design Language (PDL) allow you to make modifications instead of making changes through Source Entry Utility

1.2 Features

JD Edwards World provides several tools to help create and customize your programs.

- PDL is available to add field-specific logic to your programs.
- Quick Start asks a few basic questions, and then creates a basic Report Program Generator (RPG) or CL program.
- JD Edwards World provides many different utilities to assist you in creating and maintaining your code.
- PDL enables you to add calculations or comparisons to specific fields within the program.
- Precompiler commands are available to specialize your compile environment

CASE includes the following features:

- Foundation
- Program Generator
- Program Design Language
- Source Modifications
- CASE Programs
- Additional Tools
- Source Inventory and Database

Note: You cannot use the Program Generator to modify existing JD Edwards World programs.

1.2.1 What are the Benefits of CASE?

Every program you create using the Program Generator automatically includes and uses JD Edwards World functionality, such as:

- Data Dictionary
- User defined codes
- Vocabulary overrides
- Action code security
- Business unit security
- Standard function exits
- Function exit and option exit security

- Cursor sensitive help
- Program help
- DREAM Writer
- Processing options

This functionality is consistent across all applications you generate because it is built into the Program Generator and Master Source.

The Program Generator is the same tool that JD Edwards World uses to generate the JD Edwards World application programs.

You can create simple programs in a short period of time using the Program Generator. Due to the standard structure and subroutines of the programs you generate, it is easier to incorporate complexities in either the Program Specifications or the source code.

You generate the source RPG code from Program Specifications, Program Types, and Master Source Code; therefore, you can regenerate the source as JD Edwards World enhances the functionality of its software. Because the enhanced functionality is in the Master Source Code File, you need to regenerate only the source code using the original Program Specifications.

Note: The JD Edwards Program Generator output is in RPGIII code. When you complete the program development cycle, you can use RPGIII to RPGIV converters from IBM and third party vendors. As of A7.3.14, A8.1.5 and A9.1, you can use the Software Versions Repository to manage RPGIV programs with the Function Code set to RPGL.

1.3 Terms and Concepts

1.3.1 CASE, as an industry term

As an industry term, CASE is an acronym for Computer-Aided Software Engineering. Many suppliers offer tools that implement various aspects of software engineering. These tools are either upper CASE or lower CASE tools.

Upper CASE tools focus on the business process and data models. Products that provide upper CASE capabilities include tools for organizational charts, decomposition diagrams, entity relationship diagrams, and data flow diagrams.

Lower CASE tools, on the other hand, focus on data models and generating source code. An example of a lower CASE product is J.D. Edward World CASE.

1.3.2 CASE, as a JD Edwards World term

As a JD Edwards World term, CASE refers to a set of tools that you use in the software development process. Following are the components of the CASE tools.

1.4 Detailed Information

1.4.1 CASE Profile

See CASE Profiles *JD Edwards World Advanced Programming Concepts and Skills Guide* for information on setting up the CASE profile. There are several methods to access the CASE profile:

- Choose CASE profile from the Computer Aided Design menu (G92)
- Choose Software Versions Repository from the Computer Aided Design menu (G92), and then choose Repository Services (F6) to access the Repository Services window.

You enter the CASE program source generation file and compiler options on this screen.

1.4.2 Computer Assisted Design (CAD)

CAD includes the following:

- Data Dictionary
- User Defined Codes
- File Design Aid (FDA)
- Screen Design Aid (SDA)
- Report Design Aid (RDA)

1.4.3 Computer Assisted Programming (CAP)

CAP includes the following:

- Program Generator
  - Program Purpose and Type
  - File Specifications
  - General Instructions (Help)
  - Option and Function Key Exits
  - Detailed Programming Facility
  - Processing Options
- CL Generator
  - Model CL programs (J98MODEL1 through J98MODEL8)
  - Quick Start CL Generator
- Quick Start Application Tool

1.4.4 About The Program Generator

The Program Generator is the JD Edwards World tool that generates source code for both RPG programs and CL programs. In many respects the Program Generator is a very simple tool that combines three functions and produces the source code as a result of combining the functions. The three functions are:

- Program Types
- Master Source Code
- Program Specifications

1.4.5 About Program Types

The Program Generator builds software depending on the program type you choose. The program types combine the features of:

- Interactive, for example, screen
- Batch, for example report or conversion
- Single record or multi-record

These program types contain a list of individual definitions which you combine to form a functional program. JD Edwards World refers to individual definitions as primary logic modules and the system uses them to build the source code for the program type. The system stores each primary logic module in the Master Source Code File. These logic modules are the components of all JD Edwards World program types.

1.4.6 About Master Source Code

The Master Source Code File consists of over 11,000 lines of RPG source code. Some lines are pure RPG source code. Others contain some RPG code and some JD Edwards World directives, which the Program Generator interprets and replaces with RPG code. The interpretation of the directives is based on the Program Specifications that you establish for generating a specific program type.

1.4.7 About Program Specifications

To generate a program, you must first complete the Program Generator Specifications. These specifications are the details of your program that the Program Generator uses to complete the RPG code it builds from the master source directives. There are six specifications. You must determine:

- A program type
- The files the program uses

After you specify this information, you can generate complete source code that you can then compile and execute.

1.4.8 Program Types

There are five categories of program types:

Interactive

- Can be either update or inquiry
- Can contain Action Codes
- Can contain a subfile
- Can interface with DREAM Writer to provide run-time options

Window

- Normally includes cursor sensitive helps (F1)
- Fits inside current interactive program

Report

- Provides for accumulated values (totals)

- Interfaces with DREAM Writer
- Can contain sub-headings

Server

- Name includes a prefix of X
- Updates master files
- Can contain a report

Conversion

- Use this program type to convert data from one file to another
- Can contain a report

JD Edwards World currently provides 25 pre-defined program types with the Program Generator. The CASE Guide includes information to modify existing program types and to create of your own program types.

1.5 Menu Overview

JD Edwards World systems are menu driven. System functions are organized according to their function and frequency of use. The options on these screens illustrate the flow to the functions in this guide.

Figure 1–1 Master Directory screen

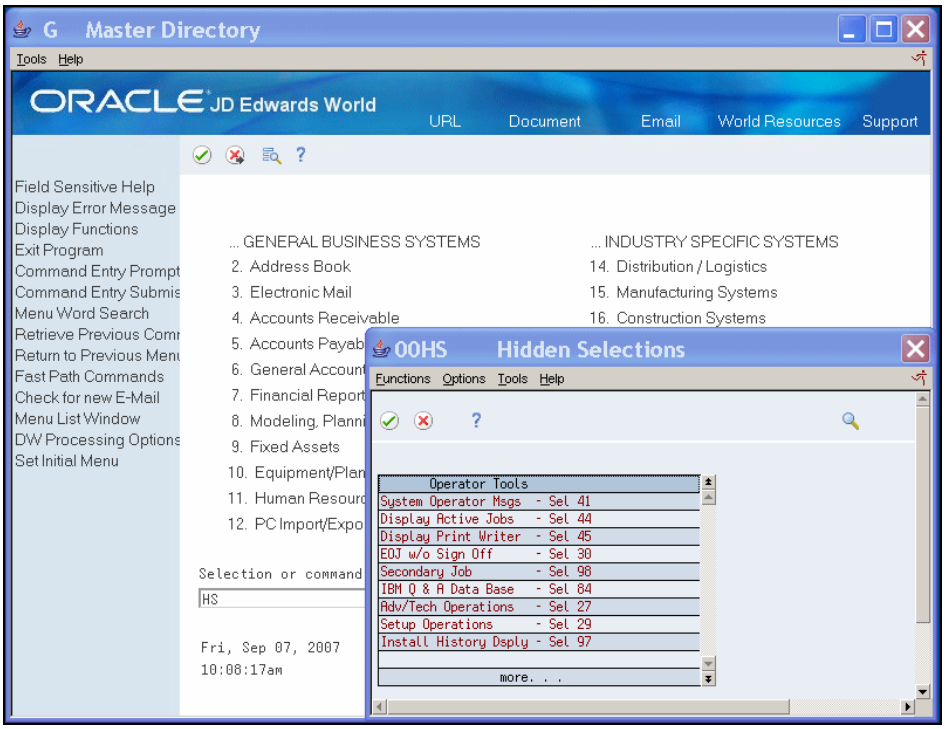


Figure 1–2 Advanced & Technical Operations screen

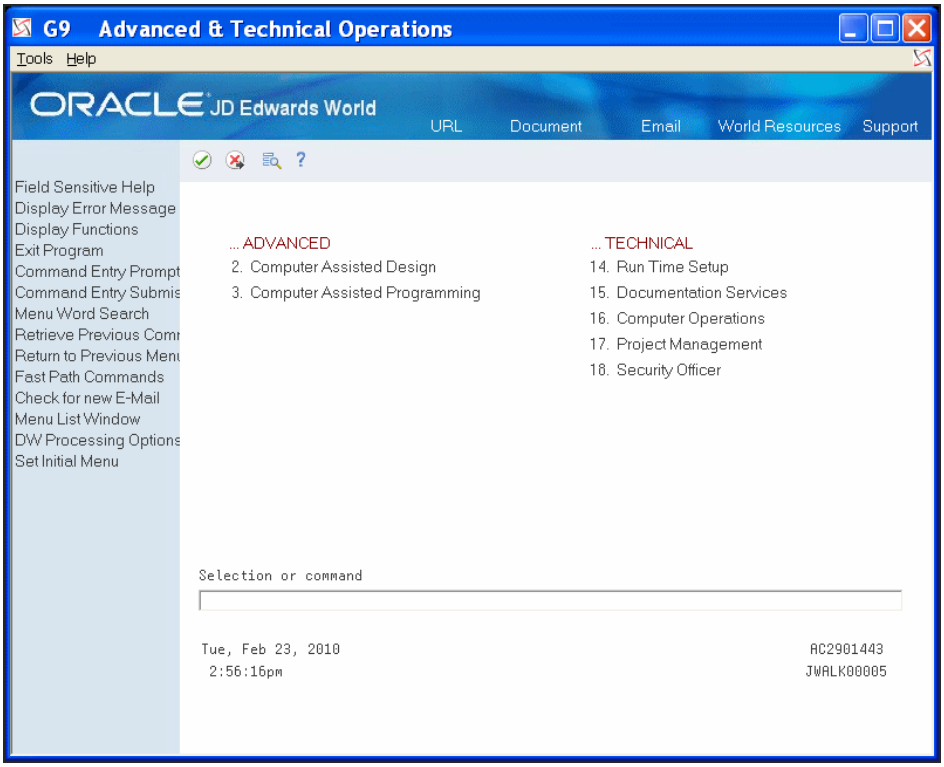


Figure 1–3 Computer Assisted Programming (CAP) screen

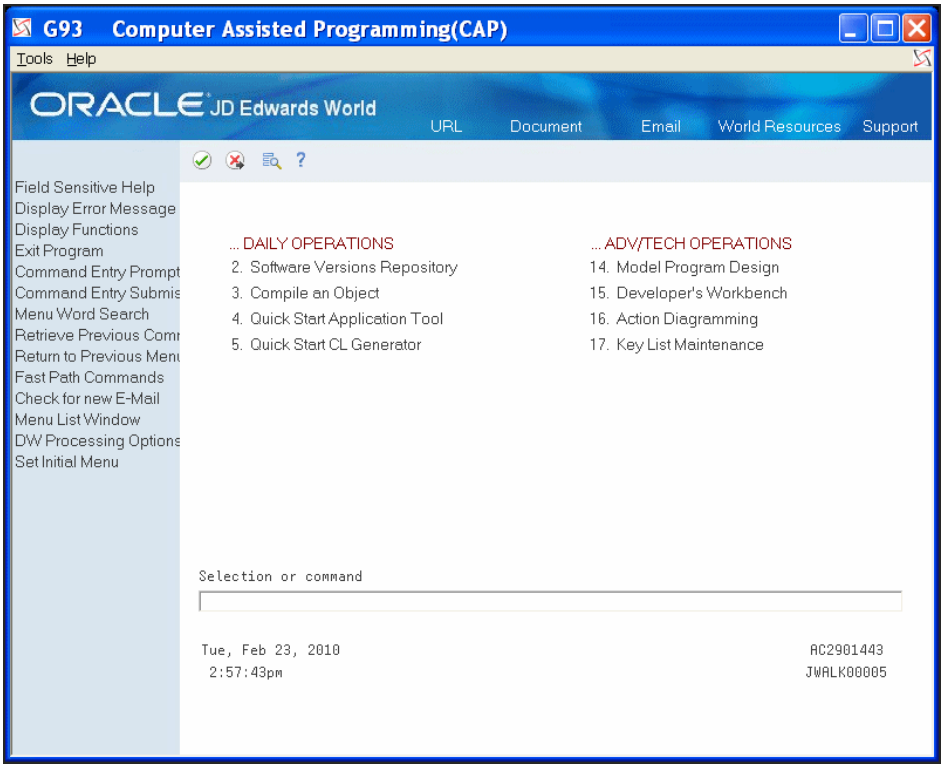
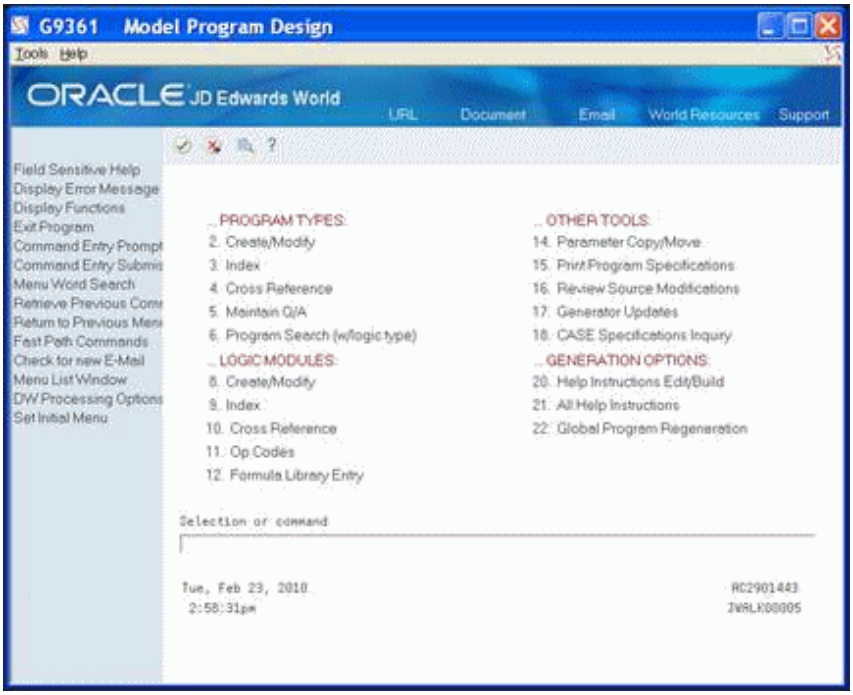


Figure 1–4 Model Program Design screen



Part I

Foundation

This part contains these chapters:

2

Foundation

This chapter contains the topic:

- Section 2.1, "About Foundation Information."

2.1 About Foundation Information

Before the Program Generator can successfully generate source code, a number of foundation items need to be in place. JD Edwards World provides some of these and you must verify they exist. You must perform additional prerequisites.

JD Edwards World provides the following prerequisites:

- Program Generator Files
- Common User Defined Codes
- Source Code for Copy Modules
- Source Code for JD Edwards World Files

You provide the following prerequisites:

- Development Libraries
- Multi-member Source File copied from F93002 (8 fields, 142 char record)
- Job Queues
- Project Management
- CASE Profiles
- Object Authorities

3

Work with Prerequisites JD Edwards World Provides

This chapter contains the topic:

- Section 3.1, "Working with Prerequisites JD Edwards World Provides."

3.1 Working with Prerequisites JD Edwards World Provides

The following are prerequisites JD Edwards World provides. You must verify their existence.

- Program Generator Files
- Common User Defined Codes (UDCs)
- Source Code for Copy Modules
- Source Code for JD Edwards World Files

3.1.1 Program Generator Files

The Program Generator files follow. Each has a specific function when the system generates a program. Some of these files include data; while others have no data. You need to verify that the files exist in your CASE environment and that they appropriately contain data or not.

Program Generator

The following two files are database files and include data.

- Program Types (F93000)
- Master Source (F93001)

Source Modifications/Helps

The Help/Modification Master (F93002) file is a multi-member source file, and includes an empty F93002 member.

Program Generator Specifications

The following files are database files and do not include data.

- Program Purpose and Type (F93101)
- File Specifications (F93102)
- File Formats (F93103)

- Selection/Function Exits (F93104)
- Detail Field Definitions (F93105)
- Automatic Accounting Instructions (F93106)

The DREAM Writer Master Parameter (F98301) file is a database file and includes processing options.

Program Design Language (PDL)

The following are database files. The Generation Operation Codes (F93108) file includes data; the other two files do not include data.

- Generation Operation Codes (F93108)
- Data Item Formulas (F93109)
- Calculation Parameters (F93110)

Q&A Dialogue

The following files are database files and include data.

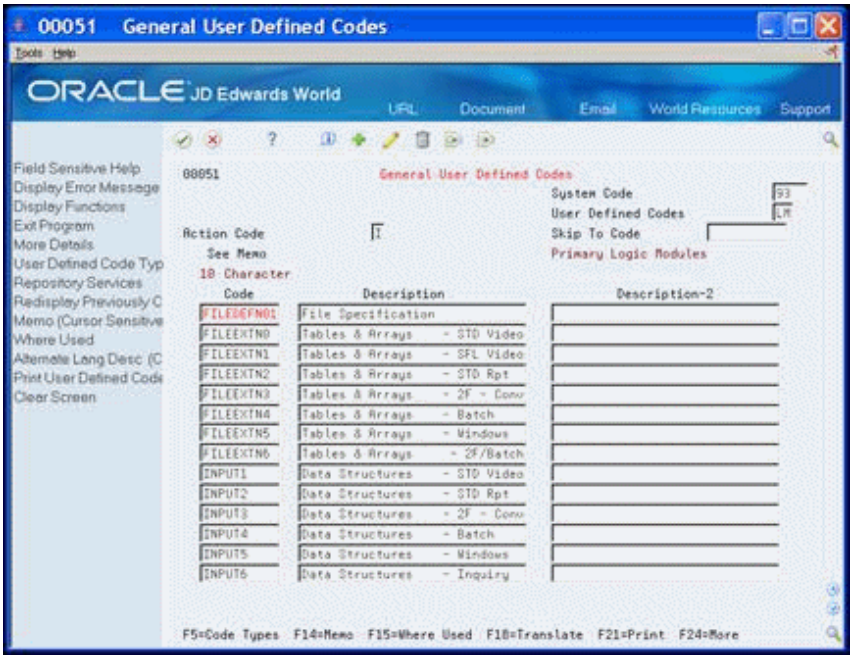
- Dialogue Master (F00501)
- Dialogue Detail (F00502)
- Dialogue Questions (F00510)
- Dialogue Responses (F00511)
- Dialogue Text (F00512)

3.1.2 Common UDCs

The Program Generator uses the following four UDCs:

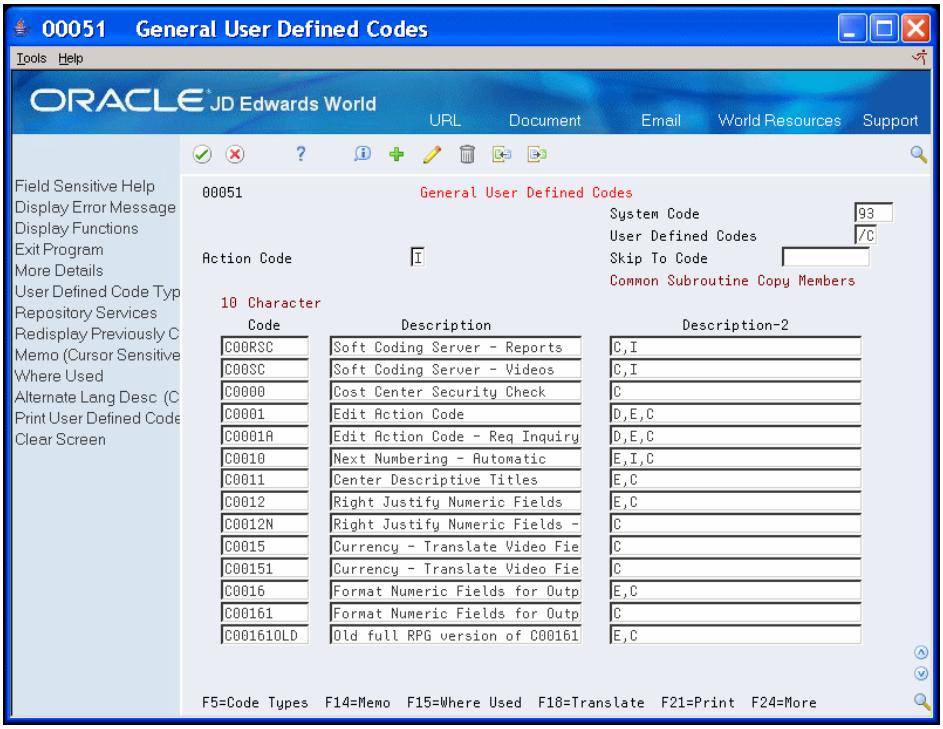
- Logic Modules, 93/LM. Identifies the pieces of code within the Master Source Inventory file (F93001) that the system uses to create your RPG program.

Figure 3–1 General User Defined Codes screen



- Common Subroutine Copy Members, 93//C. Lists all of the copy modules on the system. Description-2 field contains any additional copy modules that are necessary to make the common subroutine function properly. For example, C0012 requires copy module E0012.

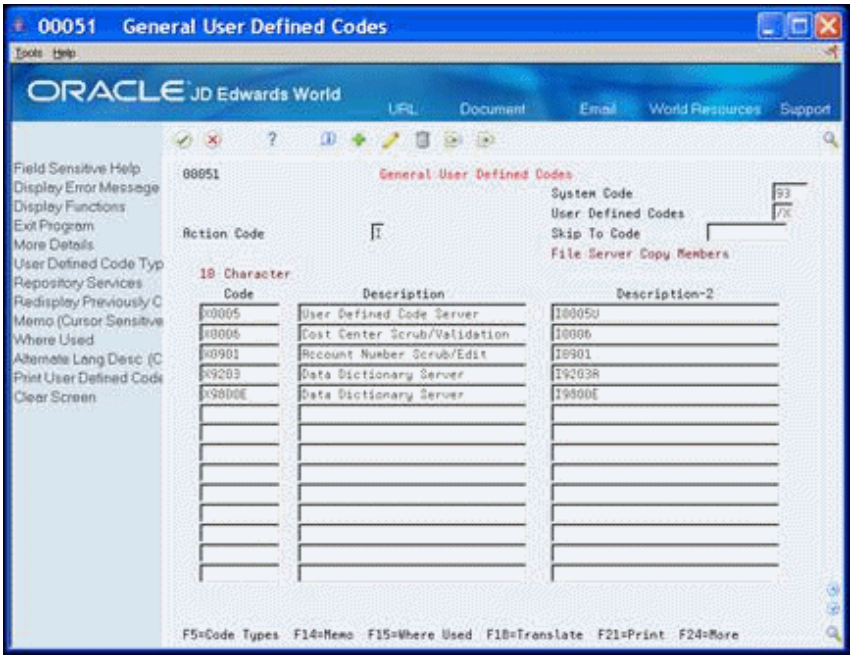
Figure 3–2 General User Defined Codes (93//C) screen



Alphanumeric Code	Type of Copy Module
D	Copy the member into the F specifications
E	Copy the member into the E specifications
I	Copy the member into the I specifications
C	Copy the member into the C specifications

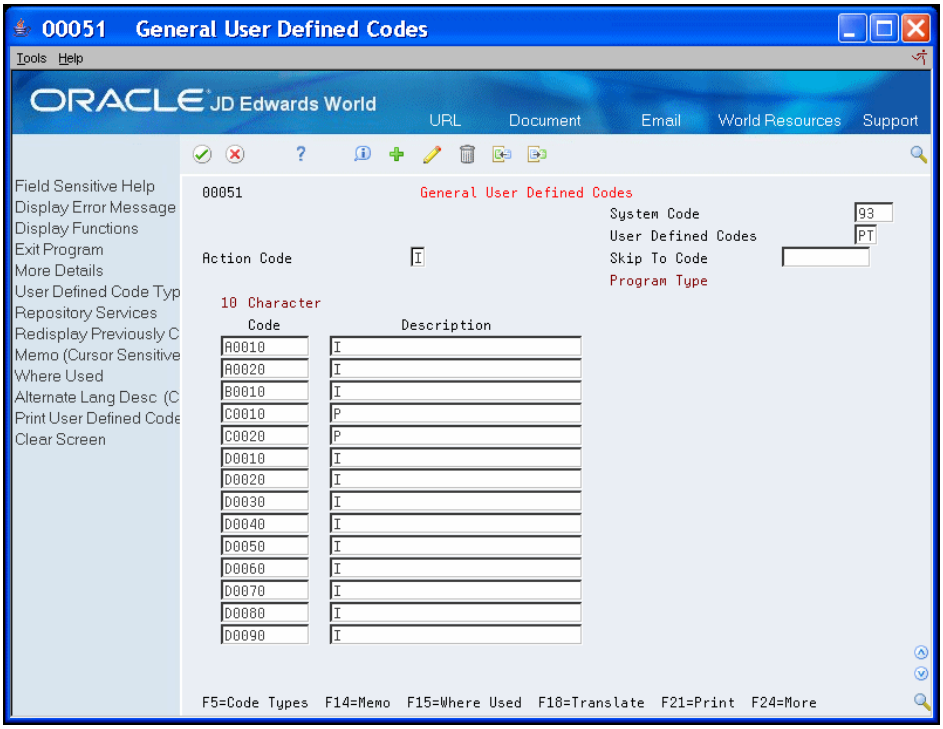
- Servers, 93//X. This is a partial list of server programs and the associated copy member for each.

Figure 3–3 General User Defined Codes (93//X) screen



- Program Types, 93/PT. These are all the program types within the CASE tool.

Figure 3–4 General User Defined Codes (93/PT) screen



3.1.3 Source Code for Copy Modules

The program generator requires that the source code for the Common Subroutine Copy Members be in the CASE environment. Copy modules are in file JDECPY in library JDFSRC.

3.1.4 Source Code for JD Edwards World Files

Source code for JD Edwards World database files must also be in the CASE environment. File source is in file JDESRC in library JDFSRC.

4

Work with User-Provided Prerequisites

This chapter contains these topics:

There are several prerequisites that the user must provide. These prerequisites include the program developer being signed on to a JD Edwards World environment including QGPL in the library list and additional prerequisites.

4.1 Development Libraries

You must provide three types of libraries for CASE:

- Source, which contains the Development Source File.
- Object, which contains the CASE generated programs and device files, as well as your non-CASE developed programs and device files.
- Data, which contains any CASE generated database files.

While it might be customary to create three different libraries for these purposes, this task is optional. Either of the following scenarios is acceptable.

Unique Libraries	Common Libraries
Source = DEVSRC	Source = DEVLIB
Object = DEVOBJ	Object = DEVLIB
Data = DEVDTA	Data = DEVLIB

4.2 Multi-member Source File (JDESRC)

To use the Program Generator to develop application software, the program source file record must:

- Be 142 bytes long to allow for the Program Generator serial number.
- Contain eight specific fields. For example, DSPFFD F93002.

To create the multi-member source file JDESRC

1. Enter the following on the Command Line:

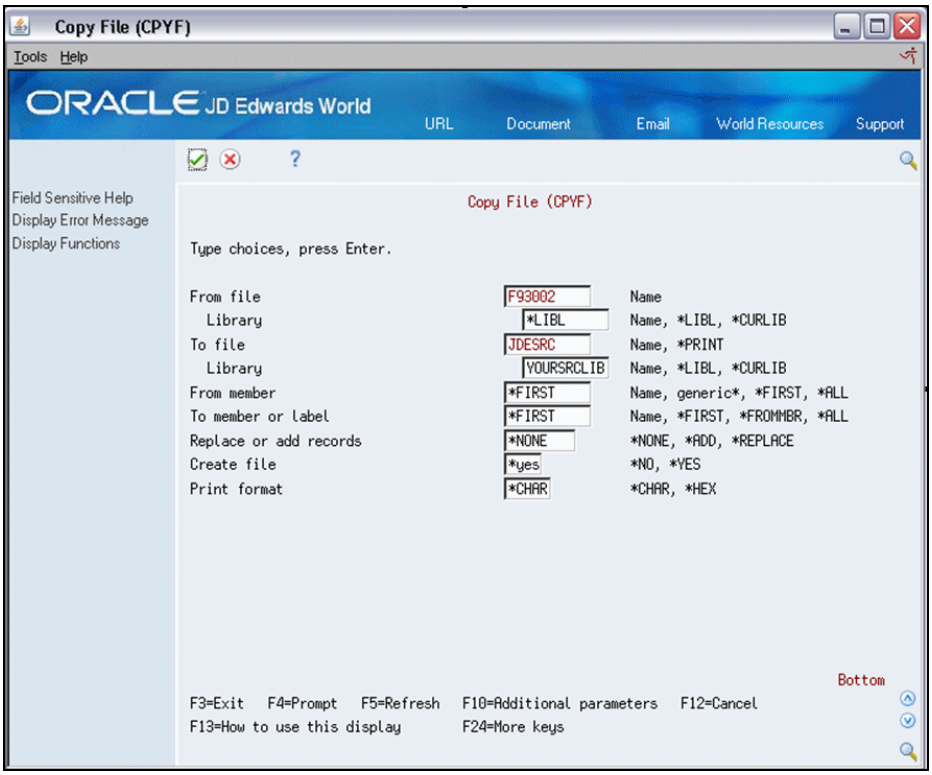
   CPYF FROMFILE(F93002) TOFILE(LIBRARY/XXXXXX) MBROPT(*NONE) CRTFILE(*YES)

   You use the F93002 file because it is in the correct format to generate the program.

   The To file can be any name and you can use JDESRC. However, JD Edwards World pristine source resides in JDESRC, so you can only use the JDESRC name if it is in a different library than the pristine JD Edwards World source library (JDFSRC).

   Do not use CRTSRCPF as it has only three fields in it, Date, Time, and Data, and the Program Generator requires extra fields.

Figure 4–1 Copy File (CPYF) screen

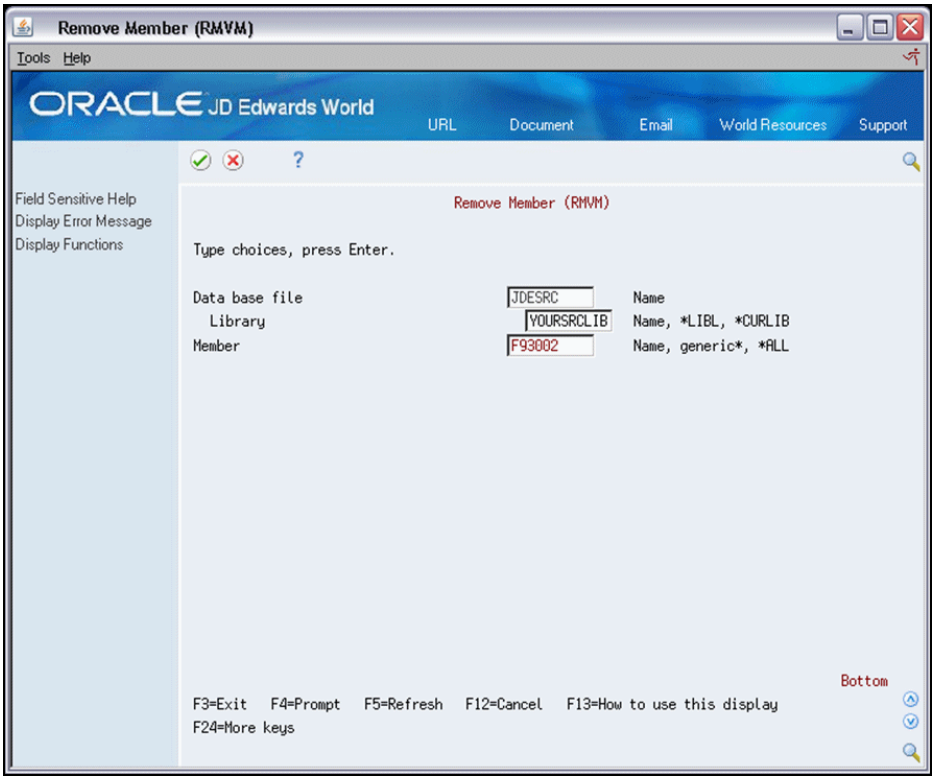


   After you create the JDESRC file, you can remove the empty member that the system adds.

2. Enter the following on the Command Line:

   RMVM FILE(LIBRARY/JDESRC) MBR(F93002)

Figure 4–2 Remove Member (RMVM) screen



After you create the JDESRC file, you can remove the empty member that the system adds.

If the system incorrectly creates your JDESRC file, you receive the CPD3105 error message for incorrect source file format, due to either:

- The wrong length
- Improper formatting

4.3 Job Queues

By default, the system submits jobs to generate the program to the CLONE job queue, and the jobs to compile the program to the COMPILE job queue. If you want to use these default job queues, then you must create them and attach them to an existing subsystem.

If you want to use different job queues, or existing job queues, then you must override the defaults, either in the CASE Profile for *PUBLIC or the CASE Profile for specific users.

4.4 Project Management

You must determine the following regarding Project Management:

1. Whether to manage CASE generated programs (or any development work) using the JD Edwards World Software Action Request System (SAR). JD Edwards World includes the SAR system as part of System 00, General Back Office, under the name of Work Order Processing.

- See About SAR System Setup in the *JD Edwards World Advanced Programming Concepts and Skills Guide* for more information about the JD Edwards World SAR System.
- If you are going to use the JD Edwards World SAR System, you create a SAR before starting development or use the number of an existing SAR for development.
- If you are not going to use the JD Edwards World SAR system, you can disable the function that allows the system to validate the SAR number by entering *NONE in the SAR Number field on the CASE Profiles screen.

2. If you use the JD Edwards World SAR System to manage software development, then you must determine whether to use SAR logging.

   SAR Logging is a process that allows you to associate a SAR number with all of the components of the software development project. These include the Data Dictionary, UDCs, Files, Programs, Vocabulary Overrides, DREAM Writer, and Menus. SAR Logging allows you to identify what components you must move from your development environment to a testing environment and a production environment.

   If you use SAR Logging, you must determine what method you use to link a SAR number with each piece of the development work. There are two ways to associate a SAR number with development:

   - Use a default SAR number, which you use with all development work until you change the default number.
   - Enter the SAR number as you perform the development work.

   The results of your decisions reside in your *PUBLIC CASE Profiles.

4.5 CASE Profiles

CASE profiles are user-defined values that can pertain to individual users or to one default *PUBLIC user profile. The system:

- Stores information in the CASE Profiles file (F98009).
- Uses the profiles to define the overall CASE operating environment.

You define various processing control parameters, including:

- Default development libraries
- Compile job queue
- Program Generator source generation job queue
- Compile print options
- SAR logging options

The system overrides the *PUBLIC default values with the individual CASE profile values.

- You must complete all fields when entering information for *PUBLIC.
- You maintain default CASE Profile values in a record with the User ID *PUBLIC. Enter CASE Profile values for individual users only if you want to override the *PUBLIC values.
- You can leave all fields blank except for the specific values you want to override when entering values for individual users.

- The system uses the values in the record for User ID *PUBLIC as the defaults for all users unless individual user profiles have been set up.
- You cannot delete the *PUBLIC record.

The system uses the values in the SAR Number and SAR Delivery fields to determine what type of SAR logging should occur.

Value in the SAR Delivery field	SAR Logging
*NONE	No SAR logging at all.
*LOG	The system does not include a SAR number as part of the SAR logging.
*DFT	The system uses the SAR number you specify for the SAR logging.
*PROMPT	The system prompts you for a SAR number and revision notes when it creates an entry to the SAR log.

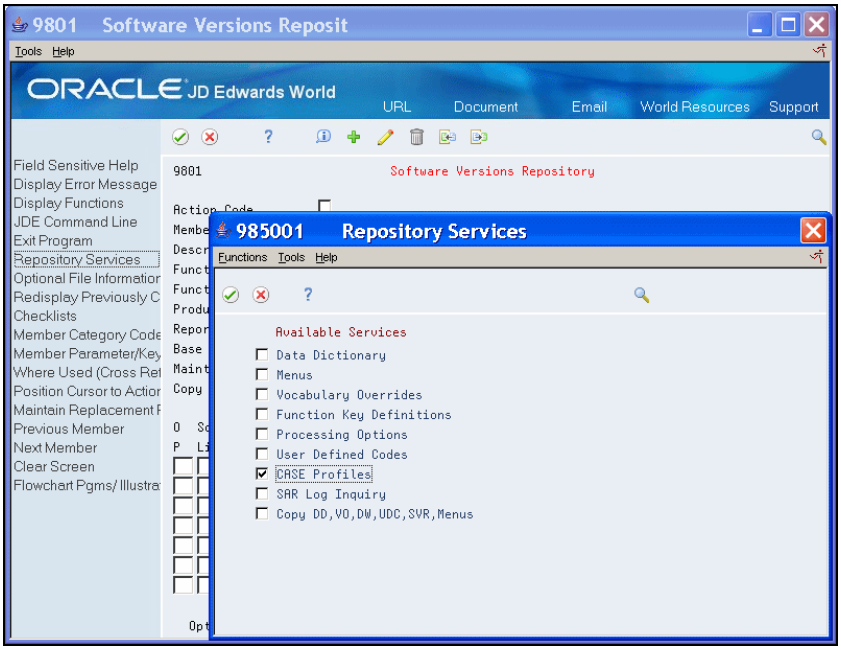
To access CASE profiles

Navigation

From Computer Assisted Design (G92), choose Case Profiles

Alternatively, on the Software Versions Repository screen, choose Repository Services. On the Repository Services window, choose Case Profiles and then click Enter.

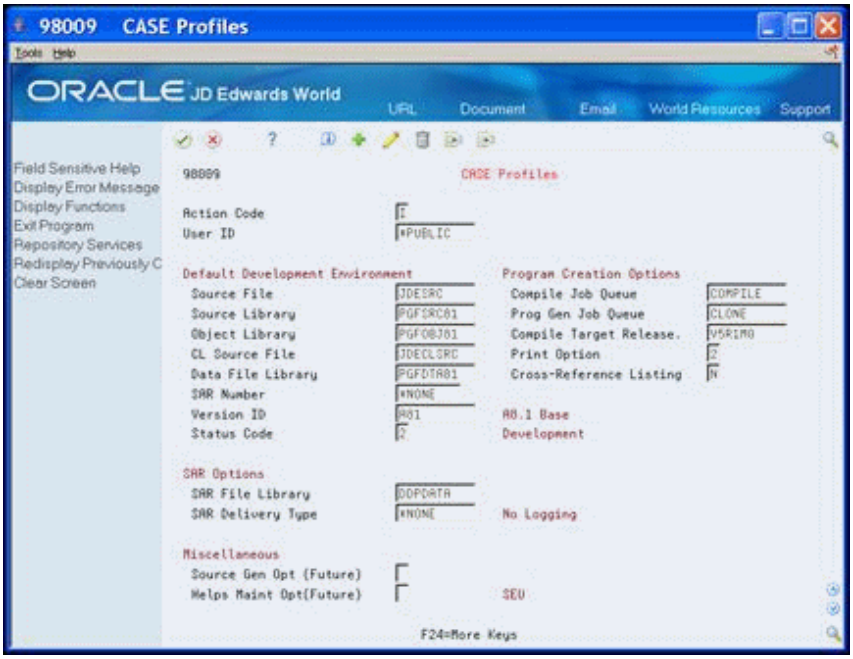
Figure 4–3 Software Versions Repository screen



The program attempts to locate the CASE profile for your User ID. An error message displays on the CASE Profiles screen if your user ID is not set up.

1. On Case Profiles, locate the *PUBLIC user ID.
2. Enter your Used ID, complete any of the fields and click Change to create your record.

Figure 4–4 CASE Profiles screen



Field	Explanation
Source File	The Source File Name field contains the name of the file where the source for an object exists. In the program generator File Specifications this name is defaulted to "JDESRC". In combination with the source library name it identifies where the program generator places the generated source code. The system uses this file to find the source for each data file, display file or report file which it must analyze to create the data field parameters. As used in the automated installation processing file this is the source file of an object at the time the object was created.
Source Library	The default library where source will be stored. The source file specified must reside within this library.
Object Library	The default library where compiled objects will be stored.
CL Source File	The default library where source for CL programs will be stored. This file must reside within the specified source library.
Data File Library	The default data file library specifies the test (or development) library for physical and logical files. This library is used as the default object library for the Software Versions Repository when copying source code for physical or logical files.
SAR Number	An abbreviation for software action request (SAR). ■ *NONE = the SAR number will not be validated in any of the CAD/CAP programs and can be left blank. ■ If a SAR number is entered, it is used in conjunction with the SAR Delivery Type of *DFT (default). ■ If the SAR Number is left blank, you must enter a valid SAR number when using the CAD/CAP tools.
Version ID	The software version number to be defaulted in the Software Versions Repository file.

Field	Explanation
Status Code	This code determines the status of the software as well as where it resides in production. It will specify that the software is in production, in development, or in release.
Compile Job Queue	Specifies which job queue will be used when submitting programs to compile. This job queue is used for programs with function code of RPG, CBL, PLI, C and SYSC.
Prog Gen Job Queue	Specifies which job queue will be used when submitting jobs to the Program Generator. These jobs include the source code generation and the source code monitor from SEU.
Compile Target Release	Used by various System CRT commands (RPG, CLP, COBOL, C) to compile an object compatible with a specified target release. ■ A value of *CURRENT compiles an object compatible to the release of the machine at compile time. ■ A value of *PRV compiles an object compatible with both one release back and the current release.
Print Option	Used to designate whether or not a report will be generated when an object is compiled. ■ 0 = no print ■ 1 = print ■ 2 = print and hold spool file ■ 3 = print only, does not generate execution object (applies to COBOL and RPG only) ■ 4 = print when compile or creation fails
Cross-Reference Listing	Enter Y or N. Specifies whether a cross-reference listing will be generated for variables and fields in a program's compile listing.
SAR File Library	Specifies which library the Software Action Request (SAR) file (F4801) being used for software development exists in. If left blank, the user's library list will be used. You may specify *NONE in the SAR number field (MSAR) if you do not want any SAR number editing.
SAR Delivery Type	Associated with SAR logging, which tracks all modifications to JD Edwards World' software. For example, it will track when User Defined Codes are modified. ■ *NONE = no logging. ■ *LOG = log to SAR number 00000000 (no SAR number is used for logging). ■ *DFT = log to a default SAR number (specified in the SAR Number field). ■ *PROMPT = log and prompt the user for the SAR number to be used and allow the user to enter the revision notes.
Source Gen Opt (Future)	Specifies whether to generate source interactively or in batch for programs with this option (for example, Fast Path Application Tool). Allowed values are as follows: 1. generate source on-line (interactively) 2. generate source in batch
Helps Maint Opt (Future)	Enter a user defined code, 92/HL.

4.5.1 Function Exits

Choose Redisplay Previously Changed Member (F9) to locate the last record to which you made changes.

4.6 Object Authorities

The system checks the user's authorities to some objects at different steps in generating programs using CASE. Therefore, it is necessary that you review these authorities initially.

4.6.1 Job Control Authority

On the user's IBM User Profile, you must set the Special Authority parameter to *JOBCTL. This authority is necessary when entering the CASE Specifications.

4.6.2 Source Library

Ensure that the user has Object Management authority to the Source Library for software development.

4.6.3 Source File

Ensure that the user has Object Management authority to the Source File for software development.

4.6.4 Job Queues

Ensure that the user has authorization to use the job queues for generating source code and compiling programs.

Part II

Program Generator

This part contains these chapters:

5

Overview to Program Generator

This chapter contains the topic:

- Section 5.1, "About Program Generator Steps."

5.1 About Program Generator Steps

You perform the following tasks to create a program using the Program Generator:

- Define Program Generator Specifications
- Define Program Purpose and Type
- Work with File Specifications
- Define General Instructions
- Define Option and Function Key Exits
- Work with the Detailed Programming Facility
- Define Processing Options

6

Access Program Generator Specifications

This chapter contains these topics:

- Section 6.1, "Accessing Program Generator Specifications,"
- Section 6.2, "Function Exits."

6.1 Accessing Program Generator Specifications

You use the specification screens in the Program Generator to create a program.

- You must enter two specifications:
  - Program Purpose and Type
  - File Specifications

The system allows a third specification, Detailed Programming Facility, which it creates after you enter the File Specifications.

- Optional specifications include:
  - General Instructions
  - Option and Function Exits
  - Processing Options
  - Automatic Accounting Instructions

The system only requires source for files and common copy modules during the specifications and generation steps. The system does not require objects you define externally until you compile the program.

This section contains the following tasks:

- To access the Program Generator
- To access Program Generator Options

To access the Program Generator

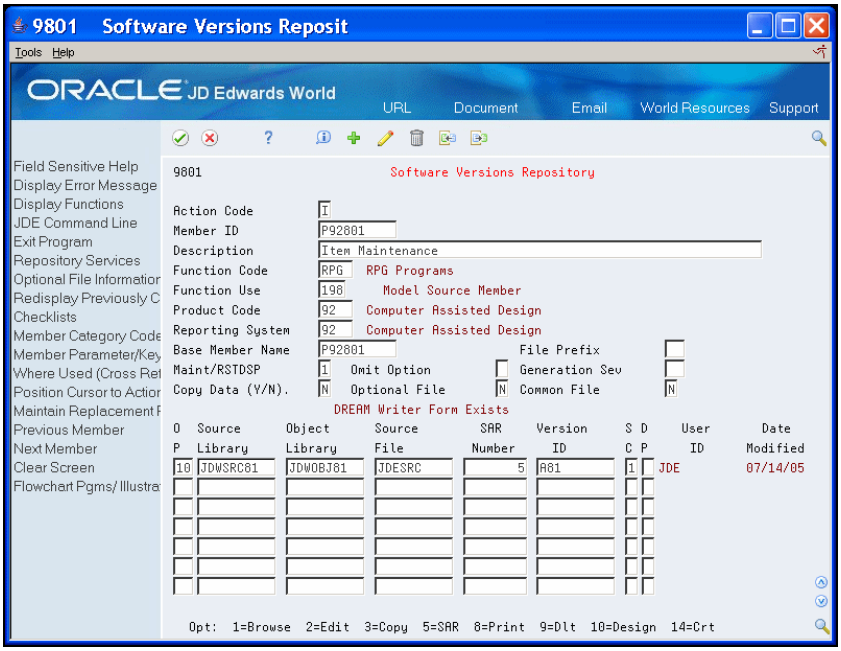
The Software Versions Repository screen serves as the portal screen to all JD Edwards World Design tools including the Program Generator.

Navigation

From Computer Assisted Design (G92), choose Software Versions Repository

1. Locate a member from the Software Versions Repository. For example, locate P92801.

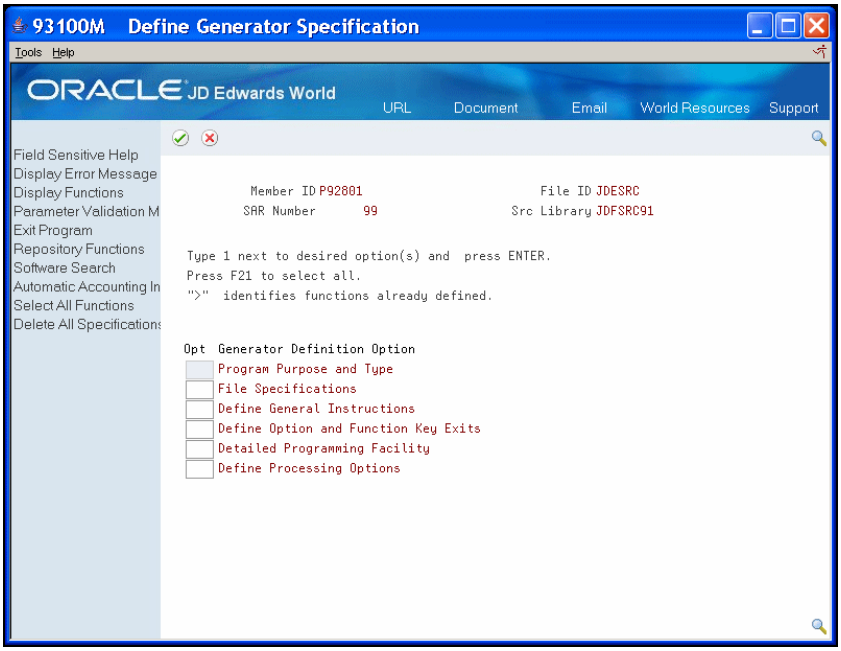
Figure 6–1 Software Versions Repository (Program Generator) screen



2. Enter 10 (Design) next to the environment in the following field:
   - Option

   The Program Generator Specification screen displays.

Figure 6–2 Define Generator Specification screen

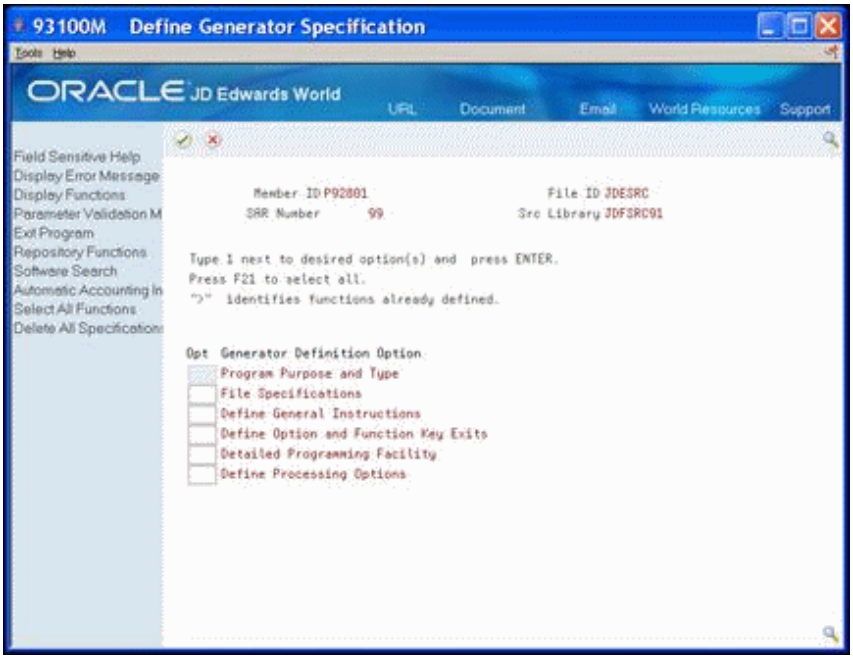


To access Program Generator Options

Enter 1 in the following field for the appropriate option on the Define Generator Specifications screen.

- Option

Figure 6–3 Define Generator Specification (Options) screen



Specification	Explanation
Program Purpose and Type	Defines what kind of program you are designing and the status of the program generation (CAP status).
File Specifications	Allows the user to enter the data base files to be used by the program you are designing.
Define General Instructions	Allows the user to enter program-specific help instructions.
Define Option and Function Key Exits	Allows the user to define special program exits.
Detailed Programming Facility	Allows the user to specify data field definition parameters for fields included in the screen, the report, and the master files.
Define Processing Options	Allows the user to define processing options the program can use.

6.2 Function Exits

Parameter Validation Monitor (F2)

Choose Parameter Validation Monitor after you enter all of the Program Generator specifications to determine if the monitor program can detect any pre-defined errors.

- This program verifies important features that are pertinent to generating source code by the Program Generator
- This program does not verify whether you regenerate the file specifications after you change your video file

The monitor program verifies that you:

- Specify $$ fields in the TOTAL formats of the report file for the a generated report program if the report includes a total column

- Define the SH#RRN field for interactive subfile programs processing by relative record number
- Define the Fie Information Data Structure for interactive programs processing by relative record number
- Choose a keyed master file for programs processing by relative record number
- Define a field as mandatory entry N for transaction processor programs (subfiles)
- Define a hidden field for interactive transaction processor programs
- Define the master file key fields as output
- Attach a validation file to fields that are set up to use next numbers

Repository Functions (F6)

Choose Repository Functions (F6) to access a window of JD Edwards World repositories. This is the same window you access from the Software Versions Repository and CASE Profiles screens.

Software Search (F9)

Choose Software Search (F9) to access the Software Search facility. On the Software Search facility, enter a program name (generic*) to view all program names that meet or are greater than the search criteria.

Automatic Accounting Instructions (F13)

Choose Automatic Accounting Instructions (F13) to access the Automatic Accounting Instructions screen. Use this screen for reference only as you cannot generate code from this screen. Data you enter on this screen appears in the AAP portion of the Help instructions you generate.

Select All Functions (F21)

Choose Select All Functions (F21) to access all of the Program Generator definition screens.

Delete All Specifications (F23)

Choose Delete All Specifications (F23) to delete all of the Program Generator specifications for the program. This removes the Pxxxxx and Hxxxxx members from the F93002 file.

7

Define Program Purpose and Type

This chapter contains these topics:

7.1 Defining Program Purpose and Type

Defining the program purpose and the program type is the first step in creating a program using the CASE Program Generator. Program types specify the basic function of the program. There are program types for:

- Interactive maintenance programs
- Programs with subfiles
- Report programs
- Conversion programs

The system:

- Stores information in the General Purpose/Type Parameters file (F93101)
- Creates the Pxxxxx member in the Additional Help/Modifications Master file (F93002)
- Creates a data item in the Data Item Master file (F9200)

The Program Purpose and Type screen includes:

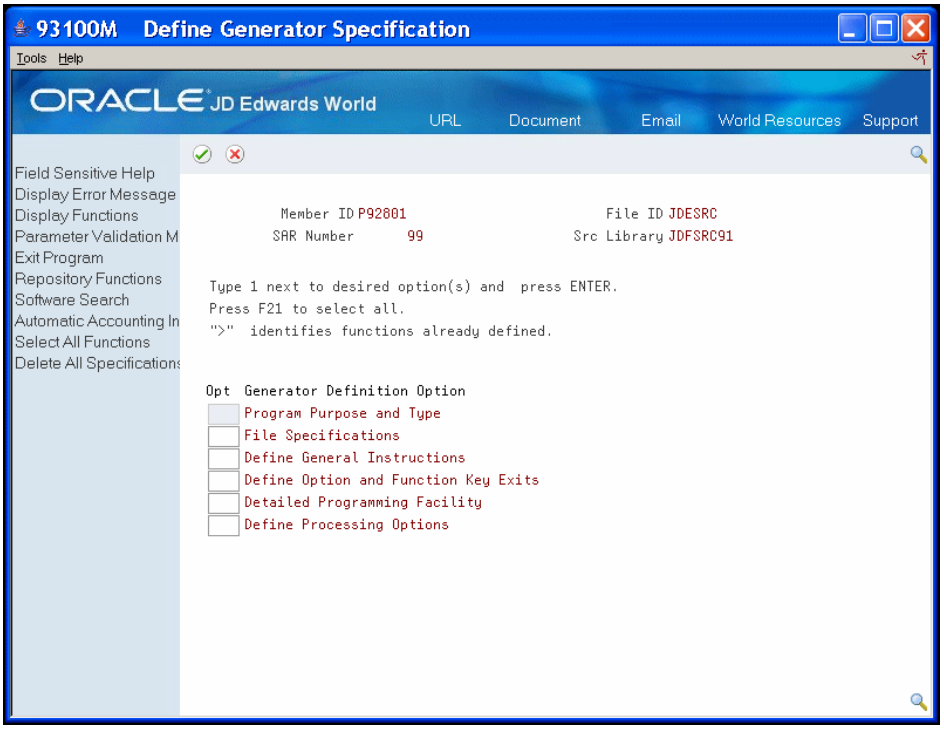
- Software Action Request (SAR) number for the program
- Install system value
- Additional information from the Software Version Repository

The Dialogue Selection screen is a series of questions you use to determine the Program Type.

To define program purpose and type

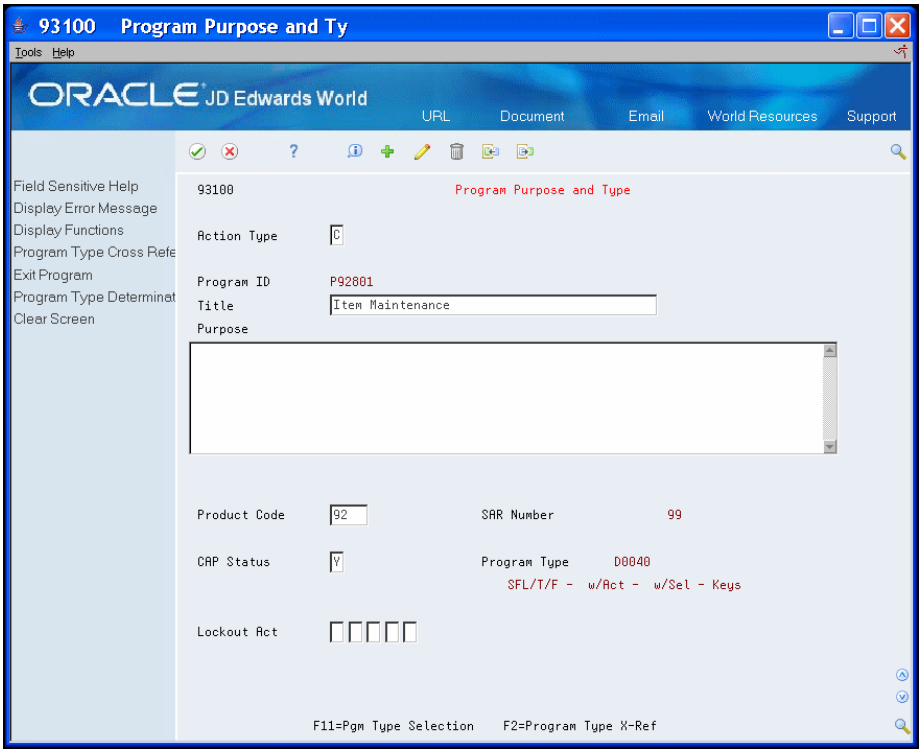
1. On Define Generator Specification, enter 1 in the following field next to Program Purpose and Type.
   - Option

Figure 7–1 Define Generator Specification (Purpose and Type) screen



2. On Program Purpose and Type, complete the following fields.
   - Program ID
   - Title
   - Purpose
   - Product Code
   - SAR Number
   - CAP Status
   - Program Type
   - Lockout Action Codes

Figure 7–2 Program Purpose and Type screen



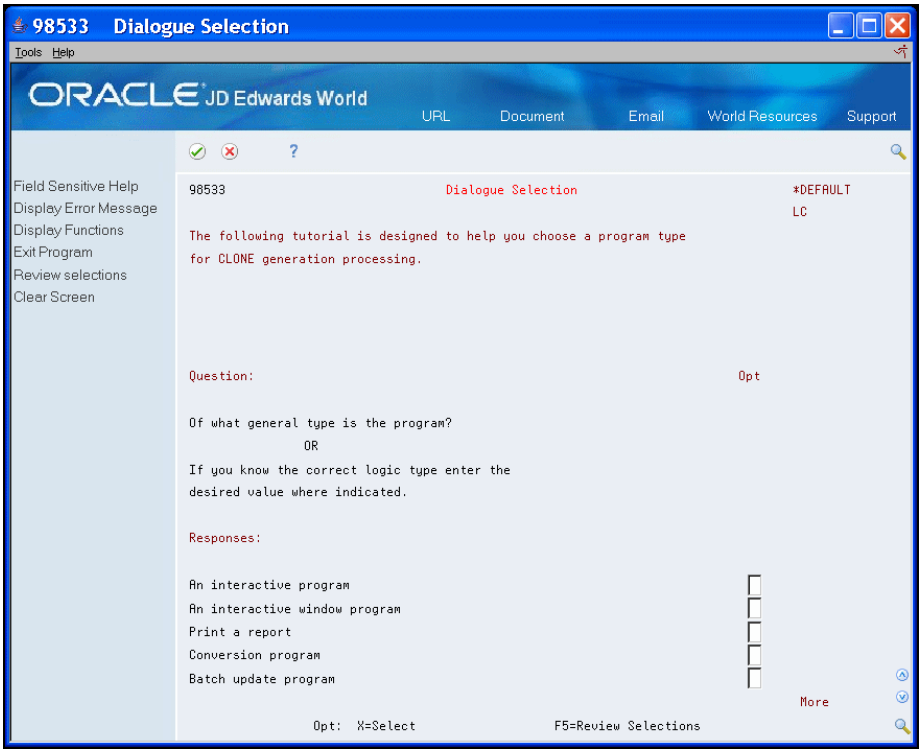
Field	Explanation
Program ID	RPG program name specified in the Software Versions Repository. The system adds a data item by this name, with a glossary group of P to the data dictionary as part of this program definition.
Title	The title defaults to the description in the Software Versions Repository and should not be changed. When help instructions are generated, this title appears as the Help program title. Serves as the alpha description for the data item previously mentioned.
Purpose	The full glossary of terms (Data Dictionary) definition. When entering the definition, be aware that the text is wrapped around to fit within 65 characters when being printed for Help Instructions. Therefore, if you are indenting certain parts of the definition, keep the entire line to within 65 characters to retain your desired indentation.
Product Code	Defaults to the system specified in the Software Versions Repository.
SAR Number	Defaults to the SAR entered in the Software Versions Repository.

Field	Explanation
CAP Status	This field indicates whether the source code for a program can be generated using the program generator. The default for this field is "Y" (Yes, can be generated). The generation program will only generate source code for programs having a code of "Y". This should be set to "N" (No, cannot be generated) if the Program Generator should not be used to generate the program source or if the source generation process is complete and the program has moved into production. *Screen-specific information* This field also indicates whether the source code for a program can be modified using the program generator. The five additional serial number fields are still included in the source file (142 characters). When the source generation process is complete and the program has moved into a production source file (92 characters)
Program Type	The Program Type is a name used to identify the basic functions of a program. Each program type is made up of several logic modules. Each logic module contains small sections of RPG code. The program type determines which particular logic modules go together to create the desired program.
Lockout Act (action)	Allows the user to specify which action codes they do not want included in the program. Any codes listed will not be allowed. That is, the program will not allow the indicator associated with the action code being locked out to ever be turned on. The source to process the Action Code will still be included but the associated indicator will never be allowed to be turned on. Utilizes array @NAC in the programs.

To identify program type

1. On Program Purpose and Type, choose Program Type Determination (F11).
2. On Dialogue Selection, answer the questions.

Figure 7–3 Dialogue Selection screen



1. The following graphics illustrate the flow you use in selecting the proper program type.

Figure 7–4 Selecting the Proper Program Type

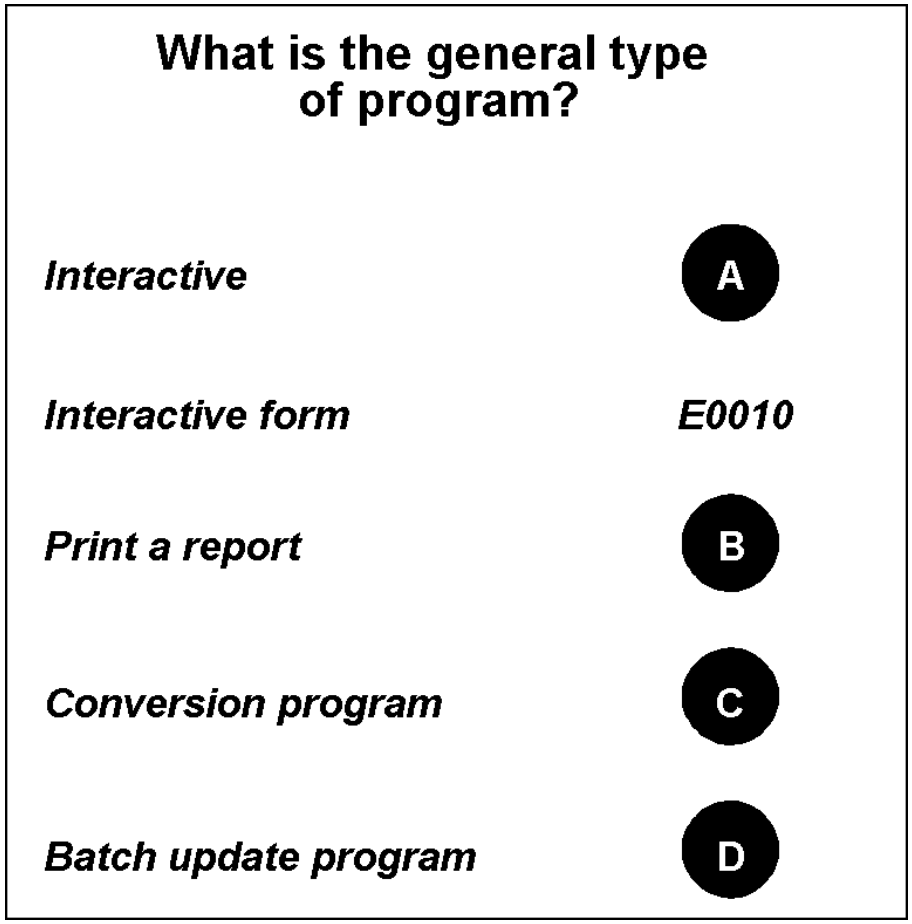


Figure 7–5 A: Interactive Program flow

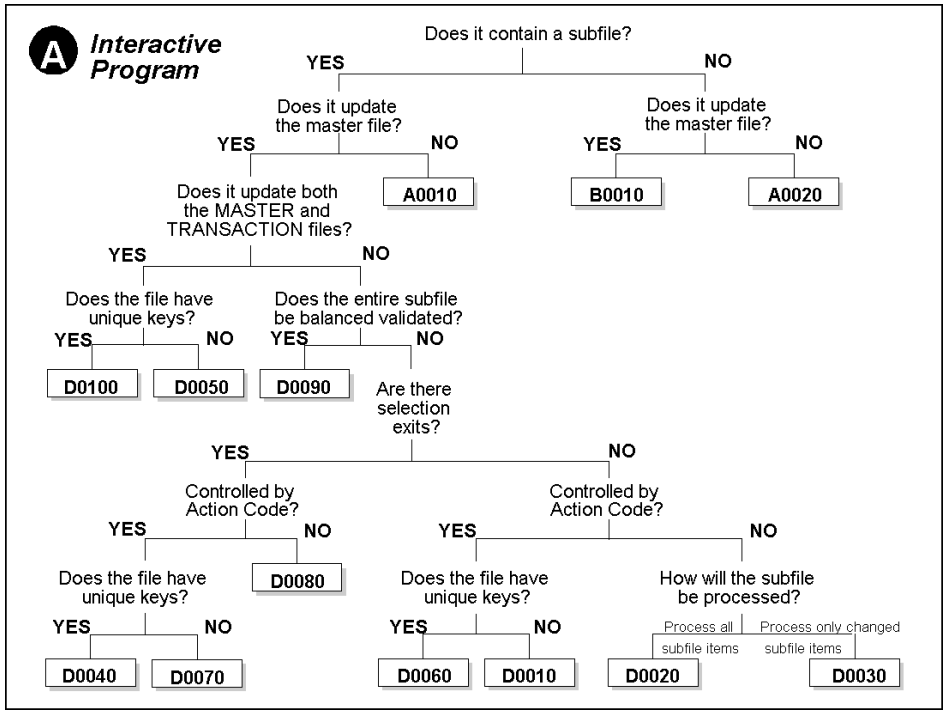
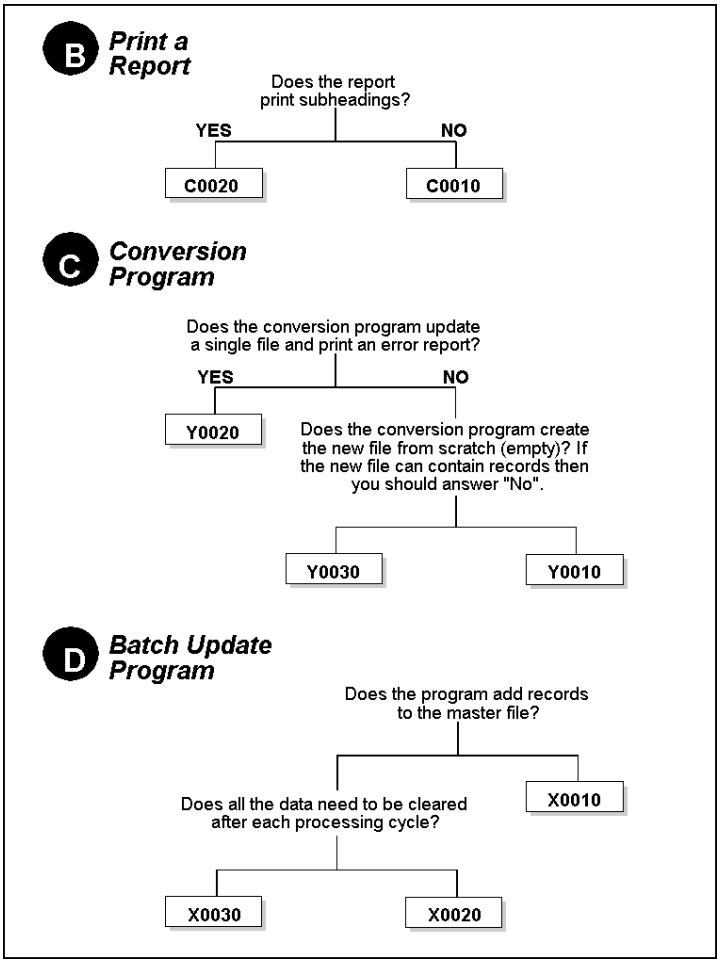


Figure 7–6 Three Program flow



7.2 Function Exits

Program Type Cross-Reference (F2)

Choose Program Type Cross-Reference (F2) to access Program Type Cross-Reference which allows you to view all the programs with the same program type.

Program Type Determination (F11)

Choose Program Type Determination (F11) to access the first dialogue screen if there is no program type.

When you copy a program with specifications, it is not necessary to complete the question and answer process, which the system uses to determine the program or logic type.

8

Work with File Specifications

This chapter contains these topics:

The program generator requires that you specify the files for your program. The program generator adds any necessary validation files and servers.

File specifications allow you to enter the database files your program uses. After you select your specific program type, continue by completing the File Specifications screen. The system stores information in F93102 and F93103 and creates the F93105 records.

A significant feature of the Program Generator is its interpretive ability to include secondary editing and referencing files.

This chapter includes the following tasks:

- To enter file specifications
- To generate source code from file specifications

8.1 What Are File Specifications?

A key step in generating source code is that you correctly specify the master files for a program. The database Input/Output operations depend on the files you specify.

PROGRAM TYPE	DESCRIPTION	SPECIFICATION
A0010	SFL (IBM Subfile) Inquiry	Specify the master file with an M or 1 in the Input field.
A0020	Single Record Inquiry	
C0010	Standard Report	
C0020	Standard Report - Subheading	
C0025	Standard Report - Subheading above Columns	
E0010	Window	

PROGRAM TYPE	DESCRIPTION	SPECIFICATION
B0010	Single Record Maintenance	Specify the master file with an M or 1 in the Update field
D0040	SFL Maintenance - KEY	
D0045	SFL Maintenance - KEY, No Action Code	
D0060	SFL Maintenance - KEY	
X0010	Batch Update - 1 File	
Y0020	File Conversion - 1 File	
Y0030	File Conversion - 1 File	
D0100	SFL Maintenance - KEY, 2 Update Files	Specify the master file, which the system maintains in the SFL Control format, with a 1 in the Update field. Specify the transaction file, which the system maintains in the SFL format, with a 2 in the Update field.
D0010	SFL Maintenance - RRN	Specify the logical file which the system uses to fill the subfile, with a 1 in the Input field. Also, enter a File Information Data Structure name for the logical file in the fold area.
D0020	SFL Maintenance - RRN	
D0030	No Action code	
D0070	SFL Maintenance - RRN	Specify the physical file that the system updates with a 2 in the Update field. Also, enter N in the Key field for the physical file in the fold area.
D0070	No Action code	
D0080	SFL Maintenance - RRN	
D0090	SFL Maintenance - RRN	
	SFL Maintenance - RRN	
	No Action code	
	SFL Maintenance - RRN	
D0050	SFL Maintenance - RRN, 2 Update Files	Specify the master file, which the system maintains in the SFL Control format with a 1 in the Update field. Specify the logical file that the system uses to fill the subfile with a 3 in the Input field. Also, enter a File Information Data Structure name for the logical file in the fold area. Specify the physical file that the system updates with a 2 in the Update field. Also, enter N in the Key field for the physical file in the fold area.
X0020	Batch Update, 2 Files	Specify the input file with a 1 in the Input field. Specify the output file with a 2 in the Update field.
X0030	Batch Update, 2 Files	
Y0010	File Conversion, 2 Files	

The Program Generator requires that you:

- Specify one master file with an M or a 1. Do not specify one file with an M and another file with a 1.
- Enter the correct function code on the Software Versions Repository for the screen or report. Otherwise, the Program Generator does not generate moves to the screen or report.

You can use non-JD Edwards World files with the Program Generator, but you must enter the file in the Software Versions Repository.

The Program Generator does not require that you enter values in the Input, Output, or Update fields for a screen or report.

After you complete the appropriate fields on the File Specifications screen, a job runs interactively that analyzes the file specifications and creates records for three Program Generator files. As the system processes this job, messages display at the bottom of the screen.

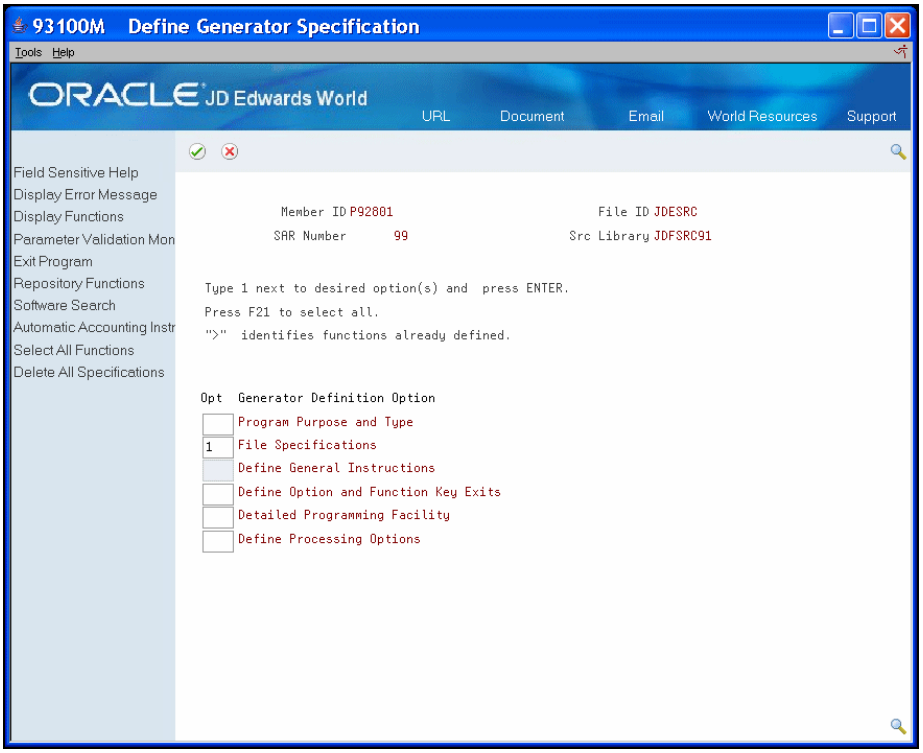
File	Description
File Specifications F93102	The system updates this file with one record for each file in the File Specification. ■ If the master file includes a Business Unit field, then the system adds the Business Unit Security file (F0001) to the File Specifications. ■ If the master file is for an interactive program and contains a field that uses a validation file, then the system adds that file to the File Specifications. If you later decide that the file validation is not necessary, you can delete it on the File Specifications screen.
Data Base Format Parameters F93103	The system updates this file with one record for each format in each file. If the file is a database file, then the F93103 record contains the name of the Key List that the Program Generator uses, and the names of the key fields.
Detail Program Logic Parameters F93105	The system updates this file with one record for each field in each file. The system uses the records in the Detailed Programming Facility. ■ If the file is a master file or device file, then the system includes all fields. ■ If the file is a database file that you use only for input purposes, then the system includes only the key fields.

Note: If you make changes to the fields in any of the files you list in the File Specifications, you must run the File Specifications again. If you delete a field from a file, you must manually delete that field from the Detailed Programming Facility. Running the File Specifications again does not remove records from the F93105 file.

To enter file specifications

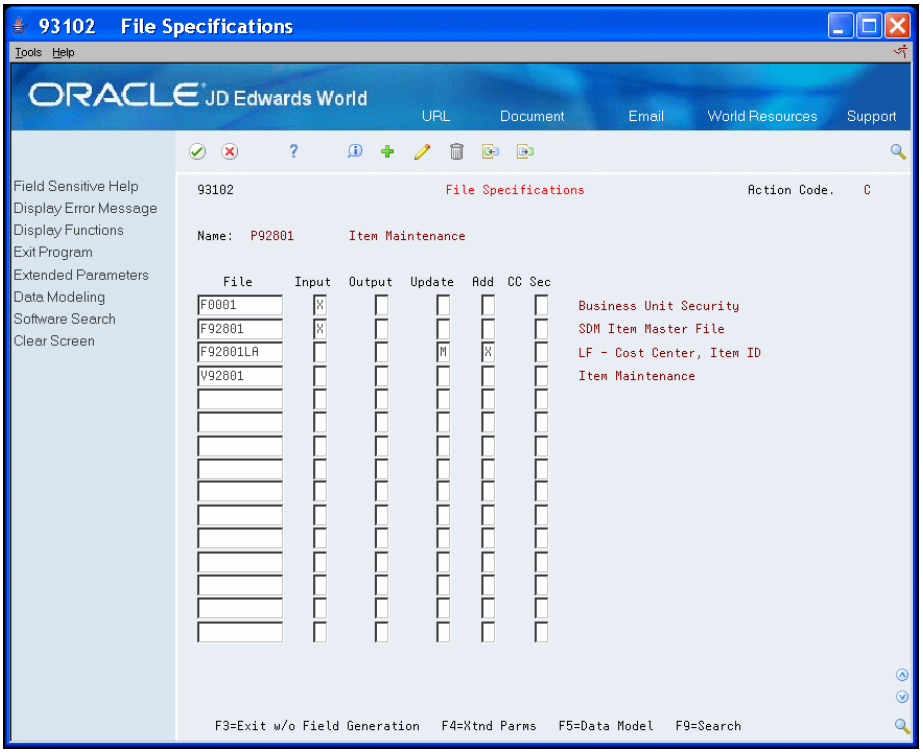
1. On Define Generator Specification, enter 1 in the following field next to File Specifications
   - Option

Figure 8–1 Define Generator Specification (Enter File) screen



2. On File Specifications, complete the following field:
   - File
3. Complete the appropriate field:
   - Input
   - Output
   - Update
   - Add

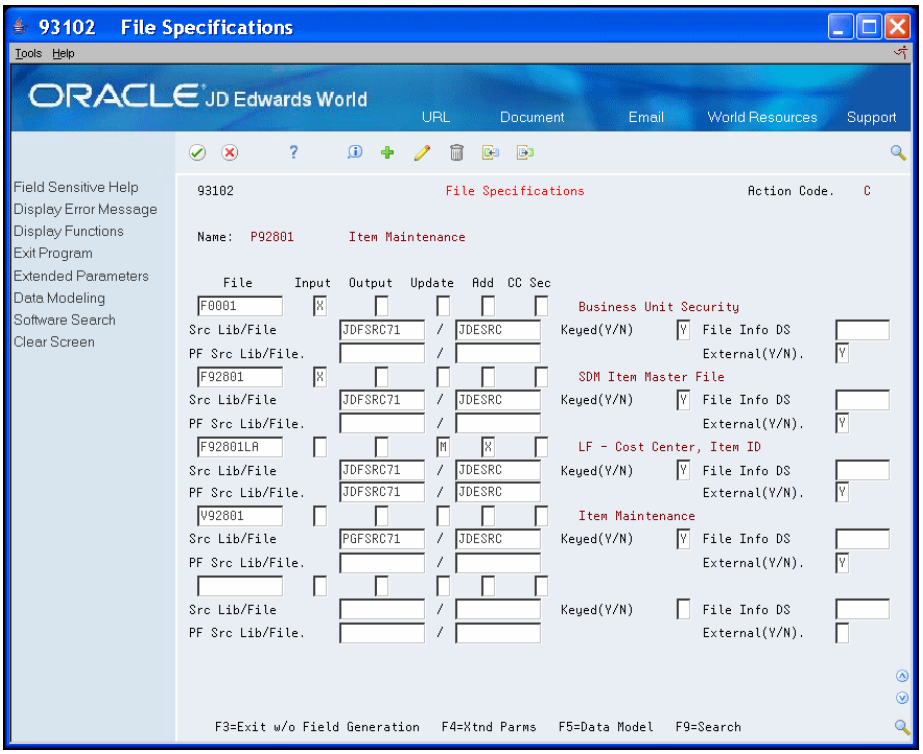
Figure 8–2 File Specifications screen



If you specify Update for a file, the Program Generator examines all fields in that file and includes any other files necessary to edit those fields during an update.

4. Choose Extended Parameters (F4) to complete the fields in the fold area.

Figure 8–3 File Specifications (Fold) screen



Field	Explanation
File	The member ID of the file used by the program.
Input	A code used to specify that a data file will be used as input only by the program being generated. The value entered in this field designates secondary meanings for the use of the file: "M" or "1" thru "9" = Master input file No. 1 thru No. 9, P – Primary input file. The "P" will generate the F specification as input primary S – Secondary input file. The "S" designates input secondary. X – Input file. Any master file designation or an "X" will generate the RPG file (F) specification as input full procedural. When working within a Report program type: Files are not treated as input/primary. The program forces a read of the file for control level processing. You can only define one master file read within a report.
Output	A code of X indicates this data file is used as output only by the program to be generated. The RPG file (F) specification will be generated with a file type of O in position 15.
Update	A code in this field designates that a file is to be updated within the program being generated. The value entered in this field designates secondary meanings for the use of the file: M or 1 thru 9 - Update master file P - Update primary file S or X - Update secondary file T - Update transaction file When defining a subfile transaction processor program type that updates the master file by relative record number, you must designate the keyed file as master file No. 1 and the file updated by relative record number as master file No. 2.
Add	A code of X specifies that a file will have records written to it in the program being generated. The data file designated as the master file in all file maintenance programs must be designated as allowing file additions. A code of X will generate an A in column 66 of the file (F) specification in RPG.
Src Lib/File	The Library Name field contains the name of a valid AS/400 library name. Defaults from SVR. In the Program Generator Data File parameters this library name is the library where the data file's source file resides. For logical files it is necessary that the based on physical file's source exist in the same source file.
Keyed (Y/N)	A code of Y indicates the data file being specified is keyed. A value of N indicates the file access will be by relative record number. The default value is Y. ■ If processing by RRN, the physical file that is being updated must be specified as keyed = N.

Field	Explanation
File Info DS	Name assigned to an RPG III file information data structure if needed for an associated data file. ■ If processing by RRN, the logical file that is used to retrieve database records must have a file information data structure name. In addition, you must define SH#RRN as a hidden field on the SFL format of the video, since the Program Generator uses this field to store the relative record number. ■ Suggested naming conventions are INFDS1, INFDS2, and so forth. ■ Used with a keyed data file that does not have UNIQUE keys. If you use the POST operation code from IBM for a file information data structure, you must do it for every file information data structure in the program.
PF Src Lib/File	Library where the source resides for the physical file linked to the logical file.
External (Y/N)	The External File field designates to the program generator whether or not you wish the data file being specified to be an externally defined file or an internally defined file. The default is "Yes" if left blank. Absolutely no data files specified in normal application software created by JD Edwards World and Company may be internally defined. This parameter is strictly reserved for files designated in multi-file access utility functions that deal with source files or other types of system software.

8.2 Function Exits

Extended Parameters (F4)

Choose Extended Parameters (F4) to display the fold area with the library names of the source files. Default library names are in the Software Versions Repository and your library list.

Data Model (F5)

Choose Data Model (F5) to access the Work with File Relationships screen to build the data model. You must build or rebuild the Cross Reference Index before you can view the data model by choosing Cross-Ref Index from the Rebuilds and Global Updates menu (G9642).

Search (F9)

Choose Search (F9) to access the Software Search facility. On the Software Search facility, you enter a program name to view all programs that meet or are greater than the search criteria.

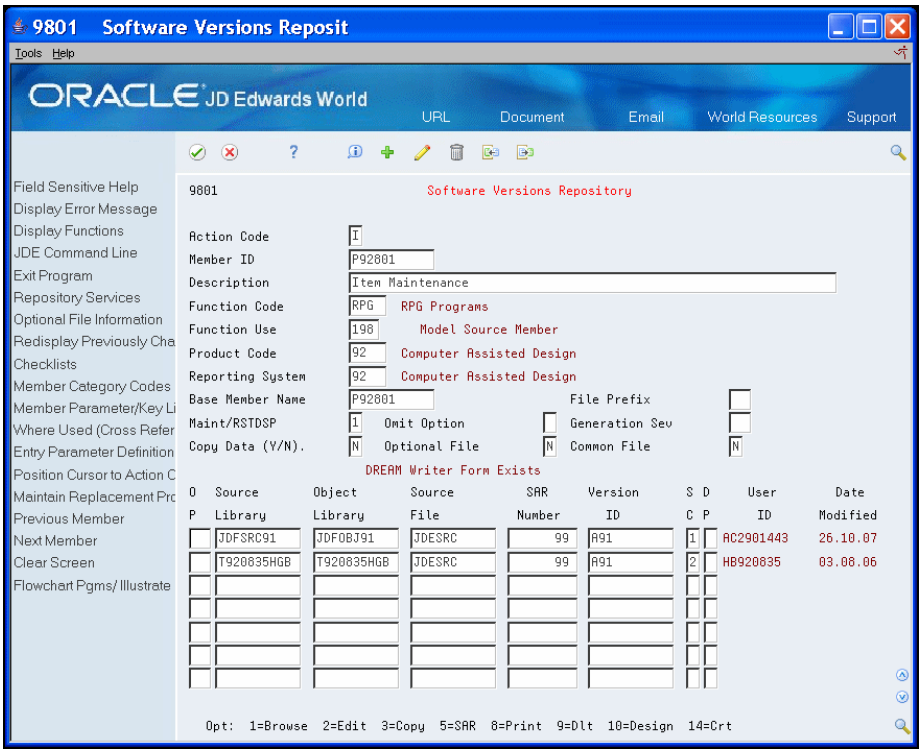
Notice that the system updates the fields on this screen from your File Specifications.

To generate source code from file specifications

When you generate the source, the system submits a batch job to process your program specifications. The system submits the job to the generation job queue in your CASE Profile. This naming convention for this job is your member ID with a prefix of G.

1. On Software Versions Repository, locate a member.

Figure 8–4 Software Versions Repository (Source Code) screen



2. Enter 15 in the following field to generate the source and help.
   - Option
3. Enter 14 in the following field to compile the program.
   - Option
4. Review the program compile and correct any errors.
5. Repeat the steps to generate and compile if necessary.

9

Define General Instructions

This chapter contains these topics:

You use General Instructions to create or change program-specific help text for the program that you are creating. To work with Define General Instructions you should be familiar with:

- Entering and changing text on the Edit screen
- Using special characters
- Updating the help file

The system stores information in the Hxxxxx member of the Additional Help/Modifications Master file (F93002).

9.1 About Special Characters

Following are special characters for general instructions:

Character	Explanation
**	Must be in positions 1 & 2. This causes a page skip when you print the text.
++	Must be in positions 1 & 2 which you follow with a data item. This causes the system to enter the most current data dictionary information.
>>	Enters all help instruction records for the program after the >> character. This character displays only when you print the text.
//BYPASS	Marks the beginning of help information that the system ignores. Enter at the beginning of comment lines.
//END	Marks the end of help information that the system ignores. Enter at the end of comment lines.
|	Underlines text.
¢	Underlines and highlights the text.

Character	Explanation
~	Highlights the text Press Shift + Tilde, and then press the Space Bar. Alternatively, press ALT + HEX + A1 if you do not have a Tilde (~) on your keyboard.

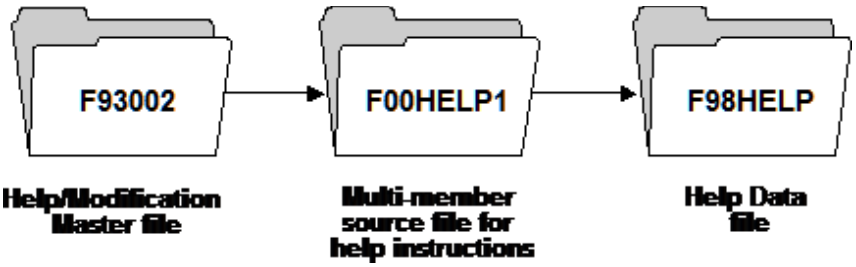
9.2 Special Characters within Help Instructions

You can use the special characters to display fields with specific attributes. You begin and end the text selection as follows.

- To underline General Use, enter | General Use |
- To highlight Additional Features, enter ~Additional Features~
- To underlines and highlight Special Considerations, enter ¢Special Considerations¢

After you define the General Instructions, you must rebuild the help instructions in order to include them in the interactive Help Instructions Master file (F98HELP).

Figure 9–1 Help Instructions Modifications



When you choose Help Instruction from the Computer Assisted Design (CAD) menu (G92) to review the F00HELP1 file, notice that the system adds some directional statements to the general instructions you create. The format is as follows:

++ HELP100, ++ HELP200, and so on.

The rebuild automatically generates these statements in order to categorize the help instructions, and to include additional help. For example, it automatically creates field explanations and a list of functions and selections for the program. HELP100, HELP200, and so on, are entries in the Data Dictionary.

The results might display as follows:

Figure 9–2 Task Detail screen

Select General Instructions to view the program-specific help text for the program.

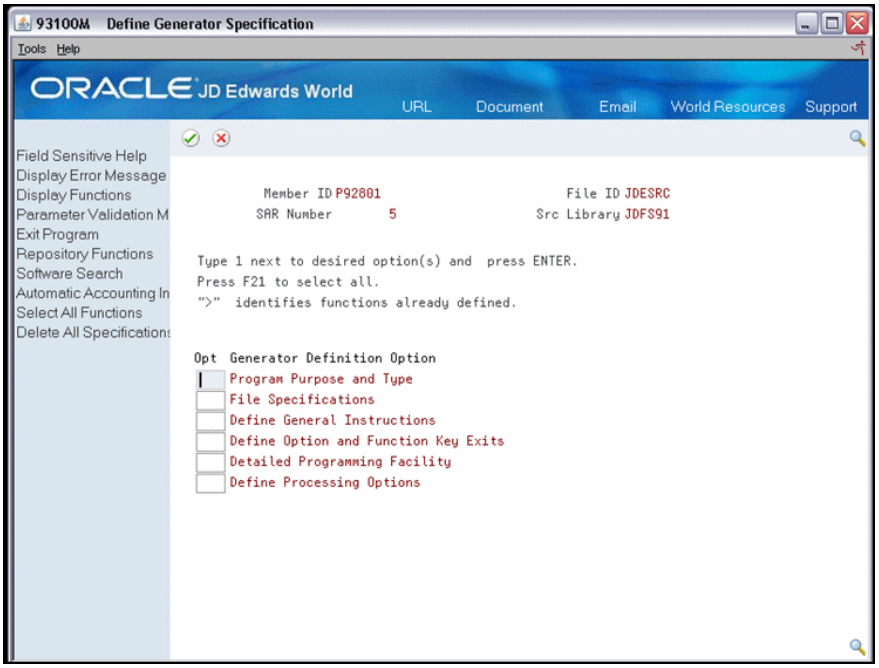
This chapter includes the following tasks:

- To define general instructions
- To update the help instructions

To define general instructions

1. On Define Generator Specification, enter 1 in the following field next to Define General Instructions:
   - Option

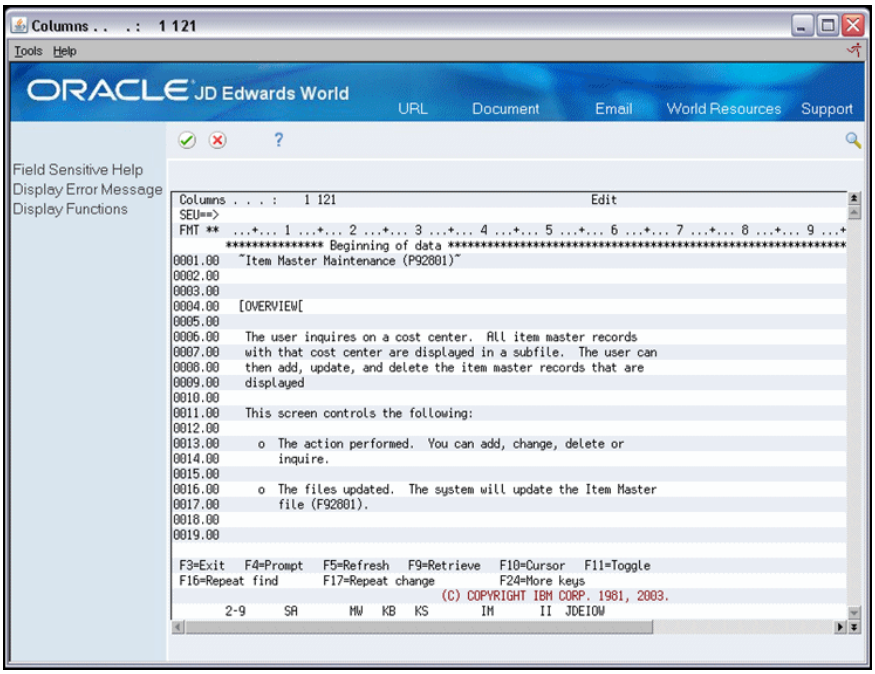
Figure 9–3 Define Generator Specification (General Instructions) screen



2. On the Edit screen, enter the program-specific help text.

   You should keep the text between columns 5 and 70 or the text will be truncated.

Figure 9–4 Item Master Maintenance screen



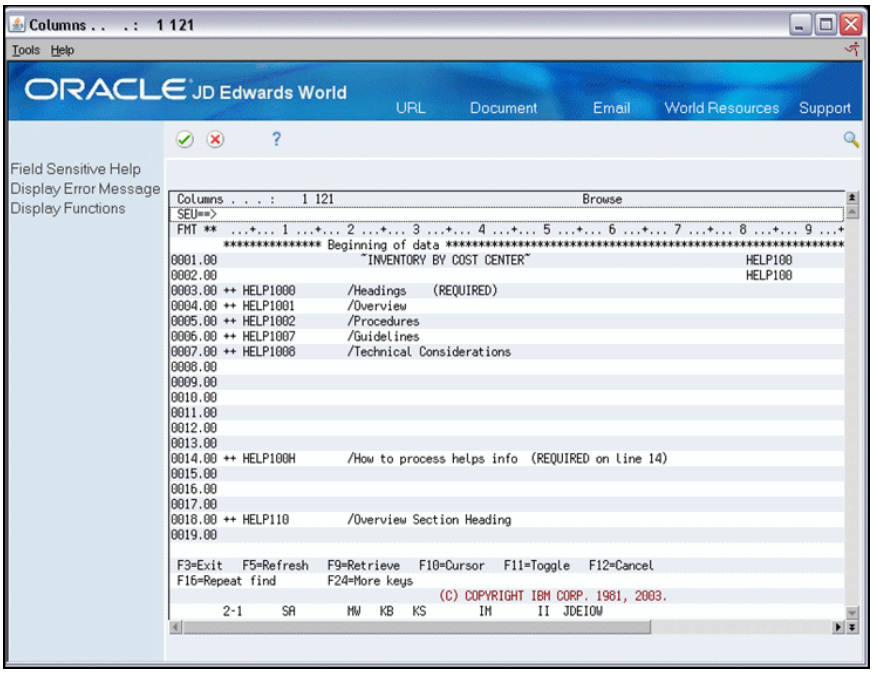
To update the help instructions

There are two methods to update the help instructions.

On Software Versions Repository, enter 15 in the following field to regenerate the program. Alternatively, enter 18 in the following field to rebuild the help instructions:

- Option

Figure 9–5 Columns (Inventory by Cost Center) screen



10

Define Option and Function Exits

This chapter contains these topics:

10.1 Defining Option and Function Exits

To add function exits (function key exits) and subfile selection options to your interactive program, use Define Option and Function Key Exits. The program generator automatically adds the standard function exits to your program, such as Prompt for valid field values (F1), Display Error Message (F7), and Exit (F3). You can highlight the function exits you want to display on line 24 of the program screen using Screen Design Aid (SDA) or Vocabulary Overrides. The program generator creates a list of function exits and selection options for the program. This allows the user to choose Display Options (F24) on any screen to display the list of all function exits and use Prompt for valid field values (F1) in the Option field to display the list of options.

The system stores information for CASE in the Program Exit Parameters file (F93104).

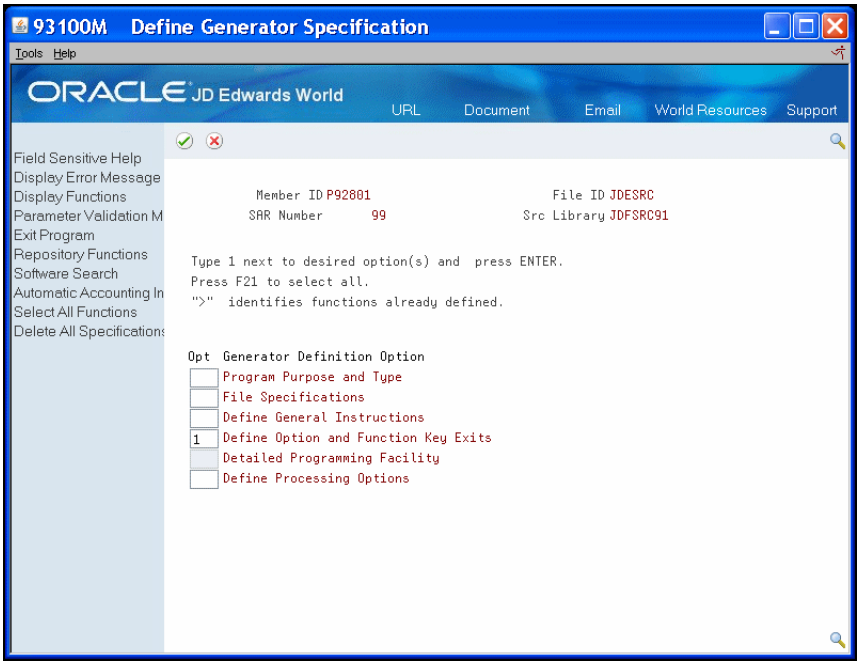
The system creates or updates the Function Key Translation Detail (F9611) and Generic Function Key Master (F96012) tables for the specific screen.

Each set of fields on the Option & Function Key Exits screen pertains to the Function Key or Selection Option you are defining. There is a correlation between the values you enter in the Field field and the Key field. The value in the Field field is the internal data name for the program and the system compares this value to the value in the Key field. The system uses the value in the Program ID field for the name of the program or routine the system executes. The Parm fields are the parameters the system needs for the program or routine.

To define Option and Function Exits

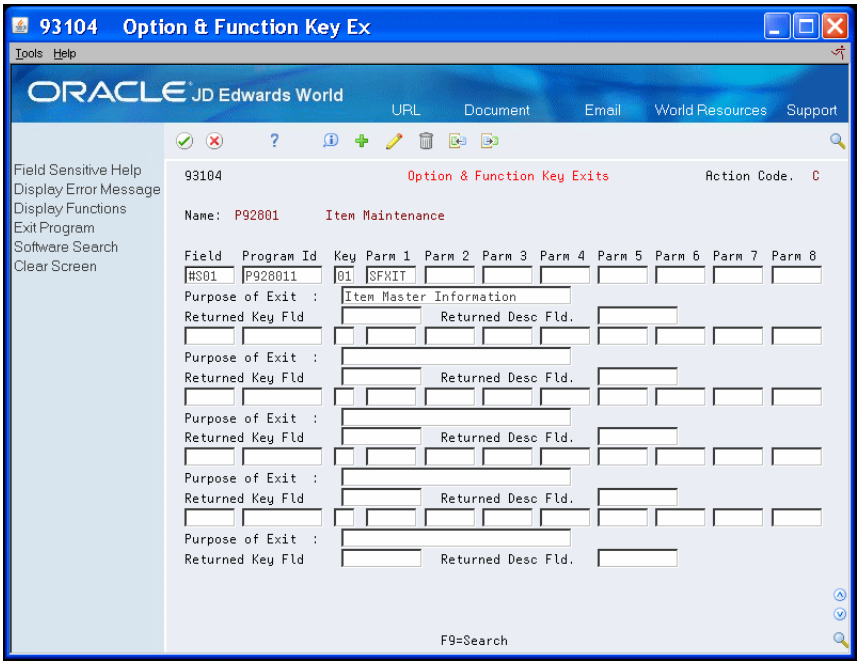
1. On Define Generator Specification, enter 1 in the following field to define option and function exits:
   - Option

Figure 10–1 Define Generator Specification (Option) screen



2. On Option & Function Key Exits, complete the following fields:
   - Field
   - Program ID
   - Key
   - Parm (Parameter) 1 through 8
   - Purpose of Exit
   - Returned Key Fld
   - Returned Desc Fld

Figure 10–2 Option & Function Key Exits screen



Field	Explanation
Field	The RPG field name (6 bytes) to be passed as a parameter on function key exits or subfile options. *Screen-specific information* The internal field name the system assigns to each option and function exit in the program you are generating. Correlation exists between this field and the Function exit Definitions repository. Maintained in the soft coding server data structure (I00SC). ■ This is a required field ■ Use #S01 - #S16 for options ■ Use #F01 - #F15 for function exits
Program Id	The identification, such as program number, table number, and report number, this is assigned to an element of software. *Screen-specific information* The name of the program that the system executes when you choose the function exit or enter a selection option value. By prefixing the name with an asterisk (*) you may designate the name of a logic module. A logic module's name that you use for this purpose must begin with an X followed by any eight characters. The name cannot be longer than nine characters in order to allow for entry of the asterisk prefix. This function allows the programmer to create logic other than the standard execution of an external program when a user chooses a function exit or enters a selection option.

Field	Explanation
Key	This field is used to specify the function key or subfile option number for a particular exit in the program being generated. Along with function key or option number, you must enter the program ID and any parameters that should be passed to the external program. *Screen-specific information* You can only define function exits for #F01 through #F15 and subfile options for #S01 through #S16.
Parm 1	The RPG field name (6 bytes) to be passed as a parameter on function exits or subfile options.
Parm 2	The RPG field name (6 bytes) to be passed as a parameter on function exits or subfile options.
Parm 3	The RPG field name (6 bytes) to be passed as a parameter on function exits or subfile options.
Parm 4	The RPG field name (6 bytes) to be passed as a parameter on function exits or subfile options.
Parm 5	The RPG field name (6 bytes) to be passed as a parameter on function exits or subfile options.
Parm 6	The RPG field name (6 bytes) to be passed as a parameter on function exits or subfile options.
Parm 7	The RPG field name (6 bytes) to be passed as a parameter on function exits or subfile options.
Parm 8	The RPG field name (6 bytes) to be passed as a parameter on function exits or subfile options.
Purpose of Exit	A name or remark that describes an element in the JD Edwards World systems. *Screen-specific information* Special Use: For the CASE system, this field is used for program exit remarks and AAI remarks. It also allows you to enter a data dictionary key when prefixed with an * (asterisk). This lets you use standard explanations and provide more extensive explanations for each exit or AAI when viewed with the help instructions.
Returned Key Fld	This field is used to specify the name of the data field to be updated by a returned key when exiting to an inquiry program that allows passing the selected record's key back to the initiating program. *Screen-specific information* Causes logic generation to let a returned key pass through the local data area and loads the value in the specified key field. Only valid with the CL program J98LDAKY

Field	Explanation
Returned Desc Fld	This field is used to specify the name of the data field to be updated by a returned description when exiting to an inquiry program that allows passing the selected record's description back to the initiating program. *Screen-specific information* Causes logic generation to let a returned description pass through the local data area and loads the value to the designated description field. ■ Only valid with the CL program J98LDAKY ■ For more information on using the Returned Key and Returned Desc Fld, see the program level Helps for P93104

10.2 Function Exit

Search (F9)

Choose Search (F9) to access the Software Search facility. On Software Search, enter a program name to view all programs that meet or are greater than the search criteria. You can also enter Generic* to view the names of all program in the SVR.

10.2.1 What You Should Know About

Topic	Description
Values in the Parameter fields	Use caution when using an internal program data name in the Parm fields. Using screen (VD prefix) or subfile (SF prefix) fields might cause issues because the program the system retrieves can change the data in the field. To avoid transferring screen or subfile fields values, alternative options for VDxxxx or SFxxxx include: ■ Transfer PSxxxx This requires a manual source change to the program in order to properly load the PSxxxx field with the screen or subfile field, or load the field using Program Design Language. ■ Transfer SHxxx You can define the SHxxxx fields as hidden fields on their screen and then load them with the proper information using the Detailed Programming facility.

11

Work with the Detailed Programming Facility

This chapter includes these topics:

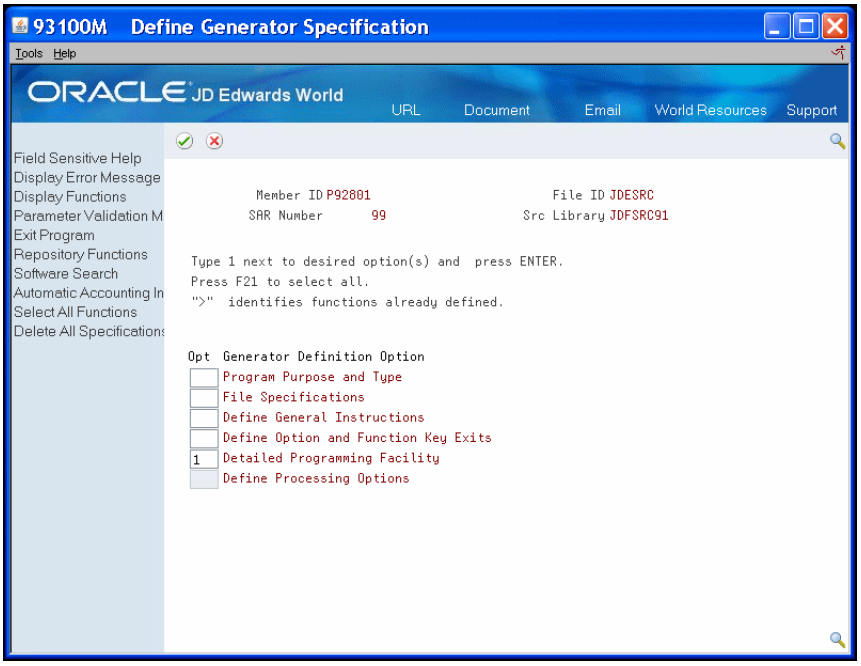
The Detailed Programming Facility allows you to specify data field definition parameters. The Detailed Programming Facility screen lists the files in order and then each field in order within the files for the shell program the Program Generator creates. It also provides access to Field Detail and Program Design Language. The system creates this specification after you enter the File Specifications. Additionally, the system stores the information in the Detail Program Logic Parameters file (F93105).

11.1 About the Detailed Programming Facility

After you enter the file specifications, you access the Detailed Programming Facility from the Define Generator Specification screen.

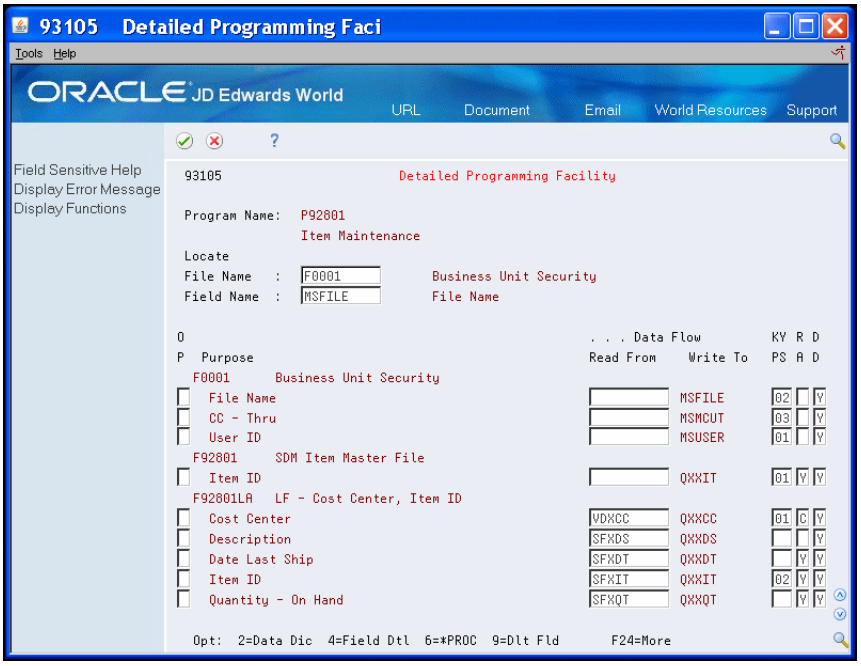
To access the Detailed Programming Facility, you enter 1 in the Option field on the Define Generator Specification screen.

Figure 11–1 Define Generator Specification (Detailed Programming) screen



The Detailed Programming Facility screen displays.

Figure 11–2 Detailed Programming Facility screen



Field	Explanation
File Name	The member ID of the file used by the program.
O P	Allows for selection exits for each field.

Field	Explanation
Data Flow - Read From	Indicates what information is to be loaded into the "Write To" field on the screen. This field is loaded automatically by CAP during the data field generation process initiated by adding files to the file specifications program. It is loaded based upon either a display file or report file data dictionary item name matching with the same data dictionary item name in the specified data base files. If no match occurs for the designated master file fields, this field is loaded with "*SKIP". (An entry of "*" followed by an internal logic module name allows creating standard calculation routines for certain fields.) An entry of *PROC will replace standard code with that generated by PDL.
Key Position	Designates the relative position of the field in the key list. It is used in the program generator to generate key lists (KLIST). You may also define a partial key by blanking out the key position for a particular field. Just remember, partial keys should be defined from the bottom up; for example, don't remove key position 01 if there are 4 keys in the key list.
Right Adjust Parameter	A code of: Y – indicates the field should be right adjusted. N – indicates the field should NOT be right adjusted. C – indicates the field is a business unit and should be left filled with blanks instead of zeros. A – indicates the field is an account number and the account number edit routine will be used for editing. Can only be used when the Read From field is a video field and the Write To field is a data base field.
Data Dictionary Validation	Designates whether the Program Generator will generate all the editing logic specified in the Data Dictionary for the particular data item. Enter a Y if this editing is desired, otherwise enter an N to bypass the Data Dictionary editing. Y is the default.

11.1.1 Available Options

Value	Description
2 - Data Dictionary	Access the Data Dictionary Repository for the data item.
4 - Select/Work With	Access the Full Data Field Parameters screen for more detail on the field.
6 - Data Formula Entry (*PROC)	Access the Data Item Formula Revisions screen where you enter Program Design Language (PDL) code.
9 - Delete Record	Allows you to delete a field from the Detailed Programming Facility.

11.1.2 Function Exits

Repository Services (F6)

Choose Repository Services (F6) to access a screen of JD Edwards World technical functions or repositories.

Select *PROC Fields On/Off (F10)

Choose Select *PROC Fields On/Off (F10) to toggle between a display of either all fields in the Detailed Programming Facility or the fields with PDL.

11.2 About Full Data Field Parameters

Full Data Field Parameters allows you to create additional source code.

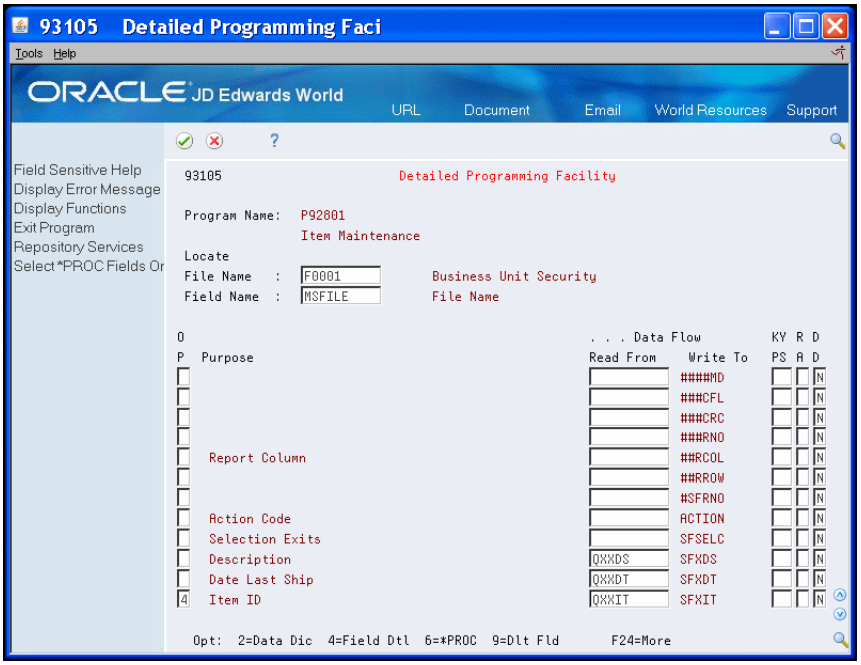
11.2.1 Primary Uses of Full Data Field Parameters

The primary uses of full data field parameters include:

- Loading VC0 description fields: The system can store VC0 (descriptive data) about either a screen (video) or report in another file. Use this screen to enter the file in which you want the system to store the data about the field, the file key, where you want the system to store the description and the field with which you want to associate the field.
- Enabling the database update function for subfiles: Entering N in the Entry Optional field enables the subfile field that controls data base updates
- Creating the *ENTRY PLIST code for a program: Specifies which data fields you want to include in an *ENTRY PLIST statement and the sequence in which they will appear.
- Protecting a field from the system clearing it every time the system executes the S001 routine when you generate the code.
  - You specify N in the Clear After (Y/N) field
  - The system requires this for output only fields that do not have a VC0 prefix
  - The system requires this for key fields in RRN program types
- Adding error message the user creates
- Suppressing edits in S005 for audit fields
- Creating a partial KLIST for an input file

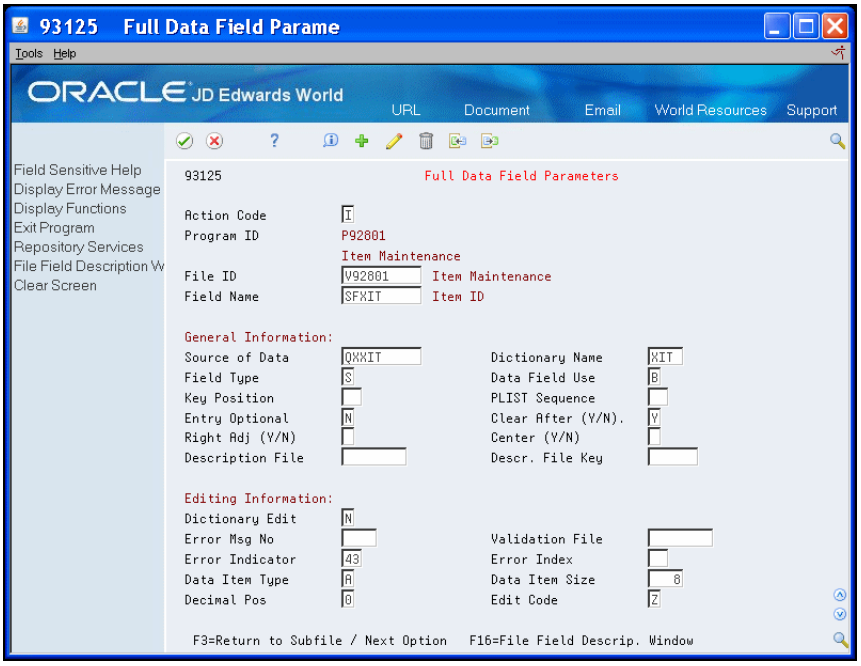
To access the Full Data Field Parameters screen, you enter 4 in the Option field next to the field for which you want to create additional source code on the Detailed Programming Facility screen.

Figure 11–3 Detailed Programming Facility (Full Data) screen



The Full Data Field Parameters screen displays.

Figure 11–4 Full Data Field Parameters screen



Field	Explanation
Source of Data	Indicates what information is to be loaded into the "Write To" field on the screen. This field is loaded automatically by CAP during the data field generation process initiated by adding files to the file specifications program. It is loaded based upon either a display file or report file data dictionary item name matching with the same data dictionary item name in the specified data base files. If no match occurs for the designated master file fields, this field is loaded with "*SKIP". (An entry of "*" followed by an internal logic module name allows creating standard calculation routines for certain fields.) An entry of *PROC will replace standard code with that generated by PDL.
Dictionary Name	The 4 character data item name from the data dictionary. Used extensively for field editing within the program generator.
Field Type	Used to designate master file field names and display/report file field names within the data field parameter records. M – indicates a master file field P – indicates the field is in the control record portion of a video screen (so if not a subfile, all fields would be a P) S – indicates the field is in the subfile portion of a video D – indicates a field within a report detail format H – indicates a field within a report heading format T – indicates a field within a report total format
Data Field Use	To determine how a data item is used on a video screen or report as far as: I – input only O – output only B – both input and output H – hidden field
Key Position	Designates the relative position of the field in the key list. It is used in the program generator to generate key lists (KLIST). You may also define a partial key by blanking out the key position for a particular field. Just remember, partial keys should be defined from the bottom up; for example, don't remove key position 01 if there are 4 keys in the key list.
PLIST Sequence	The PLIST Sequence field specifies to the Program Generator which data fields you wish to include as passed parameters on a *ENTRY PLIST statement and the sequence in which they will appear. ■ 01 - 32 are valid ■ Must enter as 01 and not 1 ■ If the first parameter is passed a non-blank value, an auto-inquiry will be performed
Entry Optional	Used with subfile maintenance programs to identify the field that controls database updates. ■ One field needs to be designated as Entry Optional: N ■ Defaults to a blank

Field	Explanation
Clear After (Y/N)	Designates to the Program Generator whether a field is always cleared at the end of each transaction entry or is only cleared when the user presses the specific function key to clear the screen. Y – indicates the field will be cleared at the end of each transaction entry. The default is Y. N – indicates the field will not be cleared unless specified by the user by pressing the appropriate function key.
Right Adj (Y/N)	A code of: Y – indicates the field should be right adjusted. N – indicates the field should NOT be right adjusted. C – indicates the field is a business unit and should be left filled with blanks instead of zeros. A – indicates the field is an account number and the account number edit routine will be used for editing. Can only be used when the Read From field is a video field and the Write To field is a data base field.
Center (Y/N)	A code of Y will center the data within the field when it is displayed.
Description File	Used in conjunction with loading a VC0 description field. ■ Identifies the file that contains the description
Descr. File Key	Specifies the key field name to use for retrieving the data description from the designated description file. Enter the field name used to chain to that file. If you need to use a KLIST, enter the KLIST name. If this description is coming from the User Defined Codes file, enter the field that contains the "code" portion of the User Defined Codes key. For example, to retrieve state description using the Address Book file, you would enter ABADDS not DRKY01. The system code and record type will be retrieved from the data dictionary item for state code (ADDS). The program generator will produce the code to chain to the appropriate file and move (left justified) the description to the specified output field (usually VC0xxx).
Dictionary Edit	Controls the generation of data dictionary editing for fields in the master file. ■ Defaults to Y ■ Specifying N will result in no data dictionary editing for the value that is moved to a master file field ■ Is useful for audit fields such as User ID that can be loaded from the Program Status Data Structure and need no editing.
Error Msg No	Identifies a custom error message to use when errors are detected on a screen field. ■ Loads the value in array EMK of subroutine S999
Validation File	Specifies the file name to use for validating the current data field contents. This file name is automatically provided from the data dictionary if it exists.

Field	Explanation
Error Indicator	Used to designate the error controlling indicator for a data item on a video screen. This indicator controls the standard error notification attributes for video screens (reverse image, high intensity and position cursor).
Error Index	The Error Message Index field is the array index where a special error message number is loaded in the error message array. Each of the data item parameters which uses external file validation can override the standard error message (0002). A new index must be entered for these types of changes. Error indexes 1 through 20 are reserved for the program generator. Error indexes 21 through 30 are reserved for file validation. Error indexes 30 through 64 can be used for anything else.
Data Item Type	This defines the type of data to be stored in the field. The data item types are defined in User Defined Codes, system code '98', record type 'DT'. Note: All amount fields should be entered as 15 bytes, 0 decimals, and data item type should be P (packed).
Data Item Size	The field size of the data item. **NOTE:** All amount fields should be entered as 15 bytes, 0 decimals, and the data item type should be P (packed).
Decimal Pos	The number of positions to the right of the decimal of the data item.
Edit Code	Determines how data is printed or displayed. Depending on the code, you can change the appearance of the fields as follows (standard IBM edit codes): ■ Show commas - 1, 2, A, B, J, K, N, or O ■ Show decimal point - 1, 2, 3, 4, A, B, C, D, J, K, L, M, N, O, P, Q ■ Show sign for negative - A, B, C, D ("CR") or J through Q ("-") ■ Suppress leading zeros - 1 through 4, A through D, J through Q, Y and Z Refer to user defined codes (system 98/ type EC) for all valid codes, including additional JD Edwards World edit codes.

11.2.2 Function Exits

File Field Description Screen (F16)

Choose File Field Description Screen (F16) to access the File Field Description Screen. This function exit is field sensitive.

- If the cursor is in the Description File Key field, and this field:
  - Contains a file name, the system enters the fields on the screen with the fields from the description file.
  - Is blank, the system displays a blank File Field screen for you to enter a file name and then displays the fields from that description file.
- If the cursor is not in the Description File field, the system displays a blank File Field screen for you to enter a file name and then displays the fields from that description file.

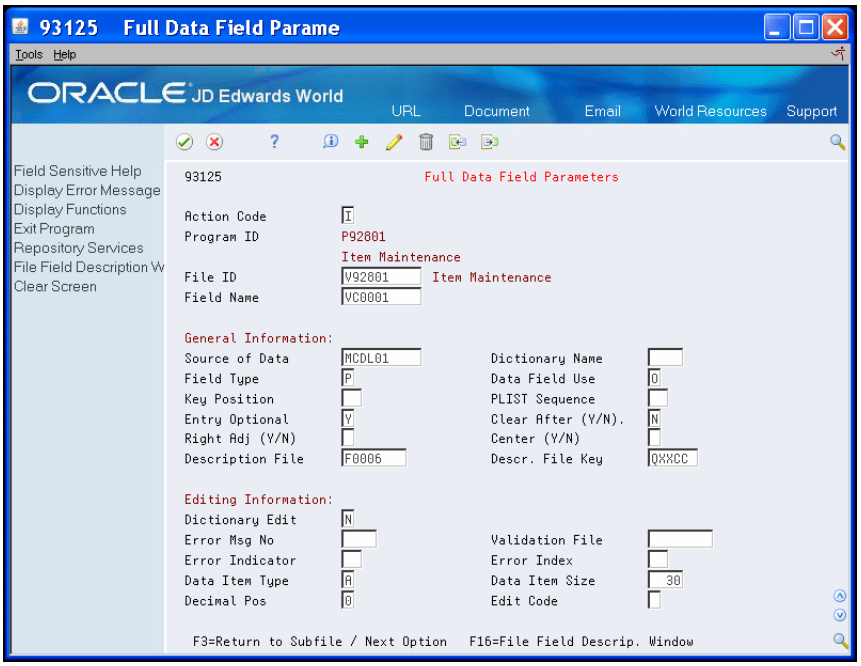
11.3 Loading VC0 Description Fields

The Detailed Programming Facility allows you to specify what file to use to access a description for a screen (video) or report description field whose prefix is VC0 (VC0xxx).

11.3.1 Example

In the following example, QXXCC is a field in the Business Unit Master table (F0006) that contains the business unit value. The F0006 table also contains descriptions of the business units. MCDL01 is the field in the F0006 table that contains the business unit description and the system enters this description into VC0001.

Figure 11–5 Full Data Field Parameters (Example 1) screen

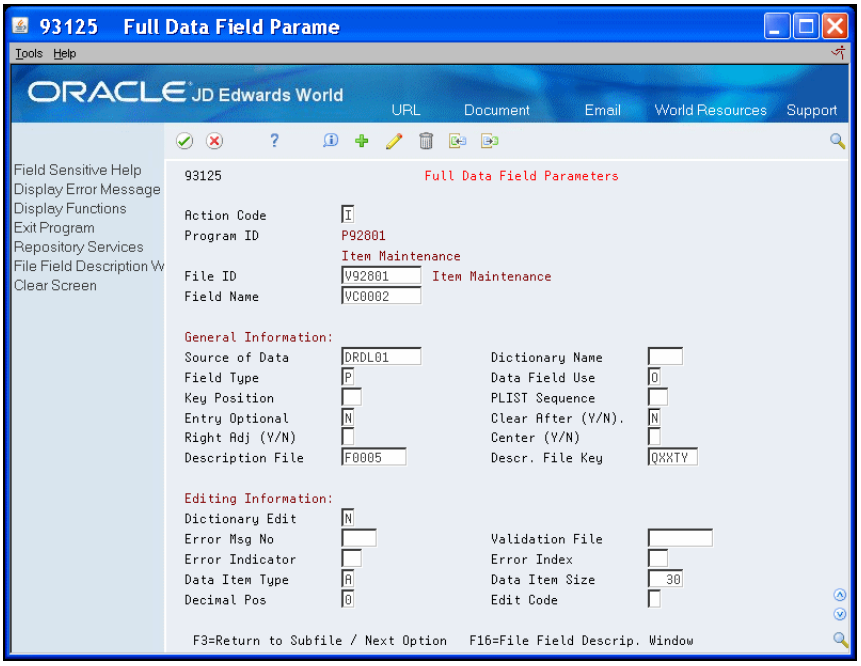


11.3.2 Example: User Defined Code

If you are accessing a description for a user defined code (UDC) field, you enter F0005 (User Defined Codes table) in the Description File and the value for the field for which you are accessing the description in the Description File Key field.

The Program Generator retrieves the Install System Code and User Defined Code Type from the Data Dictionary and builds the composite key to access the User Defined Code file.

Figure 11–6 Full Data Field Parameters (Example: UDC) screen



In the example above, QXXTY is a UDC field in the User Defined Codes table. F0005 contains descriptions of UDCs. DRDL01 is the field in F0005 that contains the UDC description and the system enters this description into VC0002.

Because a server program accesses the F0005 table, it is not necessary to include it in the File Specifications.

Loading field descriptions using this approach only works if the system enters the field description into a VC0 field.

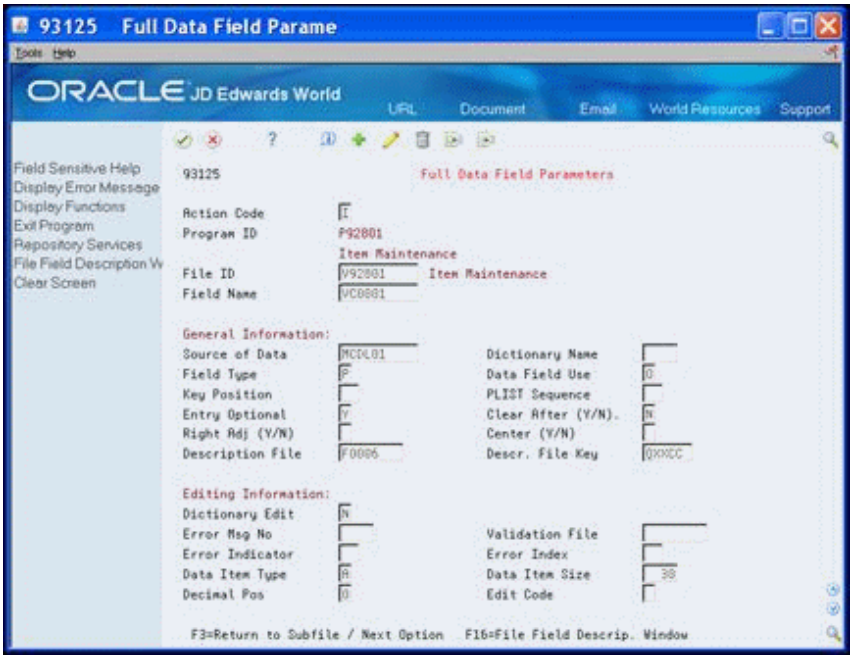
Specifying a file does not guarantee that the system enters the file you specify into the File Specifications. You must review the File Specifications to ensure the files from which you want to retrieve descriptions are present. The exception is for files that you access with a server program.

To load the VCO Description fields

Complete the following fields:

- Source of Data
- Description File
- Descr. File Key

Figure 11–7 Full Data Field Parameters (VCO) screen



Field	Explanation
Source of Data	Indicates what information is to be loaded into the "Write To" field on the screen. This field is loaded automatically by CAP during the data field generation process initiated by adding files to the file specifications program. It is loaded based upon either a display file or report file data dictionary item name matching with the same data dictionary item name in the specified data base files. If no match occurs for the designated master file fields, this field is loaded with "*SKIP". (An entry of "*" followed by an internal logic module name allows creating standard calculation routines for certain fields.) An entry of *PROC will replace standard code with that generated by PDL.
Description File	Used in conjunction with loading a VC0 description field. ■ Identifies the file that contains the description
Descr. File Key	Specifies the key field name to use for retrieving the data description from the designated description file. Enter the field name used to chain to that file. If you need to use a KLIST, enter the KLIST name. If this description is coming from the User Defined Codes file, enter the field that contains the "code" portion of the User Defined Codes key. For example, to retrieve state description using the Address Book file, you would enter ABADDS not DRKY01. The system code and record type will be retrieved from the data dictionary item for state code (ADDS). The program generator will produce the code to chain to the appropriate file and move (left justified) the description to the specified output field (usually VC0xxx).

11.4 Enabling the Database Update Function for Subfiles

If you are designing a subfile maintenance program, you must define at least one field in your subfile as a required field.

In the following example, the Item ID (SFXIT) field is the field that controls database updates:

The system performs the following:

- If Item ID is blank, but there is a database record for the subfile record, then the system deletes the database record.
- If Item ID is not blank, then the system saves or updates the database depending on whether the database record exists in the subfile.

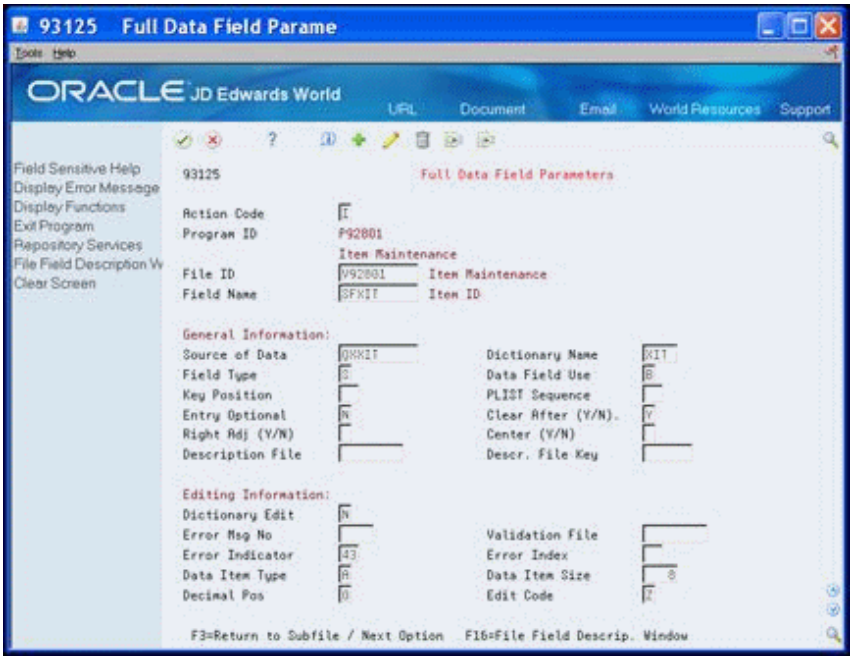
You must define one or more hidden fields in the subfile record if the program type uses:

- Key processing for the subfile. The hidden field must be SHxxxx, where xxxx is the data dictionary item. There must be a SHxxxx field for each key field that is in the subfile record.
- RRN processing for the subfile. The hidden field must be SH#RRN.

To enable the database update function for subfiles

On the Full Data Field Parameters screen, enter N in the Entry Optional field.

Figure 11–8 Full Data Field Parameters (Update) screen



11.5 Creating *ENTRY PLIST Entries

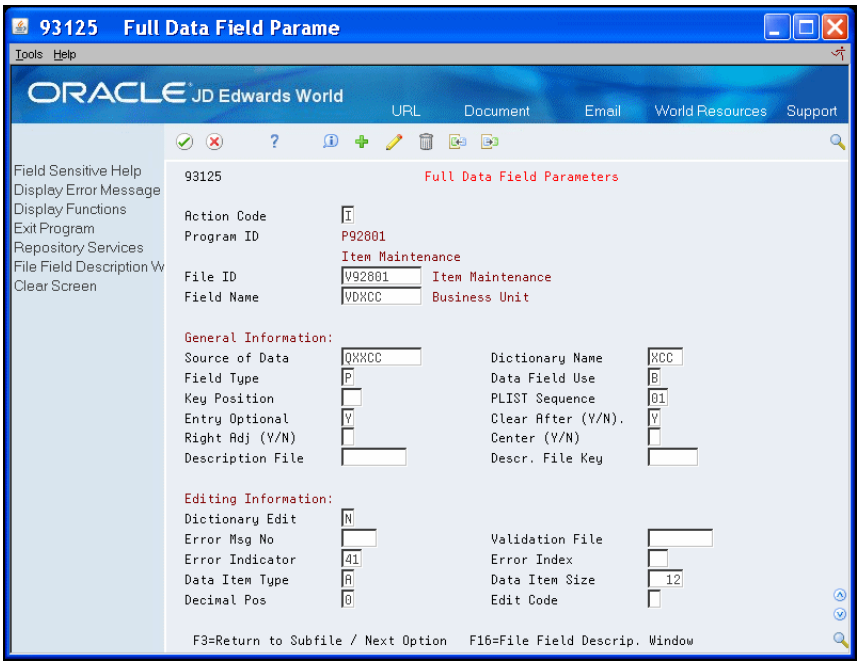
You use PLIST entries to define which data items to include in a parameter list. You can use a maximum of 32 parameters.

11.5.1 Example

The system uses data item VDXCC as the third parameter in the entry list of Subroutine S999. The program generator creates a field name, which is the same data dictionary item with a prefix of ##. The system moves this parameter field to VDXCC from the parameter field.

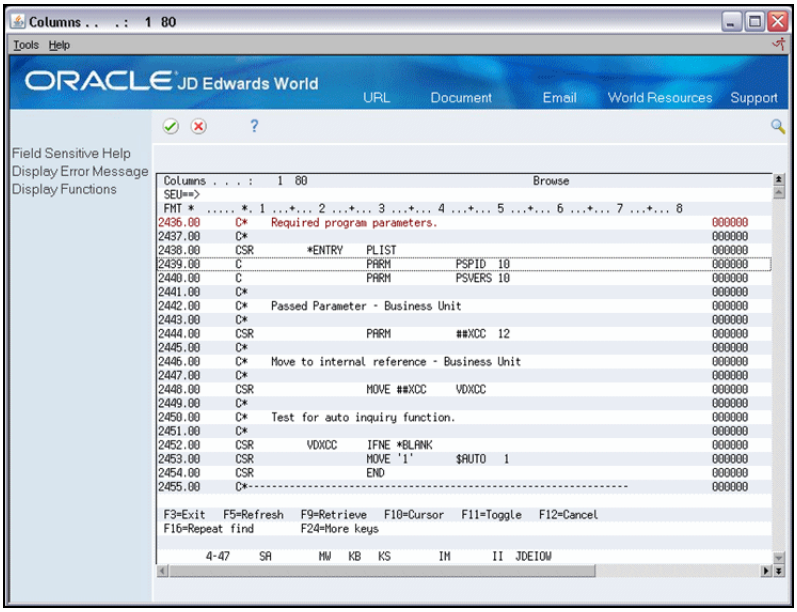
You must use the data item in the display file, not the database file, for creating PLIST parameters.

Figure 11–9 Full Data Field Parameters (Example 3) screen



If the parameter value is not blank, the system updates the variable $AUTO with a 1. When the system launches this program, this parameter informs the program to perform an automatic inquiry (S003).

Figure 11–10 Required Program Parameters screen

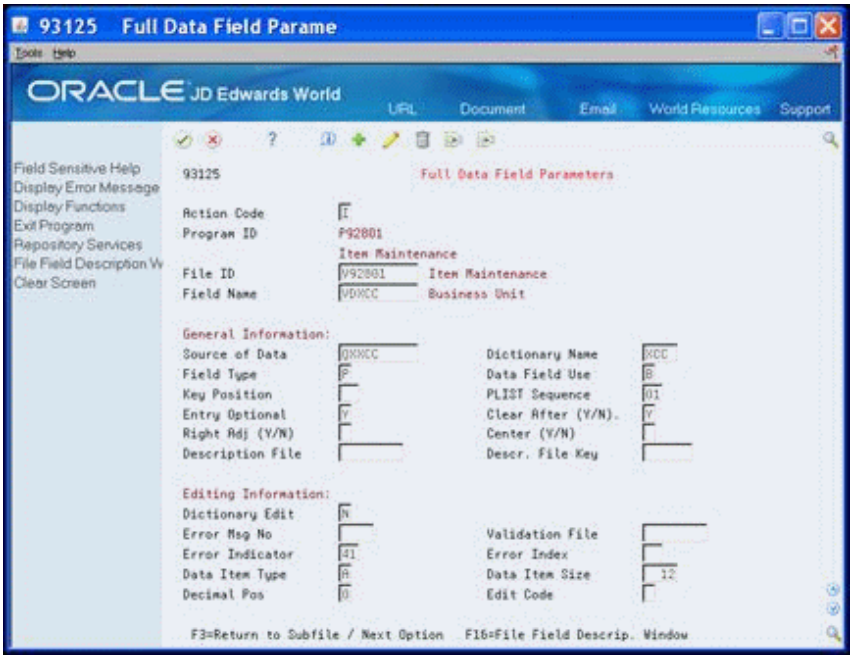


If the system retrieves this program directly, the CL program retrieving this RPG program must issue a blank parameter.

To create *ENTRY PLIST entries

On the Full Data Field Parameters screen, enter a two-digit number corresponding to the sequence of the parameter in the PLIST Sequence field.

Figure 11–11 Full Data Field Parameters (PLIST) screen



11.6 Protecting Fields from Being Cleared

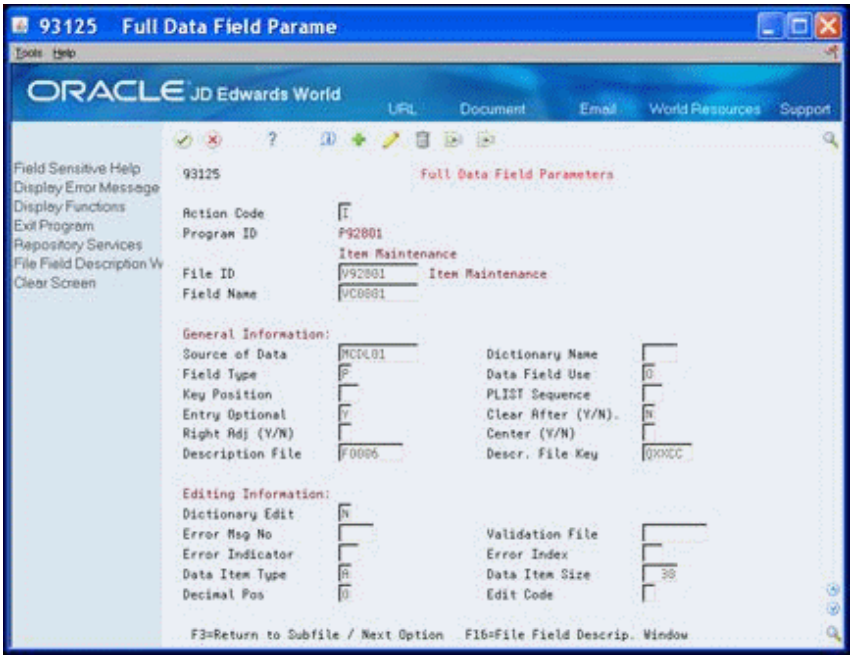
This feature is useful when creating data entry programs with a repetitive data field. For example, when there are multiple occurrences of the date field on a screen, a user only needs to enter a date in the first occurrence of the date field.

- The system clears all fields except those with a prefix of VC0 each cycle in Subroutine S001.
- The default value for this field is Y.
- The function exit F22 clears all fields.

To protect fields from being cleared

On the Full Data Field Parameters screen, enter N in the Clear After field.

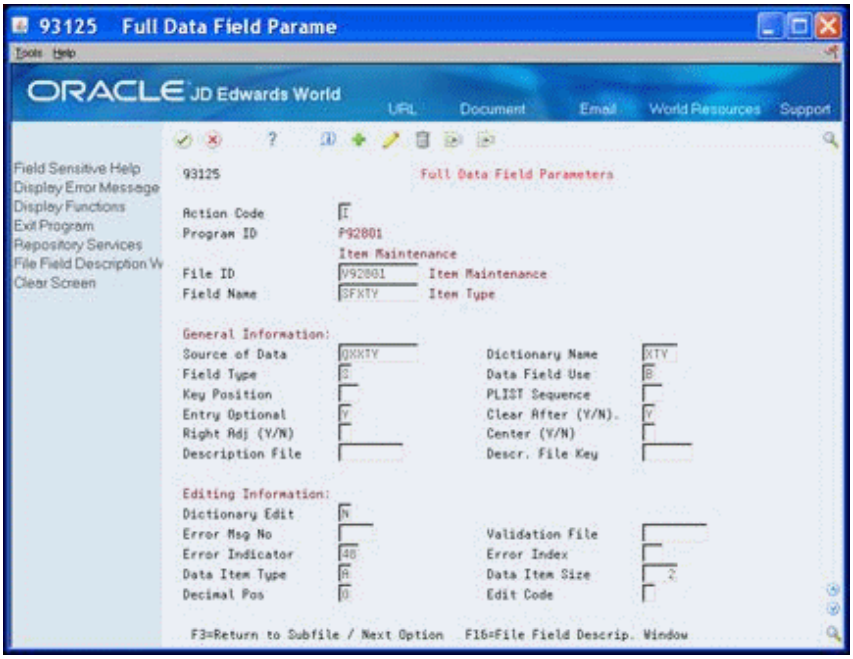
Figure 11–12 Full Data Field Parameters (Protect Fields) screen



11.6.1 What You Should Know About

Topic	Description
User Error Messages	Updating the Error Message Number and Error Index fields adds errors to the EMK array in Subroutine S999. For example, in Subroutine S999, the system applies error message 1684 to Error Index 21 of the EMK array. JD Edwards World reserves indexes 1 to 20. You must modify your source to use this error message index.

Figure 11–13 Full Data Fields Parameters (Error Message) screen



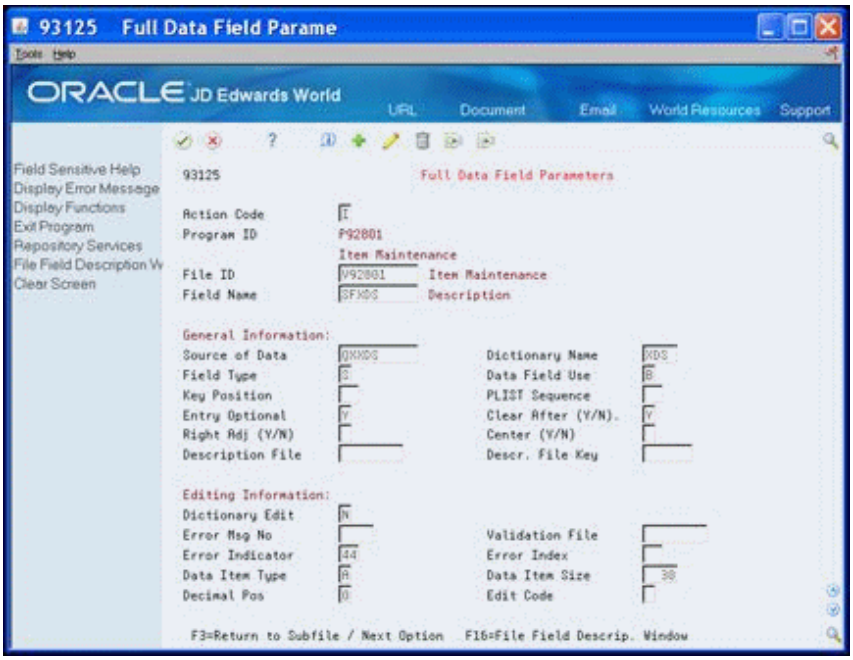
11.7 Disabling Data Dictionary Edits

This feature is useful if you add custom validation through the Source Entry Utility (SEU).

To disable Data Dictionary edits

Enter N in the Dictionary Edit field.

Figure 11–14 Full Data Field Parameters (Disable Data Dictionary) screen



11.8 Creating a Partial KLIST for a File

The Program Generator displays the full key list. You can change the key position to exclude subordinate elements.

11.8.1 Example

In the example that follows, the key list sequence for the Business Unit security file is:

- User ID
- File Name
- Through Business Unit

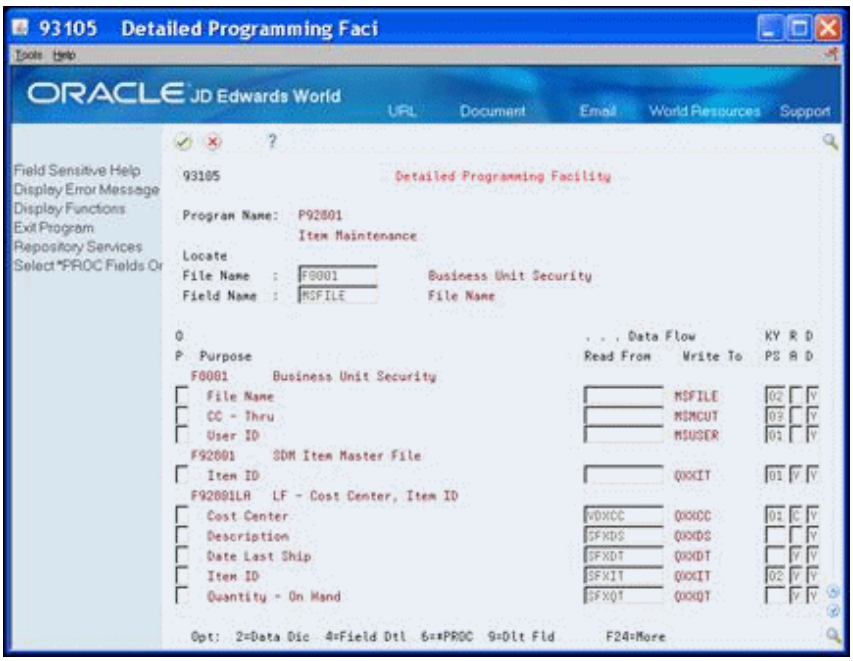
If you want to use a partial key to access this file, start with the highest number key field and clear the Key Position (KY PS) field. If you need both the full key list and a partial key list, enter this using the SEU.

To create a partial KLIST for a file

On Detailed Programming Facility, clear the Key Position (KY PS) field, starting with the last element.

In the following example, clear the Key Position (KY PS) field for CC - Thru. The key for F0001 is the User ID and File Name, key positions 01 and 02.

Figure 11–15 Detailed Programming Facility (KLIST) screen



12

Define Processing Options

This chapter contains these topics:

12.1 Overview

Processing options allow individual programs to perform in many different ways. They are analogous to mechanical switches that you set before you run the program. Processing options allow users to enter parameters prior to running a program which cause varied outcomes of the program. Processing options:

- Control which fields appear on the data entry screen
- Control how the program processes data
- Set up certain default values for entry

The Define Processing Options function allows you to define processing options that the program uses. After you define the processing options, you can access them through the DREAM Writer versions list and change the processing values for a specific version. To define processing options you must be familiar with the Processing Options Setup screen.

The system stores information in the DREAM Writer Master Parameter file (F98301). The system retrieves the processing options in the housekeeping subroutine S999 by including a copy member which accesses a program to retrieve the values and enter them into array @OP.

When you define processing options, you must be aware of the following:

- The system makes the following changes to the RPG source code:
  - Creates an O record type in file F98301.
  - Brings in /COPY statement for E81DRPT.
  - Brings in /COPY statement for C81DRPT.
  - Brings in EXSR C81DRPT statement in the housekeeping subroutine S999.
  - Loads processing options to array @OP, which has 99 elements of 25A.
- You must add code manually via the Source Entry Utility (SEU) or Program Design Language (PDL) to use the processing options in a program.

- You add source code in the housekeeping subroutine S999 to move the processing option into a program work field.

  Example: MOVEL @OP,1 $PO1 2

- The system uses the program work field with PDL, or you can manually add source code to the program via SEU. A PDL example follows:

```
\ If document type is blank, \
\ use Processing Option as default \
begin
If VDDCTO = ' ' Then
VDDCTO := $PO1;
end
```

- The program needs to have values for Program ID (PSPID) and Version ID (PSVERS) to retrieve the processing option values from the DREAM Writer parameter file:
  - If your program is a report program, the system generates PSPID and PSVERS automatically as PLIST parameters. Therefore, you do not need to do anything.
  - If your program is an interactive program, you must add PSPID(10) and PSVERS(10) as the first two PLIST parameters. Remember to modify any programs that launch this program so that the system delivers these two parameters.

12.1.1 What You Should Know About

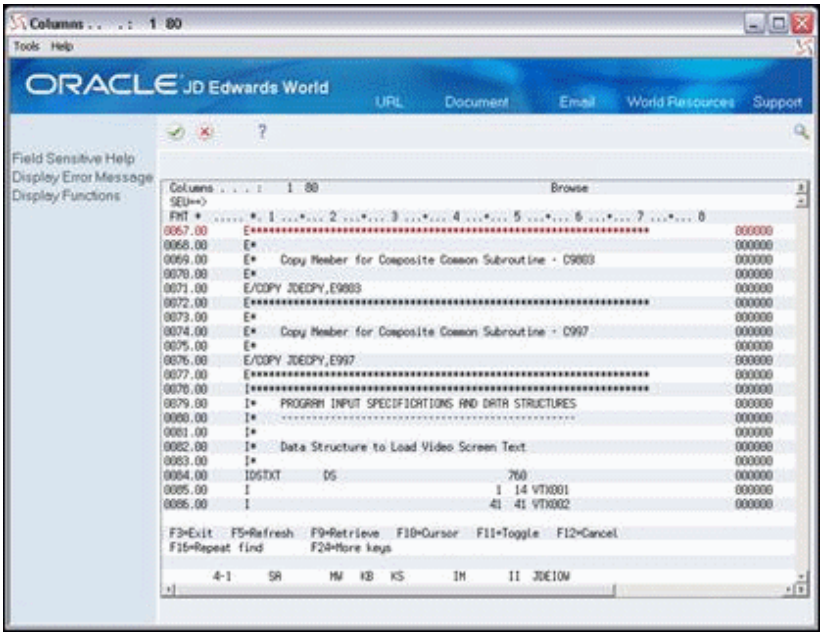
Topic	Description
Program Generator	The program generator does not include code that controls interactive processing options. The program generator does control some of the tasks for batch programs. The text you enter on the Processing Options Setup screen does not convey instructions to the program generator.

12.2 Example - Interactive Programs Using Processing Options

Following is an example of an interactive program containing processing options.

When you search in SEU for string C9803, the following screen displays:

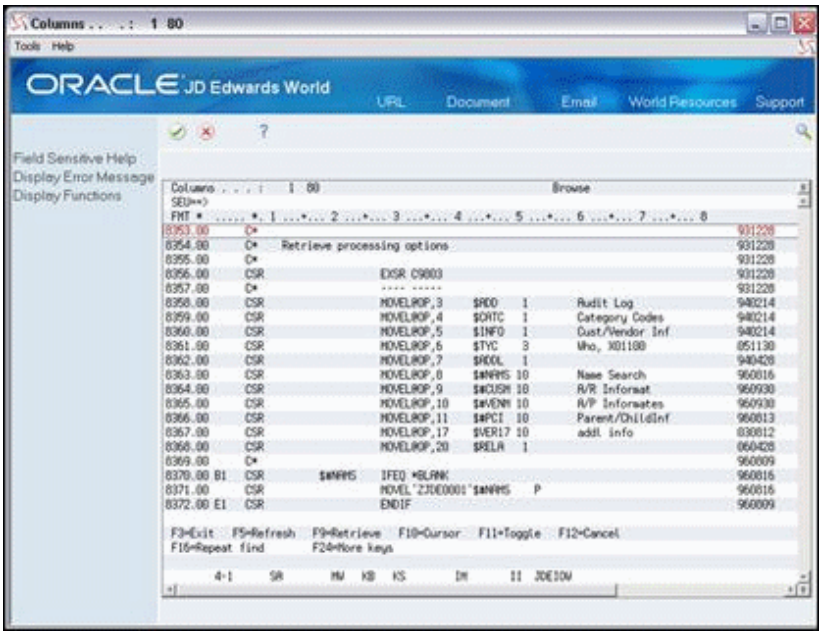
Figure 12–1 Search Results for String C9803 screen



This code copies the E Specs that relate to the common subroutine. This code defines all necessary arrays and tables for the copy module C9803. Typically, you add copy statements such as this at the end of the E Specs.

The next section of code in this program that relates to processing options is as follows:

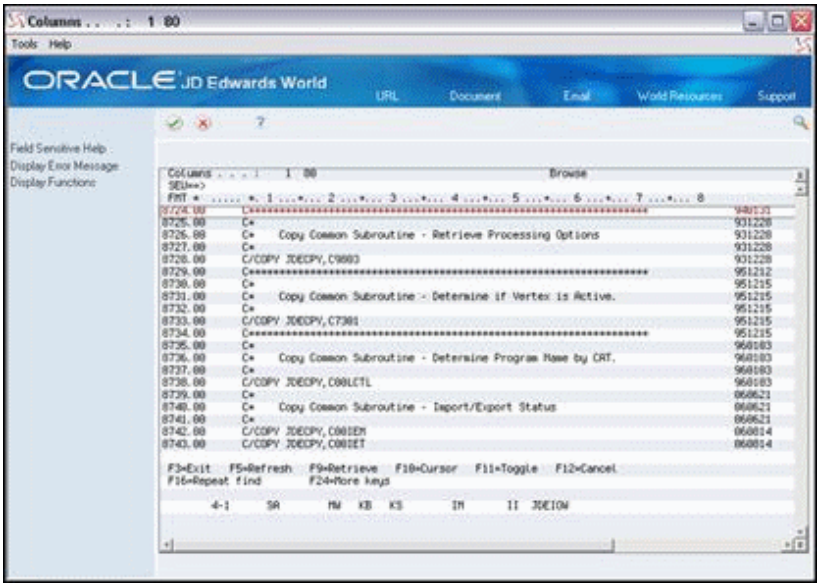
Figure 12–2 Search Results for String C9803 (Next) screen



The system loads the @OP array for the processing options. @OP1 contains the first of 99 processing option values, which is the value the user enters in the processing option you assign to position 1. The system then moves it into another program field to use.

The next section of code that relates to processing options is as follows:

Figure 12–3 Search Results for String C9803 (@OP1) screen



This code copies the C Specs for C9803. This copy module contains code for the actual subroutine C9803. The code accesses a program that retrieves the processing option values for the DREAM Writer version you execute.

12.3 Example - Report Program Using Processing Options

The program generator builds segments of code that the system requires to processing the processing options. The code that relates to report processing options exists in two locations. The locations are where the program generator copies the:

- Extension Specifications that relate to the common subroutine for retrieving processing options.
- Calculation Specifications that relate to the common subroutine for retrieving processing options.

12.4 Defining Processing Options

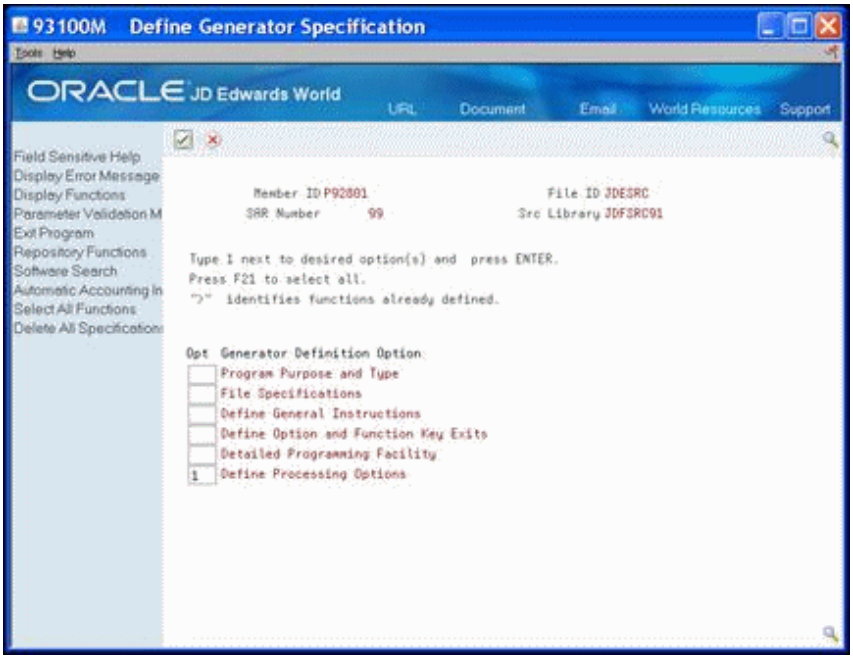
This section includes the following tasks:

- To enter processing options
- To view code for the processing options

To enter processing options

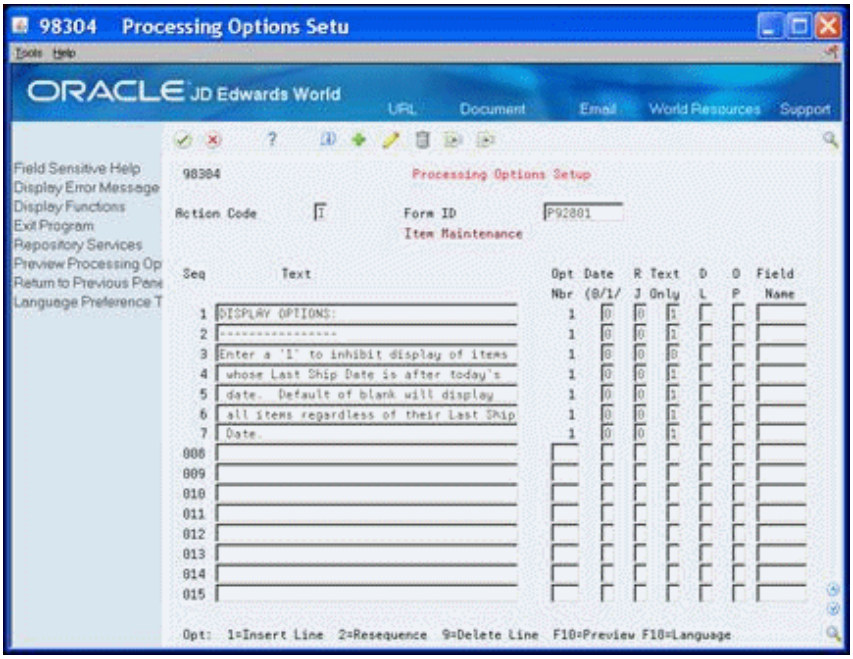
1. On Define Generator Specifications, enter 1 in the Option field to access Define Processing Options:

Figure 12–4 Define Generator Specification (Processing Options) screen



2. Complete the following fields on Processing Options Setup:
   - Sequence
   - Text
   - Option Number
   - Date (0/1/
   - RJ (Right Justify)
   - Text Only
   - DL (Display Level)
   - Field Name

Figure 12–5 Processing Options Setup screen



Field	Explanation
Seq	Specifies how the processing option text lines should be ordered on the screen. Not input capable.
Text	The descriptive text for the processing option.
Opt Nbr	The Processing Option Number field specifies for DREAM Writer processing options the array index position for each processing option. This number should never change once assigned. The sequence number of processing options may be changed to allow for better presentation on the Processing Options Entry program but the processing option number should never be changed. This field is not input capable for existing lines of text. *Screen-specific information* You can change the sequence number of processing options to allow for better presentation on the Processing Options Entry program, however, you should never change the processing option number because the program includes code specific to the array position for the Processing Option value.
Date (0/1) (0/1/2)	The Date Field specifies whether or not the processing option refers to a date. Valid values are: 0 – Indicates that the information is not a date. 1 – Indicates that a date is to be stored in the processing option as a Gregorian date in month, day and year format. 2 – Indicates that a date is to be stored in the processing option as a Julian date in century, year and day format. 3 – Indicates the same as a "2" with the exception that the display AND entry format is "YYYY/MM/DD" (full four digit year). **NOTE:** All data entry for date information is entered in SYSTEM FORMAT with the exception of the "3".

Field	Explanation
R J (Right Justify)	Determines if the entry field is right-justified. Valid values are: 0 – Information is not right-justified 1 – Information to be entered is numeric and should be right-justified 2 – Information to be entered is to be right-justified and left-filled with blanks
Text Only	The Text Only field is used to specify whether the text line is text only or a processing option value entry line. This allows you to specify multiple lines of text to document each processing option. The values for this field are 1 – for text only 0 – for a value entry line. Each separate processing option can have only one input value, or "0" value.
D L (Display Level)	This field controls which processing options are displayed to a user based upon the user's Level of Display (LOD) value in the JD Edwards World User Information file. If the User's LOD is equal or greater, PO is displayed.
Field Name	The internal field name assigned to each option and function key. Correlation exists between this field and the Function Key Definitions repository. Maintained in the soft coding server data structure (I00SC). ■ This is a required field ■ Use #S01 - #S15 for options ■ Use #F01 - #F15 for function keys *Program-specific information* The data dictionary item name. Examples include F#MMCO or F#CO for company; F#MMCU or F#MCU for business unit; and F#RP01-30 for business unit category codes 01 through 30. Special characters are not allowed as part of the data item name, with the exception of #, @, $. If you want to create protected data names without JD Edwards World' interference, use $xxx and @xxx, with xxx being user-defined. DREAM Writer NOTE: Within the Processing Options Setup screen, the field name is used during data entry to edit field size and other field attributes. Used to validate against the data dictionary. *Screen-specific information* Note: On the Processing Options Setup screen, the system uses the field name during data entry to edit field size and other field attributes for DREAM Writer.

To view code for the processing options

1. On Software Versions Repository, locate the program for which you are adding processing options.
2. Enter 1 in the Option field next to the line in the subfile for the program.

   The code for the program displays on the Browse screen.

3. Scan for the following instances within the code:
   - Where you instruct the compiler to retrieve the requisite source for the Extension Specification that relate to the C9803 subroutines.
   - Where you interpret and act upon the values in the processing options.
   - Where you instruct the compiler to copy the source for the calculation specifications that relate to the C9803 subroutine.

12.4.1 Function Exits

Repository Services (F6)

Choose Repository Services (F6) to access a screen with a list of JD Edwards World repositories.

Language Preference Text (F18)

Choose Language Preference Text (F18) to access a screen that you use to enter language specific processing options.

Part III

Program Design Language

This part contains these chapters:

13

Overview to Program Design Language

This chapter contains these topics:

13.1 Objectives

- To work with Data Item Formula Revisions
- To understand Program Design Language (PDL) statements and syntax
- To understand PDL editing, parsing, and source generation

13.2 About PDL

Use PDL to create specifications within the Detailed Programming Facility that causes specialized source code to generate. Use PDL for calculations or comparisons. When the program generates, the program generator converts the code into RPG source code.

Enter PDL code prior to the standard code that the program generator creates. If you want the PDL code to follow the standard code for a field, enter the PDL code on the field immediately following the field with which it is associated. The program generator creates all source code for fields in alphabetical order.

CASE stores PDL in the User Defined Procedures file (F93109) with one record per formula. The User Defined Procedures Detail file (F93110) divides the F93109 file into statements. The F93110 file contains multiple records for each formula.

PDL checks variable definitions as follows:

- Checks the variable to see if it is a keyword
- Checks for the variable in the RPG program
  - If not in the program, checks to see if it exists in the Data Dictionary Repository
  - If not in the Data Dictionary Repository, the user must define the variable

The PDL uses:

- Data Item Formula Revisions screen
- PDL Statements
- Blocks of Statements

- Comments
- Assignments
- Database Operations
- Calls
- Loops
- Conditions
- Miscellaneous Keywords and Syntax

Perform the following tasks:

- Work with Data Item Formula Revisions
- Understand PDL Statements and Syntax
- Understand Additional PDL Operations

14

About PDL Statements and Syntax

This chapter contains these topics:

A Data Item Formula consists of Program Design Language (PDL) statements. PDL statements form the following types of operations.

- Blocks of statements
- Comments
- Assignments
- Database operations
- Program calls
- Loops
- Conditions
- Miscellaneous keywords and syntax

You must use specific syntax when you work with PDL statements.

14.1 About PDL Statements

A PDL statement combines one or more of the following elements:

- Keywords
- Variables
- Database Files
- Operators

- Constants
- Punctuation

14.1.1 Keywords

Keywords are the vocabulary of PDL. They identify the type of operation the statement performs.

14.1.2 Variables

The following are valid variable names in PDL statements:

- Database field names

Examples: ABAN8, MCDL01

- Screen and report field names

Examples: VDDOCO, SFTRDJ, VC0001, RR#CLS

- Data Dictionary

You can use Data Dictionary fields in PDL. The system uses the data type and size as they are defined in the Data Dictionary.

- Indicators

You can use indicators by using the names IN01 to IN99. You can also use INLR. You can use both of these in PDL assignment statements to set on or off, and in conditional expressions to test for on or off.

Example:

in98 := '0'

If in98 = '0' Then

Note: In PDL, the system does not use * with indicators. That is, you specify indicator 01 as in01 and not *in01.

- Program Workfields

Any name that PDL recognizes as a variable, but is not a database field name, Data Dictionary field, screen or report field, or indicator, the system considers as a program work field. PDL will prompt you to define its data type.

Examples: $#am1, $#xtp, $po1

Be aware that if you did not yet generate the source code, PDL is not able to search the source code to find a definition.

14.1.3 Database Files

You must first define a database file name in the File Specifications before you can use it in one of the database I/O statements. PDL does not add file names to the specifications.

14.1.4 Operators

You define the valid assignment and arithmetic operators.

14.1.5 Constants

You specify alpha constants by enclosing them in single quotes. You specify numeric constants without quotes.

Examples:

vc0001 := 'Proof Mode';

$#am1 := 0;

PDL does NOT recognize the RPG constants such as *BLANK or *ZERO.

14.1.6 Punctuation

The basic PDL punctuation is a semi-colon (;), which you must use to separate PDL statements.

14.2 About Blocks of Statements

14.2.1 Keywords and Syntax

Keywords	Explanation
Begin	Initiates a block of statements. The syntax is: Begin
End	Terminates a block of statements initiated by the Begin statement. The syntax is: End

14.2.2 Rules

- You must enter all Data Item Formulas within a Begin...End block. A comment statement may precede the Begin statement. For example:

  \ Use system date as default. \

  Begin

  If vdtrdj = ' ' Then

  vdtrdj := $$edt;

  End

- You must separate all statements within a Begin...End block by a semicolon. For example:

  \ Load A/B name to vc0 field. \

  Begin

  aban8 := q3an8;

  chain f0101la;

  If in98 = '0' Then

  vc0003 := abalph;

  End

- You can nest Begin...End up to a maximum of 50 levels. For example:

```
\ Computer counter. \
Begin
If zaclst = '900' Then
   Begin
      rr#nin := ' 1';
      $#nin := 1;
End;
If zaclst < '900' Then
Begin
      rr#nin := ' 0';
      $#nin := 0;
End
End
```

14.3 About Comments

14.3.1 Keywords and Syntax

Syntax	Explanation
\ (backslash)	Initiates and terminates a comment. The syntax is: \ text \ You must enclose all comments within a pair of backslashes.

14.3.2 Rules

Comment lines must not exceed 50 characters.

For example: Initial Comment

```
\ Compute extended amount. \
Begin
$#xtp := q2xqt * q2uncs;
End
```

For example: Embedded Comment

```
Begin
$#am1 := 0; \ Order Total \
$#xtp := 0; \ Extended Amount \
End
```

14.4 About Assignments

14.4.1 Operator and Syntax

Operators	Explanation
:=	The assignment operator. The system assigns the first variable the value of the variable or expression following the operator. The syntax is: variable := expression;
+	Add
-	Subtract
*	Multiply
/	Divide
||	Concatenate
|>	Blank and Concatenate
|<	Truncate and Concatenate
SST	Substring The syntax is: variable := SST (field,n1,n2) n1 = start position n2 = length of string

14.4.2 Rules

You can use standard notation using parentheses for arithmetic operations.

For example:

in98 := '0';

vdremk := 'NOT DEFINED';

sftrdj := $$edt;

$#am1 := $#am1 + (qzqty * qzcst);

$#wrk := 100;

abalph := vd#fnm |> vd#lnm;

$cc := SST (qxxcc,3,10)

14.5 About Database Operations

14.5.1 Keywords and Syntax

Keywords	Explanation
Chain	Provides for random data base processing. The syntax is: CHAIN file;

Keywords	Explanation
Delete	Provides the ability to delete the current data base record. The syntax is: DELETE file;
Poseq	Provides for the positioning of a pointer to a specific data base record that is equal to or greater than the key value you specify. The syntax is: POSEQ file;
Posgt	Provides for the positioning of a pointer to a specific data base record that is greater than the key value that you specify. The syntax is: POSGT file;
Read	Provides for sequential data base processing by reading the next record in the file you designate. The syntax is: READ file;
Readc	Provides for processing of workstation files to obtain the next record change in a subfile. They syntax is: READC file;
Reade	Provides for sequential data base processing by reading the next record in the file with a key equal to the one you specify. The syntax is: READE file;
Readp	Provides for sequential data base processing by reading the record previous to the record read in the file you designate. They syntax is: READP file;
Update	Provides the ability to update the current data base record. The syntax is: UPDATE file;
Write	Provides the ability to add a new data base records. The syntax is: WRITE file;

14.5.2 Rules

You must first define the file in the program using the File Specifications before you enter it in the statement.

The Chain, Poseq, Posgt, and Reade statements use the default KLIST name that the system generates for the file you specify.

You should assign a value to each field of the KLIST prior to entering the statement.

Specify indicator 98 in the statements to signify that the system did not retrieve a record for the program.

Specify indicator 99 in the statements to signify that a database operation error took place.

```
\ Load A/B name to vc0 field. \
Begin
aban8 := q3an8;
chain f0101la;
If in98 = '0' Then
   vc0003 := abalph;
End
```

14.6 About Program Calls

14.6.1 Keywords and Syntax

Keywords	Explanation
Call	Allows you to execute another program. The syntax is: CALL variable;
Parm	Allows you to deliver parameters to a program that the program call statement executes. The syntax is: PARM variable;

14.6.2 Rules

Neither the Call statement nor the Parm statement allows the use of constants.

Prior to the Call statement you must enter an assignment statement to load a variable with the name of the program to launch, and load one or more variables with the values of the parameters.

The Parm statements must immediately follow the Call statement.

For example:

```
Begin
##pid := 'P1540 ';
##vers := 'ZJDE001';
##doco := nrdoco;
Call ##pid;
Parm ##pid;
Parm ##vers;
Parm ##doco;
End
```

14.7 About Loops

14.7.1 Keywords and Syntax

Keywords	Syntax
Until	Provides for loop processing where the system evaluates a condition at the bottom of the loop. ■ Translates to DOU in the RPG code. The syntax is: UNTIL (condition) DO (Statement)

Keywords	Syntax
While	Provides for loop processing where the system evaluates a condition at the top of the loop. ■ Translates to DOW in the RPG code. The syntax is: WHILE (condition) DO (Statement)
Do	An integral part of the loop statement.

14.7.2 Rules

The Do keyword is an integral part of the loop statement.

The statement following Do can be a single statement, or a block of statements within a Begin...End block.

The action is simply two expressions that you separate.

For example:

```
Begin
While in98 = '0' Do
   Begin
$#xtp := q2xqt * q2uncs;
$#am1 := $#am1 + $#xtp;
reade f59422;
   End
End
```

14.8 About Conditions

14.8.1 Keywords and Syntax

Keywords	Explanation
If	Provides for conditional processing. ■ § The condition is two expressions that you separate by a relationship. ■ § The data types of the expressions have to match. For example, alpha to alpha, numeric to numeric.
Then	Specifies the starting point for all actions the system takes when the condition of the If statement is met.
Else	Enter these statements following the If and Then statements. The system executes these statements when the condition of the If statement is not met.

The Then keyword is an integral part of the If statement.

- The statement following the Then keyword can be a Begin/End block to allow for a block of statements when the condition is met.

- The Else statement can follow the statements you enter with If (condition) and Then (statement).
- The syntax is: IF (condition) THEN (statement) ELSE (statement)

14.8.2 Symbols

Symbols	Explanation
=	Equal
¼	Not Equal
>	Greater Than
<	Less Than
>=	Greater Than or Equal To
<=	Less Than or Equal To

14.8.3 Rules

You do not have to enter the semicolon (;) to end the statement following the Else, or the Then when there is no Else.

For example, a simple If...Then statement:

```
Begin
If sftrdj = ' ' Then
sftrdj := $$edt
End
```

For example, an If...Then...Else statement

```
Begin
If in98 = '0' Then
   vc0003 := abalph
Else
   vc0003 := 'NOT DEFINED'
End
```

If you nest Begin/End blocks between the Then and Else statements, you should use the semicolon after each individual statement but not following the End.

For example, an If...Then with a Begin...End statement

```
Begin
   If zaclst = '999' Then
      Begin
      rr#nin := '1';
      $#nim := 1;
End
End
```

For example, an If...Then...Else with Begin...End statement

```
Begin
If zaclst = '900' Then
   Begin
      rr#nin := '0';
      $#nin := 0;
   End;
Else
   If zaclst < '900' Then
      Begin
rr#nin := '<0';
$#nin := 1-;
      End;
Else
      Begin
rr#nin := '>0';
$#nin := 1;
      End
End
```

14.9 About Miscellaneous Keywords and Syntax

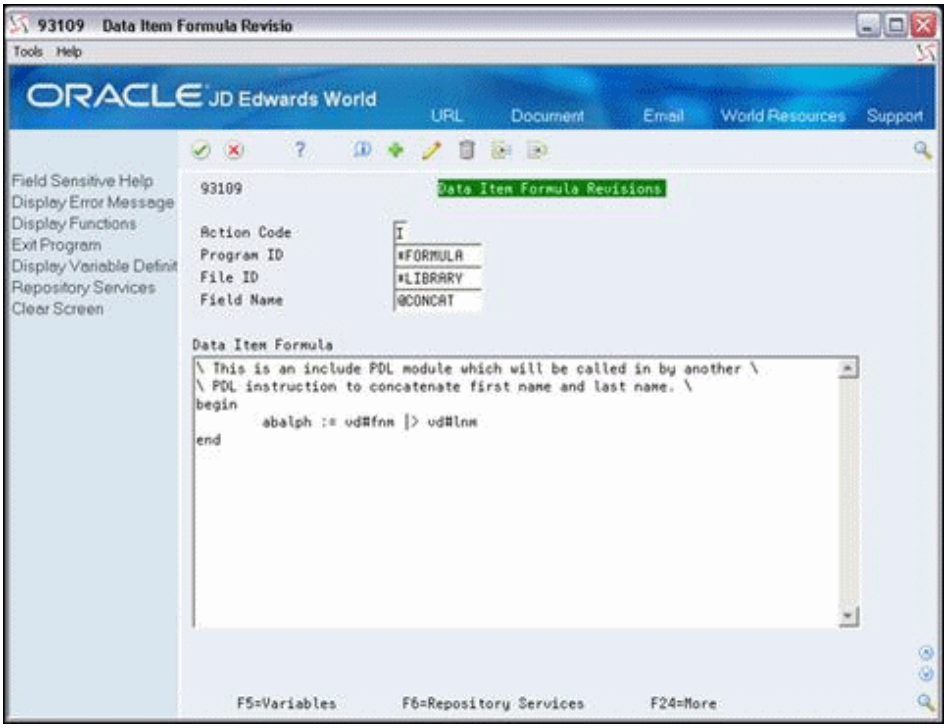
14.9.1 Keywords and Syntax

Keywords	Explanation
Include	Provides the ability to include other PDL modules in the User Calculation. The syntax is: INCLUDE (module name)
Return	Provides for user specification of the Source of Data alone or as the result of a series of procedures. The syntax is: RETURN variable;

14.9.2 Rules for Include

You can keep PDL modules in the form of a copy book by designating *FORMULA in the Program ID field and *LIBRARY in the File ID field on the Data Item Formula Revisions screen.

Figure 14–1 Data Item Formula Revisions screen



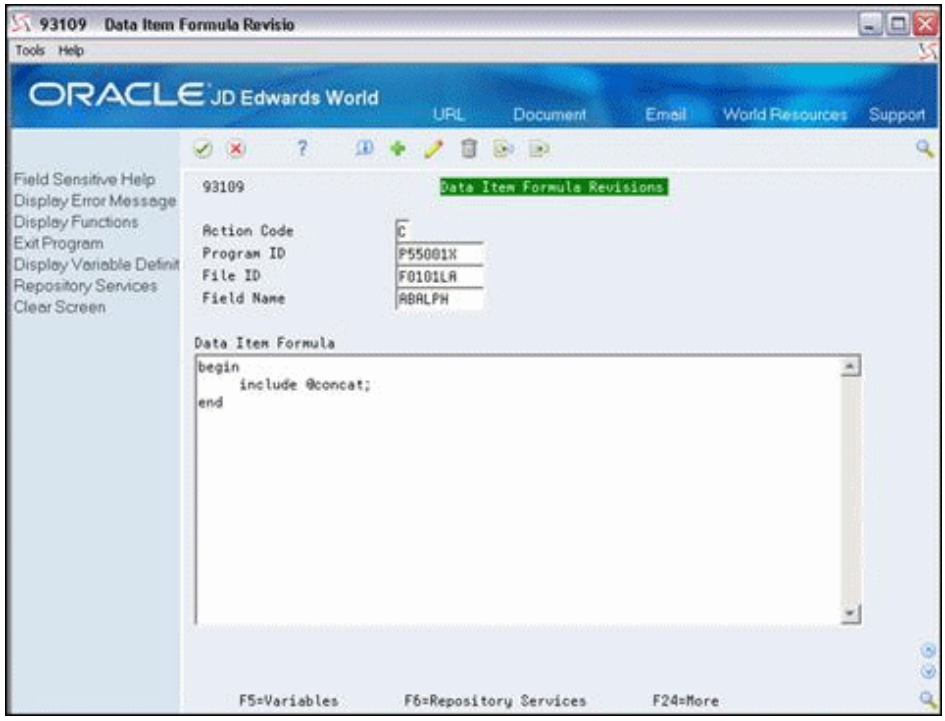
The include module should have a unique name, for example @CONCAT.

It is JD Edwards World naming convention to begin module names with the @ symbol.

The keyword include causes the Program Generator to automatically generate the appropriate code for the include module. This prevents the need to reenter user calculations that are necessary in numerous programs.

Following is an example of an include module and the include statement that calls the module.

Figure 14–2 Data Item Formula Revisions (Include Module) screen



14.9.3 Rules for Return

Specifying the Return keyword is the same as entering *PROC in the Read From field in the Detail Programming Facility.

The system omits all standard processing for this data field. In other words, by specifying the Return keyword, the system uses the code the PDL generates instead of any standard logic.

For example:

```
begin
$#b1 := 0;
$#b1 := q2xqt * q2uncs;
return $#b1
end
```

15

Understand Additional PDL Operations

This chapter contains these topics:

15.1 Editing

The Data Item Formula is one long continuous field. If there is an error, the entire field displays in reverse image, and the system places the cursor in the field following the error. You can display the error messages by choosing Display Error Message (F7).

15.2 Parsing

The system stores the Data Item Formula in the File Specifications database in two forms:

- The generator stores the unparsed form in the User Defined Procedures file (F93109), with one record for one formula.
- The generator stores the parsed form in the User Defined Procedures Detail file (F93110), with multiple records for each formula. Each record corresponds to an RPG operation code.

15.3 Source Code Generation

The generator merges the PDL code into the program based on the field you enter in the Detailed Programming Facility.

Read From	Write To	Affected
1) QXXIT	VDXIT	S004 (moves database fields to video fields)
2) VDXIT	QXXIT	S005 (moves video fields to data base fields

The generator places the PDL code before the standard code Program Generator code for the field in the Write To field. If you want the code the PDL generates to replace the standard code, then enter *PROC in the Read From field.

Note: Use caution when performing this as the system performs no editing or formatting of the field, except what you enter in the Data Item Formula.

If you want the code the PDL generates to come after the standard code the Program Generator generates for the field in the Write To field, then you must place the Data Item Formula on the field immediately following the Write To field in the Detailed Programming Facility.

The generator lists the fields in the Detailed Programming Facility in alphabetical order, and you cannot change the order.

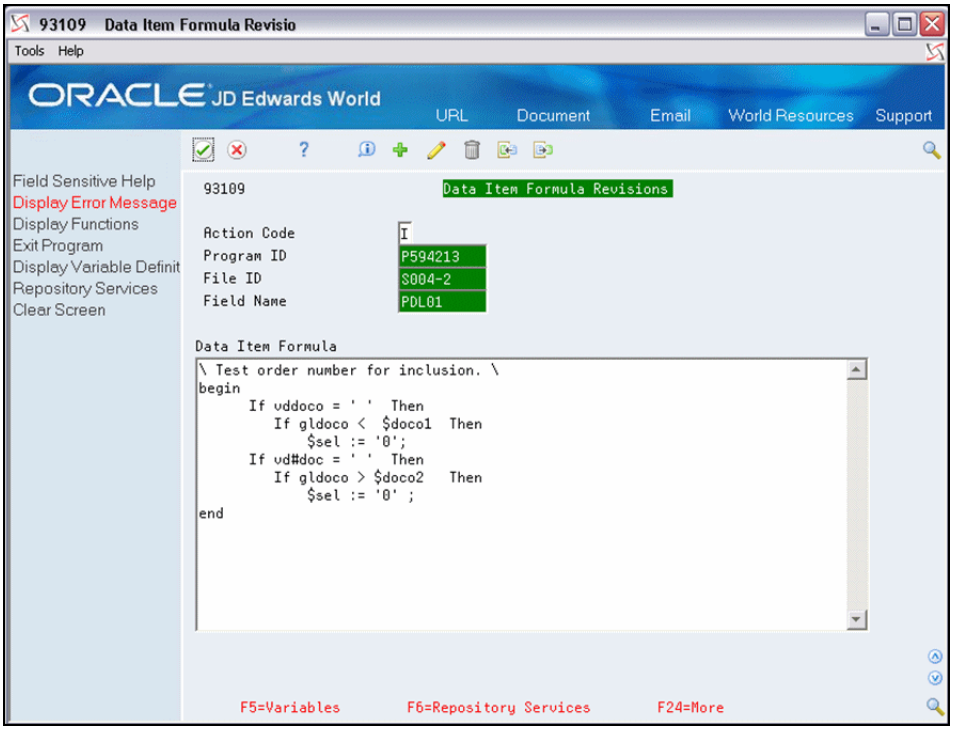
15.3.1 Data Item Formula Examples

Two examples illustrate the PDL statements and syntax. Both are from an inquiry program with a subfile.

15.3.1.1 Example User Defined PDL

The example illustrates a data item formula for a user defined PDL entry point in subroutine S004. The purpose of the formula is to determine if the database record meets the search criteria for order number ($SEL = 0 to omit). The program work fields $doco1 and $doco2 contain the lower and upper values for the inquiry search fields with a subfile.

Figure 15–1 Data Item Formula Revisions (User Defined PDL) screen



This example also illustrates the following types of PDL statements:

Type of PDL Statement	Description
Assignment	$sel := '0'
Blocks	begin...end
Comment	\ Test order number for inclusion. \
Condition	If q1doco < $doco1 Then $sel := '0';

Additionally, this example illustrates the nesting of conditions:

If vddoco = ' ' Then

If q1doco < $doco1 Then

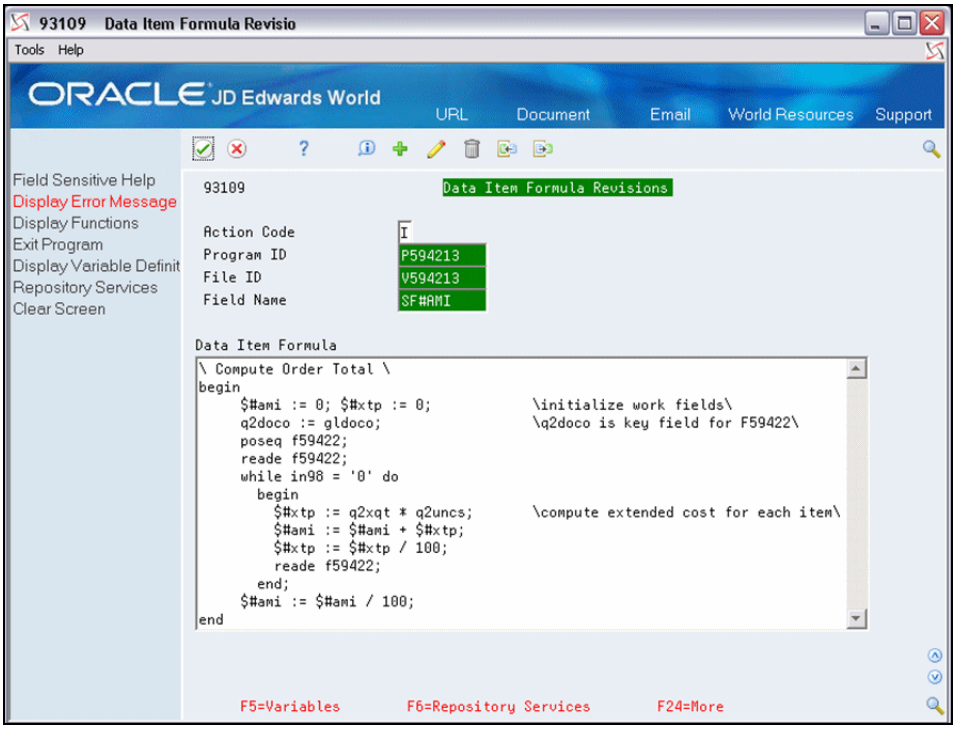
??$sel := '0';

The statement separator, the semicolon, is not necessary until the outermost If...Then statement is complete.

15.3.1.2 Example Subfile Field

This example illustrates a data item formula for a subfile field that is a computed field. The program is locating sales order header records. The computed field is the order total and is based on the sales order detail records in F59422.

Figure 15–2 Data Item Formula Revisions (Subfile Field) screen



This example illustrates the following types of PDL statements:

Type of PDL Statement	Description
Assignment	$#ami := 0; $#xtp := 0; q2doco := gldoco;

Type of PDL Statement	Description
Blocks	Notice the begin...end nested within the while...do
Comment	Notice the embedded comments as well as the heading comment
Database	poseq f59422; reade f59422;
Loops	while in98 = '0' do begin...end

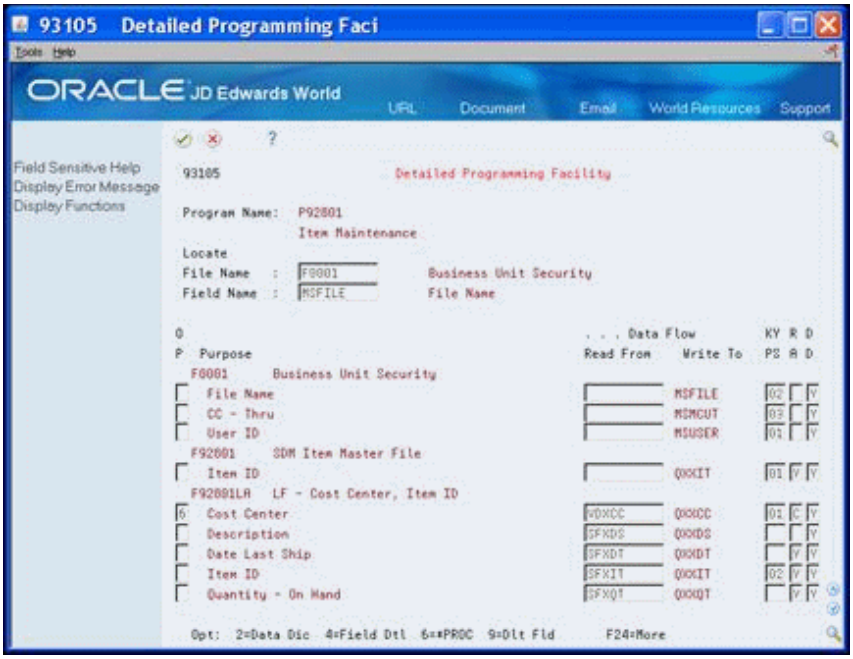
You can separate statement separators in the loop statements within the Begin...End block, and then follow the end statement with a separator.

15.4 Add PDL to a Field

To work with Data Item Formula Revisions

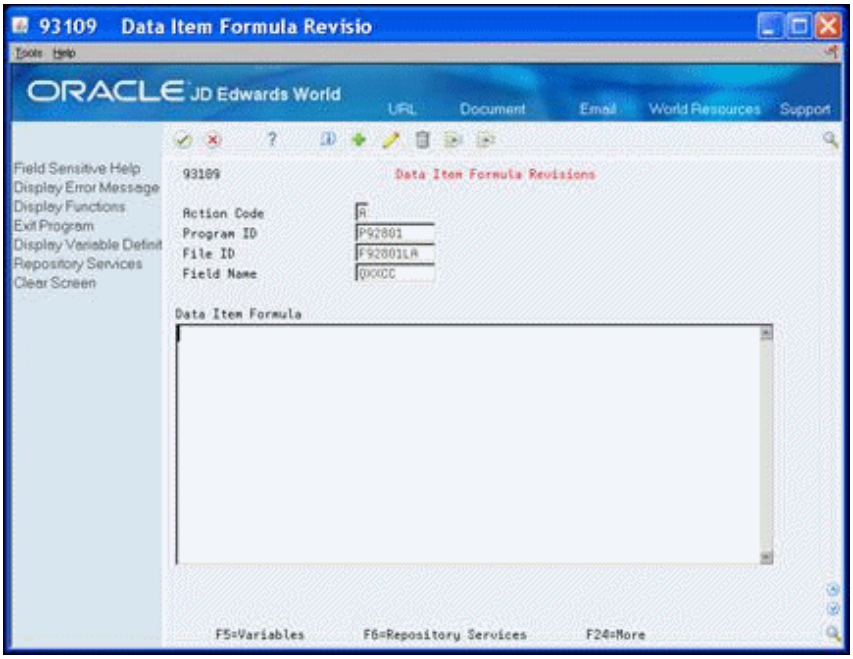
1. On Software Versions Repository, locate a program and then access Define General Specifications.
2. On Define General Specifications, enter 1 the Option field to access Detailed Programming Facility.
3. On Detailed Programming Facility, enter 6 in the Option field next to the field for which you want to add PDL.

Figure 15–3 Detailed Programming Facility (Revisions) screen



The Data Item Formula Revisions screen displays.

Figure 15–4 Data Item Formula Revisions (Add PDL) screen



4. Enter the PDL statements for the field in the Data Item Formula area.

Field	Descriptions
Program ID	The RPG program name defined in the Software Versions Repository Master table.
File ID	The member ID of the file used by the program.
Field Name	This specifies the field name as it is identified in the file.
Data Item Formula	A set of Program Design Language (PDL) statements, which are then translated into RPG code.

15.5 Function Exits

Display Variable Definitions (F5)

Choose Display Variable Definitions (F5) to access a screen with a list of variable definitions.

Repository Services (F6)

Choose Repository Services (F6) to access a screen with a list of JD Edwards World technical functions or repositories.

Part IV

Source Modifications

This part contains these chapters:

16

Overview to Source Modifications

This chapter contains these topics:

16.1 Objectives

- To change source code
- To regenerate source code
- To copy and customize Model Control Language (CL) Programs

16.2 About Source Modifications

After you generate source code, you can make modifications to it by using the Program Generator steps or using Source Entry Utility. When you make changes to your CASE specifications, you need to regenerate the source. CASE allows for continual improvement and modification to your original specifications.

Perform the following tasks

- Change generated source code
- Regenerate source code
- Work with model central language programs

17

Change Generated Source Code

This chapter contains the topic:

- Section 17.1, "Pre-SEU and Post-SEU Process."

After you generate code for a specific program, you can enter any necessary modifications to the code by using the Source Entry Utility (SEU). The program generator maintains a copy of all modifications in a separate file. When you make changes to the files for the program, or the detailed field definition parameters, you can regenerate the program source to reflect the changes and maintain your modifications.

The Program Generator indexes the modification lines based on the data the system maintains in column positions 81 through 113. After the program generates, it merges the modification lines in to the generated code according to their index values.

There are two different methods to change generated source code.

17.1 Pre-SEU and Post-SEU Process

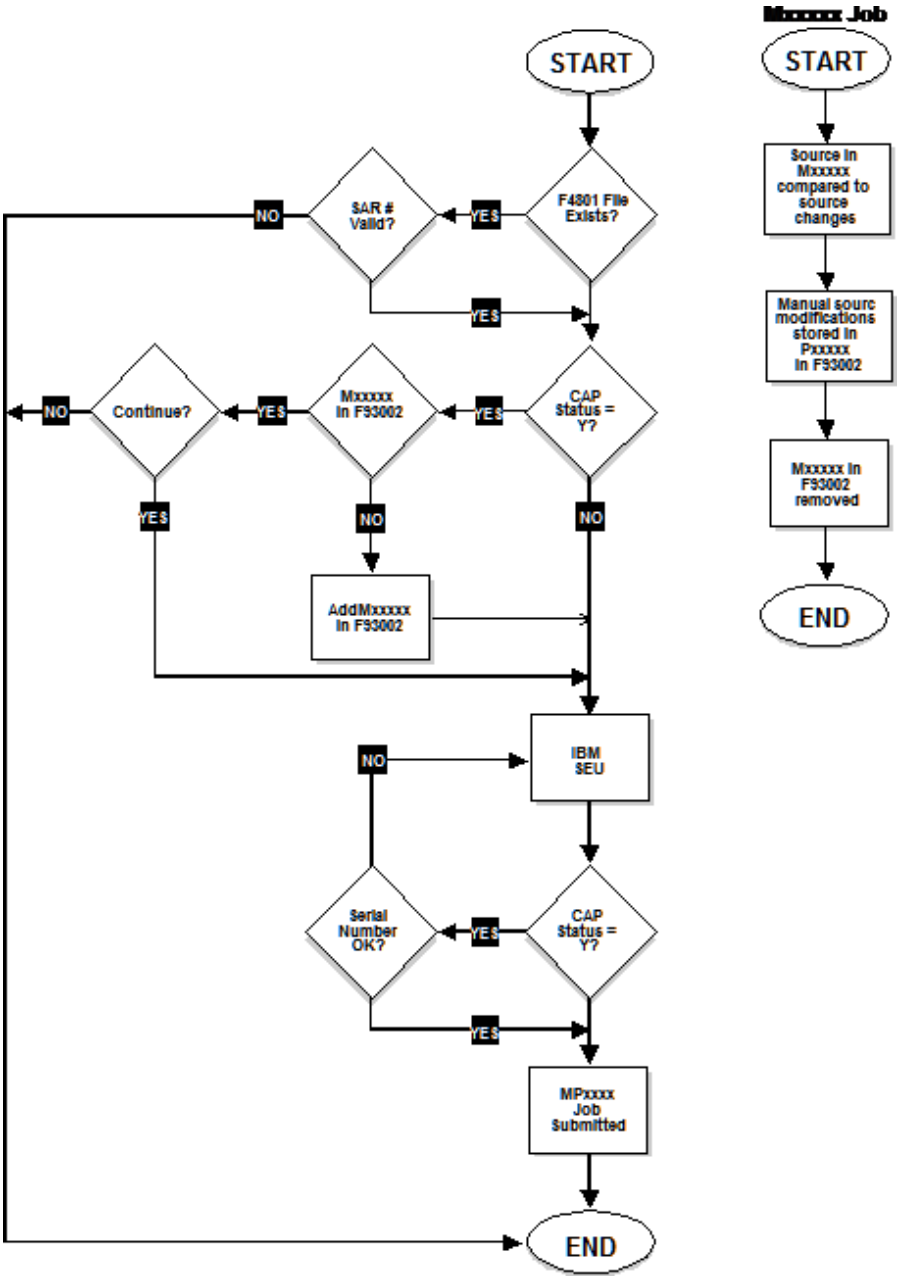
A front-end JD Edwards World program, MPxxxxx, monitors the changes on the SEU. The MPxxxxx job does not have to finish before you recompile. The system automatically merges the changes on the SEU when you generate the program, not when you compile. The system stores all changes on the SEU in the Pxxxxx member in the Additional Help/Modifications Master file (F93002).

For source code lines that you move or copy, you must clear the serial number from column 80 onward.

You can view all changes on the SEU by entering 30 in the Option field on the Software Versions Repository.

Columns 1 and 2 include a 21 for lines you add, 22 for changes, and 23 for lines you delete.

Figure 17–1 Pre-SEU and Post-SEU Processes



To change generated source code

From the Software Versions Repository, locate a program and perform one of the following:

1. Enter 2 in the following field to access the JD Edwards World SEU feature
   - Option
2. On SEU, make your changes.

   When you change your program using SEU, you do not have to regenerate the code. You only need to recompile the changes.

Alternatively, after you locate a program on Software Versions Repository you can:

1. Access Define General Specifications.
2. On Define General Specifications, enter 1 the following field to access Detailed Programming Facility.
   - Option
3. On Detailed Programming Facility, enter 6 in the following field next to the field for which you want to change PDL.
   - Option
4. On Data Item Formula Revisions, make your changes.

18

Regenerate Source Code

This chapter contains these topics:

When regenerating source code you should know:

- When to regenerate source code
- How to solve a generation error

18.1 When to Regenerate Source Code

You should regenerate a program whenever you modify a program specification. You should regenerate your programs when you:

- Change the program type
- Add or remove a file from the program file specifications
- Change the content of a file

  You must repeat the File Specifications step in this situation to enter the new information into the Detailed Programming Facility.
- Add or change a function exit or selection exit
- Change a data field definition parameter, for example:
  - Add, change, or delete a PDL
- Add, change, or delete the Full Data Field Parameters
- Add Processing Options to a program that previously did not have any, or delete all Processing Options
- Change the Lockout Action field values

When you add, change, or remove a file in the program or change the program type, you must access the File Specifications screen from the Define Generator Specification screen and click Enter to submit the Detailed Field Specifications interactive job.

You can view all changes on the SEU by entering 30 in the Option field on the Software Versions Repository.

Columns 1 and 2 include a 21 for lines you add, 22 for changes, and 23 for lines you delete.

18.2 Changing CAP Status

If you change the CAP Status field, the system deletes the changes in the Source Entry Utility that it stores in the P member of the Additional Help/Modifications Master file (F93002). JD Edwards World recommends that you do not change the CAP Status field unless the changes you make to your program become unmanageable. When the CAP Status field is set to Y, you can regenerate your program from one JD Edwards World release to the next.

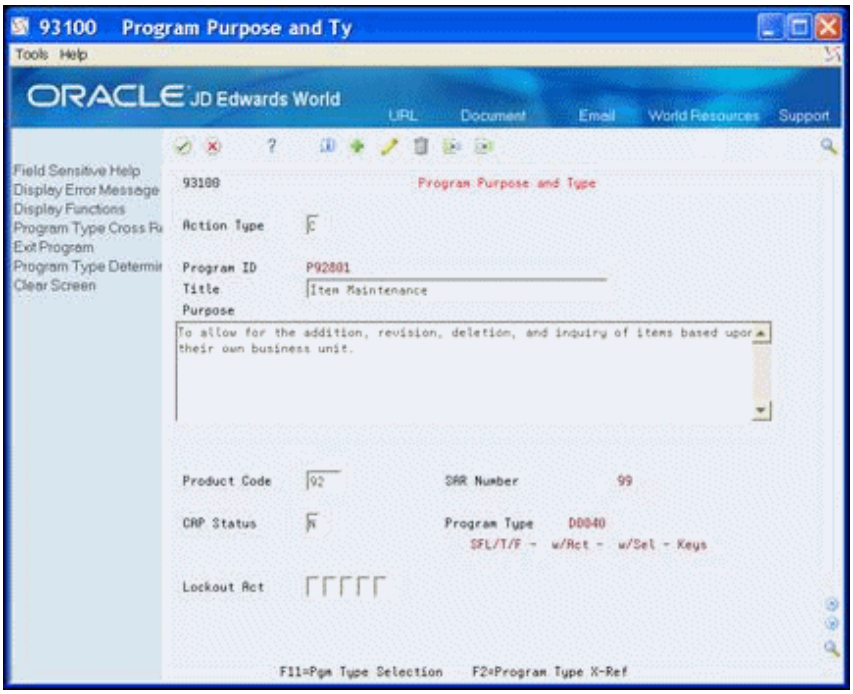
Change the CAP Status to N when either of the following occurs:

- You test the program and are ready to move it into production.
- You must make large manual changes that the program generator cannot generate for you. For example, adding special subroutines or complicated calculation logic.

To change CAP status

1. On Define Generator Specification, enter 1 in the following field next to Program Purpose and Type.
   - Option
2. On Program Purpose and Type, enter N in the following field.
   - CAP Status

Figure 18–1 Program Purpose and Type screen



The Delete KBG Modifications screen displays.

Figure 18–2 Delete KGB Modifications screen

3. To remove the modifications member, choose Delete (F6).

   The Define Generator Specification screen displays.

18.3 Resolving CAP Status Invalid Error

The Program Generator verifies that the job completes normally before each source generation. When the program generator does not complete normally or if you delete the specifications for a program, the system sends an error message to your workstation that states:CAP Status Invalid for program Pxxxx ... generation terminated.

If you receive a message in the job log indicating that the buffer length is longer than the record, or field AGSRCS is not found, verify that the JDESRC file in your source library exists and has a length of 142 and 8 fields.

To resolve the CAP Status Invalid error, perform any of the following:

Possible Resolution	Description
Ensure the CAP status is set to Y on the Program Purpose and Type screen.	Any job that prevents the MPxxxxx job from completing normally will change the CAP Status to N. ■ Allow the MPxxxxx job to complete. ■ Do not cancel it in the job queue. If you change the CAP Status field to N, the system deletes the changes in the Source Entry Utility that it stores in the P member of the Additional Help/Modifications Master file (F93002). If the File Specifications ends abnormally, the system changes the value in the CAP Status field to D. Change the value in the CAP Status field to Y and process the file specifications.

Possible Resolution	Description
Ensure the Pxxxxx member exists in the Additional Help/Modifications Master file (F93002).	The Pxxxxx member must exist in order to generate a program. The system initially creates the Pxxxxx member during the Program Purpose and Type definition step.
Ensure the Mxxxxx member does not exist in F93002.	The Mxxxxx member must not exist in order to generate a program. Use the RMVM command to remove this member.
Ensure that one step of the generation process completes before you start the batch job of another step.	NA

19

Work with Model Control Language Programs

This chapter contains these topics:

Control language (CL) is the primary interface between the system programmer and the AS/400 operating system. A command is a single control language statement. A series of commands can serve as source statements you can use to create a CL program. You compile the commands into a program the system calls whenever it needs the functions the program provides.

JD Edwards World provides you with a series of model CL programs that you can copy and change to call the CASE programs that you develop. You must use a CL program to add an RPG program as an option on a JD Edwards World menu.

You use the Source Entry Utility (SEU) to change the source code for your CL programs. When adding a new CL program using SEU, you can copy the JD Edwards World model CLs and tailor their specifications to fit your needs.

Note: You can view only the source code if the source code resides on your machine.

19.1 Working with CL Models

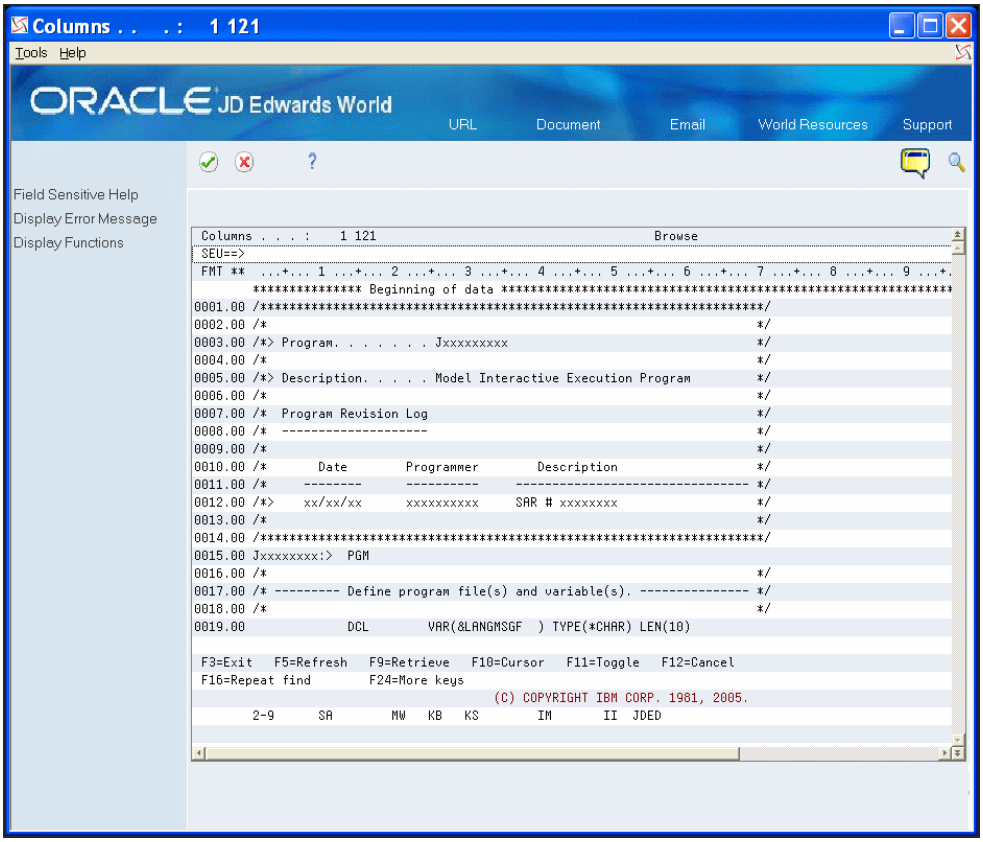
To copy a model CL

1. On Software Versions Repository, locate a model.
2. Enter 3 in the Option field next to the program.
3. Click Enter in the Copy Source Prompt window.
4. On Software Versions Repository, enter 2 in the Option field next to the program.

   The source code displays.
5. On the Source Entry Utility, enter the new program name.

   The following illustrates the source code for J98MODEL1 using the program Help. You can also view the code using the Software Versions Repository.

Figure 19–1 Source Code for J98MODEL1 screen



To customize a CL model

1. On the Source Entry Utility, locate the lines that contain lower-case xx and make changes.

   The lines in the model that require changing contain lower-case xx. This design allows you to easily scan the code for the xx and enter your changes.

2. Exit and save the CL program.

3. Compile the program.

19.2 JD Edwards World Model CL Programs

JD Edwards World includes a series of model CL programs that you can copy and customize to meet your programming needs. The following table describes each model CL program.

Model CL Programs	Description
J98MODEL1	Serves as a template for all interactive programs that do not retrieve processing options in the CL code.
J98MODEL2	Serves as a template for batch programs that need the DREAM Writer but have no printer file.
J98MODEL3	Serves as a template for interactive programs that need a prompt for parameters.

Model CL Programs	Description
J98MODEL4	Serves as a template for either batch or interactive programs that require the retrieval of processing options in the CL code, but do not require DREAM Writer selection or sequencing.
J98MODEL5	Serves as a template for batch CL programs that call report programs with fixed selection and sequencing while still passing all printer file overrides, processing options, and page-heading functions to the RPG report program.
J98MODEL6	Serves as a template for batch CL programs that require all DREAM Writer functions and call multiple print programs over the same OPNQRYF access path.
J98MODEL7	Serves as a template for batch CL programs that require all DREAM Writer functions and call multiple print programs over the same OPNQRYF access path.
J98MODEL8	Serves as a template for batch programs that have a control file.

You can create certain model CL programs using the Quick Start CL Generator. See Chapter 25, "Work with Quick Start CL Generator" for more information.

Part V

CASE Programs

This part contains these chapters:

20

Overview to CASE Programs

This chapter contains these topics:

20.1 Objectives

- To create CASE programs

20.2 About CASE Programs

Perform the following tasks:

- Create Subfile Inquiry Programs
- Create Subfile Maintenance Programs
- Create Report Programs

Note: The Report Design Aid is currently not available in the Java platform for JD Edwards World software. You must create reports using the green screen platform of the software.

21

Overview to Subfile Inquiry Programs

This chapter contains these topics:

You can create subfile inquiry programs that allow a user to process data and run programs using an inquiry screen that you create. A subfile inquiry screen presents a subfile with information, allowing a user to view several records at one time.

The use and values you enter to create a typical Interactive subfile inquiry program follow.

21.1 Program Type Description

Use the Program Type Description to create an interactive subfile program that is for inquiry purposes only. This program type processes a single master file by key. You do not use Lockout Action Codes fields. Create a display file prior to generating this program type.

21.2 Display File Definition

The Display File Definition program type validates and changes, where necessary, the data a user enters (scrubs) the key fields in the control format of the display file prior to processing the master file. You denote the key fields by enter K in the Edited Field in the Field Definition screen of Screen Design Aid (SDA). If you are using the Data Base Field Selection feature in SDA, the system updates the key fields.

You do not need to define the Action Code, it is an optional field. Define a default cursor location if there is no action code.

21.3 CL Program Definition

Using the CL Program Definition, you can copy and revise the J98MODEL1 model CL Program and create a CL program for use with program type A0010. You can also use the Quick Start CL Generator to create your CL programs.

21.4 File Specifications

The File Specifications program type requires that you define a single master file and a display file. The master file contains a value of M or 1 in the Input column. The display file begins with V and the selection columns are blank. You can add files to retrieve descriptions, if necessary.

21.5 Detailed Programming Facility

The Detailed Programming Facility allows you to use a key list for record retrieval from the master file. If you are not using the complete key list, update the Key Sequence field on the Detailed Programming Facility to include only those data items which are necessary. This key list should match your key field definition from the control format of the display file.

21.6 Special Considerations

Add special logic if you want to process the master file by using the key as a restrictive key. The default logic performs a SETLL, which positions the records from the file by using the key and then reading without a key until the subfile loads.

21.7 Quick Start Generation

You can generate this program type using Quick Start.

22

Overview to Subfile Maintenance Programs

This chapter contains these topics:

You can create subfile maintenance programs that allow a user to process data and run programs using an interactive screen you create.

The use and values you enter to create a typical Interactive Subfile Maintenance Program follow.

22.1 Program Type Description

Use the Program Type Description program type to create an interactive subfile maintenance program. Create a display file prior to generating this program type. This program type processes a single master file by key. User defined selection exits and function exits are optional.

22.2 Display File Definition

The Display File Definition program type validates and changes, where necessary, the data a user enters (scrubs) the key fields in the control format of the display file prior to processing the master file. You denote the key fields by enter K in the Edited Field in the Field Definition screen of Screen Design Aid (SDA). If you are using the Data Base Field Selection feature in SDA, the system updates the key fields.

You must define the Action Code and the Lockout Action Codes are optional.

This subfile maintenance program type includes special logic which permits the system to delete individual subfile records. This logic performs when you enter a C in the Action Code. The system compares the previous value with the current value and deletes the record if the current value is blank. The system stores the previous value in a hidden field at the subfile record level using the Display All Defined Fields in SDA.

22.3 CL Program Definition

Using the CL Program Definition, you can copy and revise the J98MODEL1 model CL program to create a CL program for use with program type D0040. Use the Quick Start CL Generator to create your CL program.

22.4 File Specifications

The File Specifications program type requires that you define a single master file and a display file. The master file contains a value of M or 1 in the Update column. The display file begins with V and the selection columns are blank. Add files to retrieve descriptions, if necessary.

22.5 Detailed Programming Facility

You use the Detailed Programming Facility to access the Full Data Field Parameters screen, which contains details for the subfile field controlling the database update. By entering N in the Update the Entry Optional Y/N field, this informs the generator that the user must enter a value in this field before the system updates the database.

22.6 Special Considerations

The Special Considerations program type uses the key information in the display file for chaining to the master file. This type must also have a hidden field and an optional entry field.

22.7 Quick Start Generation

You can generate this program type using Quick Start.

23

Create Report Programs

This chapter contains these topics:

When using Report Design Aid (RDA) in conjunction with the JD Edwards World CASE tools, you can have the program generator assist you with totals and subheadings.

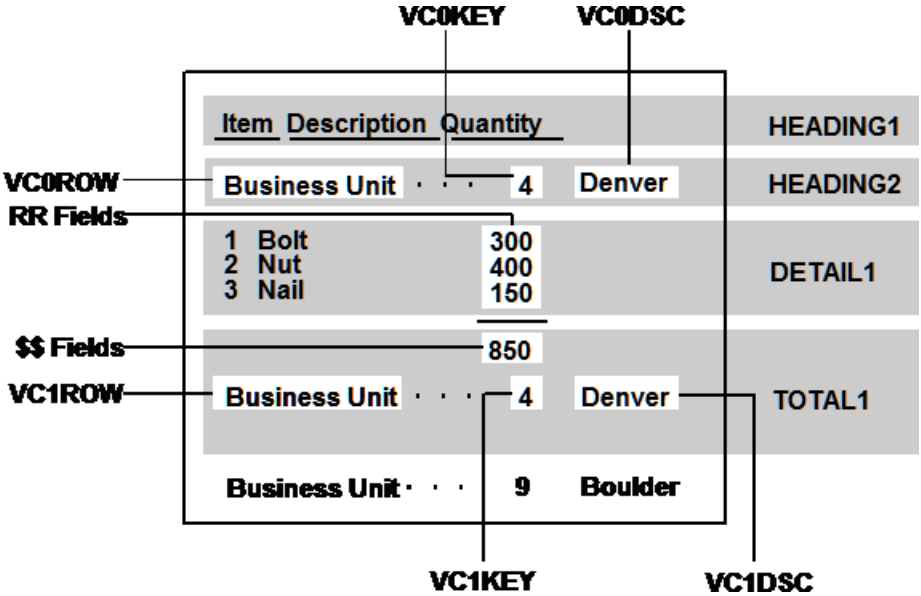
You should be familiar with the definition and use of report totals and subheadings when using the CASE tools. You should also be aware of some DREAM Writer considerations. See Work with DREAM Writer in the in the *JD Edwards World Technical Foundation Guide* for more information.

Note: The Report Design Aid is currently not available in the Java platform for JD Edwards World software. You must create reports using the green screen platform of the software.

23.1 Understanding RDA Special Use Fields

The system uses certain fields in RDA when generating reports that contain dynamic (hierarchical) totaling and subheadings. The following figure and tables illustrate how the system uses these fields within a report.

Figure 23–1 RDA Special Use Fields



The system uses the following fields in the TOTAL1 format:

Field	Explanation
VC1ROW	Prints the data dictionary row description of the level break field. Default length is 30.
VC1KEY	Prints the value of the level break field. Default length is 12.
VC1DSC	Prints the description of the value of the break field. Default length is 30. Only works with the following fields: ■ User defined codes ■ Company Number ■ Address Book Number ■ Business Unit

The system uses the following fields in only the HEADING2 format and therefore it uses them in only a C0020 or C0025 program type - Report w/Subheadings.

When you use subheadings, the system automatically underlines them.

Field	Explanation
VC0ROW	Prints the data dictionary row description of the level break field. Default length is 30.
VC0KEY	Prints the value of the level break field. Default length is 12.
VC0DSC	Prints the description of the value of the break field. Default length is 30. Only works with the following fields: ■ User defined codes ■ Company Number ■ Address Book Number ■ Business Unit

In programs you generate using CASE; the level breaks are soft coded. The DREAM Writer setup determines this.

23.2 Creating a Total Format

When you define a total format, you can define the area of the report where the description of the level break occurs. You can display up to three pieces of information for each total level break:

- The field description of the level break
- The value of the field at the level break
- The description of that value

For example, if you choose to total your report at the business unit level, the report might read:

Business Unit 5 San Francisco

To create a total format

1. On Software Versions Repository, locate the report for which you want to add a total format.
2. On Software Versions Repository, enter 10 in the Option field to access the Report Design Aid.
3. On Report Design Aid, choose Record Formats List (F10).

Figure 23–2 Record Formats List report

```
92520                                Record Formats List
Report: R928400
                                                Start
                                   Fast Path    / End     Related      # Fields   Fld
Opt   Format Name    Type            File       Lines     Record       Selected   Pfx

 _    HEADING1       REPORT                     001 008                   000      RR
 1    DETAIL1        REPORT      F92801         009 009                   000      RR
 _    TOTAL1         REPORT                     010 011                   000      $$
 _                                                                                 __
 _                                                                                 __
 _                                                                                 __
 _                                                                                 __
 _                                                                                 __
 _                                                                                 __
 _                                                                                 __
 _                                                                                 __
 _                                                                                 __
 _                                                                                 __
 _                                                                                 __
 _                                                                                 __
 _                                                                                 __

 Opt: 1=DB Field Selection  3=Field List  4=Delete  5=Format Keywords
```

4. On the Record Formats List screen, complete the following fields to enter the TOTAL1 format:
   - Format Name
   - Type
   - Start/End Lines
   - Fld Pfx (Field Prefix)
5. Press enter to return to Report Design Aid.
6. On Report Design Aid, enter an asterisk (*) in the column and row position to begin the total description.

The Field Definition screen displays.

Figure 23–3 Field Definition screen

```
 928400                                    0000000000000000000000000000000000000
                                                   Inventory by Cost Center
                                           0000000000000000000000000000000000000
                                           0000000000000000000000000000000000000

  Business          Cost Center             It          Item Type
  Unit            Description             T T        Description                u
------------ ------------------------------ -- ------------------------------ -
000000000000 0000000000000000000000000000000 00 0000000000000000000000000000000 0

*                                                   000000000000000000000000000

Report: R928400              Field Definition            Format: TOTAL1
  Dict Name    ____        Text
  Data Type    _           Field Name  VC1ROW                          Cond Ind
  Row/Column   11  55      Field Use   0           Highlight        _ ___ ___ ___
  Size         30  __      Text Form   _           Underline        _ ___ ___ ___
               Lines  Cond Ind                     Field Cond       _ ___ ___ ___
  Space Before ___  ___ ___ ___                    Char per Inch __ ___ ___ ___
  Space After  ___  ___ ___ ___                    Edit Code        _
  Skip Before  ___  ___ ___ ___                     Asterisk Fill _
  Skip After   ___  ___ ___ ___                     Float Symbol  _
   F3=Exit  F12=Prev Screen  F17=Dictionary
```

7. On Field Definition, enter VC1ROW in the Field Name field.
8. Click Enter twice.

   The description for the total field replaces the asterisk (*).

   In the sample report that follows, when you print the report, the field contains the descriptive text Business Unit.
9. On Report Design Aid, enter an asterisk (*) in the column and row position to display the key value.

   The Field Definition screen displays.
10. On Field Definition, enter VC1KEY in the Field Name field.

Figure 23–4 Field Definition (VC1KEY) screen

```
0000000000000000000000000000000000                          Page - . . . 6666
Inventory by Cost Center                                    Date - . . . 66666666
0000000000000000000000000000000000
0000000000000000000000000000000000

    Item Type                Item          Item          Ship     Quantity
 Description               umber r    Description       Date     On Hand    U U-
------------------------- -------- -------------------- -------- ------------ -0
0000000000000000000000000 00000000 0000000000000000000 00000000 000000000000 00
                                                                 ----------
 00000000000000000000000000* 000  00000000000000000000000000000000 000000000000

Report: R928400              Field Definition            Format: TOTAL1
  Dict Name    ____        Text
  Data Type    _           Field Name  VC1KEY                          Cond Ind
  Row/Column   11  52      Field Use   0           Highlight        _ ___ ___ ___
  Size         12  __      Text Form   _           Underline        _ ___ ___ ___
               Lines  Cond Ind                     Field Cond       _ ___ ___ ___
  Space Before ___  ___ ___ ___                    Char per Inch __ ___ ___ ___
  Space After  ___  ___ ___ ___                    Edit Code        _
  Skip Before  ___  ___ ___ ___                     Asterisk Fill _
  Skip After   ___  ___ ___ ___                     Float Symbol  _
   F3=Exit  F12=Prev Screen  F17=Dictionary
```

11. Click Enter.

The description for the key value replaces the asterisk (*).

In the sample report that follows, when you print the report, the field contains the value of 5.

12. On Report Design Aid, enter an asterisk (*) in the column and row position to begin the key value description.

The Field Definition screen displays.

13. On Field Definition, enter VC1DSC in the Field Name field:

Figure 23–5 Field Definition (VC1DSC) screen

```
0000000000000000000000000000000000                          Page - . . . 6666
Inventory by Cost Center                                    Date - . . . 66666666
0000000000000000000000000000000000
0000000000000000000000000000000000

    Item Type                Item          Item            Ship     Quantity
 Description               umber r    Description        Date     On Hand     U U-
------------------------- -------- -------------------- -------- ------------ -0
0000000000000000000000000 00000000 0000000000000000000 00000000 000000000000 00
                                                                 ----------
 00000000000000000000000000  000  00000000000000000000000000000000 000000000000*

Report: R928400                Field Definition                Format: TOTAL1
  Dict Name    ____          Text
  Data Type    A             Field Name  VC1DSC                          Cond Ind
  Row/Column   11  66        Field Use   _            Highlight       _ ___ ___ ___
  Size         30  __        Text Form   _            Underline       _ ___ ___ ___
               Lines  Cond Ind                        Field Cond      _ ___ ___ ___
  Space Before ___  ___ ___ ___                       Char per Inch __ ___ ___ ___
  Space After  ___  ___ ___ ___                       Edit Code       _
  Skip Before  ___  ___ ___ ___                        Asterisk Fill _
  Skip After   ___  ___ ___ ___                        Float Symbol  _
   F3=Exit  F12=Prev Screen  F17=Dictionary
```

14. Click Enter.

The description for the key value replaces the asterisk (*).

In the sample report that follows, when you print the report, the field contains the value San Francisco.

15. On Report Design Aid, add the field to be accumulated to the report.

The field that contains data for the Quantity on Hand column is RRXQTY. The system places the total amount of Quantity On Hand in field $$XQTY as part of the TOTAL1 format. The program generator creates the total amount field by adding a $$ prefix to the data item name.

The following illustrates the report.

Figure 23–6 Inventory by Business Unit Report

```
928400                                  J.D. Edwards & Company                          Page No. . .   2
                                  Inventory by Business Unit Report                       Date - . 12/02/17
  Bus                                    It                                Item                Ship      Quantity
 Unit          Description            Ty     Description                Number   Description     Date      On
                                                                                                                Hand  UM
          5 San Francisco Branch       N  Non-Refrigerated                2524 1 Inch Nail       06/01/17  100.00 BX
          5 San Francisco Branch       N  Non-Refrigerated                2532 2 Inch Nails      06/15/17  250.00 BX
          5 San Francisco Branch       N  Non-Refrigerated                2541 2 1/2 Inch Nails  05/31/17  75.00 BX
          5 San Francisco Branch       N  Non-Refrigerated                2559 3 Inch Nails      07/20/17   51.00 BX
                                                                                                            ------
                                     Business Unit                     5  San Francisco Branch                476.00
                                                                                                            ------
```

23.3 Defining a Subheading

You can define a subheading before you choose the type of detail you want in the report.

Subheading field descriptions are similar to those for totals. You can display up to three pieces of information at each subhead:

- The field description
- The value
- The description of the value of the level break fields

For example, if you choose to add a subheading to your report using business unit as the level break field, the report can read:

Business Unit 5 San Francisco

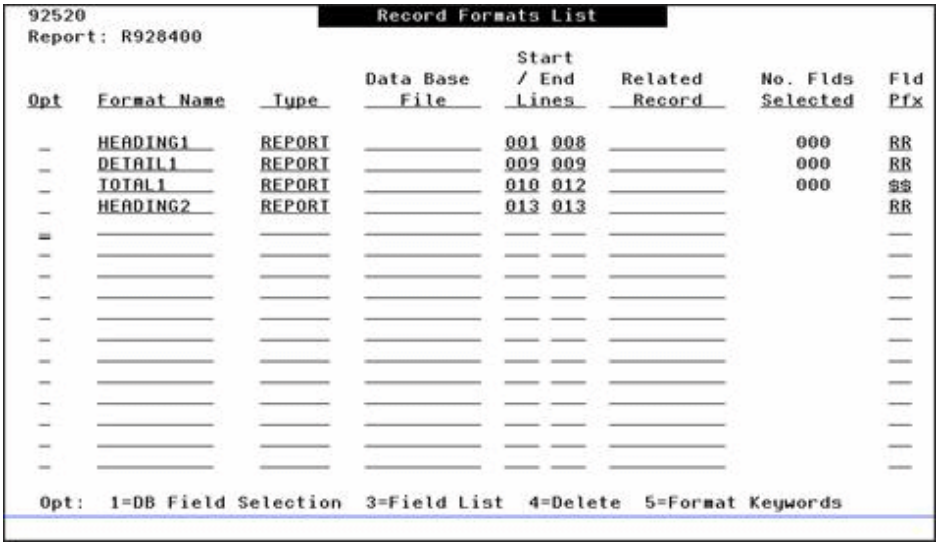
When adding the field description for the subhead, use field VC0ROW. When adding the value of the subhead, use field VC0KEY. When adding the description of the value of the subhead, use field VC0DSC.

Add these fields on the Field Definition screen in the same manner as the VC1 fields for the TOTAL1 format. On the design area, enter an asterisk (*) where the subheading field should begin. The Field Definition screen opens. Enter the field name and any other appropriate information.

To define a subheading

1. On Software Versions Repository, locate the report for which you want to define subheadings.
2. On Software Versions Repository, enter 10 in the Option field to access the Report Design Aid.
3. On Report Design Aid, choose Record Formats List (F10).
4. On the Record Formats List, enter HEADING2 on the first blank line in the Format Name field:

Figure 23–7 Record Formats List (Define a Subheading) report



92520 Record Formats List
Report: R928400

Opt	Format Name	Type	Data Base File	Start	End	Related Record	No. Flds Selected	Fld Pfx
_	HEADING1	REPORT		001	008		000	RR
_	DETAIL1	REPORT		009	009		000	RR
_	TOTAL1	REPORT		010	012		000	$$
_	HEADING2	REPORT		013	013			RR

Opt: 1=DB Field Selection 3=Field List 4=Delete 5=Format Keywords

5. Complete the following fields:

- Type
- Start/End Lines
- Fld Pfx (Field Prefix)

The system accommodates the placement of the fields on the report.

The following is an example of a report using a HEADING2 format. The system creates this report using a C0020 program type.

Figure 23–8 Inventory by Business Unit Report (HEADING2)

```
928400                                  J.D. Edwards & Company                                  Page No. . .    2
                                  Inventory by Business Unit Report                              Date - . . . 12/02/17
  Bus                                                  It                                Item                          Ship        Quantity
  Unit          Description                            Ty      Description               Number    Description       Date       On Hand   UM
          5 San Francisco Branch                         N  Non-Refrigerated                2524 1 Inch Nail        06/01/17     100.00  RK
          5 San Francisco Branch                         N  Non-Refrigerated                2532 2 Inch Nails       06/15/17     250.00  RK
          5 San Francisco Branch                         N  Non-Refrigerated                2541 2 1/2 Inch Nails   05/31/17      75.00  RK
          5 San Francisco Branch                         N  Non-Refrigerated                2559 3 Inch Nails       07/20/17      51.00  RK
                                                                                                                              -------
                                                       Business Unit                          5  San Francisco Branch          476.00
                                                                                                                              -------
                                                                                                                               476.00
```

Program type C0025 report prints the subheadings above the column titles as follows. You use the same steps to define this report as you use for the C0020 program type.

Figure 23–9 Inventory by Business Unit Report (Type C0025)

```
928400                                  J.D. Edwards & Company                                  Page No. . .    2
                                  Inventory by Business Unit Report                              Date - . . . 12/02/17
Business Unit  5    San Francisco Branch
  Bus                                                  It                                Item                          Ship        Quantity
  Unit          Description                            Ty      Description               Number    Description       Date       On Hand   UM
          5 San Francisco Branch                         N  Non-Refrigerated                2524 1 Inch Nail        06/01/17     100.00  RK
          5 San Francisco Branch                         N  Non-Refrigerated                2532 2 Inch Nails       06/15/17     250.00  RK
          5 San Francisco Branch                         N  Non-Refrigerated                2541 2 1/2 Inch Nails   05/31/17      75.00  RK
          5 San Francisco Branch                         N  Non-Refrigerated                2559 3 Inch Nails       07/20/17      51.00  RK
                                                                                                                              -------
                                                       Business Unit                          5 San Francisco Branch           476.00
                                                                                                                              -------
                                                                                                                               476.00
```

The report program adds the grand totals automatically because it utilizes the total format. When you use DREAM Writer and create a version, you define the fields to use as total levels. For further information regarding DREAM Writer, see Understand DREAM Writer in the *JD Edwards World Technical Foundation Guide*.

23.4 Understanding DREAM Writer Considerations

When compiling your report, use the PRTF command to print a cover page. PRTS does not print a cover page when the system finishes compiling the report.

When the program generator creates the report program, it includes a cover page. Using the DREAM Writer, you can choose to print the cover page.

The title fields the system included on the cover page are in the following example:

Figure 23–10 Cover Page With Title Fields in DREAM Writer

```
Program ID . . P928400                  The Organization's Name                                Report Date. . 12/02/17
Version. . . . 002                  Inventory by Business Unit Report                          Report Time. .  9:35:50
                                          San Francisco  Branch
                                    Additional Line of Text if Required
```

The VC0CO field is the name of the company. The TTL@ field is line 1 of the DREAM Writer version. TXT2 and TXT3 are lines 2 and 3 of the DREAM Writer version.

The field names for report headings are similar to those of the cover page. For report headings, the VC0CO field contains the name of the company. The DREAM Writer fields have an RR prefix. For example, RRTTL@ field contains line 1 of the DREAM Writer version ID description. The RRTXT2 and RRTXT3 are lines 2 and 3 of the DREAM Writer version description, respectively.

Figure 23–11 Report Headings Using Field Names in DREAM Writer

```
92R400                    J.D. Edwards & Company                    Page No. . .   2
                  Inventory by Business Unit Report                  Date - . . . 12/02/17
```

On the Additional Parameters screen in the DREAM Writer version, you must enter 2 in the Type Report Totaling field. This enables you to specify your total level fields on the Data Sequence screen.

Part VI

Additional Tools

This part contains these chapters:

24

Overview to Additional Tools

This chapter contains these topics:

24.1 Objectives

- To use the Quick Start CL Generator
- To use the Quick Start Application Tool
- To use Action Diagramming

24.2 About Additional Tools

You can quickly create programs, forms, and reports using:

- Quick Start CL Generator
- Quick Start Application Tool

Produce a diagram to illustrate the different groupings of logic and the interrelationships of code using the Action Diagramming feature.

Perform the following tasks:

- Work with Quick Start CL Generator
- Work with the Quick Start Application Tool
- Work with Action Diagramming

25

Work with Quick Start CL Generator

This chapter contains the topic:

- Section 25.1, "Working with Quick Start CL Generator."

25.1 Working with Quick Start CL Generator

The Quick Start CL Generator provides a quick and easy way for you to create a Control Language (CL) program for any of the following four types of programs.

- Standard interactive program
- Standard report program with DREAM Writer
- File processor
- File processor with DREAM Writer

Quick Start CL Generator does not add the new CL program to a menu. You must perform that task manually.

Perform the following tasks:

- To create a program using the Quick Start CL Generator
- To compile a CL program

Navigation

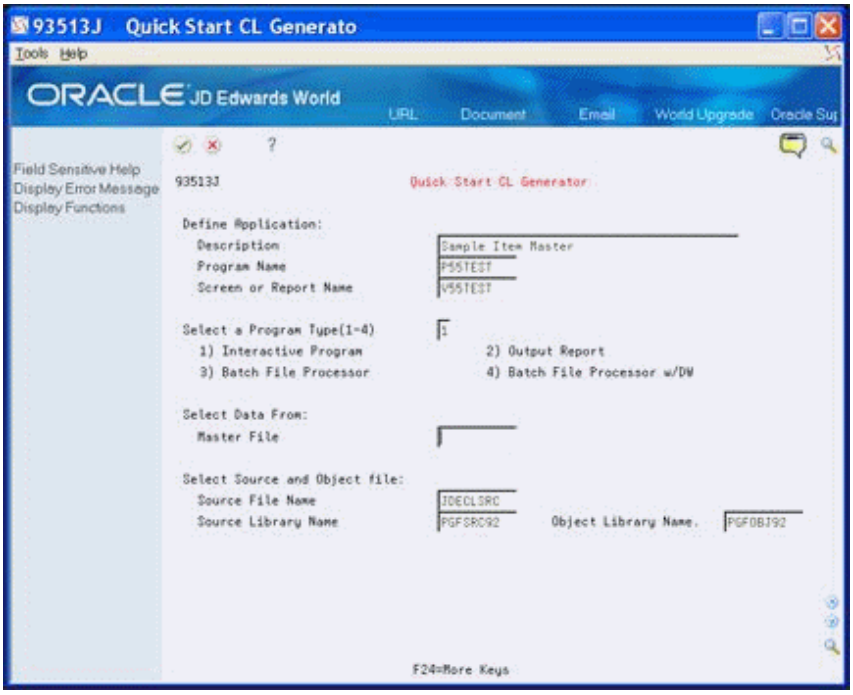
From Computer Assisted Programming (CAP) (G93), choose Quick Start CL Generator

To create a program using the Quick Start CL Generator

1. On Quick Start CL Generator, complete the following fields and click Enter:
   - Description
   - Program Name
   - Screen or Report Name
   - Select a Program Type(1-4)
   - Master File
   - Source File Name
   - Source Library Name
   - Object Library Name
2. Perform one of the following:

- Click Exit (F3) to return to the menu.
- Click Enter to compile the program.

Figure 25–1 Quick Start CL Generator screen

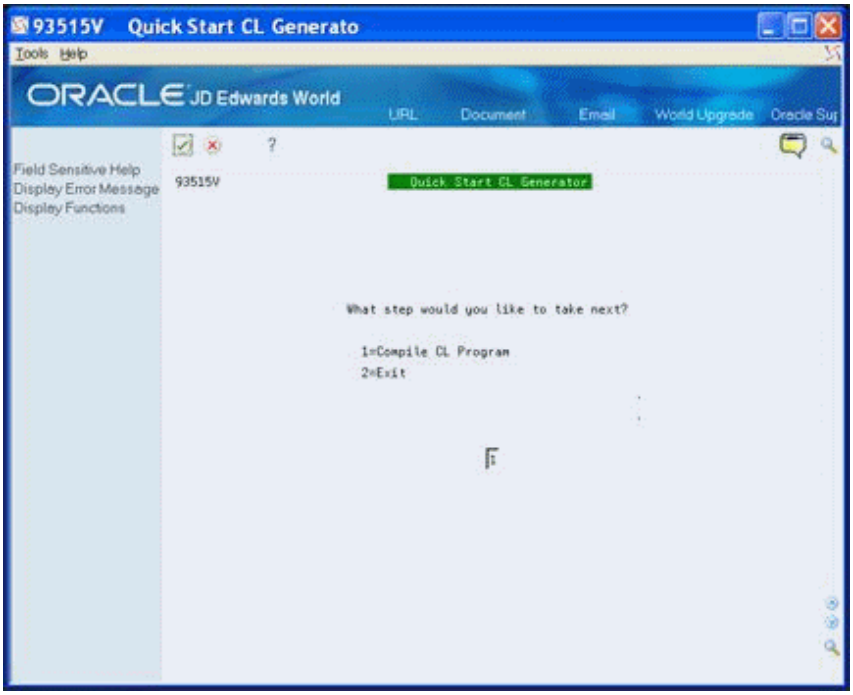


Field	Explanation
Description	Use this field to enter a short one-line description of the program you are creating.
Program Name	Type the name of the RPG program that the CL program will call. This is a required field. Do not leave it blank. The name of the CL program generated will be the same as the RPG program name, but prefaced with a J instead of a P.
Screen or Report Name	Type the screen or report file name associated with the program. This field is only required for program type 2.
Select a Program Type(1-4)	Type one of the following in this field to indicate the type of program you are creating: 1 – Standard Interactive Program 2 – Standard Report Program with DREAM Writer 3 – File Processor 4 – File Processor with DREAM Writer
Master File	Type the name of the data file to use for the program you are creating. This field is required for program types 2, 3, and 4.
Source File Name	The member ID of the file used by the program.
Source Library Name	File and library that contains the file source.
Object Library Name	Enter the name of the object library where the program you are creating will reside. This is defaulted from the CASE Profiles.

To compile a CL program

On Quick Start CL Generator, enter 1 to choose Compile CL Program.

Figure 25–2 Quick Start CL Generator (Compile) screen



26

Work with the Quick Start Application Tool

This chapter contains these topics:

The Quick Start Application Tool allows you to quickly create initial versions of programs, screens, and reports. After you create a new version, you can access the Screen or Report Design Aid or the Program Generator and make adjustments to the version.

The tool provides an easy way for you to create a prototype. This program allows you to:

- Create the program that you associate with the screen or report.
- Select fields dynamically from the master and detail files, as well as other database files.
- Compile your screen or report.
- Create specifications for the Program Generator.
- Create and compile your source code, optionally.
- Create a Control Language (CL) program to launch your new screen or report program.

The Quick Start Application Tool recognizes whether the program is a subfile. Additionally, this tool:

- Adds a hidden field to the screen for subfile maintenance.
- Sets the Entry Optional field to N for subfile maintenance.

Quick Start cannot:

- Define which VC0 fields to use as defaults in the version.
- Add the CL program to a menu.

- Add a Fold Area.

26.1 Quick Start Process

The Quick Start Application Tool is a set of steps that allow you to:

1. Define the Application
   - Define the type of program you want to create
   - Define the screen options
   - Define the report options
   - Define the files and libraries
   - Define the source file to use to create the application
2. Select Data Fields
   - Select the individual data fields to display on the screen or report using JD Edwards World Screen/Report Design Aid
   - Sequence the fields any way you choose.
3. Browse or update the screens or report you are creating (optional).
4. Compile screens or the report (optional).
5. Modify Specifications (optional).
   - Using the File Specifications, the Detailed Programming Facility, and the Help Instructions based on the program type you select.
   - Compile the program. Even if you compile the screen or report in a previous step, the system prompts you to do so again.
6. Compile the program (optional).
7. Update Data Dictionary and Glossary.

Note: As you create a version, you should continue through the steps and complete the entire process. The optional steps allow you to perform additional functions that relate to the process. If you exit the process and access the tool at a later time, the system enters all of the information on the Quick Start Application Tool screen from the previous version you created if you did not sign off the system.

Navigation

From Computer Assisted Programming (CAP) (G93), choose Quick Start Application Tool

26.2 Defining the Application

You create versions of programs, screens, and reports by defining the initial criteria.

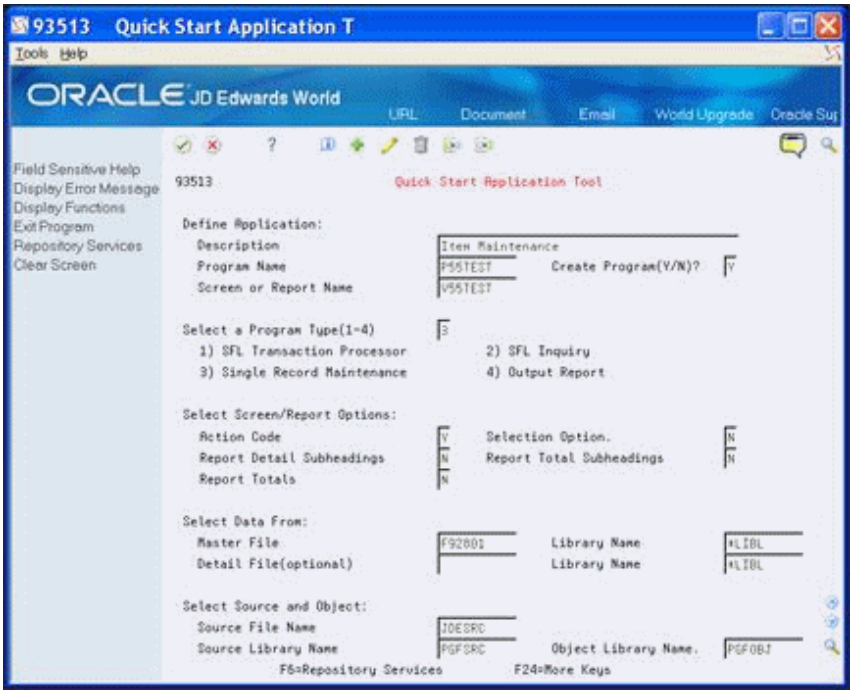
The system enters all of the information on this screen from the previous version you created if you did not sign off the system.

To define the application

On Quick Start Application Tool, complete the following fields:

- Description
- Program Name
- Create Program(Y/N)?
- Screen or Report Name
- Select a Program Type(1-4)
- Action Code
- Selection Option
- Report Detail Subheadings
- Report Total Subheadings
- Report Totals
- Master File
- Library Name
- Detail File(optional)
- Library Name
- Source File Name
- Source Library Name
- Object Library Name

Figure 26–1 Quick Start Application Tool screen



Field	Explanation
Description	Use this field to enter a short one-line description of the program you are creating.

Field	Explanation
Program Name	Type the name of the RPG program that the CL program will call. This is a required field. Do not leave it blank. The name of the CL program generated will be the same as the RPG program name, but prefaced with a J instead of a P.
Create Program (Y/N)?	Indicate in this field whether you want to create the RPG program.
Screen or Report Name	Type the screen or report file name associated with the program. This field is only required for program type 2.
Select a Program Type (1-4)	Type one of the following in this field to indicate the type of program you are creating: 1 – Standard Interactive Program 2 – Standard Report Program with DREAM Writer 3 – File Processor 4 – File Processor with DREAM Writer
Action Code	Enter Y if you are creating a screen with an Action Code field. Enter N if you are not creating a screen with an Action Code field.
Selection Option	Enter Y if you are creating a screen with a selection option.
Report Detail Subheadings	Enter Y if you are creating a report with detail subheadings.
Report Total Subheadings	Enter Y if you are creating a report with total subheadings.
Report Totals	Enter Y if you are creating a report with totals.
Master File	Type the name of the data file to use for the program you are creating. This field is required for program types 2, 3, and 4.
Library Name	Type in the name of the library your master file is in.
Detail File (optional)	Type in the name of an optional secondary file from which you want to select data.
Library Name	Type in the name of the library your secondary file is in.
Source File Name	The member ID of the file used by the program.
Source Library Name	File and library that contains the file source.
Object Library Name	Enter the name of the object library where the program you are creating will reside. This is defaulted from the CASE Profiles.

26.3 Selecting Data Fields

The system displays key fields from each data file. You can select, deselect or resequence the fields that you want to use in your program.

The fields from the primary data file display first in the list, followed by the fields from the secondary data file, if you entered one.

To select data fields

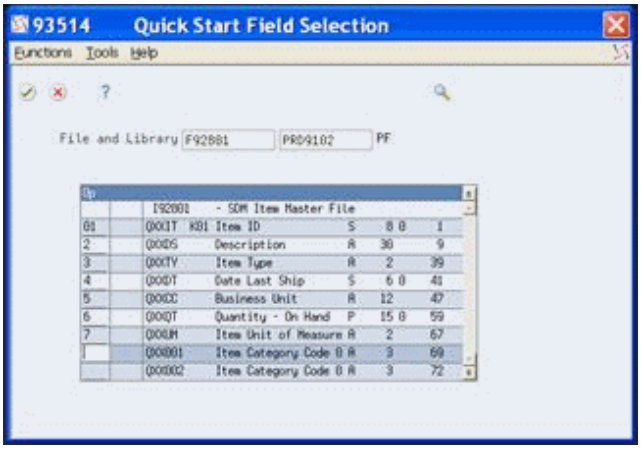
1. On Quick Start Field Selection, perform any of the following:
   - To select a field, enter 1 in the Option field to the left of the field name and click Enter.
   - To specify heading or subfile fields enter 1 or 2, respectively, in the column to the right of the selection and sequencing column.

This field only displays if the program you are creating is a transaction processor.

- To sequence a field, enter the sequence number in the Option field to the left of the fields you want to use in your program and click Enter.
- To add fields, enter the names of additional fields on the screen.

2. Press (F3) to continue.
3. The system prompts you perform one of the following:
   - Exit (F3) to exit the program.
   - Replace (F6) to continue to the next step in the process.

Figure 26–2 Quick Start Field Selection screen



26.4 Browsing or Updating the Screens or Reports (Optional)

At this point in the process, you can view or update the screens or reports you are create using the browse or update mode.

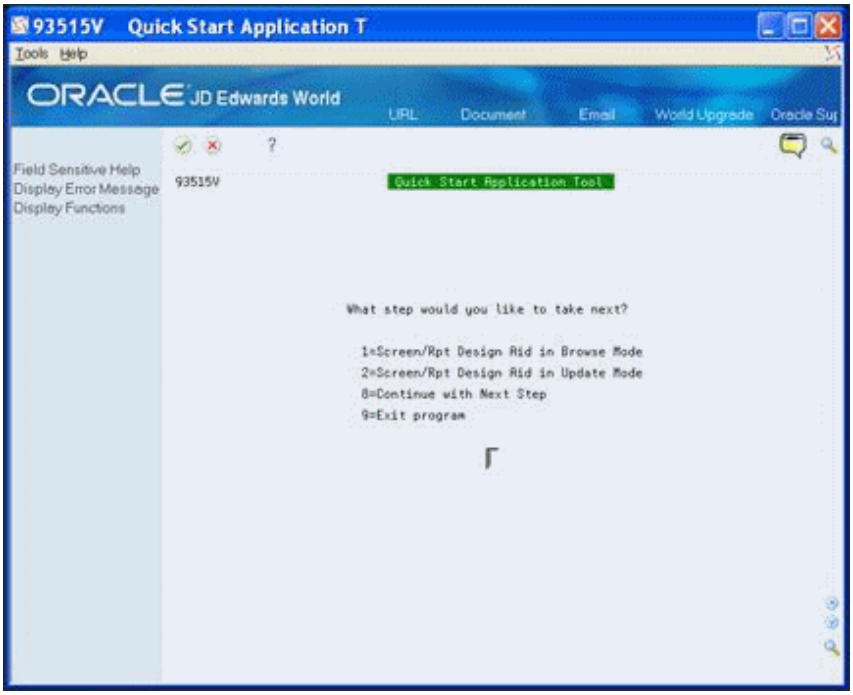
To browse or update screens or reports

On Quick Start Application Tool, enter 1 to browse or 2 to update.

To continue the steps to create a version, enter 8.

To exit the program, enter 9 and return to the Computer Assisted Programming (CAP) menu.

Figure 26–3 Quick Start Application Tool (Browse or Update) screen



26.5 Compiling the Screens or Report (Optional)

At this point in the process, you can compile the screens or report. Before you compile the program, you must complete this step.

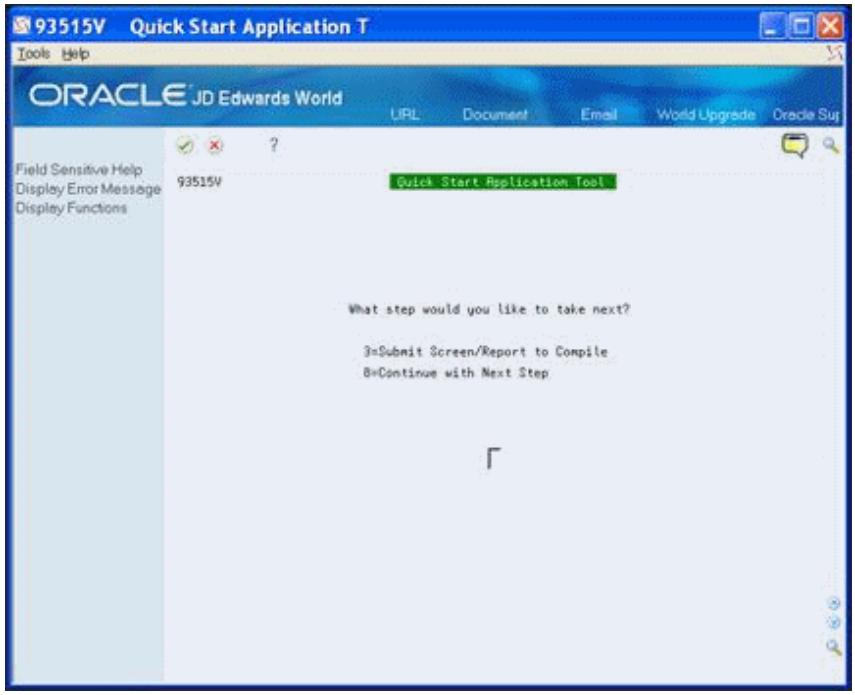
To compile the screens or report

On Quick Start Application Tool, enter 3 to compile the screens or reports.

The system retrieves the object library for the compile from the CASE Profiles.

To continue the steps to create a version, enter 8.

Figure 26–4 Quick Start Application Tool (Compile) screen



26.6 Modifying Specifications (Optional)

At this point in the process, you can access the Program Generator Specifications screen to modify specifications.

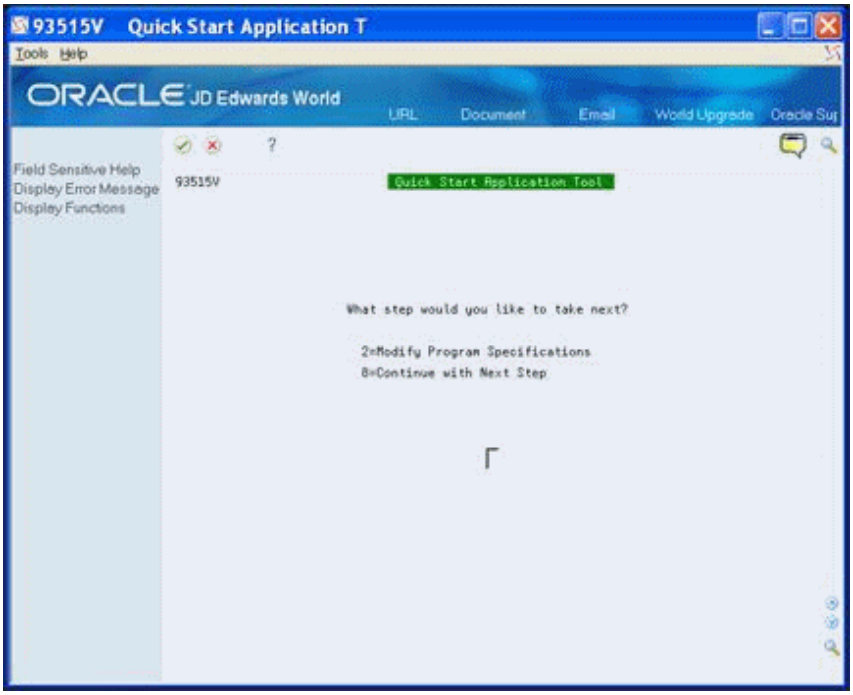
To modify specifications

On Quick Start Application Tool, enter 2 to modify program specifications.

The Program Generator Specifications screen displays.

To continue the steps to create a version, enter 8.

Figure 26–5 Quick Start Application Tool (Modify) screen



26.7 Submitting the Program to Compile (Optional)

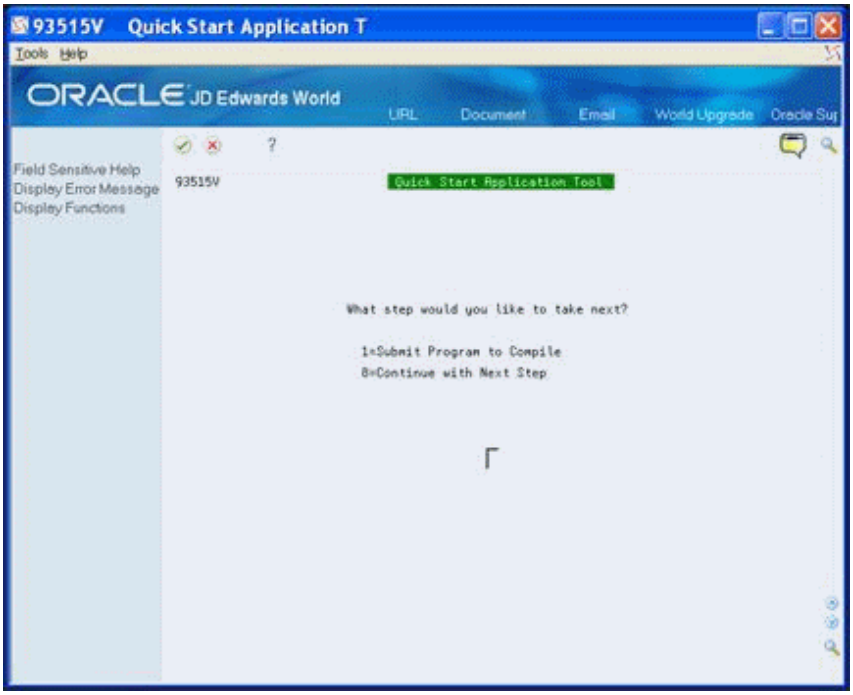
Do not submit the program to compile until the screens or report successfully compile.

To submit the program to compile

On Quick Start Application Tool, enter 1 to compile the screens or reports.

To continue the steps to create a version, enter 8.

Figure 26–6 Quick Start Application Tool (Submit to Compile) screen



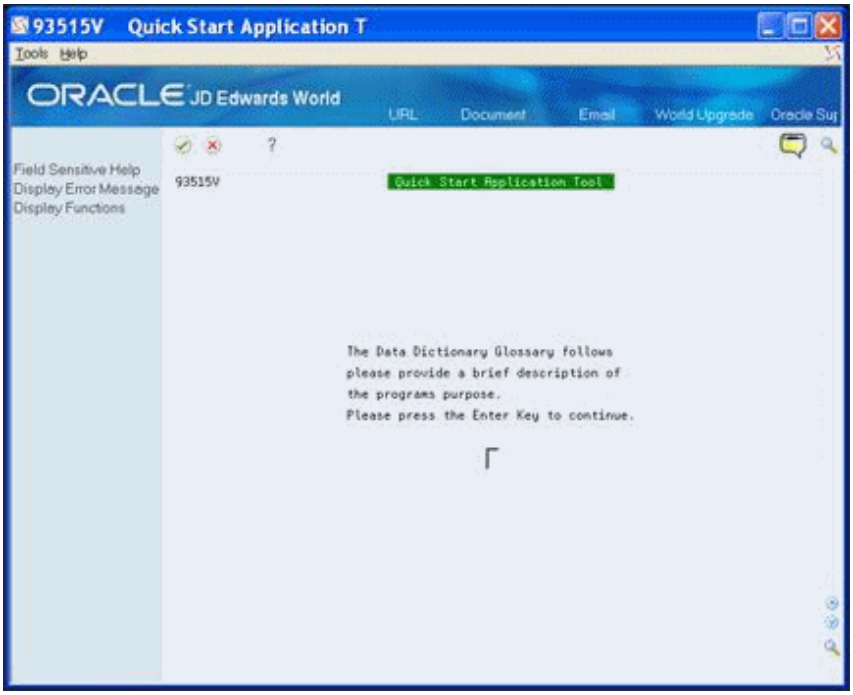
26.8 Updating the Data Dictionary and Glossary

You must enter the purpose of the program on the Data Item Glossary Revisions screen.

To update the data dictionary and glossary

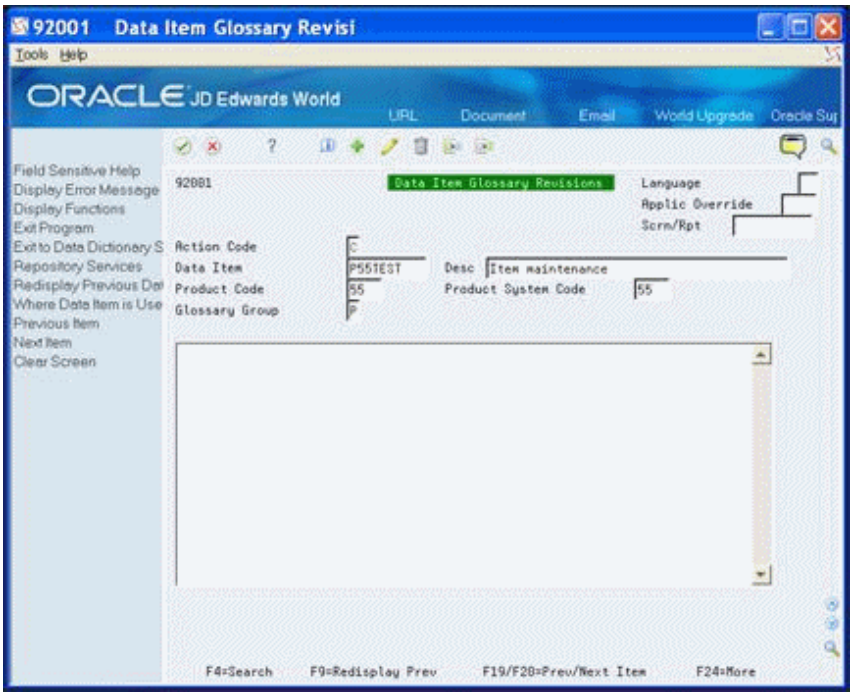
1. On Quick Start Application Tool, click Enter to continue.

Figure 26–7 Quick Start Application Tool (Update Data Dictionary) screen



2. On Data Item Glossary Revisions, enter the description of the program's purpose that displays in the online help instructions.

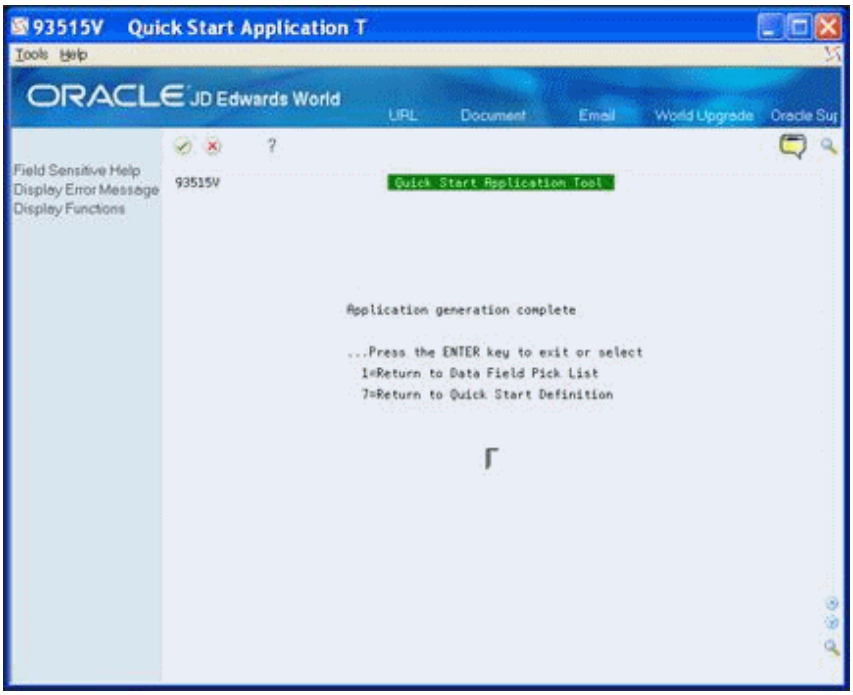
Figure 26–8 Data Item Glossary Revisions screen



3. Click Add to add the program purpose statement.
4. Click Exit (F3).
5. On Quick Start Application Tool, perform one of the following:

- Click Enter to exit the program and return to the menu.
- Enter one of the following:
  - 1 to Return to the Data Field Pick List
  - 7 to Return to Quick Start Definition

Figure 26–9 Quick Start Application Tool (Exit) screen



27

Work with Action Diagramming

This chapter contains these topics:

The Action Diagramming functionality allows you to produce a diagram which illustrates the different groupings of logic and the interrelationships of code within a program. The system generates the diagrams from the program source code. They provide easy access to more detailed information about the files, fields and programs in the code.

27.1 Building an Action Diagram

The Build Action Diagram program allows you to build the necessary cross reference items to produce the action diagram. Using DREAM Writer as the initial screen to the batch job, you can specify the programs for which you want to build an action diagram.

JD Edwards World includes sample Action Diagrams with the software but you must build the Action Diagram for all other programs. This is not an automatic function.

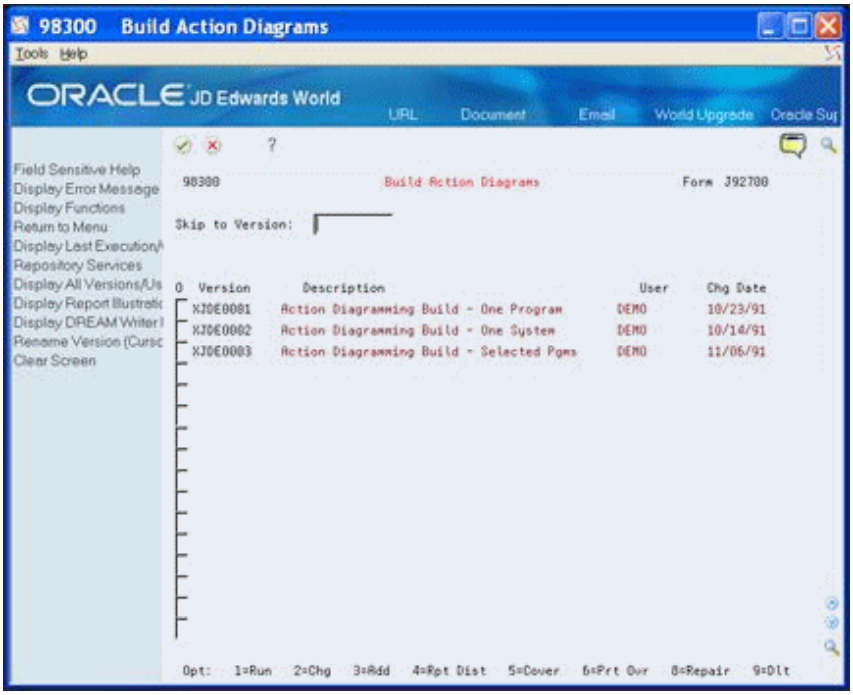
To build an action diagram

Navigation

From Action Diagramming (G9363), choose Build Action Diagrams

On Build Action Diagram, choose a version.

Figure 27–1 Build Action Diagrams screen



27.2 Viewing an Action Diagram

When you view an action diagram, you are viewing a graphical representation of the code's hierarchy within the program and how different subsets of code relate to other subsets of code. You can view the code for a subroutine from the program or exit to facilities that show more detail for fields, files, and programs.

To view an action diagram

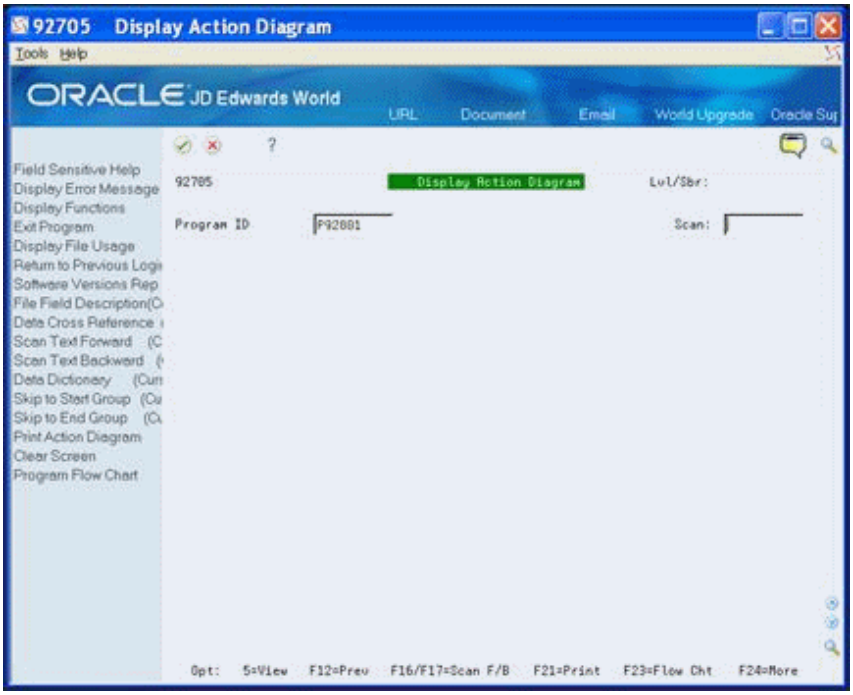
Navigation

From Action Diagramming (G9363), choose Display Action Diagram

On Display Action Diagram, enter a program ID in the Program ID field to view an action diagram.

For example, enter P92801.

Figure 27–2 Display Action Diagram screen



The logic groups for the program display.

Group	Description
Lvl/Sbr	Specifies the logic level and subroutine.
Program ID	The program name for the action diagram.
Scan	Allows the user to search for specific information.

The use of colors, arrows, indentation, and connecting vertical lines indicates the hierarchy and relationships of the code within the program.

Symbol	Description
===>	Signals the beginning or ending of a loop.
--->	Signals an IF or WHEN statement or their associated end statement.
Blank	Labels are in reverse image.

27.2.1 Function Exits

Display File Usage (F10)

Choose Display File Usage (F10) to view the files in the file specifications of the program.

Return to Previous Logic Level (F12)

Choose Return to Previous Logic Level (F12) to return to the logic level immediately prior to the one that currently displays.

Scan Text Forward (F16)

Choose Scan Text Forward (F16) to enter a value in the Scan field and then scan forward through the code to locate the value.

Scan Text Backward (F17)

Choose Scan Text Backward (F17) to enter a value in the Scan field and then scan backward through the code to locate the value.

Skip to Start Group (F19)

Choose Skip to Start Group (F19) to skip to the beginning (start) of a section of code. The user places the cursor within the section of code and then chooses Skip to Start Group to go to the beginning of that section of code.

Skip to End Group (F20)

Choose Skip to End Group (F20) to skip to the end of a section of code. The user places the cursor within the section of code and then chooses Skip to End Group to go to the end of that section of code.

Print Action Diagram (F21)

Choose Print Action Diagram (F21) to obtain a printout of the action diagram.

Program Flowchart (F23)

Choose Program Flowchart (F23) to view and print, or view, or print a flowchart which illustrates the interaction of files and processes that relate to a single program. You can continue to view lower levels of detail as well.

27.2.2 Cursor Sensitive Function Exits

To access information that relates to fields, files, and programs appearing in the program code, you can use cursor sensitive function exits to access this information by placing the cursor at the beginning of the field, file, or program.

Software Versions Repository (F13)

Choose Software Versions Repository (F13) to access the Software Versions Repository.

File Field Description (F14)

Choose File Field Description (F14) to display the File Field Description screen.

Data Cross Reference (F15)

Choose Data Cross Reference (F15) to access the cross reference program.

Data Dictionary (F18)

Choose Data Dictionary (F18) to access the Data Dictionary program.

The following chart indicates which function exits access relevant information for the different elements.

Element	Function Exit	Description
Fields	Data Cross Reference (F15)	Displays all the programs that use the data item.

Element	Function Exit	Description
	Data Dictionary (F18	Displays the Data Dictionary definition for the data item.
Files	Display File Usage (F10)	Displays the files within the program.
	Software Versions Repository (F13)	Displays the Software Versions Repository record for the file.
	File Field Description (F14)	Displays the File Field Descriptions for the file.
	Data Cross Reference (F15)	Displays all the programs that use the file.
Programs	Software Versions Repository (F13)	Displays the Software Versions Repository record for the program.
	Data Cross Reference (F15)	Displays all the programs that launch the program.

27.2.3 Option Field Values

View (5)

Allows the user to view subroutine code whenever it indicates that the program is to execute a subroutine.

27.3 Accessing the Logic Translation Feature

The Logic Translation feature allows you to view how the Action Diagram feature translates the RPG code of a program into an Action Diagram.

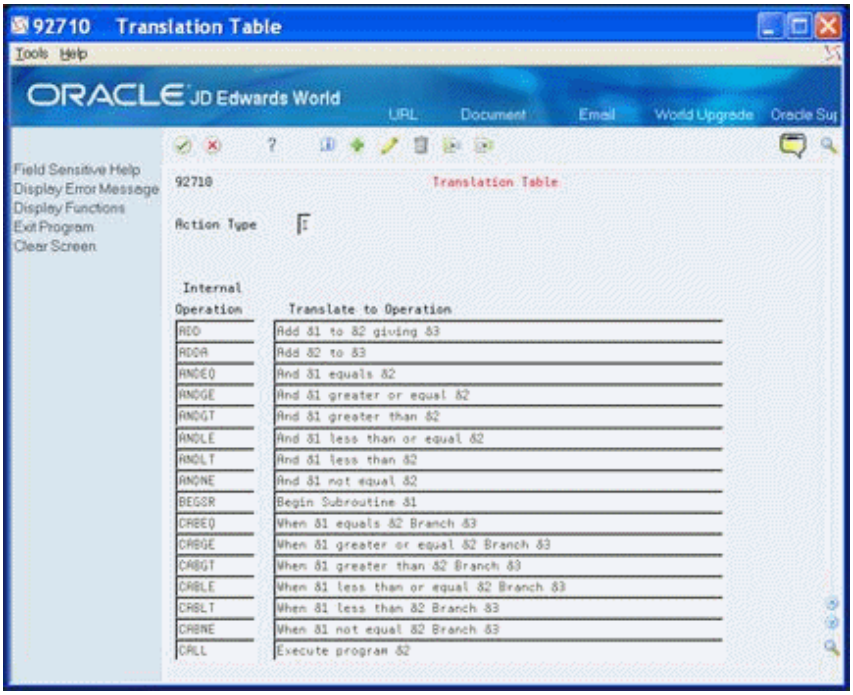
To access the logic translation feature

Navigation

From Action Diagramming (G9363), choose Translation Table

The system displays the RPG operation in the first column and how it translates that operation within an action diagram in the second column.

Figure 27–3 Translation Table screen



Part VII

Source Code Inventory and Database

This part contains these chapters:

28

Overview to Source Code Inventory and Database

This chapter contains these topics:

28.1 Objectives

- To understand the Source Sequence Line Number
- To create or modify program types
- To create or modify logic modules
- To understand directives
- To understand the Question and Answer system
- To create user defined PDL

28.2 About the Source Code Inventory and Database

Perform the following tasks:

- Understand the Source Sequence Line Number
- Create or modify program types
- Create or modify logic modules
- Understand directives
- Work with the Question and Answer system
- Create user defined PDL

29

Understand Source Sequence

This chapter contains these topics:

When you use the program generator, it is important that you understand how the system manages the source code in the program. The topics in this chapter include the key elements that the system assigns.

29.1 Source Serial Numbers

When the program generator creates a new program, it assigns each line of source code within the program a twelve-digit serial number. If you regenerate a program after making changes, the program generator uses the serial numbers to integrate your changes, and then renumbers the entire source.

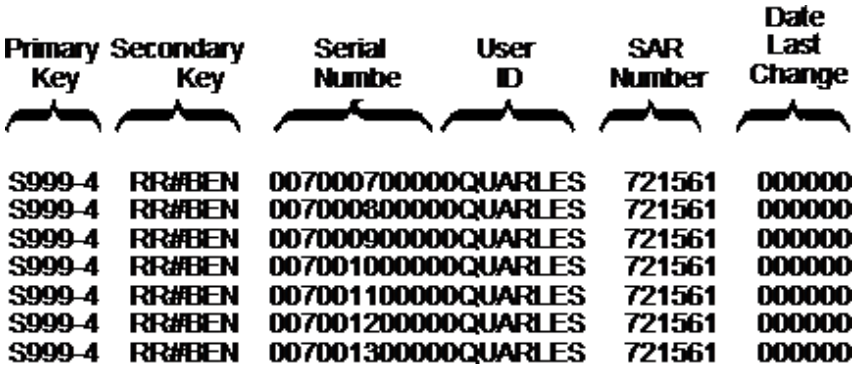
29.2 Source Sequence Line Structure

The source sequence line structure includes six elements:

Element	Description
Primary Key	The primary key represents source code lines that come from a Primary Logic Module. The primary key begins in column 80.
Secondary Key	The secondary key represents the source code lines that come from a Detail Logic module. The secondary key begins in column 90.
Serial Number	The serial number is a 12-digit number the program generator assigns to each line of source code in a program. The serial number begins in column 100.
User ID	When the program generator creates a program, it places the User ID of the program's creator within the source sequence line.
SAR Number	When the program generator creates a program, it places the SAR Number, if available, within the source sequence line.
Date Last Change	When the program generator creates a program, it places the date you add or change the code within the source sequence line.

The following illustrates the parts of the source sequence line.

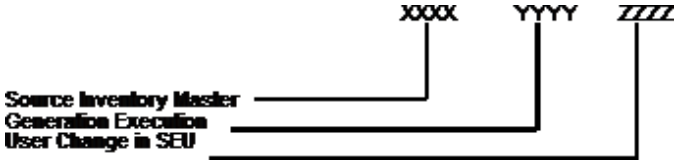
Figure 29–1 Parts of the Source Sequence Line



The Primary and Secondary keys and serial number make up a unique key for each line of code.

29.3 Structure of the Serial Number

Figure 29–2 Structure of the Serial Number



29.3.1 Source Inventory Master File (F93001) - XXXX

- Assigns numbers to the first sequence of the serial number.
- Increments by 10 to allow you to insert lines as the Program Generator Source Inventory Master file changes.
- Allows a maximum of 9999 lines.

29.3.2 Generation Execution - YYYY

- Assigns numbers when the system generates the program.
- Represents lines that are part of a detail logic module.
- Increments by 10 to allow you to insert lines.
- Allows a maximum of 9999 lines.

29.3.3 User Change in SEU - ZZZZ

- Represent lines of code that the user inserts via SEU.
- Allows a maximum of 9999 lines.

30

Working with Program Types

This chapter contains these topics:

Within the program generator, the program type specifies the basic function or type of program that you create. For example, there are separate program types for basic interactive maintenance programs, programs which use subfiles, conversion programs, report programs, and batch update programs.

The system ties each program type to the question and answer process with the program generator.

- After answering a series of questions about the program to generate, the system determines the program type and assigns it to your program specifications.
- The program generator constructs the program using primary and detail logic modules within the program type.

JD Edwards World provides you with program types for the most common programs. You can create your own program types for your organization's needs.

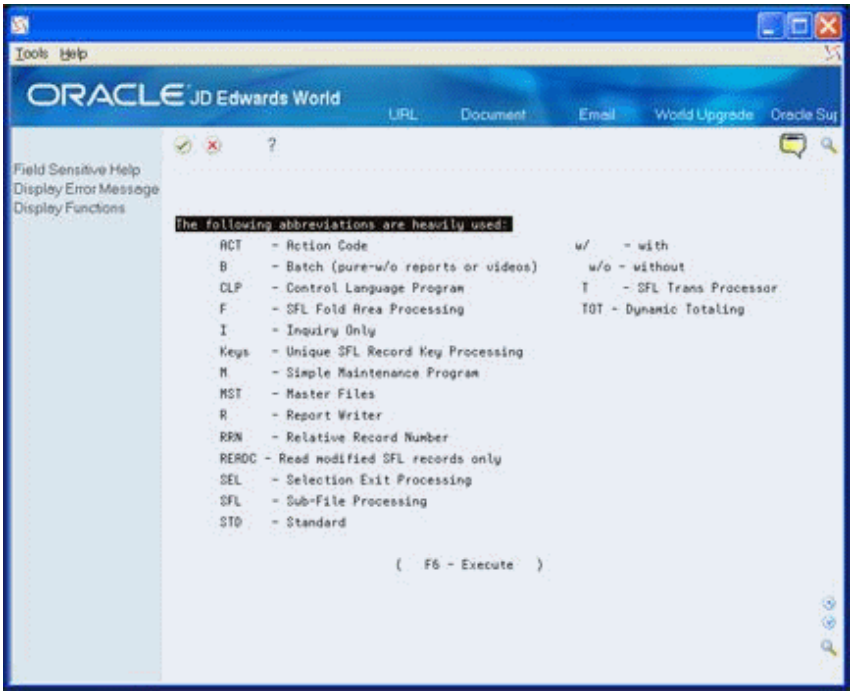
30.1 Reviewing Abbreviations for Program Types

You can use the Index to review abbreviations for data that displays on the Create Modify screen.

Navigation

From Model Program Design Menu (G9361), under PROGRAM TYPES, choose Index

Figure 30–1 Index of Abbreviations for Program Types screen



30.2 Reviewing Program Types Index

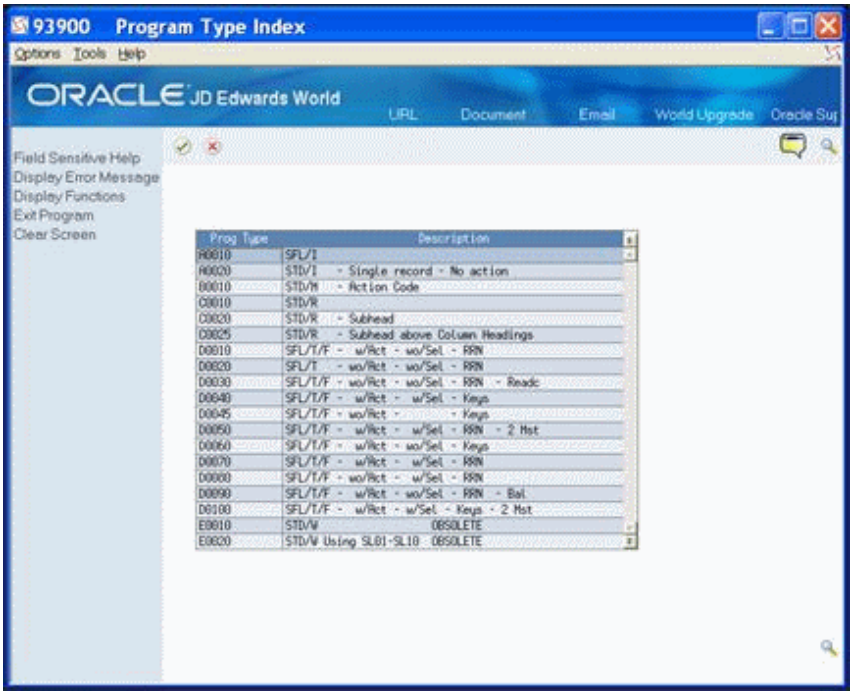
You can use the Program Type Index program (P93900) to locate program types. You can access this from the Program Types Cross Reference screen, Index screen, as well as the Create/Modify screen.

30.2.1 Available Options

You can right click on any program type and choose one of the following options:

- Display Full Logic - Access the Data Item Glossary Revisions screen
- Print Logic Class Source
  - Prints the generic source of the shell program without any of the specifics (detail logic modules).
  - Use this if you are creating your own program types and you want to review them.
- Display Logic Class Source
  - Displays the generic source of the shell program without any of the specifics (detail logic modules).
  - Use this if you are creating your own program types and you want to review them.
- Return Selected Program Type - Retrieves the program type when the system accesses it from another program.
- Display Logic Cross Reference - Displays the programs you create using this logic type.
- Revise Logic Class - Displays a bill of materials list for the program type.

Figure 30–2 Program Type Index screen



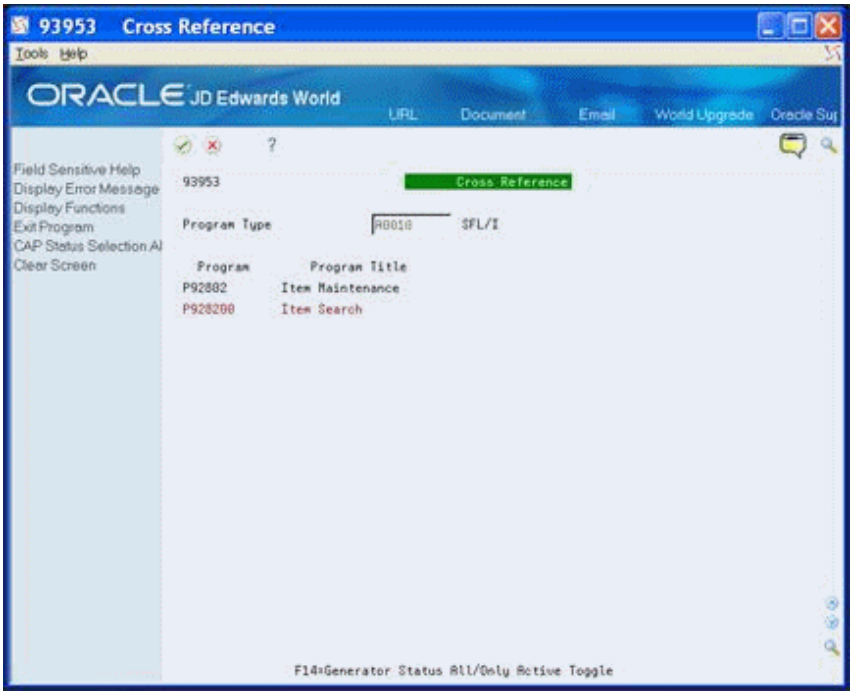
30.3 Reviewing Program Types Cross Reference

The Program Types Cross Reference screen allows you to review additional information about program types.

Navigation

From Model Program Design Menu (G9361), under PROGRAM TYPES, choose Cross Reference

Figure 30–3 Cross Reference screen



Clone Status All/Only Active Toggle (F14)

You can choose CAP Status Selection All/Only Active (F14) to toggle back and forth between viewing all programs using the program type or only the programs with a CAP status of Y.

30.4 Creating or Modifying Program Types

As you create or modify program types, you should be aware of the following:

30.4.1 Program Type

It is the list of the segments of code the system requires to build this type of program. You might consider this a bill of materials list.

30.4.2 Primary Module

This is the main sections of code that the system uses to create the first level of program source.

30.4.3 Glossary K

The system uses these to document logic modules within a program type. When the system generates a program, it validates the field against the Data Dictionary, and adds the glossary for the key as documentation for the logic module.

To create or modify program types

Ensure you are of the alpha order requirement when creating new program types.

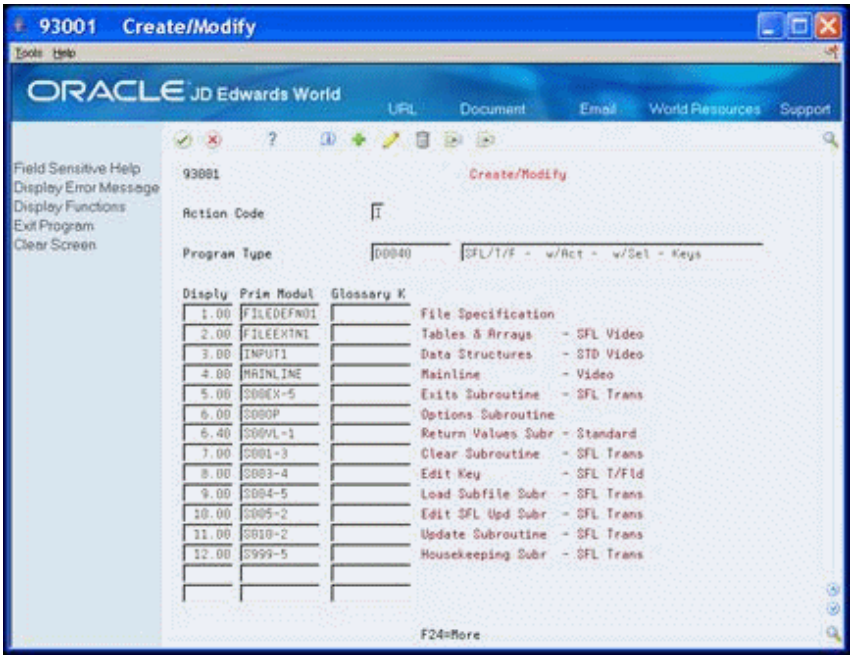
The following is an example using program type D0040.

Navigation

From Model Program Design Menu (G9361), under PROGRAM TYPES, choose Create/Modify

On Create/Modify, locate an existing program type.

Figure 30–4 Create/Modify screen



31

Work with Logic Modules

This chapter contains these topics:

There are two types of logic modules:

- Primary
- Detail

31.1 Primary Logic Modules

Primary logic modules include:

- Main segments of code in the definition of a program type.
- Full sections of a program or subroutines within the program, normally.
- Functional directives to the generation program.

Each primary logic module includes code with a five character directive code. See Columns 1 through 5 in the Source Code Inventory Master file (F93001).

The JD Edwards World CASE software provides approximately 100 different primary logic modules. This includes many variations on mainline logic, field initialization,

update logic, housekeeping, and so forth. Use the Index for logic modules to become familiar with the various types of primary logic modules.

Primary logic modules contain the following:

- Program identification specifications
- Extension specifications
- Data structures
- Mainline calculations
- Default logic from data dictionary
- Subroutine calculations
- Update subroutine
- Housekeeping subroutine

31.2 Detail Logic Modules

Detail logic modules direct the final integration of the database, screen, or report specifications into the primary logic modules that make up the final program type.

Detail logic modules are usually functional or data field-related segments of code. Functional directives reference the detail logic modules which contain substitution directives to the generation program. A prefix of X indicates the system does not use the detail logic module in conjunction with a conditional directive. A prefix of Z indicates the system uses the detail logic module in conjunction with a conditional directive. See Chapter 32, "Understand Directives" for more information about directives.

31.3 Generation Options

Following are additional programs you can use on the Model Program Design Menu.

31.3.1 Help Instructions Edit/Build

You use this to access the Software Versions Repository to rebuild the Helps for a single program.

31.3.2 All Help Instructions

You use this to submit a job to regenerate the helps for all programs.

31.3.3 Global Program Regeneration

You use this to regenerate all programs that have a CAP Status of Y.

Caution: Use caution when you use this program.

Working with logic modules includes the following tasks:

- View the Logic Module Index
- View the Logic Module Cross Reference
- View Logic Module Op Codes

- Maintain the Logic Module File
- Create or modify Logic Modules
- Create or modify Formula Library Entry
- Copy or move program specifications
- Print Program Generator specifications
- Review source modifications
- Use Program Generator updates
- Use CASE specifications inquiry

31.4 Viewing the Logic Module Index

The system allows multiple logic modules for each subroutine. Depending on the type of program in which you use the subroutine, the same subroutine can appear differently.

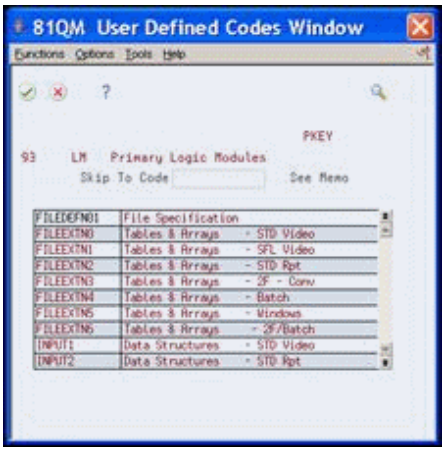
You can review the logic modules on the User Defined Codes window.

To view the logic module index

Navigation

From Model Program Design Menu (G9361), under LOGIC MODULES, choose Index

Figure 31–1 User Defined Codes Window screen



31.5 Viewing Logic Module Cross Reference

The Logic Module Cross Reference allows you to determine which program types use a particular logic module.

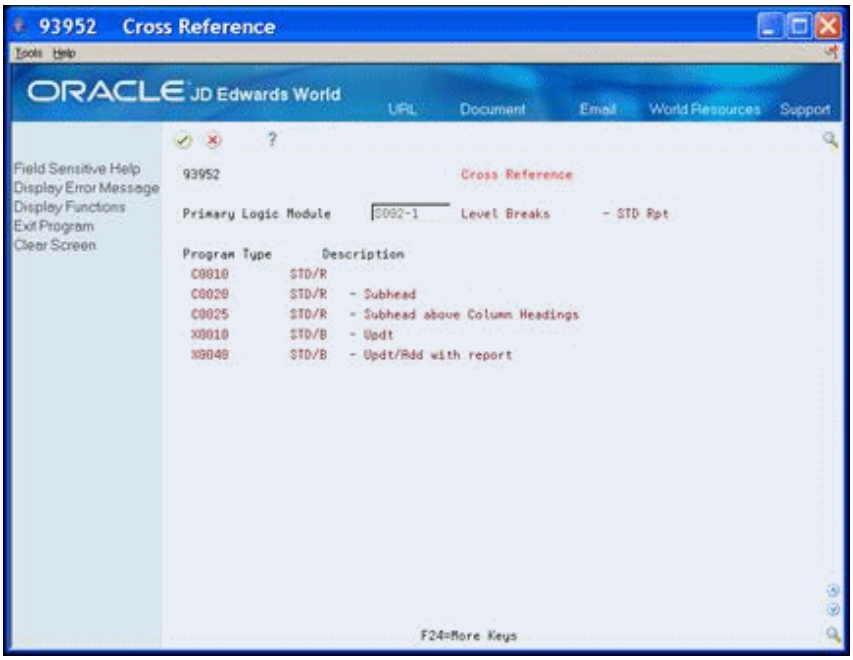
To view the logic module cross reference

Navigation

From Model Program Design Menu (G9361), under LOGIC MODULES, choose Cross Reference

Enter a primary logic module name.

Figure 31–2 Cross Reference (View Logic) screen



31.6 Viewing Logic Module Op Codes

On the Op Codes screen, the:

- Left column lists the PDL op codes.
- Right column displays the x-module that the system launches to generate the source code.

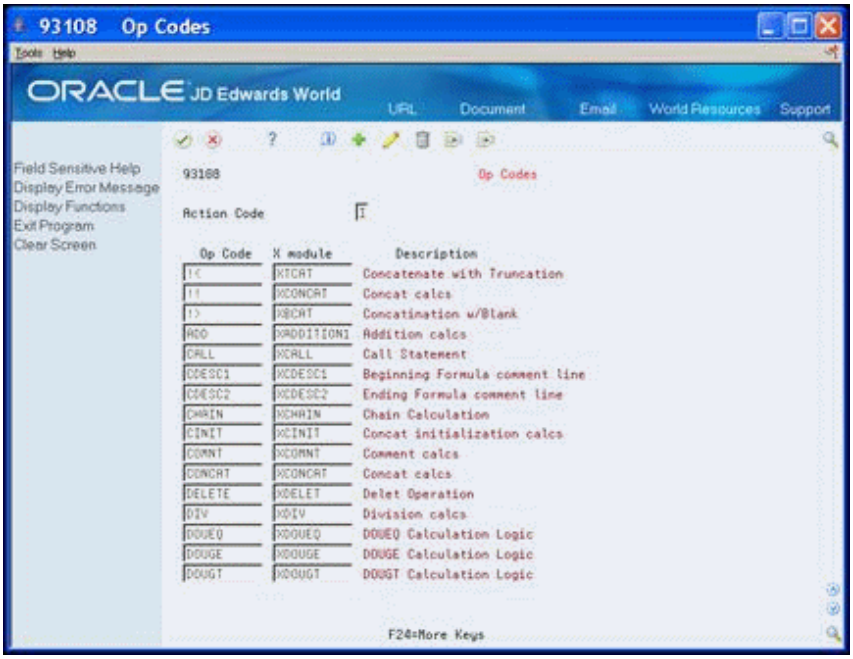
If PDL does not generate source code, the Operation Code to Logic Module X-Ref file (F93108) might have been accidently cleared.

To view the logic module op codes

Navigation

From Model Program Design Menu (G9361), under LOGIC MODULES, choose Op Codes

Figure 31–3 Op Codes screen



31.7 Maintaining the Logic Module File

The following programs do not appear on a menu and you must access these programs manually.

Caution: Use extreme caution when using these programs.

31.7.1 Resequence Logic Module

Use this program when you need to add several lines to a logic module and resequence the line numbers. If you add or change lines in a logic module, you must manually change or add the serial numbers for the logic module or run this program. The Resequence Master Source program (93998) launches a program to resequence an existing logic module.

Normally, you create and incorporate a new logic module into a new program type. You use the new program type and delete the old program type when there are no longer programs with that program type with a CAP status of Y.

CALL P93998 PARM (logic module name).

31.7.2 Remove Logic Module

You use this program when you no longer use a logic module and want to reduce the amount of source code in the F93001 file. The Remove Logic Module program (P93999) removes lines from F93001 and launches a program to remove an existing logic module.

You must ensure that there are no programs with a CAP status of Y that use a program type with this logic module.

CALL P93999 PARM(logic module name).

31.8 Creating or Modifying Logic Modules

The Create/Modify screen allows you to review only the logic module you want, otherwise all 12,000 lines of code display because the F93001 is a single member file.

You can choose Field Sensitive Help to access a list of logic modules, UDC 93/LM.

When the system accesses the code, it performs three steps:

- Creates a work file in QTEMP/F93001WRK.
- Adds a member to F93001WRK.
- Clears the member in F93001WRK.

You can exit the code without saving your changes.

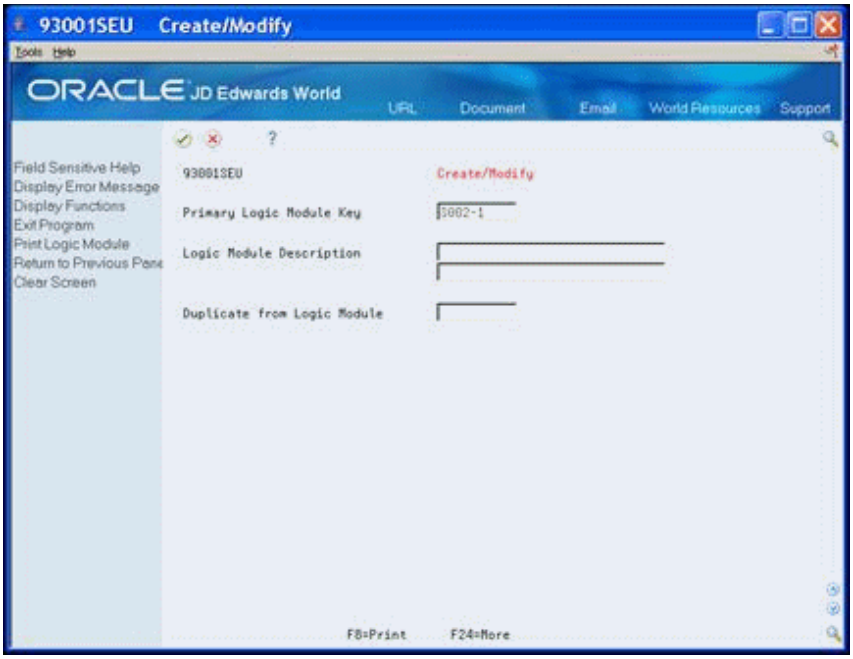
To create or modify logic modules

Navigation

From Model Program Design Menu (G9361), under LOGIC MODULES, choose Create/Modify

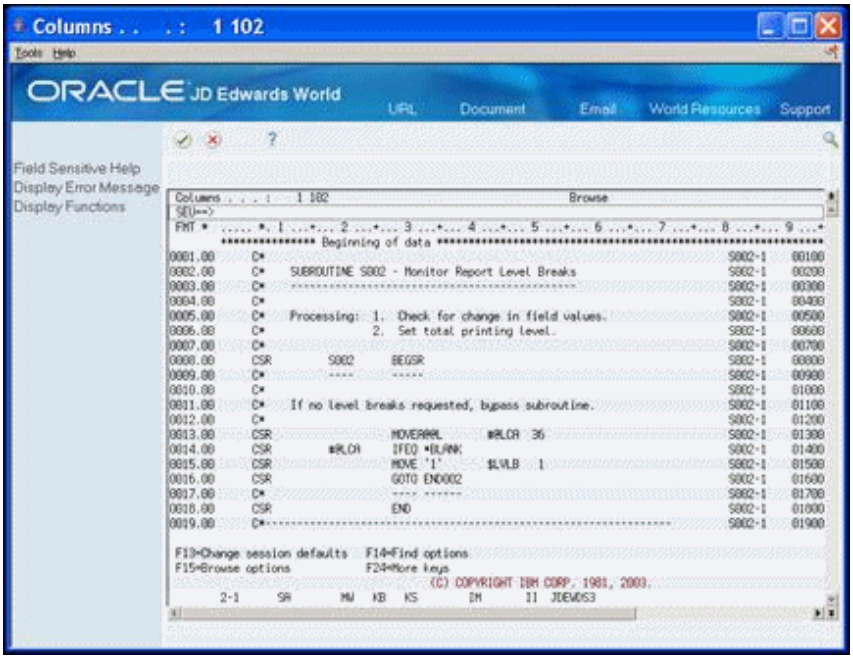
1. Enter a logic module name.

Figure 31–4 Create/Modify (Logic Modules) screen



2. Create or change the appropriate lines of code

Figure 31–5 Lines of Code screen



31.9 Creating or Modifying Formula Library Entry

When you choose this menu selection, the system preloads the screen with the keys for entering a formula.

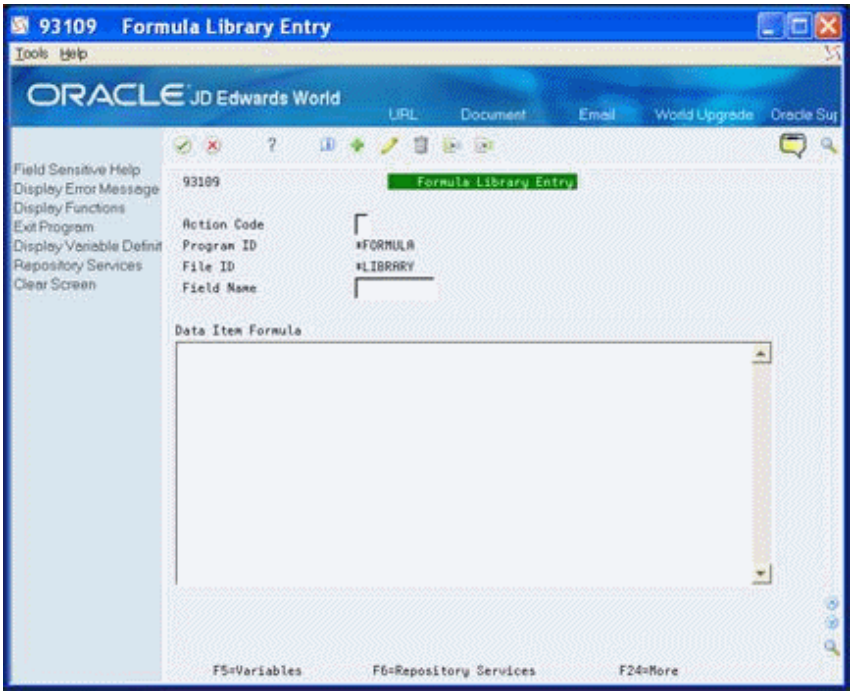
Alternatively, you also access this screen through the Detailed Programming Facility to enter PDL.

To create or modify the formula library entry

Navigation

From Model Program Design Menu (G9361), under LOGIC MODULES, choose Formula Library Entry

Figure 31–6 Formula Library Entry screen



31.10 Copying or Moving Program Specifications

The Parameter Copy/Move program allows you to copy the following from one library to another or from one program ID to another:

- Program Generator specifications
- Data dictionary glossary (program purpose)
- DREAM Writer processing options

Alternatively, you can enter 3 in the Option field on Software Versions Repository to copy Program Generator specifications within a library.

To copy or move program specifications

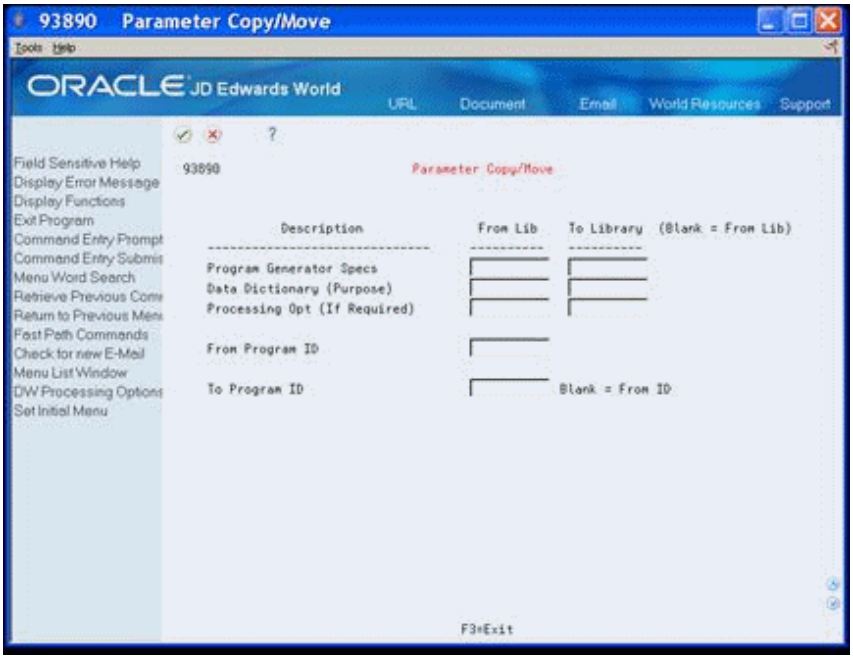
Navigation

From Model Program Design Menu (G9361), under OTHER TOOLS, choose Parameter Copy/Move

On Parameter Copy/Move complete the following fields:

- Program Generator Specs
- Data Dictionary
- Processing Option
- From Program ID
- To Program ID

Figure 31–7 Parameter Copy/Move screen



31.11 Printing Program Generator Specifications

Use the Print Program Specifications program to print the program specifications. You must use a logical file.

If the print job ends abnormally, review the Additional Parameters screen of the DREAM Writer and ensure that the File Output Type field is set to a Logical File and not Open Query.

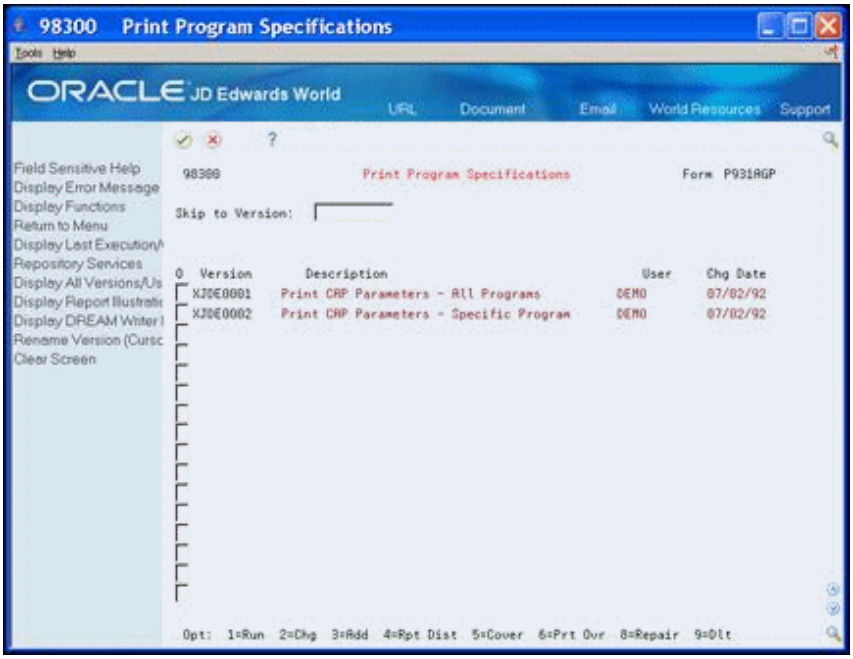
To print program generator specifications

Navigation

From Model Program Design Menu (G9361), under OTHER TOOLS, choose Print Program Specifications

Copy the appropriate version and change it to print the version of the specifications you want.

Figure 31–8 Print Program Specifications screen



31.12 Reviewing Source Modifications

The Review Source Modifications program displays the source code that a user adds manually through the Source Entry Utility. You view the Pxxxxx member in the Additional Help/Modifications Master file (F93002).

The lines of code are the result of the MPxxxxx job that runs and compares the before image of the source code with the source code after the user makes changes and stores the code in the Pxxxxx member in the F93002.

To review source modifications

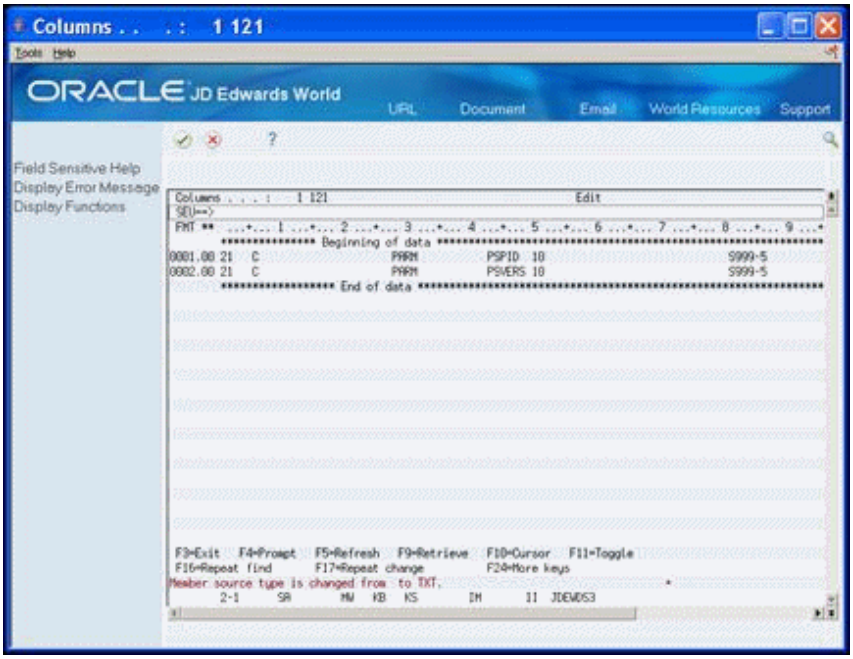
Navigation

From Model Program Design Menu (G9361), under OTHER TOOLS, choose Review Source Modifications

Alternatively, you can enter 30 in the Option field on Software Versions Repository to access Review Source Modifications screen.

1. On the Review Source Modifications screen, locate the program.
2. Enter 30 in the Option field to view source code modifications.

Figure 31–9 Review Source Code Modifications screen



31.13 Using Program Generator Updates

The both of the Generator Updates merge JD Edwards World updates for the Program Generator.

The system uses these programs during a PTF install.

To use program generator updates

Navigation

From Model Program Design Menu (G9361), choose Generator Updates From Generator Updates (G9366), choose the appropriate Compare/Update

31.14 Using CASE Specifications Inquiry

The CASE Specifications Inquiry allows you to view the programs you design using the JD Edwards World CASE Tools. You can modify and delete CASE Specifications using this utility as well as access the source code in the Software Versions Repository.

To use CASE specifications inquiry

Navigation

From Model Program Design Menu (G9361), under OTHER TOOLS, choose Case Specifications Inquiry

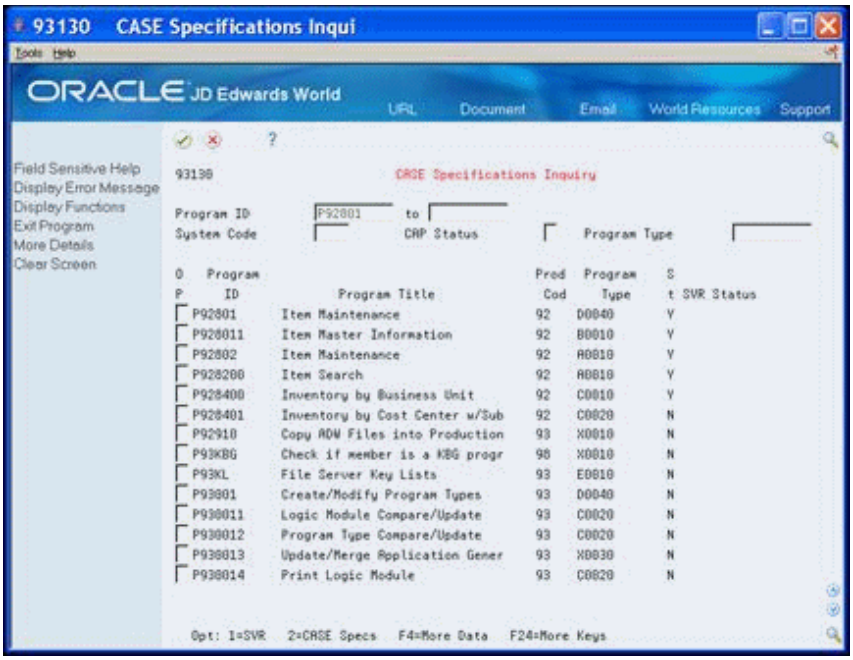
1. On CASE Specifications Inquiry, complete any of the following fields:
   - Program ID
   - System Code
   - CAP Status

- Program Type

The system displays the records that meet your search criteria.

2. Complete the following field:
   - Option

Figure 31–10 CASE Specifications Inquiry screen



32

Understand Directives

This chapter contains these topics:

Directives are in the logic modules and instruct the program generator what type of action to take when constructing source code. They use the first five columns of the RPG statement.

There are several types of directives, including:

- Functional Directives
- Substitution Directives
- Exception Directives
- Conditional Directives

JD Edwards World supplies all directives and you cannot create your own directives.

32.1 Functional Directives

Functional directives:

- Control major functions within a program.
- Provide the initiation point for creating database specific logic and screen or report file control logic.
- Initiate the inclusion of copy modules into the source code.
- Seize detail logic modules for inclusion.

Functional directives are only found within primary logic modules and cannot reside in a detail logic module.

Following are the functional directives JD Edwards World includes with the software:

Directive Code	Detail Logic Module	Source Created	Functional Directive
*ACTN	None	S999	Load action code lock out array
*ATOT	XADDTOT1	S010	Accumulate report total logic

Directive Code	Detail Logic Module	Source Created	Functional Directive
AUTHR	None	F spec	Program author
*AUTOI	X*ENTRYI	S999	Automatic inquiry at execution test logic
*CLRN	None	S001	Clear user requested fields
CLRY	None	S001	Clear all data fields for next transaction
CLSFL	None	S003	Clear all subfile fields
COPY	XCOPY-SUB	Various	RPGIII copy function for common subroutines
CTOT	XCLRTOT1	S010	Clear report totals
*DATES	XDSDATE	I Spec	Data structures for Gregorian dates (not using record buffer)
*DATER	None	I Spec	Data structures for Gregorian dates in the record buffer #BUFIN
DESC	None	F Spec	File or program description
*DPARM	XFIELDVAL	S998	Retrieve all Data Dictionary values for videos
*DPRMS	XFIELDVL2	S998	Retrieve Data Dictionary values for detail subheading reports
*DPRMR	XFIELDVAL	S998	Retrieve Data Dictionary values for total subheading reports
DSPF	None	Various	Variable name substitution for display file(s) fields
DSP1		S	Display logic for primary video fields
	XDSPFLD1	004	Format Alpha field for output
	XDSPFLD2	S004	Format Gregorian Date for output
	XDSPFLD3	S004	Format Julian Date for output
	XDSPFLD4	S004	Format VC0 field from VTX
	XDSPFLD5	S004	Format VC0 field from designated description file (field details)
	XDSPFLD6	S004	Format VC0 field from F0005
	XDSPFLD7	S004	Format Alpha 3 or 28
	XDSPFLD8	S004	Repeat of XDSPFLD1
DSP2			Display logic for primary video fields
	XDSPFLD1	S004	Format Alpha field for output
	XDSPFLD2	S004	Format Gregorian Date for output
	XDSPFLD3	S004	Format Julian Date for output
	XDSPFLD4	S004	Format VC0 field from VTX
	XDSPFLD5	S004	Format VC0 field from designated description file (field details)
	XDSPFLD6	S004	Format VC0 field from F0005
	XDSPFLD7	S004	Format Alpha 3 or 28
	XDSPFLD8	S004	Repeat of XDSPFLD1
*EMK	XLOADEMK	S999	Load user defined error messages

Directive Code	Detail Logic Module	Source Created	Functional Directive
ENTRY	X*ENTRYP	Various	Load program execution passed parameters
	X*ENTRYM		
*EXITC	XEXIT-CMD0	S00EX	Function key exit execution logic
	XEXIT-CMD1		
*EXITS	XEXIT-SEL0	S00OP	Selection exit execution logic
*EXITW	XEXIT-SEL0	S000P	Selection exit execution logic
*FIELD			Active Data Dictionary field validation logic
	XFIELDEDT1	S005	Data Dictionary alpha edit
	XFIELDEDT2	S005	Validation n=Master - Alpha
	XFIELDEDT3	S005	Gregorian edit
	XFIELDEDT4	S005	Julian edit
	XFIELDEDT5	S005	Data Dictionary numeric edit
	XFIELDEDT6	S005	Alpha field size 10
	XFIELDEDT7	S005	User defined code edit
	XFIELDEDT8	S005	No dictionary
	XFIELDEDT9	S005	Validation n = Master - Numeric
	XFIELDEDTA	S005	Account ID
	XFIELDEDTC	S005	Cost center edit
	XFIELDEDTE	S005	Numeric field size 7
	XFIELDEDTR	S005	Right adjust
	XFIELDEDTS	S005	Validation = Master - Alpha
	XFIELDEDTT	S005	Validation = Master - Alpha Rt Adj
	XFIELDEDTU	S005	Validation = Master - Numeric
FILES	None	F spec	Program file descriptions
*FLDxx			Active Data Dictionary field validation for primary data
	XFIELDEDT1	S005	Data Dictionary alpha edit
	XFIELDEDT2	S005	Validation n=Master - Alpha
	XFIELDEDT3	S005	Gregorian edit
	XFIELDEDT4	S005	Julian edit
	XFIELDEDT5	S005	Data Dictionary numeric edit
	XFIELDEDT6	S005	Alpha field size 10
	XFIELDEDT7	S005	User defined code edit
	XFIELDEDT8	S005	No dictionary
	XFIELDEDT9	S005	Validation n = Master - Numeric
	XFIELDEDTA	S005	Account ID
	XFIELDEDTC	S005	Cost center edit
	XFIELDEDTE	S005	Numeric field size 7
	XFIELDEDTR	S005	Right adjust
	XFIELDEDTS	S005	Validation = Master - Alpha
	XFIELDEDTT	S005	Validation = Master - Alpha Rt Adj
	XFIELDEDTU	S005	Validation = Master - Numeric

Directive Code	Detail Logic Module	Source Created	Functional Directive
INFDS			File information data structures, if specified
	XINFDS1	Ispec	Standard database file information data structure. The field prefix is incremented from $1 to $x where x = number of files
	XINFDS2	I spec	OBSOLETE. Use SRVFDS.
KEYI			Load master file key fields for inquiry programs.
	XFIELDLD1	S003	Load video input - Alpha
	XFIELDLD2	S003	Load video input - Numeric
	XFIELDLD3	S003	Load video input - Cost Center
	XFIELDLD4	S003	Load video input - Julian Date
	XFIELDLD5	S003	Load video input - Gregorian Date
KEYS			Load master file key fields in subfile format.
	XFIELDLD1	S003	Load video input - Alpha
	XFIELDLD2	S003	Load video input - Numeric
	XFIELDLD3	S003	Load video input - Cost Center
	XFIELDLD4	S003	Load video input - Julian Date
	XFIELDLD5	S003	Load video input - Gregorian Date
	XNEXT-NBR	S003	Load video input - Next Numbering
KEYS2			Load master file key fields in primary video format
	XFIELDLD1	S005	Load video input - Alpha
	XFIELDLD2	S005	Load video input - Numeric
	XFIELDLD3	S005	Load video input - Cost Center
	XFIELDLD4	S005	Load video input - Julian Date
	XFIELDLD5	S005	Load video input - Gregorian Date
	XNEXT-NBR	S005	Load video input - Next Numbering
KLIST	XKEYLIST	S999	Create data file key list
*LVLS	XSAVVAL1	Save report level break data	
MF	None	Various	Variable name substitution for master database files
*MCUxx	None	S003 S004 S00EX	Business Unit security logic where xx = master field designation 1 thru 9
*OPEN	XFILEOPN1	S999	Open report program data files
OPTE	None	S005	Subfile processing condition test based on mandatory entry fields in subfile format
*OTOT	XPRTTOT1	S010	Print all report level totals
PDL	None	Various	User defined entry point
*RKYxx	None	S999	Load softcoding record key for reports where xx = master file designation 1 thru 9

Directive Code	Detail Logic Module	Source Created	Functional Directive
RPTD			Format data for report detail format
	XDSPFLD1	S004	Format Alpha field for output
	XDSPFLD2	S004	Format Gregorian Date for output
	XDSPFLD3	S004	Format Julian Date for output
	XDSPFLD4	S004	Format VC0 field from VTX
	XDSPFLD5	S004	Format VC0 field from description file (field details)
	XDSPFLD6	S004	Format VC0 field from F0005
	XDSPFLD7	S004	Format Alpha 3 or 28
	XDSPFLD8	S004	Repeat of XDSPFLD1
RPTH			Format data for report heading format
	XDSPFLD1	S004	Format Alpha field for output
	XDSPFLD2	S004	Format Gregorian Date for output
	XDSPFLD3	S004	Format Julian Date for output
	XDSPFLD4	S004	Format VC0 field from VTX
	XDSPFLD5	S004	Format VC0 field from description file (field details)
	XDSPFLD6	S004	Format VC0 field from F0005
	XDSPFLD7	S004	Format Alpha 3 or 28
	XDSPFLD8	S004	Repeat of XDSPFLD1
*RPTT			Format data for report total format
	XDSPFLD1	S004	Format Alpha field for output
	XDSPFLD2	S004	Format Gregorian Date for output
	XDSPFLD3	S004	Format Julian Date for output
	XDSPFLD4	S004	Format VC0 field from VTX
	XDSPFLD5	S004	Format VC0 field from description file (field details)
	XDSPFLD6	S004	Format VC0 field from F0005
	XDSPFLD7	S004	Format Alpha 3 or 28
	XDSPFLD8	S004	Repeat of XDSPFLD1
*RTA	XTOTARRY	E spec	Load totaling arrays
*RTS	None	I spec	Report softcoding array
*RTX	None	I spec	Report softcoding text fields
*RTXI	XVTIDX	S999	Set maximum VTX index to use

Directive Code	Detail Logic Module	Source Created	Functional Directive
*SFFLD			Active Data Dictionary data field validation for subfile fields.
	XFIELDEDT1	S005	Data Dictionary alpha edit
	XFIELDEDT2	S005	Validation n = Master - Alpha
	XFIELDEDT3	S005	Gregorian edit
	XFIELDEDT4	S005	Julian edit
	XFIELDEDT5	S005	Data Dictionary numeric edit
	XFIELDEDT6	S005	Alpha field size 10
	XFIELDEDT7	S005	User defined code edit
	XFIELDEDT8	S005	No dictionary
	XFIELDEDT9	S005	Validation n = Master - Numeric
	XFIELDEDTA	S005	Account ID
	XFIELDEDTC	S005	Cost center edit
	XFIELDEDTE	S005	Numeric field size 7
	XFIELDEDTR	S005	Right adjust
	XFIELDEDTS	S005	Validation = Master - Alpha
	XFIELDEDTT	S005	Validation = Master - Alpha Rt Adj
	XFIELDEDTU	S005	Validation = Master- Numeric
SLDxx			Active Data Dictionary data field validation for subfile data fields. Where xx = specified master file 1 thru 9.
	XFIELDEDT1	S005	Data Dictionary alpha edit
	XFIELDEDT2	S005	Validation n = Master - Alpha
	XFIELDEDT3	S005	Gregorian edit
	XFIELDEDT4	S005	Julian edit
	XFIELDEDT5	S005	Data Dictionary numeric edit
	XFIELDEDT6	S005	Alpha field size 10
	XFIELDEDT7	S005	User defined code edit
	XFIELDEDT8	S005	No dictionary
	XFIELDEDT9	S005	Validation n = Master - Numeric
	XFIELDEDTA	S005	Account ID
	XFIELDEDTC	S005	Cost center edit
	XFIELDEDTC	S005	Numeric field size 7
	XFIELDEDTR	S005	Right adjust
	XFIELDEDTS	S005	Validation = Master - Alpha
	XFIELDEDTT	S005	Validation = Master - Alpha Rt Adj
	XFIELDEDTU	S005	Validation = Master- Numeric
*S00VL	None	I spec	Cursor Control, F1
TITLE	None	H spec	Program title
*VKYxx	None	S999	Load softcoding record key for display files where xx=display file designation 1 - 9.
*VTS	None	I spec	Display file softcoding array

Directive Code	Detail Logic Module	Source Created	Functional Directive
*VTX	None	I spec	Update softcoding text field ending positions based upon size definition in display file
*VTXI	XVTXIDX	S999	Set maximum VTX index used

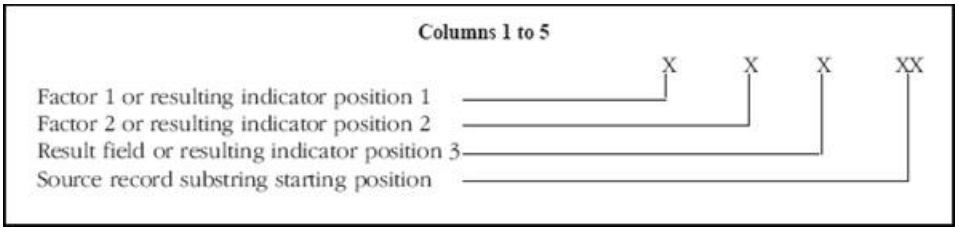
* Automatically include JD Edwards World standards, which are beyond normal requirements.

32.2 Substitution Directives

Substitution directives:

- Control the translation of symbolic names to the actual data field names the system requires for an individual line of source code.
- Substitute information within a line of code.
  - If the system replaces a field, the field it replaces begins with an & (ampersand).
  - If the substitution is positional, this directive informs the program generator where to position the substitution on a line of code.

Figure 32–1 Substitution Directives, Columns 1 to 5



Following are the substitution directives JD Edwards World includes with the software:

Directive	Column Allowed	Column Allowed	Column Allowed	Column Allowed	Function
	1	2	3	45	
@	x	x	x	x	Four character Data Dictionary name
#	x				Primary parameter that passes for *ENTRY
A	x	x	x		Highest VTX field.
B					Unused at this time.

Directive	Column Allowed	Column Allowed	Column Allowed	Column Allowed	Function
C	x				Function key exit indicator test
D	x			x	Descriptions for fields, files, and copy modules
E		x			Error message key
F		x			Validation file name
G		x			User defined calculation logic result field name
H		x			Descriptive display file name
I	x	x	x		Display field error condition attribute indicator
J	x	x	x	x	Data file names
K	x	x	x		Descriptive display file key field name
L	x				Data file key list name and optional file/format name
M	x				File information data structure name
N	x	x	x		Full data field name (write to)
O	x			x	Common subroutine name
P		x			Function key/selection exit program to execute
Q				x	Field name to receive description value

Directive	Column Allowed	Column Allowed	Column Allowed	Column Allowed	Function
R				x	Field name to receive key value
S			x		Selection exit value test
T		x			Function key/selection exit
U	x				File information data structure subfield prefix
V	x	x	x		Source of data (Read From) field name
W			x		Data file key list key field name
X			x	x	Error message array index
Y			x		Function key/selection exit parameter field name
Z			x		Numeric field size definition (right adj alpha)
0		x			Gregorian date Data Structure numeric 6 byte date
1	x				Gregorian date Data Structure numeric 2 byte month
2	x				Gregorian date Data Structure numeric 2 byte day
3	x				Gregorian date Data Structure numeric 2 byte year
4	x	x	x		Parameter 1 from *PROC calculations

Directive	Column Allowed	Column Allowed	Column Allowed	Column Allowed	Function
5	x	x	x		Parameter 2 from *PROC calculations
6	x	x	x		Parameter 3 from *PROC calculations
7	x	x	x		Parameter 4 from *PROC calculations
8	x	x	x		Parameter 5 from *PROC calculations

32.3 Exception Directives

Exception directives:

- Provide unusual option definition to the program generation process.
- Combine two other types of directives. For example:

  DSPF &01FILE

  Combines a functional directive (DSPF) with a substitution directive (&01FILE), so it is an exception directive.

  Example:

  You create a line of code for the READ Master file and then substitute the Master file name.

Most exception directives are substitution directives but are out of the normal syntax substitution directives use.

Following are the exception directives JD Edwards World includes with the software:

Factor 1	Factor 2	Result	Keyword	Function
	x		&xxFILE	Master/video/report file name
	x		&xx(FILE)	File name in single quote marks
	x		&xxFORMAT	Master/video format name
	x		&xxFORMAT1	Subfile line 24 format name
	x		&xxFORMATC	Subfile control record format name
	x		&xxFORMATS	Subfile record format name
x	x		&xxKEYFLD	Master file primary key field name

Factor 1	Factor 2	Result	Keyword	Function
x	x		&xxPGCTL	Number of subfile records in 1 page
x			%	Factor 1 intentionally left blank
x	x	x	=	User defined calculation logic result

32.4 Conditional Directives

Conditional directives:

- Are the most flexible and most powerful directives.
- Verify specific conditions exist before determining if the system must perform any action.
- Use positions 1 to 5 to provide directive initiation and use Factor 1, Factor 2, and the Result field to complete the directive definition.

Subroutine S010-11 includes examples of conditional directives. For example:

If SFSELC exists, include code for selection exits.

You can combine conditional directives.

Following are the conditional directives JD Edwards World includes with the software:

Position/Factor/Result	Description
Pos 1	+ Include detail logic module if true
	- Include detail logic module if false
Pos 2-5	FLDN Test existence of data field
	DTAI Test existence of data item
	FILE Test existence of file
	FMT Test existence of file
Factor 1	Name of field, item, file or format to test. Can also contain *ANYx for file test which you can use to test for types of files in a program where x might optionally designate number of files.
Oper (file test only)	DSPF Display file
	PF Physical file only
	LF Logical file only
	PRTF Printer file only
	DB Database file
Factor 2	Name of detail logic module to include into source code. Might also use *AND to produce compound conditions
Result Field Pos 1	@ Any input file
	M Master input file with M in file specifications
	1-9 Master input file with 1 - 9 in field specifications

Position/Factor/Result	Description
Result Field Pos 2	@ Any output file
Result Field Pos 3	@ Any update file
	M Master update file with M in file specifications
	1-9 Master update file with 1 - 9 in field specifications
Result Field Pos 4	@ Any add file

33

Work with the Question and Answer System

This chapter contains these topics:

The program generator uses JD Edwards World Question and Answer system as a method of determining the appropriate program type. Based on the answers to certain questions, the system selects a program type for you.

You can create your own questions and answers to produce your own custom program type. You can also modify the questions, known as a dialogue, the program generator uses through this feature.

Navigation

From Model Program Design Menu (G9361), choose Maintain Q/A

From World CASE Q & A Menu (G9364), choose Simple Question and Answer

33.1 About Simple Question & Answer

The Simple Question & Answer screen, from which you begin all Question & Answer tasks, includes the following three fields.

Option	Description
Simple Question and Answer	Access the Question Entry screen.
Add New Q & A Dialogue	Access the Dialogue Descriptions screen.
Update Existing Q & A Dialogue	Access the Dialogue Lists screen.

33.2 Reviewing Questions in a Master Dialogue

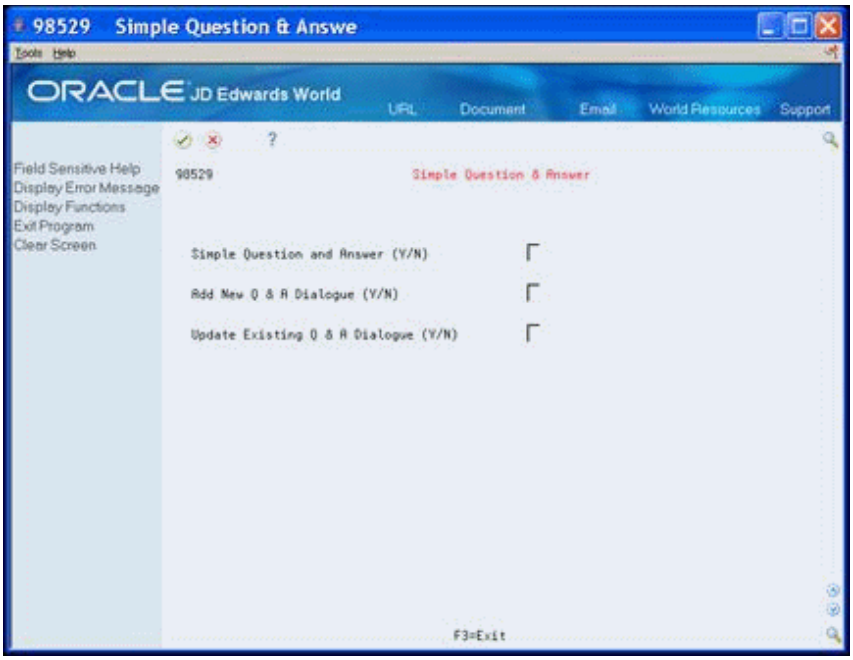
You choose Display Next Question (F19) and Display Previous Question (F20) to review all of the master questions. Additionally, you can make changes to the master question that displays on the Question Entry screen.

To review questions in a master dialogue

1. On Simple Question and Answer, enter Y in the following field:

- Simple Question and Answer

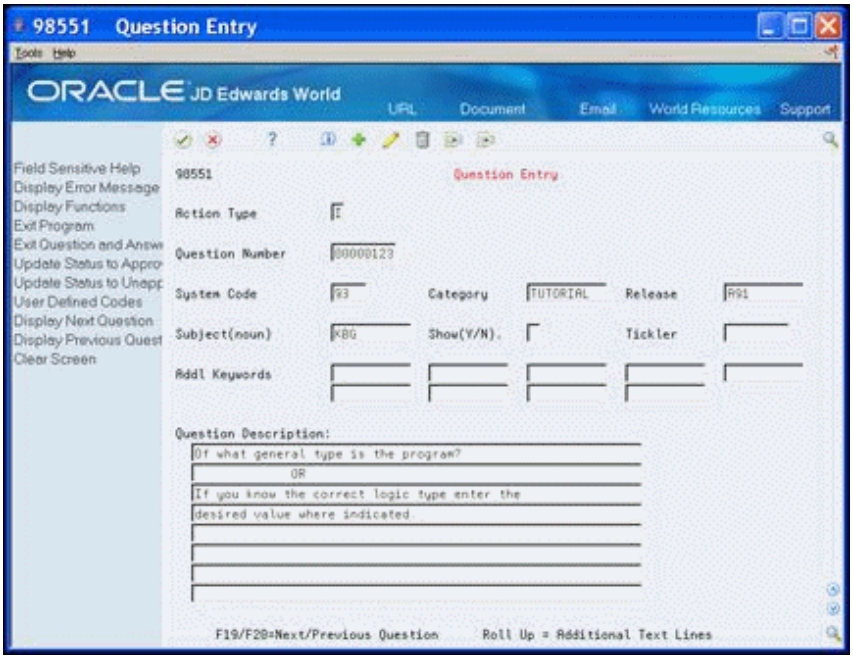
Figure 33–1 Simple Question & Answer screen



2. On Question Entry, complete the following field:
   - Question Number

   The question detail displays.

Figure 33–2 Question Entry screen



3. To review the answers to the master question Click Change.

33.3 Adding New Q & A Dialogue

You can create your own questions and answers by completing the Add New Q & A Dialogue field.

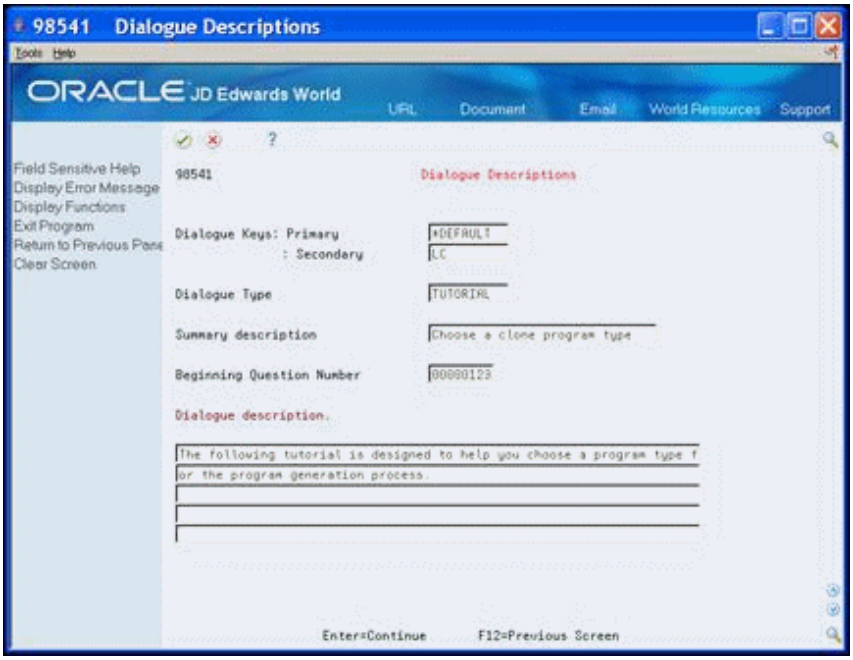
The dialogue the CASE tool uses to determine the program type is Primary Key *Default, Data Item LC.

To add new Q&A dialogue

1. On Simple Question & Answer, enter Y in the following field:
   - Add New Q & A Dialogue

   The Dialogue Descriptions screen displays.
2. Complete the following fields:
   - Dialogue Keys: Primary
   - Dialogue Keys: Secondary
   - Dialogue Type
   - Summary description
   - Beginning Question Number
   - Dialogue description

Figure 33–3 Dialogue Descriptions screen

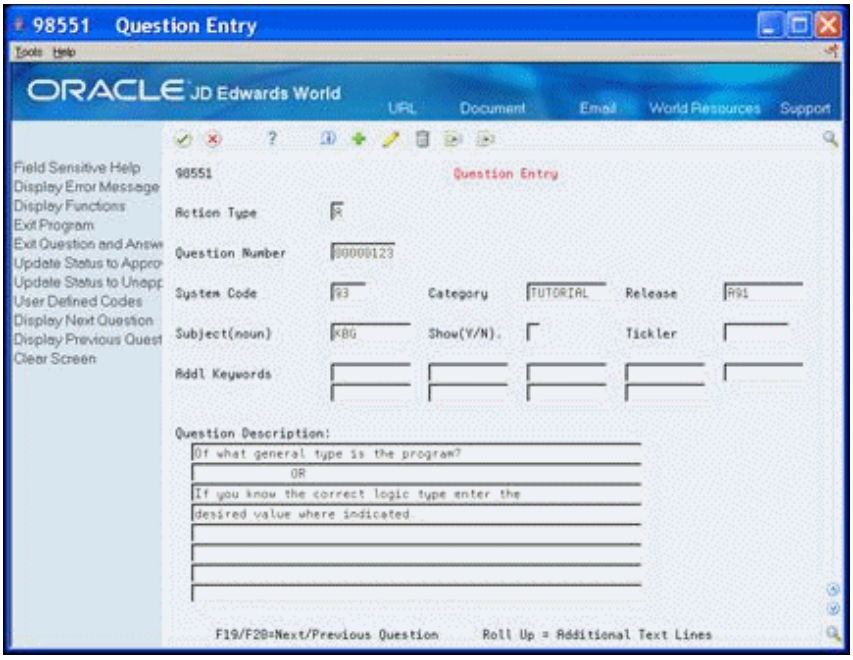


   The first Question Entry screen displays.
3. Complete the following fields:
   - Question Number
   - System Code
   - Category

- Release
- Subject
- Show
- Tickler
- Question Description

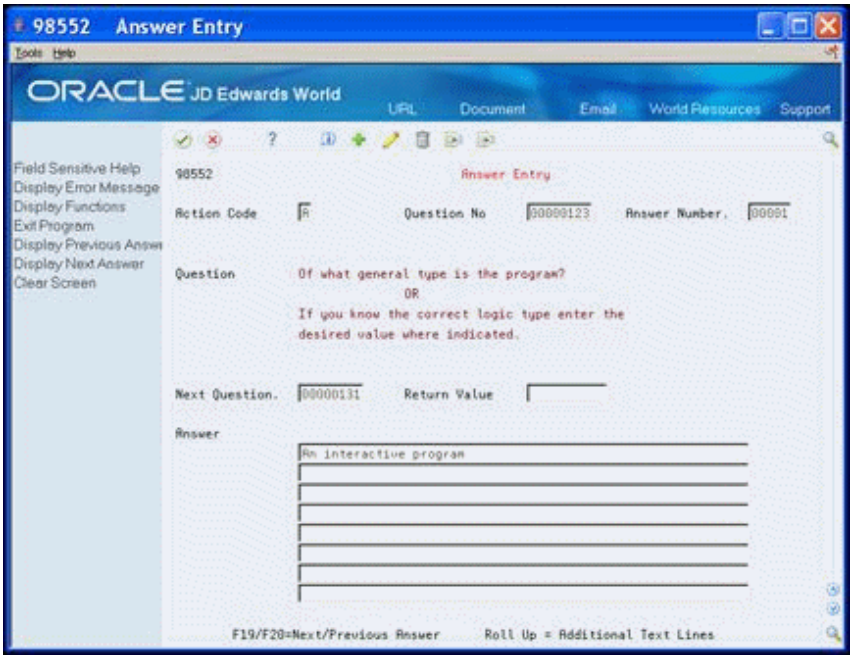
4. Complete the following field to assist in future searches for this question:
   - Additional Keywords

Figure 33–4 Question Entry (New) screen



The Answer Entry screen displays.

Figure 33–5 Answer Entry screen



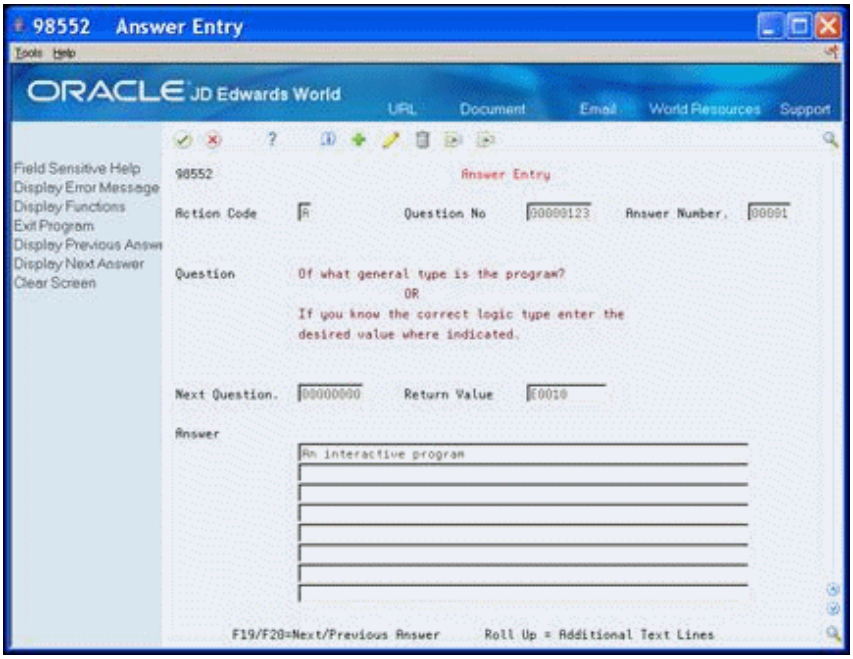
5. Complete the following fields:
   - Question Number
   - Answer Number
   - Next Question
   - Answer
6. Optionally, complete the Return Value field.

   The Return Value field can contain a member name, or *PROMPT. *PROMPT lets the user manually complete the Return Value field.

   The following screen illustrates the use of the Return Value field. The return value is the program type for an interactive window program. In this case, there is no next question. The dialogue ends after the system enters the value E0010.

   When you click Add the value in the Next Question field changes. There is no value in the Return Value field. For any question, there is either a value in the Return Value field or the Next Question field.

Figure 33–6 Answer Entry (Next Question) screen



For an existing question and answer, you choose Display Next Question (F19) and Display Previous Question (F20) to review all other possible answers for this question.

7. To create a second answer to the question, click Enter.

   The screen clears.

8. Enter the number of the next answer in the following field:

   - Answer Number

9. Repeat the previous steps as necessary to enter the next question and answer.
10. To define the next question, click Exit to return to the Question Entry screen.
11. Repeat the previous steps as necessary to enter questions and answers.
12. Click Exit until the Simple Question & Answer screen displays.

33.4 Working with an Existing Dialogue

You can perform the following tasks using the Update Existing Q & A Dialogue feature:

- To review a dialogue flow
- To change a dialogue
- To copy a dialogue
- To rename a dialogue
- To run a dialogue
- To delete a dialogue
- To run a quiz

To perform these tasks, choose Update Existing Q & A Dialogue on the Simple Question and Answer screen to access the Dialogue Lists screen.

On Dialogue Lists, you can use the following values in the Option field:

2 - Change the questions and answers for the Dialogue

3 - Copy one dialogue to another dialogue

5 - Run the Q & A. You can specify the number of responses to allow.

6 - Flow displays the flow of the Q&A and how one question leads to another. You can access Q&A Revisions from the flow.

7 - Rename

9 - Delete

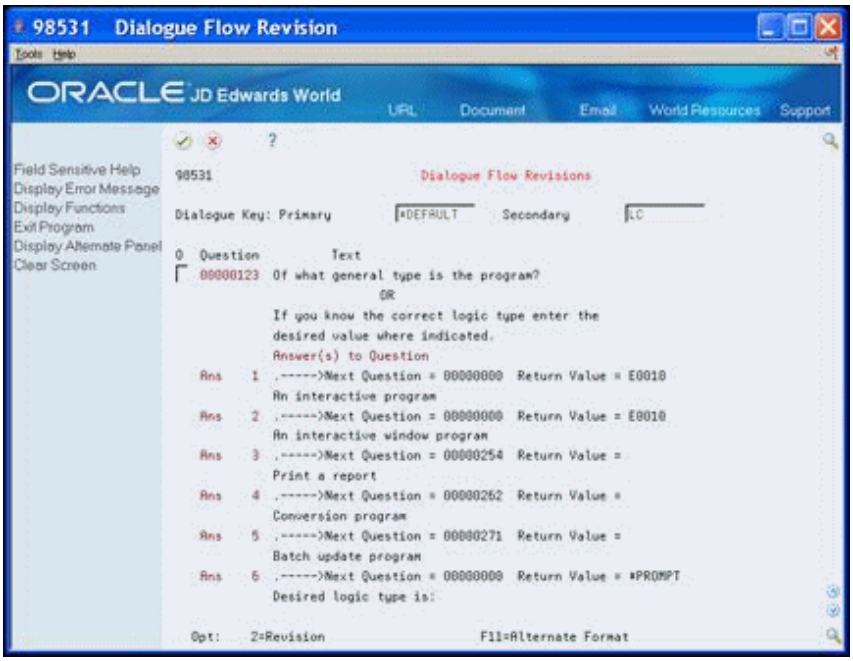
11 - Take a quiz from this screen

To review a dialogue flow

1. On Dialogue Lists, enter 6 in the Option field.

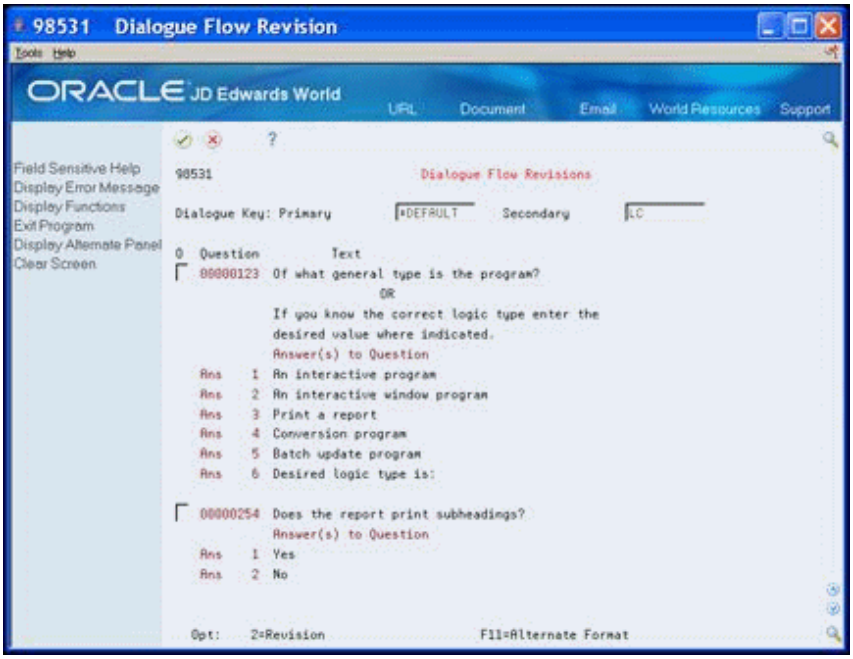
   The Dialogue Flow Revisions screen displays.

Figure 33–7 Dialogue Flow Revision screen



2. Choose Alternate Format (F11) to view the Alternate Format.

Figure 33–8 Dialogue Flow Revision (Alternate Format) screen



To change a dialogue

1. On Dialogue Lists, enter 2 in the Option field next to the dialogue you want to change.

   The Question Entry screen displays.

2. Click Change.

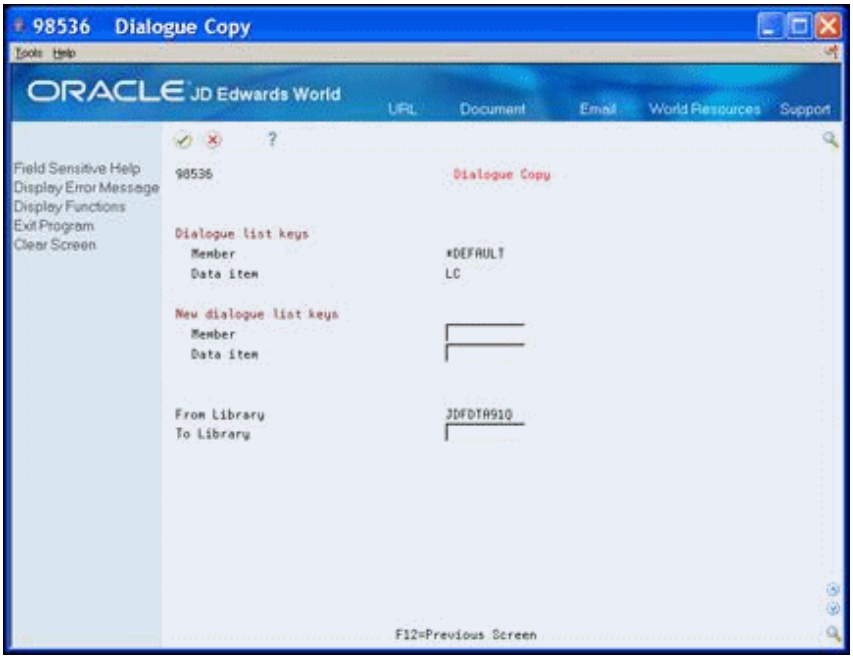
3. Make the changes to the questions and answers.

To copy a dialogue

1. On Dialogue Lists, enter 3 in the Option field next to the dialogue you want to copy.

   The Dialogue Copy screen displays.

Figure 33–9 Dialogue Copy screen



2. Enter the name of the new dialogue list keys (primary key) in the following field:
   - Member
3. Enter the name of the new dialogue list keys (secondary key) in the following field:
   - Data item
4. Enter the name in which the new dialogue resides in the following field:
   - To Library

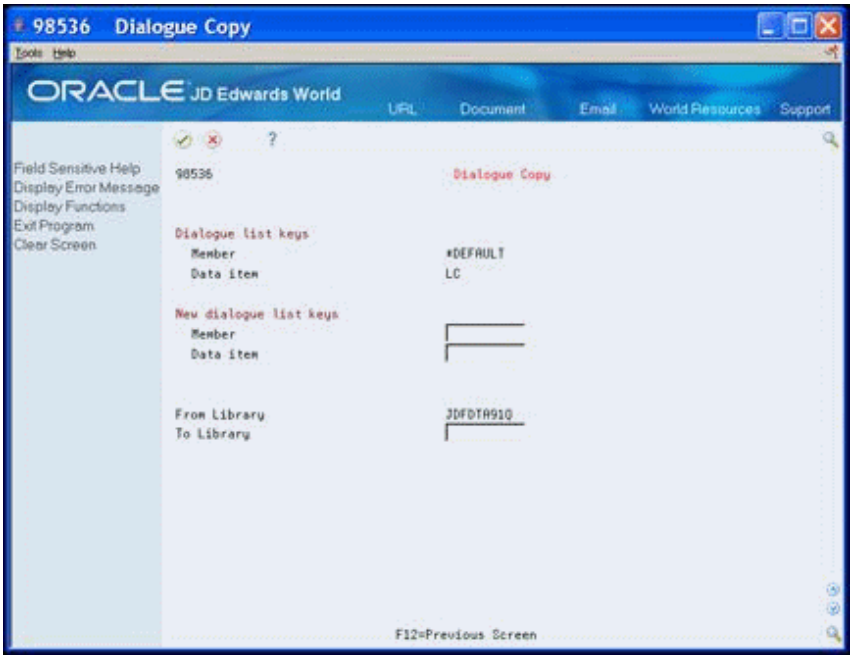
   The system copies the dialogue.

To rename a dialogue

1. On Dialogue Lists, enter 3 in the Option field next to the dialogue you want to rename.

   The Dialogue Copy screen displays.

Figure 33–10 Dialogue Copy (Rename) screen



2. Enter the name of the primary key in the following field:
   - Member
3. Enter the name of the secondary key in the following field:
   - Data item
4. Enter the name in which the new dialogue resides in the following field:
   - To Library

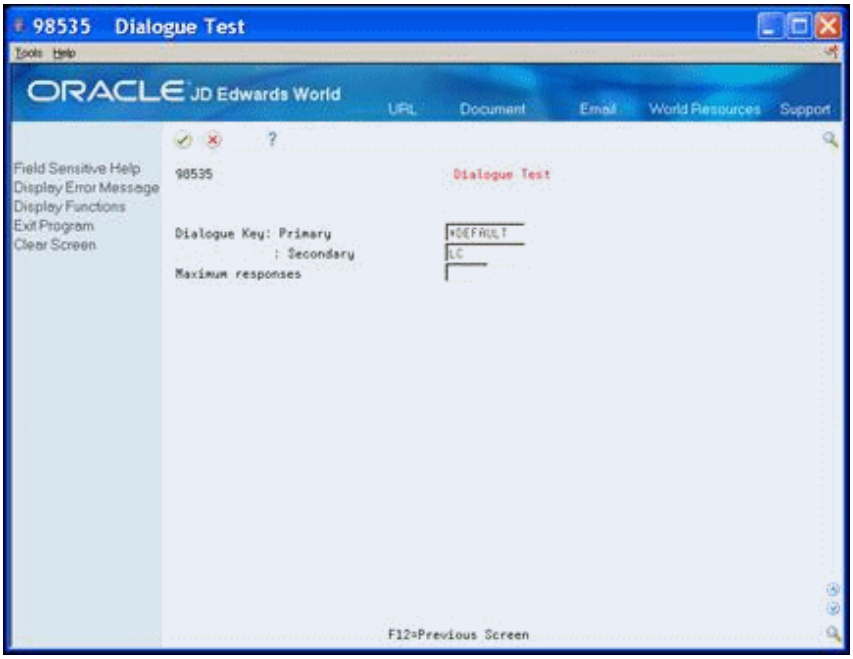
   The system renames the dialogue.

To run a dialogue

1. On Dialogue Lists, enter 5 in the Option field next to the dialogue you want to run.

   The Dialogue Test screen displays.

Figure 33–11 Dialogue Test screen



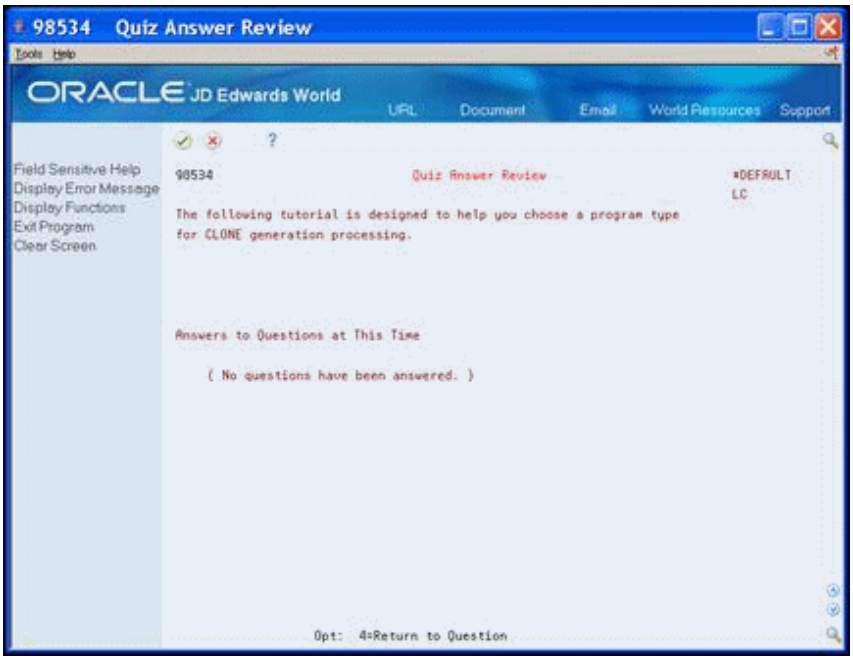
2. Enter a number for the maximum number of times you want to run this dialogue in the following field:

   - Maximum responses

   The questions of the dialogue display in sequence. When you reach the last question, a message displays at the bottom of the Dialogue Selection screen.

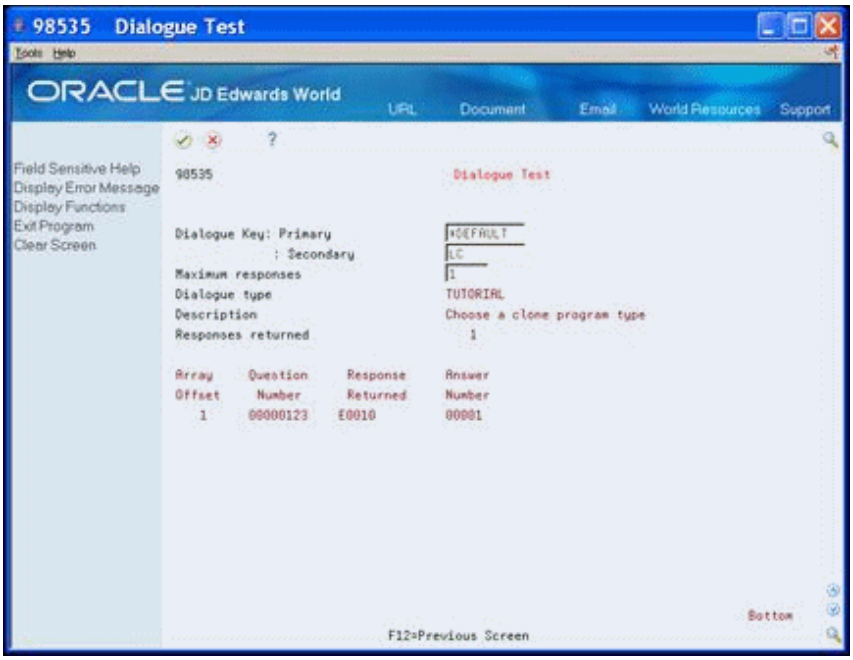
3. Choose Review Selections (F5) when the last question displays, to access the Quiz Answer Review screen.

Figure 33–12 Quiz Answer Review screen



4. The screen displays with the information about your answers. To review the remaining questions and answers, choose Display Next Question (F19) and Display Previous Question (F20).
5. Enter 4 to return to a specific question.
6. Click Exit on the last question screen to display the Dialogue Test screen.

Figure 33–13 Dialogue Test (Exit) screen



The Dialogue Test screen displays the values for number of times the dialogue was run, the Responses Returned at the end of the dialogue, and the Answer Number of the last question.

7. Click Exit (F3) to return to the Dialogue Lists screen.

To delete a dialogue

On Dialogue Lists, enter 9 in the Option field next to the dialogue you want to delete.

The system deletes the dialogue.

To run a quiz

To run a quiz, the dialogue type must be QUIZ.

1. On Dialogue Lists, enter 11 in the Option field next to the quiz you want to run.

   The first question of the quiz displays.

2. Answer the questions.

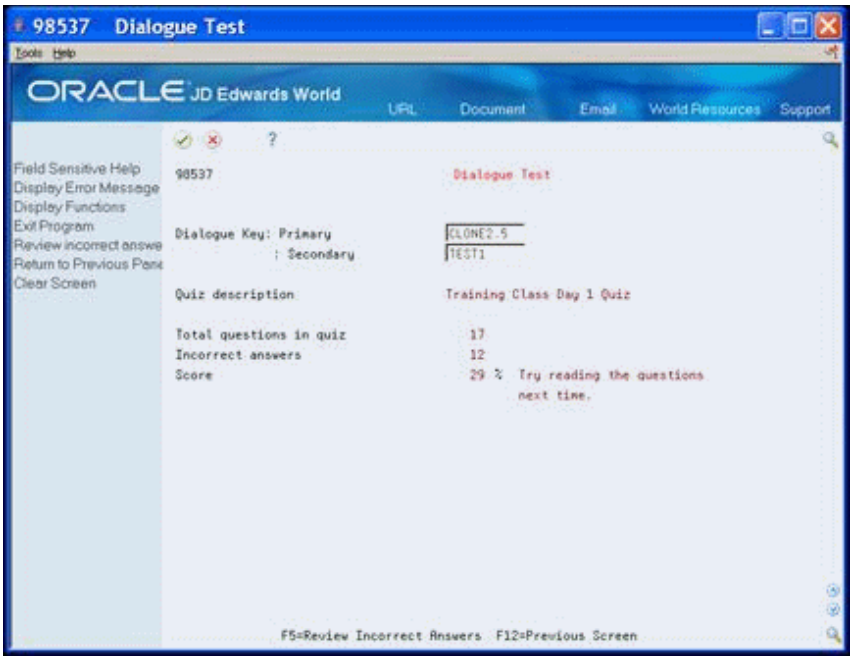
   When you finish answering the questions, a message displays at the bottom of the last screen, Question and Answer complete.

3. Perform one of the following:
   - To review choose Review Incorrect Answers (F5)
   - Click Enter

When you choose Review Incorrect Answers, the questions and answers display on the screen. When you click Enter, the system calculates the number of errors and displays your score.

Choose Review Incorrect Answers (F5) from this Dialogue Test screen to review your errors.

Figure 33–14 Dialogue Test (Review Incorrect Answers) screen



34

Create User Defined PDL

This chapter contains the topic:

- Section 34.1, "Creating User Defined PDL."

34.1 Creating User Defined PDL

You attach *PROCs to either a master file field or to a device file field (screen or report). If you attach them to a master file field, then the system places the code it generates in S005. If you attach them to a device file field, then the system places the code it generates in S004.

The purpose of User Defined PDL Entry Points is to allow you to create *PROCs in any subroutine and to allow them to exist without attaching them to a master file field or device file field. You define the entry points within subroutines where you enter PDL code using the Detailed Programming Facility. User Defined PDL Entry Points are a functional directive that you can enter into a primary logic module.

The User Defined PDL Entry Points cause the system to create RPG code in the same manner as users entering the PDL using the Detailed Programming Facility; however, you connect it to logic modules instead of fields.

In any primary logic module you can insert up to 99 PDL directives. Ordinarily, you number the first one PDL01, the second one PDL02, and so forth. PDL directives do not have to be in sequential order; however, each PDL directive must have a unique number within that logic module.

For all single record maintenance forms, you create a user defined PDL entry point in the mainline subroutine. Enter PDL to bring in a default value for a constant field.

For example, change the logic module MAINLINE because this module creates the mainline code for all single record maintenance forms.

Before You Begin

You must be able to locate program types and logic modules. See Section 30.4, "Creating or Modifying Program Types" and Chapter 31, "Work with Logic Modules."

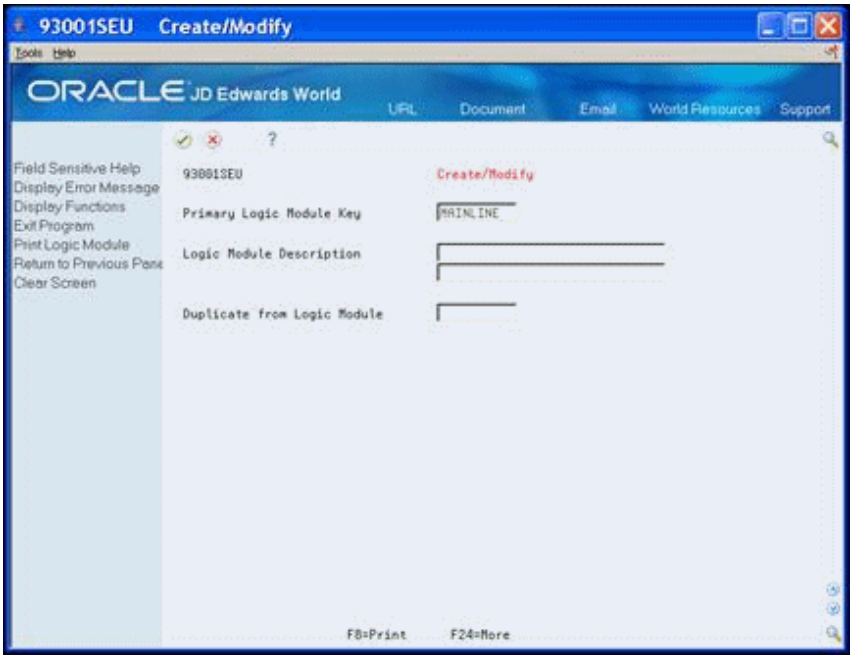
To create user defined PDL

Navigation

From Model Program Design Menu (G9361), under LOGIC MODULES, choose Create/Modify

1. On Create/Modify (Logic Module), access the Edit screen.

Figure 34–1 Create/Modify (User Defined PDL) screen



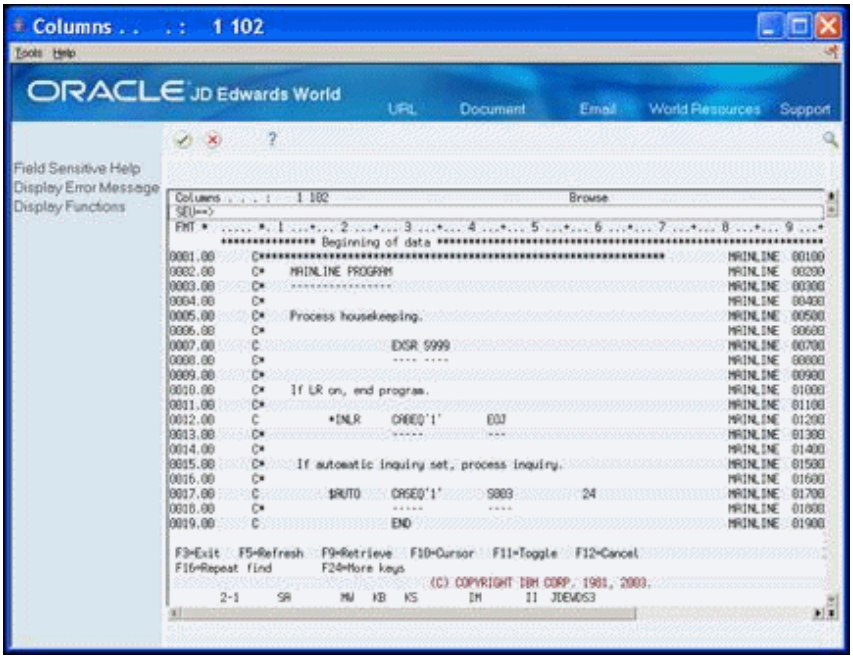
2. On the Edit screen, create the user defined PDL entry points within the affected primary logic modules.

   The naming convention for user defined PDL entry points is PDLxx, where xx is a two digit number between 01 and 99.

   You can either add the PDL directive to an existing line of code that does not contain a directive, or insert a new line and enter the directive on this line. The directive goes in positions 1 to 5 of the source line. If you insert a new line, remember to add the source sequence and serial number in the appropriate columns. (Move to column 80.)

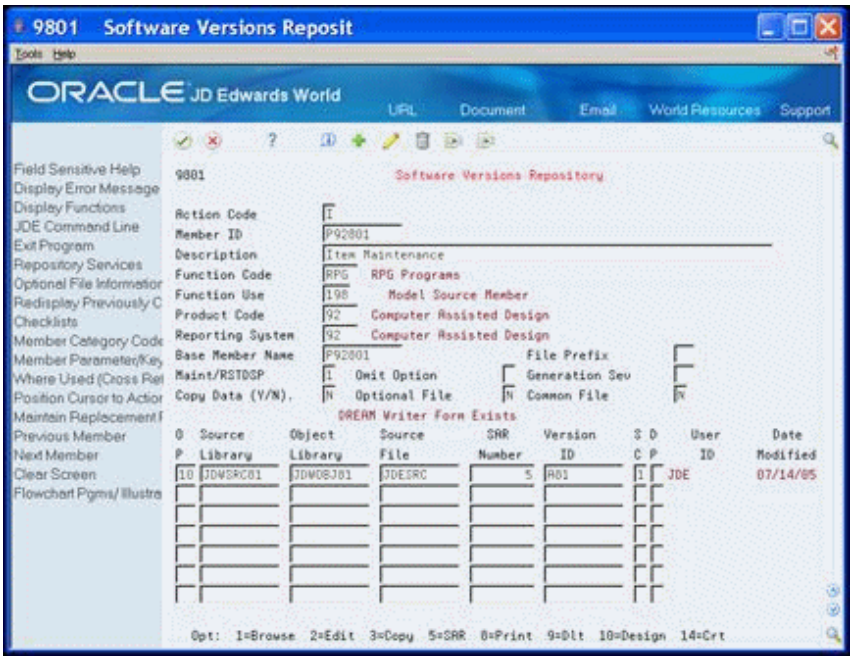
   In this example, you enter PDL01 on line 9. Any PDL code that you enter for this entry point will come immediately after the statement EXSR S999 and before the test for *INLR.

Figure 34–2 Edit PDL Code screen



3. Access the Software Versions Repository and locate the member.

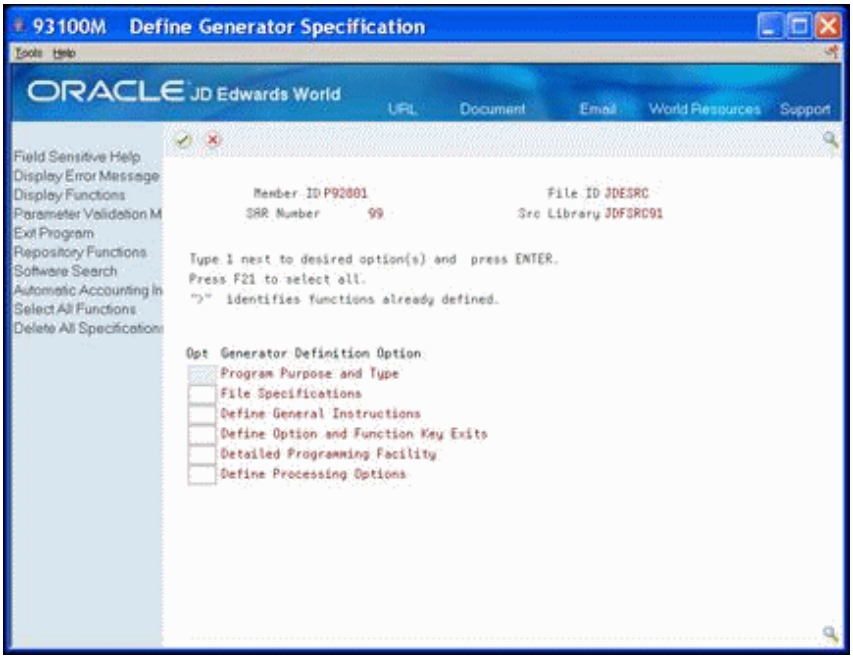
Figure 34–3 Software Versions Repository (User Defined PDL) screen



4. Enter 10 (Design) next to the environment in the Option field:

   The Program Generator Specification screen displays.

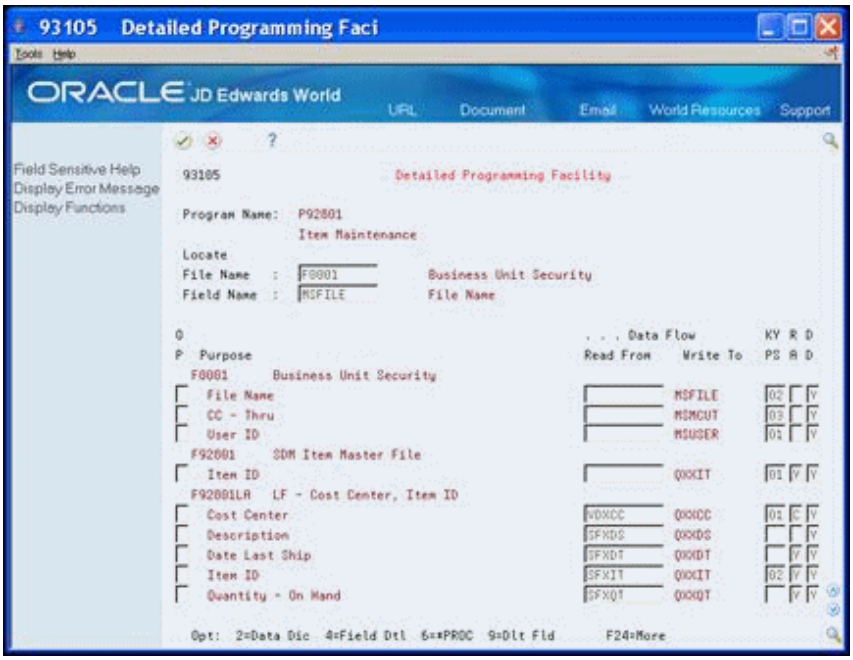
Figure 34–4 Define Generator Specification (User Defined PDL) screen



5. On Define Generator Specification, enter 1 in the Option field to access the Detailed Programming Facility:

   The Detailed Programming Facility screen displays.

Figure 34–5 Detailed Programming Facility (User Defined PDL) screen

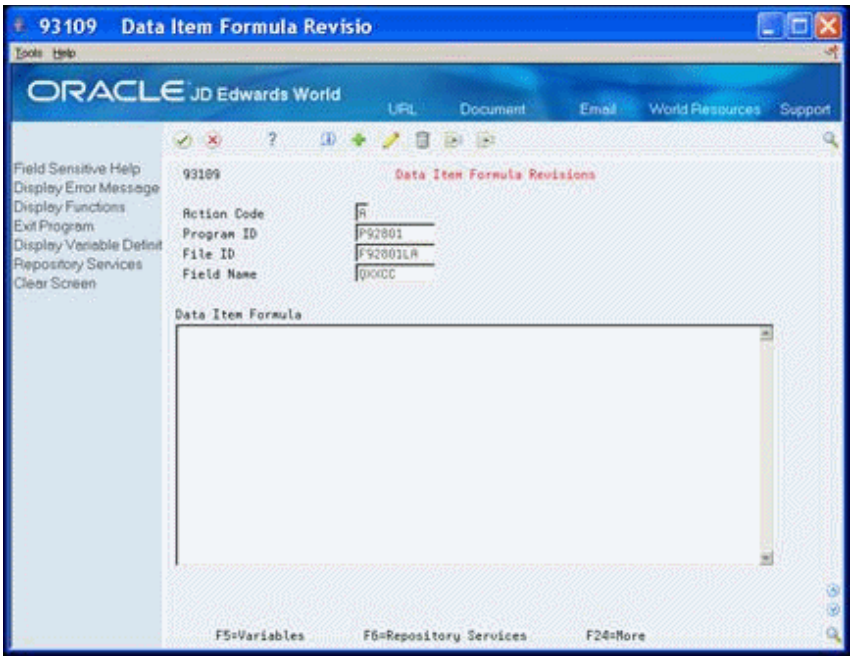


6. Enter the PDL code through the Detailed Programming Facility.

   All user defined PDL entry points appear after the form or report file fields in the Detailed Programming Facility.

7. On Detailed Programming Facility, enter 6 in the Option field to access Data Item Formula Revisions.
8. Enter the PDL code.

Figure 34–6 Data Item Formula Revisions (User Defined PDL) screen



A

Program Generator Checklist

This appendix contains these topics:

You can use the following to aid you as you use the Program Generator. It includes topics that you should consider as you use the Program Generator.

A.1 Data File Design Aid

Attempt to create files with keys to avoid having to process by relative record numbers. Processing by relative record numbers is more complex than processing by keys.

A.2 Screen Design Aid

For Subfile Programs, you should define:

- A hidden field for the parts of the file key that the subfile video uses if you create a maintenance subfile.
- The hidden field, SH#RRN if processing by relative record numbers.
- A hidden field for the data structure if processing by relative record numbers.

You should:

- Note the video fields that relate to VC0 fields. You need this information in the Detailed Programming Facility in order to load the VC0 fields.
- Note the error indicators the system assigns to screen fields.
- Prepare final checks:
  - Did you assign the Default Cursor keyword to a video field?
  - Did you allow for upper and lower case on description fields?
  - Did you specify a K in the Edited field for the key fields only?

Note: The Screen Design Aid is currently not available in the Java platform for JD Edwards World software. You must perform these tasks using the green screen platform of the software.

A.3 Report Design Aid

- Change the Start/End lines for format HEADING1 from 1-4 to the length you need. Usually 1-8 will suffice.
- Add DETAIL1 format.
- Add TOTAL1 format if using hierarchical (dynamic) totaling. You must include one or all of the following fields which enable dynamic totaling:

  VC1ROW, VC1KEY, VC1DSC, VC0TO2
- Add HEADING2 format if using subheadings. You must include one or all of the following fields that enable subheadings to work properly:

VC0ROW, VC0KEY, VC0DSC

A.4 Program Generator

- All Programs:
  - Ensure the CAP Status is set to Y. If CAP Status is not set to Y, then something could have ended abnormally.
  - Verify the program type.
- File Specifications:
  - You must specify one file with an M. Do not specify one file with an M and another with a 1 as the Program Generator views both files on an equal basis. Specify the main file as an M and subsequent files starting with 2.
  - You must specify a video or report file.
  - You cannot include description files if a field is in the HEADING2 format for a report.
- Option and Function Exits:
  - Ensure the program the system is launching is setup to accept parameters sent by the function key or selection exit.
  - Modify any CL programs that also launch a program to send blank parameters. For example, CALL Pxxxxx PARM( )
  - Ensure the program to retrieve exists before using it on this screen.
  - Attempt to send PSxxxx fields instead of VDxxxx or SFxxxx fields.
  - May inadvertently change in the program the system launches.
  - You might have to define and load the PSxxxx fields manually.
- Detailed Programming Facility:
  - Enter N in the Entry Optional field for key fields in a subfile. You specify this for the subfile fields, not the hidden fields as it enables the delete function.
  - Link VC0 fields to description files.

  - Use PDL in the Detailed Programming Facility to:
  - Affect subroutine S005 when you enter it with a data base field.
  - Affect subroutine S004 when you enter it with a video field.
  - Use the Return keyword to omit the standard code the Program Generator creates.
- Specify a PLIST sequence if the program is going to receive parameters from another program. Use the video fields for this instead of the file fields.
- Use *OUTPUT to retrieve the row description from the Data Dictionary for fields that you only use in the HEADING2 format and not the DETAIL1 format.

B

Programming Standards

This appendix contains these topics:

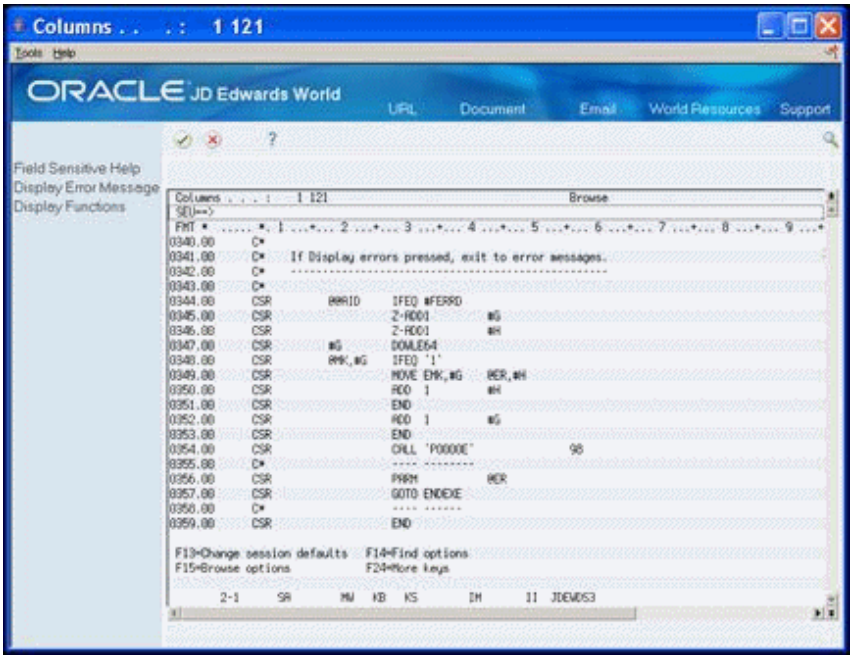
B.1 Error Handling

JD Edwards World includes an efficient means of handling errors using arrays. The following illustrate the error handling arrays within the Single Record Maintenance Program.

- The EMK array contains the four byte data dictionary name of every error that can occur in this program.
- The @MK array maintains an indicator for each error in EMK. If one of the errors occurs, the system activates the indicator.
- The @ER array loads the error messages when you choose Display Error Message (F7) to view the errors.

The code to launch the error message handling program follows.

Figure B–1 Error Message Handling Program Code screen



If an error indicator is set to one, the program moves the corresponding data item from the array of all possible errors (EMK) into the array of the errors (@ER).

The system loads the array which contains every possible error for this program only once (in S999).

B.2 Indicator Usage

There are 99 indicators available for use. JD Edwards World groups them by purpose and includes standards for the use of the indicators that are in the following table. JD Edwards World does not include standards for indicators that are not in the following table.

INDICATOR	DESCRIPTION
01	Causes the Invalid Function Key Pressed message to display
02	Dictates the color palette to use
04	Controls subfile keywords SFLDROP and SFLFOLD for fold areas
20	Controls the clear screen action code
21	Controls the add action code
22	Controls the change action code
23	Controls the delete action code
24	Controls the inquire action code
31	The system uses this in conjunction with subfile processing to initiate the INVITE or SFLCLR keyword
32	The system uses this in conjunction with subfile processing initiating the keyword SFLNXTCHG
37	The system uses this in conjunction with subfile processing to highlight the last record in the display (used only with inquiry subfiles)

INDICATOR	DESCRIPTION
38	The system uses this in conjunction with subfile processing to control the display keyword SFLDSP
42-79	The system uses this for error processing to indicate which fields are in error
40	The system reserves this for errors in the Action Code field
41	The system reserves this for errors in the key fields
80-89	Indicates a general reusable one-time indicators
93	Indicates global error indicator that highlights line 24
98	Indicates a chain or read failure
99	Indicates a record is in use
OF	Indicates overflow for report processing
LR	Indicates that the last record has been read and the program should end normally
RT	Indicates that a temporary or final halt in the program should take place and returns to the calling program leaving files open

B.3 Naming Conventions

Use the following characters in the first place of the naming convention to distinguish different item names:

@ - Array names

$ - Field names the program creates for flags and work fields

- Fields you define in common subroutines

B.4 Key List (KLIST)

Define key lists in the housekeeping subroutine.

Begin the key list name with the data file prefix. For example, the Address Book Master file prefix is AB, so the key list would be ABKY01.

The program generator creates key lists using the following naming conventions:

- XXKY01 for physical files where XX = the file prefix. For example: ABKY01
- When a physical file needs to have more than one key list in a program, you denote the successive files by the last character. For example, for three key lists for the physical F0101, the key lists are: ABKY01, ABKY02, and ABKY03.
- XXKY0x for logical files where XX is equal to the file prefix and X is equal to the last letter of the logical file name. For example: ABKY0A for F0101LA, ABKY0B for F0101LB
- When a logical file needs to have more than one key list in a program, you denote the successive files by the penultimate character. For example, the three key lists for the logical F0101LA are: ABKY0A, ABKY1A, and ABKY2A.

B.5 Work Fields

Define work fields only once within a program. JD Edwards World recommends that you use the LIKE DEFN command to define work fields when their attributes directly tie to those of database fields.

For example, if the work field needs to have the same attributes as a field that exists in a file:

MOVE ABANS $ANS,

You then define $ANS as follows:

*LIKE DEFN ABANS $ANS

The advantage of this method is that the work field and database field retain the same attributes even if the database field changes.

When using work fields as an indicator, you should assign the prefix $ and enter descriptive text for the remainder of the name. For example, a work field name such as $GLOBL is more descriptive than a field name such as $G.

For numeric indices, use the fields in the data structure I00DSINX.

B.6 Current Date and Time

When retrieving the current date and time, use the TIME operation code instead of UDATE. UDATE obtains the date format of the system on which you compiled the program. You cannot change the date format without recompiling the program. TIME uses the system's date format when it executes the operations code.

Note: The TIME operation requires significant system resources. If possible, use it only once for a program. Typically, this would occur in the Housekeeping Subroutine (S999).

Always use program X0028 to edit dates and format them for output.

C

CASE Program Types

This appendix contains these topics:

- Section C.21, "X0030 - Batch Update with Subroutine S001,"
- Section C.22, "X0040 - Batch Update with Report,"
- Section C.23, "Y0010 - Conversion, Two Files with Error Report,"
- Section C.24, "Y0020 - Conversion, One File Update with Error Report,"
- Section C.25, "Y0030 - Conversion, One File Write with Error Report."

This appendix includes each program type, the requirements for each program type, and its use. Use this as a quick reference for all program types.

C.1 Guidelines

The following are optional:

- General help instructions, however JD Edwards World highly recommends you include these.
- Detail (fold) areas and AAIs within program types.
- Processing Options. Define processing options for batch processing. The step in the program generator which automatically includes the logic to retrieve this information is subroutine S999. Define the special calculations to use the processing options.
- User defined options and function exits for all program types.
- Calculations you can create using Program Design Language in the Detailed Programming Facility.
- VC0 description fields updates.

C.2 A0010 - Interactive Subfile Inquiry

C.2.1 Description

Use this program type to create an interactive subfile program. This subfile program is for inquiry purposes only. This program type processes a single master file by key. You cannot set the Lockout Action Codes fields. Create a display file prior to generating this program type.

C.2.2 Display File Definition

This program type scrubs the key fields in the control format of the display file prior to processing the master file. The key fields are noted by updating the Edited Field in the Field Definition screen of the Screen Design Aid (SDA) with the value K. If you are using the Data Base Field Selection feature in SDA, the known key field updates automatically.

The use of an Action Code is optional. Enter a default cursor location if there is no action code.

C.2.3 CL Program Definition

Copy and revise the model CL program J98MODEL1 to create a CL program to use with this program type. You can use the Quick Start CL Generator to automatically create your CL program.

C.2.4 File Specifications

This program type requires that you define a single master file and a display file. The master file contains M or 1 in the Input column. The display file begins with a V and has blank selection columns. Add files to retrieve descriptions if necessary.

C.2.5 Detailed Programming Facility

Use a key list for record retrieval from the master file. If you are not using the complete key list, update the Key Sequence Field in the Detailed Programming Facility to include only those data items which are necessary. This key list should match your key field definition from the control format of the display file.

C.2.6 Special Considerations

Add special logic if you want to process the master file using the key as a restrictive key. The default logic performs a SETLL which positions the records from the file using the key and then scans without a key until the subfile fills.

C.2.7 Quick Start Generation

You can generate this program type using the Quick Start CL Generator.

C.3 A0020 - Interactive Single Record Inquiry

C.3.1 Description

Use this program type to create an interactive single record program. This program is for inquiry purposes only. Create a display file prior to generating this program type. This program type processes a single master file by key.

C.3.2 Display File Definition

This program type scrubs the key field in the display file prior to processing the master file. The key field is noted by updating the Edited Field in the Field Definition screen of SDA with the value K. If you are use the Data Base Field Selection feature in SDA, the known key field updates automatically.

The use of an Action Code is optional. Enter a default cursor location if there is no action code. This program type does not use Lockout Action Codes.

C.3.3 CL Program Definition

Copy and revise the model CL program J98MODEL1 to create a CL program for use with this program type. Use the Quick Start CL Generator to automatically create your CL program.

C.3.4 File Specifications

This program type requires that you define a single master file and a display file. The master file contains M or 1 in the Input column. The display file begins with V and has blank selection columns. Add files to retrieve descriptions if necessary.

C.3.5 Special Considerations

This program type uses a key list for record retrieval from the master file. This key list should match your key field definition from the control format of the display file. One record displays per inquiry.

C.3.6 Quick Start Generation

You cannot generate this program type using the Quick Start CL Generator.

C.4 B0010 - Interactive Single Record Maintenance

C.4.1 Description

Use this program type to create an interactive single record maintenance program. Create a display file prior to generating this program type. This program type processes a single master file by key.

C.4.2 Display File Definition

This program type scrubs the key field in the display file prior to processing the master file. The key field is noted by updating the Edited Field in the Field Definition screen of SDA with the value K. If you are using the Data Base Field Selection feature in SDA, the known key field updates automatically.

You must use an Action Code. Lockout Action Codes are optional.

C.4.3 CL Program Definition

Copy and revise the model CL program J98MODEL1 to create a CL program to use with this program type. Use the Quick Start CL Generator to automatically create your CL program.

C.4.4 File Specifications

This program type requires that you define a single master file and a display file. The master file contains M or 1 in the Update column. The display file begins with a V and has blank selection columns. Add files to retrieve descriptions if necessary.

C.4.5 Detailed Programming Facility

Use a key list for record retrieval from the master file. If you are not using the complete key list, update the Key Sequence Field in the Detailed Programming Facility to include only those data items which are necessary. This key list should match your key field definition from the control format of the display file.

C.4.6 Quick Start Generation

Generate this program type using the Quick Start CL Generator.

C.5 C0010 - Batch Report with Totals

C.5.1 Description

Use this program type to create a batch report program that you manipulate using DREAM Writer. Create a printer file prior to generating this program type. This program type processes a single master file. You choose the data for the batch report using DREAM Writer Data Selection and Data Sequence parameters. The Batch Report with Totals program type does not use Lockout Action Codes and user defined options and function exits.

C.5.2 Printer File Definition

This program type requires that formats HEADING1 and DETAIL1 exist in the printer file. Format TOTAL1 is optional for totals.

C.5.3 CL Program Definition

Copy and revise the model CL program J98MODEL6 to create a CL program to use with this program type. Use the Quick Start CL Generator to automatically create your CL program.

C.5.4 File Specifications

This program type requires that you define a single master file and a printer file. The master file contains M or 1 in the Input column. The printer file begins with R and has blank selection columns. Add files to retrieve descriptions if necessary.

C.5.5 Special Considerations

If you are printing totals using format TOTAL1, use the special keywords for Data Dictionary description (VC1ROW), data key field (VC1KEY), and data key description (VC1DSC).

When creating your DREAM Writer Version, ensure that the value of 2 is in the Type Report Totaling field on the Additional Parameters screen. This allows hierarchal totaling and page breaks in the Data Sequence.

C.5.6 Quick Start Generation

Generate this program type using the Quick Start CL Generator.

C.6 C0020 - Batch Report with Totals and Subheadings

C.6.1 Description

Use this program type to create a batch report program that you manipulate using DREAM Writer. Create a printer file prior to generating this program type. This program type processes a single master file. You choose the data for the print program using DREAM Writer Data Selection and Data Sequence parameters. The Batch Report with Totals and Subheadings program type does not use Lockout Action Codes and user defined options and function exits.

C.6.2 Printer File Definition

This program type requires that formats HEADING1, HEADING2 and DETAIL1 exist in the printer file. Format TOTAL1 is optional for totals.

C.6.3 CL Program Definition

Copy and revise the model CL program J98MODEL6 to create a CL program for use with this program type. Use the Quick Start CL Generator to automatically create your CL program.

C.6.4 File Specifications

This program type requires that you define a single master file and a printer file. The master file contains M or 1 in the Input column. The printer file begins with an R and has blank selection columns. Add files to retrieve descriptions if necessary.

C.6.5 Special Considerations

If printing totals using format TOTAL1, use the special keywords for Data Dictionary description (VC1ROW), data key field (VC1KEY), and data key description (VC1DSC).

If printing subheadings using format HEADING2, use the special keywords for Data Dictionary description (VC0ROW), data key field (VC0KEY), and data key description (VC0DSC).

When creating your DREAM Writer Version, ensure that the value of 2 is in the Type Report Totaling field on the Additional Parameters screen. This allows hierarchal totaling and page breaks in the Data Sequence.

C.6.6 Quick Start Generation

Generate this program type using the Quick Start CL Generator.

C.7 C0025 - Batch Report with Totals and Subheadings

C.7.1 Description

Use this program type to create a batch report program that you manipulate using DREAM Writer. Create a printer file prior to generating this program type. This program type processes a single master file. You choose the data for the print program using DREAM Writer Data Selection and Data Sequence parameters. The Batch Report with Totals and Subheadings program type does not use Lockout Action Codes and user defined options and function exits.

C.7.2 Printer File Definition

This program type requires that formats HEADING1, HEADING2 and DETAIL1 exist in the printer file. Format HEADING2 is the format that prints subheadings. Format TOTAL1 is optional for totals.

C.7.3 CL Program Definition

Copy and revise the model CL program J98MODEL6 to create a CL program for use with this program type. Use the Quick Start CL Generator to automatically create your CL program.

C.7.4 File Specifications

This program type requires that you define a single master file and a printer file. The master file contains M or 1 in the Input column. The printer file begins with R and has blank selection columns. Add files to retrieve descriptions if necessary.

C.7.5 Special Considerations

This program type is not a Q&A response in the Program Purpose and Type step. To use this program type, enter an X in the first Q&A question to provide this program type name.

This program type is identical to C0020 except that the subheadings headings print above the column headings. When you use this program type, control the page breaks to match the subheadings.

If you are printing totals using format TOTAL1, use the special keywords for Data Dictionary description (VC1ROW), data key field (VC1KEY), and data key description (VC1DSC).

If printing subheadings using format HEADING2, use the special keywords for Data Dictionary description (VC0ROW), data key field (VC0KEY), and data key description (VC0DSC).

When creating your DREAM Writer Version, ensure that the value of 2 is in the Type Report Totaling field on the Additional Parameters screen. This allows hierarchal totaling and page breaks in the Data Sequence.

C.7.6 Quick Start Generation

You cannot generate this program type using the Quick Start CL Generator.

C.8 D0010 - Interactive Subfile Maintenance with Action Code, without Options, by Relative Record Number

C.8.1 Description

Use this program type to create an interactive subfile maintenance program. Create a display file prior to generating this program type. This program type processes two master files. The primary master file is keyed and controls the sequence in which the records display. The secondary master file processes by relative record number and controls the database updates.

C.8.2 Display File Definition

This program type scrubs the key field in the control format of the display file prior to processing the master file. The key field is noted by updating the Edited Field in the Field Definition screen of SDA with the value K. If you use the Data Base Field Selection feature in SDA, the known key field update automatically.

You must use an Action Code. Lockout Action Codes are optional.

The system stores the record number of each subfile record in a hidden relative record number field. Add the field SH#RRN to the subfile format with S in the Type field and 9.0 in the Size field, using the Display All Defined Fields in the SDA.

C.8.3 CL Program Definition

Copy and revise the model CL program J98MODEL1 to create a CL program for use with this program type. Use the Quick Start CL Generator to automatically create your CL program.

C.8.4 File Specifications

This program type requires that you define a keyed master file, a secondary master file which is not keyed, and a display file. The master file contains 1 in the Input column. You enter a value in the File Information Data Structure field in the fold area of the primary master file. The secondary master file contains 2 in the Update column and N in the Keyed (Y/N) field in the fold area. The display file begins with a V and has blank selection columns. Add files to retrieve descriptions if necessary.

C.8.5 Detailed Programming Facility

Use a selection exit 4 to exit to the Detailed Programming Facility for the subfile field controlling the update to the database. Enter N in the Entry Optional field. Entering N informs the program generator that the user must complete this field before the system updates the database. Because there are two master files for this program type, you must add special logic to control the page up and page down keys. Subroutine S001 contains logic to clear all non-key fields for each of the master files. Since the second master file has no keys, all fields clear. This causes the page up and page down processing for the keyed master file to work incorrectly after the first subfile page fills. To rectify the page up and page down processing, locate the field within the second master file that is the key to the primary keyed master file. Use selection exit 4 to display the Detailed Programming Facility and enter N in the Clear After (Y/N) field. This prevents the key field for page up and page down key processing from clearing.

If you are creating an inquiry which uses a partial key list from the master file, you must change the Key Sequence field (KY PS) in the Detailed Programming Facility. The KY column is to the right of the master file field names and contains the sequence number for the key fields. Clear all sequence numbers that are not in the key search that you define in the control format of the display file. The key sequence you define in the Detailed Programming Facility should match the key fields in the control format.

C.8.6 Special Considerations

This program type uses the key information in the display file for positioning within the master file. This program type must also have a hidden relative record number field and an entry optional field.

C.8.7 Quick Start Generation

You cannot generate this program type using the Quick Start CL Generator.

C.9 D0020 - Interactive Subfile Maintenance without Action Code, without Options, by Relative Record Number

C.9.1 Description

Use this program type to create an interactive subfile maintenance program. Create a display file prior to generating this program type. This program type processes two master files. The primary master file is keyed and controls the sequence in which the records display. The secondary master file processes by relative record number and controls the database updates.

C.9.2 Display File Definition

This program type scrubs the key field in the control format of the display file prior to processing the master file. The key field is noted by updating the Edited Field in the Field Definition screen of SDA with the value K. If you use the Data Base Field Selection feature in SDA, the known key field update automatically.

This program type does not use an Action Code. Enter a default cursor location.

The system stores the record number of each subfile record in a hidden relative record number field. Add the field SH#RRN to the subfile format with a type of S and a size of 9.0 by using Display All Defined Fields in SDA.

C.9.3 CL Program Definition

Copy and revise the model CL program J98MODEL1 to create a CL program for use with this program type. Use the Quick Start CL Generator to automatically create your CL program.

C.9.4 File Specifications

This program type requires that you define a keyed master file, a secondary master file which is not keyed and a display file. The master file contains 1 in the Input column. You enter a value in the File Information Data Structure field in the fold area of the primary master file. The secondary master file contains a 2 in the Update column and N in the Keyed (Y/N) field in the fold area. The display file begins with V and has blank selection columns. Add files to retrieve descriptions if necessary.

C.9.5 Detailed Programming Facility

Use a selection exit 4 to display the Detailed Programming Facility for the subfile field controlling the database update. Enter N in the Entry Optional field. Entering N informs the program generator that the user must complete this field before the system updates the database.

Because there are two master files for this program type, you must add special logic to control the page up and page down keys. Subroutine S001 contains logic to clear all non-key fields for each of the master files. Since the second master file has no keys, all fields clear. This causes the page up and page down processing for the keyed master file to work incorrectly after the first subfile page fills. To rectify the page up and page down processing, locate the field within the second master file that is the key to the primary keyed master file. Use selection exit 4 to display the Detailed Programming Facility and enter N in the Clear After field. This prevents the key field for page up and page down processing from clearing.

If you are creating an inquiry which uses a partial key list from the master file, you must change the Key Sequence field (KY PS) in the Detailed Programming Facility. The KY column is to the right of the master file field names and contains the sequence number for the key fields. Clear all sequence numbers that are not in the key search that you define in the control format of the display file. The key sequence you define in the Detailed Programming Facility should match the key fields in the control format.

C.9.6 Special Considerations

This program type uses the key information in the display file for positioning within the master file. This type must also have a hidden relative record number field and an entry optional field.

C.9.7 Quick Start Generation

You cannot generate this program type using the Quick Start CL Generator.

C.10 D0030 - Interactive Subfile Maintenance without Action Code, without Options, by Relative Record Number with Read Next Modified Record

C.10.1 Description

Use this program type to create an interactive subfile maintenance program. Create a display file prior to generating this program type. This program type processes two master files. The primary master file is keyed and controls the sequence in which the records are display. The secondary master file processes by relative record number and controls the database updates. The system bases updates to the subfile on read next change (READC) logic.

C.10.2 Display File Definition

This program type scrubs the key field in the control format of the display file prior to processing the master file. The key field is noted by updating the Edited Field in the Field Definition screen of SDA with the value K. If you use the Data Base Field Selection feature in SDA, the known key fields update automatically.

This program type does not use an Action Code. Enter a default cursor location.

The system stores the record number of each subfile record in a hidden relative record number field. Add the field SH#RRN to the subfile format with a type of S and a size of 9.0 by using Display All Defined Fields in SDA.

C.10.3 CL Program Definition

Copy and revise the model CL program J98MODEL1 to create a CL program for use with this program type. Use the Quick Start CL Generator to automatically create your CL program.

C.10.4 File Specifications

This program type requires that you define a keyed master file, a secondary master file which is not keyed and a display file. The master file contains 1 in the Input column. You enter a value in the File Information Data Structure field in the fold area of the

primary master file. The secondary master file contains a 2 in the Update column and N in the Keyed (Y/N) field in the fold area. The display begins with a V and has blank selection columns. Add files to retrieve descriptions if necessary.

C.10.5 Detailed Programming Facility

Use a selection exit 4 to display the Detailed Programming Facility for the subfile field controlling the update to the database. Enter N in the Entry Optional field. Entering N informs the program generator that the user must complete this field before the system updates the database.

Because there are two master files for this program type, you must add special logic to control the page up and page down keys. Subroutine S001 contains logic to clear all non-key fields for each of the master files. Since the second master file has no keys, all fields clear. This causes the page up and page down processing for the keyed master file to work incorrectly after the first subfile page fills. To rectify the page up and page down processing, locate the field within the second master file that is the key to the primary keyed master file. Use selection exit 4 to display the Detailed Programming Facility and enter N in the Clear After field. This prevents the key field for page up and page down processing from clearing.

If you are creating an inquiry which uses a partial key list from the master file, you must change the Key Sequence field (KY PS) in the Detailed Programming Facility. The KY column is to the right of the master file field names and contains the sequence number for the key fields. Clear all sequence numbers that are not in the key search that you define in the control format of the display file. The key sequence you define in the Detailed Programming Facility should match the key fields in the control format.

C.10.6 Special Considerations

This program type uses the key information in the display file for positioning within the master file. This type must also have a hidden relative record number field and an entry optional field.

C.10.7 Quick Start Generation

You cannot generate this program type using the Quick Start CL Generator.

C.11 D0040 - Interactive Subfile Maintenance with Action Code, with Options, by Key

C.11.1 Description

Use this program type to create an interactive subfile maintenance program. Create a display file prior to generating this program type. This program type processes a single master file by key.

C.11.2 Display File Definition

This program type scrubs the key fields in the control format of the display file prior to processing the master file. The key fields are noted by updating the Edited Field in the Field Definition screen of SDA with the value K. If you are using the Data Base Field Selection feature in SDA, the known key fields update automatically.

You must define Action Codes. Lockout Action Codes are optional.

This subfile maintenance program type allows you to delete individual subfile records using special logic. You perform this by entering C in the Action Code field, comparing the previous value with the current value and then deleting the record if the current value is blank. The system stores the previous value in a hidden field at the subfile record level using the Display All Defined Fields in the SDA.

C.11.3 CL Program Definition

Copy and revise the model CL program J98MODEL1 to create a CL program for use with this program type. Use the Quick Start CL Generator to automatically create your CL program.

C.11.4 File Specifications

This program type requires that you define a single master file and a display file. The master file contains M or 1 in the Update column. The display file begins with a V and has blank selection columns. Add files to retrieve descriptions if necessary.

C.11.5 Detailed Programming Facility

Use a selection 4 to exit to the field details for the subfile field controlling the database update. Enter N in the Entry Optional field. Entering N informs the program generator that the user must complete this field before the system updates the database.

C.11.6 Special Considerations

This program type uses the key information in the display file for chaining to the master file. This type must also have a hidden field and an entry optional field.

C.11.7 Quick Start Generation

Generate this program type using the Quick Start CL Generator.

C.12 D0050 - Interactive Subfile Maintenance with Two Master Files, with Action Code, with Options, by Relative Record Number

C.12.1 Description

Use this program type to create an interactive subfile maintenance program. Create a display file prior to generating this program type. This program type processes two master files. The primary master file is keyed and the system updates it from the fields in the control format of the display file. The secondary master file processes by relative record number and the system update it from the fields in the subfile format of the display file.

C.12.2 Display File Definition

This program type scrubs the key fields in the control format of the display file prior to processing the master file. The key fields are noted by updating the Edited Field in the Field Definition screen of SDA with the value K. If you use the Data Base Field Selection feature in SDA, the known key fields update automatically.

You must define Action Codes. Lockout Action Codes are optional.

The system stores the record number of each subfile record in a hidden relative record number field. Add the field SH#RRN to the subfile format with a type of S and a size of 9.0 by using Display All Defined Fields in SDA.

C.12.3 CL Program Definition

Copy and revise the model CL program J98MODEL1 to create a CL program for use with this program type. Use the Quick Start CL Generator to automatically create your CL program.

C.12.4 File Specifications

This program type requires that you define a two keyed master files, a secondary master file which is not keyed and a display file. The first master file contains 1 in the Update column. The system updates this file from the control format of the display file. The second master file is a non-keyed file which the subfile format of the display file updates. The second master file contains 2 in the Update column and X under the Add column. Enter N in the Keyed (Y/N) field in the fold area. The third master file is the logical file that the system uses for sequencing records in the subfile. This file contains 3 in the Input column. You enter a value in the File Information Data Structure field in the fold area of this master file. The keyed master files have a similar key list sequence. The display file begins with V and has blank selection columns. Add files to retrieve descriptions if necessary.

C.12.5 Detailed Programming Facility

Use a selection exit 4 to display the Detailed Programming Facility for the subfile field controlling the database update function. Enter N in the Entry Optional field. Entering N informs the program generator that the user must complete this field before the system updates the database.

Because there are two master files for this program type, you must add special logic to control the page up and page down keys. Subroutine S001 contains logic to clear all non-key fields for each of the master files. Since the second master file has no keys, all fields clear. This causes the page up and page down processing for the keyed master file to work incorrectly after the first subfile page fills. To rectify the page up and page down processing, locate the field within the second master file that is the key to the primary keyed master file. Use selection exit 4 to display the Detailed Programming Facility and enter N in the Clear After field. This prevents the key field for page up and page down processing from clearing.

If you are creating an inquiry which uses a partial key list from the master file, you must change the Key Sequence field (KY PS) in the Detailed Programming Facility. The KY column is to the right of the master file field names and contains the sequence number for the key fields. Clear all sequence numbers that are not in the key search that you define in the control format of the display file. The key sequence you define in the Detailed Programming Facility should match the key fields in the control format.

C.12.6 Special Considerations

This program type uses the key information in the subfile control format of the display file for retrieving one record from the first master file and multiple records from the second master file. This type must also have a hidden field and an entry optional field.

C.12.7 Quick Start Generation

You cannot generate this program type using the Quick Start CL Generator.

C.13 D0060 - Interactive Subfile Maintenance with Action Code, without Options, by Key

C.13.1 Description

Use this program type to create an interactive subfile maintenance program. Create a display file prior to generating this program type. This program type processes a single master file by key.

C.13.2 Display File Definition

This program type scrubs the key fields in the control format of the display file prior to processing the master file. The key fields are noted by updating the Edited Field in the Field Definition screen of SDA with the value K. If you use the Data Base Field Selection feature in SDA, the known key fields update automatically.

You must define Action Codes. Lockout Action Codes are optional.

This subfile maintenance program type allows you to delete individual subfile records using special logic. You perform this logic by entering C in the Action Code, comparing the previous value with the current value and then deleting the record if the current value is blank. The system stores the previous value in a hidden field at the subfile record level. Define this field in the display file prior to generating this program type by using Display All Defined Fields in SDA.

C.13.3 CL Program Definition

Copy and revise the model CL program J98MODEL1 to create a CL program for use with this program type. Use the Quick Start CL Generator to automatically create your CL program.

C.13.4 File Specifications

This program type requires that you define a single master file and a display file. The master file contains an M or 1 in the Update column. The display file begins with a V and has blank selection columns. Add files to retrieve descriptions if necessary.

C.13.5 Detailed Programming Facility

Use a selection 4 to exit to the field details for the SF field controlling the update to the database. Enter N in the Entry Optional field. Entering N informs the program generator that the user must complete this field before the system updates the database.

C.13.6 Special Considerations

This program type uses the key information in the display file for chaining to the master file. This type must also have a hidden field and an entry optional field.

C.13.7 Quick Start Generation

Generate this program type using the Quick Start CL Generator.

C.14 D0070 - Interactive Subfile Maintenance with Action Code, with Options, by Relative Record Number

C.14.1 Description

Use this program type to create an interactive subfile maintenance program. Create a display file prior to generating this program type. This program type processes two master files. The primary master file is keyed and controls the sequence in which the records display. The secondary master file processes by relative record number and controls the database updates.

C.14.2 Display File Definition

This program type scrubs the key fields in the control format of the display file prior to processing the master file. The key fields are noted by updating the Edited Field in the Field Definition screen of SDA with the value K. If you are using the Data Base Field Selection feature in SDA, the known key fields update automatically.

You must define the Action Codes. Lockout Action Codes are optional.

The system stores the record number of each subfile record in a hidden relative record number field. Add the field SH#RRN to the subfile format with a type of S and a size of 9.0 by using Display All Defined Fields in SDA.

C.14.3 CL Program Definition

Copy and revise the model CL program J98MODEL1 to create a CL program for use with this program type. Use the Quick Start CL Generator to automatically create your CL program.

C.14.4 File Specifications

This program type requires that you define a keyed master file, a secondary master file which is not keyed, and a display file. The master file contains 1 in the Input column. You enter a value in the File Information Data Structure field in the fold area of the primary master file. The secondary master file contains a 2 in the Update column and N in the Keyed (Y/N) field in the fold area. The display file begins with a V and has blank selection columns. Add files to retrieve descriptions if necessary.

C.14.5 Detailed Programming Facility

Use a selection exit 4 to display the Detailed Programming Facility for the subfile field controlling the database update. Enter N in the Entry Optional field. Entering N informs the program generator that the user must complete this field before the system updates the database.

Because there are two master files for this program type, you must add special logic to control the page up and page down keys. Subroutine S001 contains logic to clear all non-key fields for each of the master files. Since the second master file has no keys, all fields clear. This causes the page up and page down processing for the keyed master file to work incorrectly after the first subfile page fills. To rectify the page up and page

down processing, locate the field within the second master file that is the key to the primary keyed master file. Use selection exit 4 to display the Detailed Programming Facility and enter N in the Clear After field. This prevents the key field for page up and page down processing from clearing.

If you are creating an inquiry which uses a partial key list from the master file, you must change the Key Sequence field (KY PS) in the Detailed Programming Facility. The KY column is to the right of the master file field names and contains the sequence number for the key fields. Clear all sequence numbers that are not in the key search that you define in the control format of the display file. The key sequence you define in the Detailed Programming Facility should match the key fields in the control format.

C.14.6 Special Considerations

This program type uses the key information in the display file for positioning within the master file. This type must also have a hidden relative record number field and an entry optional field.

C.14.7 Quick Start Generation

You cannot generate this program type using the Quick Start CL Generator.

C.15 D0080 - Interactive Subfile Maintenance without Action Code, with Options, by Relative Record Number

C.15.1 Description

Use this program type to create an interactive subfile maintenance program. Create a display file prior to generating this program type. This program type processes two master files. The primary master file is keyed and controls the sequence in which the records display. The secondary master file processes by relative record number and controls the database updates.

C.15.2 Display File Definition

This program type scrubs the key fields in the control format of the display file prior to processing the master file. The key fields are noted by updating the Edited Field in the Field Definition screen of SDA with the value K. If you use the Data Base Field Selection feature in SDA, the known key fields update automatically.

Do not use Action Codes. Enter a default cursor location.

This program type processes the secondary master file by relative record number. The record number of each subfile record is stored in a hidden relative record number field. Add the field SH#RRN to the subfile format with a type of S and a size of 9.0 by using Display All Defined Fields in SDA.

C.15.3 CL Program Definition

Copy and revise the model CL program J98MODEL1 to create a CL program for use with this program type. Use the Quick Start CL Generator to automatically create your CL program.

C.15.4 File Specifications

This program type requires that you define a keyed master file, a secondary master file which is not keyed and a display file. The master file contains 1 in the Input column. You enter a value in the File Information Data Structure field in the fold area of the primary master file. The secondary master file contains a 2 in the Update column and N in the Keyed (Y/N) field in the fold area. The display file begins with V and has blank selection columns. Add files to retrieve descriptions if necessary.

C.15.5 Detailed Programming Facility

Use a selection exit 4 to display the Detailed Programming Facility for the subfile field controlling the database update. Enter N in the Entry Optional field. Entering N informs the program generator that the user must complete this field before the system updates the database.

Because there are two master files for this program type, you must add special logic to control the page up and page down keys. Subroutine S001 contains logic to clear all non-key fields for each of the master files. Since the second master file has no keys, all fields clear. This causes the page up and page down processing for the keyed master file to work incorrectly after the first subfile page fills. To rectify the page up and page down processing, locate the field within the second master file that is the key to the primary keyed master file. Use selection exit 4 to display the Detailed Programming Facility and enter N in the Clear After field. This prevents the key field for page up and page down processing from clearing.

If you are creating an inquiry which uses a partial key list from the master file, you must change the Key Sequence field (KY PS) in the Detailed Programming Facility. The KY column is to the right of the master file field names and contains the sequence number for the key fields. Clear all sequence numbers that are not in the key search that you define in the control format of the display file. The key sequence you define in the Detailed Programming Facility should match the key fields in the control format.

C.15.6 Special Considerations

This program type uses the key information in the display file for positioning within the master file. This type must also have a hidden relative record number field and an entry optional field.

C.15.7 Quick Start Generation

You cannot generate this program type using the Quick Start CL Generator.

C.16 D0090 - Interactive Subfile Maintenance with Action Code, without Options, by Relative Record Number, Balance

C.16.1 Description

Use this program type to create an interactive subfile maintenance program. Create a display file prior to generating this program type. This program type processes two master files. The primary master file is keyed and controls the sequence in which the records display. The secondary master file processes by relative record number and controls the database updates. The system verifies all records before it performs any database updates.

C.16.2 Display File Definition

This program type scrubs the key fields in the control format of the display file for positioning within the master file. The key fields are noted by updating the Edited Field in the Field Definition screen of SDA with the value K. If you use the Data Base Field Selection feature in SDA, the known key fields update automatically.

Do not use Action Codes. Enter a default cursor location.

This program type processes the secondary master file by relative record number. The record number of each subfile record is stored in a hidden relative record number field. Add the field SH#RRN to the subfile format with a type of S and a size of 9.0 by using Display All Defined Fields in SDA.

C.16.3 CL Program Definition

Copy and revise the model CL program J98MODEL1 to create a CL program for use with this program type. Use the Quick Start CL Generator for creation of your CL program.

C.16.4 File Specifications

This program type requires that you define a keyed master file, a secondary master file which is not keyed, and a display file. The master file contains 1 in the Input column. You enter a value in the File Information Data Structure field in the fold area of the primary master file. The secondary master file contains a 2 in the Update column and N in the Keyed (Y/N) field in the fold area. The display file begins with V and has blank selection columns. Add files to retrieve descriptions if necessary.

C.16.5 Detailed Programming Facility

Use a selection exit 4 to display the Detailed Programming Facility for the subfile field controlling the database update. Enter N in the Entry Optional field. Entering N informs the program generator that the user must complete this field before the system updates the database.

Because there are two master files for this program type, you must add special logic to control the page up and page down keys. Subroutine S001 contains logic to clear all non-key fields for each of the master files. Since the second master file has no keys, all fields clear. This causes the page up and page down processing for the keyed master file to work incorrectly after the first subfile page fills. To rectify the page up and page down processing, locate the field within the second master file that is the key to the primary keyed master file. Use selection exit 4 to display the Detailed Programming Facility and enter N in the Clear After field. This prevents the key field for page up and page down processing from clearing.

C.16.6 Special Considerations

This program type uses the key information in the display file for positioning within the master file. This type must also have a hidden field and an entry optional field. The update logic in this program type processes all subfile transactions prior to performing the database updates. This allows the system to balance transactions or verify all records before it updates the database.

C.16.7 Quick Start Generation

You cannot generate this program type using the Quick Start CL Generator.

C.17 D0100 - Interactive Subfile Maintenance with Two Master Files, with Action Code, with Options, by Key

C.17.1 Description

Use this program type to create an interactive subfile maintenance program. Create a display file prior to generating this program type. This program type processes two master files. The primary master file is keyed and the system updates it from the fields in the control format of the display file. The secondary master file processes by key and the system updates it from the fields in the subfile format of the display file.

C.17.2 Display File Definition

This program type scrubs the key fields in the control format of the display file prior to processing the master file. The key fields are noted by updating the Edited Field in the Field Definition screen of SDA with the value K. If you use the Data Base Field Selection feature in SDA, the known key fields update automatically.

You must define the Action Codes. Lockout Action Codes are optional.

This program type requires that you define one or more hidden fields in the subfile record. The fields in the subfile that are keys to the second master file must also have hidden fields. Add the hidden fields by using Display All Defined Fields in SDA.

C.17.3 CL Program Definition

Copy and revise the model CL program J98MODEL1 to create a CL program for use with this program type. Use the Quick Start CL Generator for creation of your CL program.

C.17.4 File Specifications

The first master file contains 1 in the Update column. The system updates this file from the control format of the display file. The second master file contains 2 in the Update column and X in the Add column. The display file begins with V and has blank selection columns. Add files to retrieve descriptions if necessary.

C.17.5 Detailed Programming Facility

Use a selection exit 4 to display the Detailed Programming Facility for the subfile field controlling the database update. Enter N in the Entry Optional field. Entering N informs the program generator that the user must complete this field before the system updates the database.

C.17.6 Special Considerations

This program type uses the key information in the display file for chaining to the master file. This type must also have a hidden field and an entry optional field.

C.17.7 Quick Start Generation

Generate this program type using the Quick Start CL Generator.

C.18 E0010 - Interactive Window

C.18.1 Description

Use this program type to create an interactive window program. Create a display file prior to generating this program type. This program type processes a single master file by key.

C.18.2 Display File Definition

SDA builds the DDS for a window program when you select Fast Path Create for Window, Y. Update the predefined VTX field from Row Desc to a meaningful Skip To description. SDA defines a key field. Delete this field and add a VD field which is the same as the key to the master file. If the key field is greater than 10 in length, you must also shorten the literal field that follows that key and precedes the window border.

Do not use Action Codes.

C.18.3 CL Program Definition

A CL program is option for this model.

If you want to create a CL program, copy and revise the model CL program J98MODEL1 to create a CL program to use with this program type. Use the Quick Start CL Generator to automatically create your CL program. The interactive window program type assumes three parameters. Add these to the call statement for your program.

C.18.4 File Specifications

This program type requires the use of a single master file and a display file. The master file contains M or 1 in the Input column. The display file begins with V and has blank selection columns. Add files to retrieve descriptions if necessary.

C.18.5 Define Option and Function Key Exits

If you use this window to retrieve values to the calling program, add #SSELC to the Function Exit definitions.

C.18.6 Detailed Programming Facility

If used, update all VC0 description fields in the Detailed Programming Facility.

The system uses a key list for record retrieval from the master file. If you are not using the complete key list, update the Key Sequence field (KY PS) in the Detailed Programming Facility to include only those data items which are necessary. This key list should match your key field definition from the control format of the display file.

Update the fields MNMNI and MNMTTL with the key and the key description fields. Subroutine S004 assumes that only two fields display per master file record. If you plan to display more than two fields, modify this subroutine.

C.18.7 Special Considerations

This program type uses a key list for record retrieval from the master file. This key list should match your key field definition from the control format of the display file. One record displays per inquiry.

Subroutine S004 assumes that only two fields display per master file record. If you plan to display more than two fields, modify Subroutine S004 through JD Edwards World SEU or *PROC. JD Edwards World includes two entry points into this subroutine.

The system updates the window key literal in the upper left hand corner of the display file at run time. Modify subroutine S999 through *PROC prior to compiling the RPG program. Assign the video screen name to the work field VC01 using the entry point in subroutine S999.

C.18.8 Quick Start Generation

You cannot generate this program type using the Quick Start CL Generator.

C.19 X0010 - Batch Update with Report

C.19.1 Description

Use this program type to create a batch update program that you manipulate using DREAM Writer. Create a printer file prior to generating this program type. This program type processes a single master file. You choose the data for the batch update program using DREAM Writer Data Selection and Data Sequence parameters.

C.19.2 Printer File Definition

This program type requires that formats HEADING1 and DETAIL1 exist in the printer file. Format TOTAL1 is optional exist for totals.

C.19.3 CL Program Definition

Copy and revise the model CL program J98MODEL6 to create a CL program for use with this program type. Use the Quick Start CL Generator to automatically create your CL program.

C.19.4 File Specifications

The master file contains M or 1 in the Update column. Remove default value of X in the Add column or add special logic to your program for writing to the master file. The printer file begins with R and has blank selection columns. Add files to retrieve descriptions if necessary.

C.19.5 Special Considerations

If you are printing totals using format TOTAL1, use the special keywords for Data Dictionary description (VC1ROW), data key field (VC1KEY), and data key description (VC1DSC).

When creating your DREAM Writer Version, ensure that the value of 2 is in the Type Report Totaling field on the Additional Parameters screen. This allows hierarchal totaling and page breaks in the Data Sequence.

This program updates the master file in subroutine S010. You might want to add special logic to control when updates occur.

C.19.6 Quick Start Generation

You cannot generate this program type using the Quick Start CL Generator.

C.20 X0020 - Batch Update

C.20.1 Description

Use this program type to create a batch update program that you manipulate using DREAM Writer. This program type processes two master files. The system uses the primary master file to retrieve data from the secondary master file. You choose the data for the batch update program using DREAM Writer Data Selection and Data Sequence parameters. Do not create user defined options and function exits.

C.20.2 Printer File Definition

You do not use a printer file with this program type.

C.20.3 CL Program Definition

Copy and revise the model CL program J98MODEL2 to create a CL program for use with this program type. Use the Quick Start CL Generator to automatically create your CL program.

C.20.4 File Specifications

This program type requires that you define a key for both the master file and secondary file. The master file contains 1 in the Input column. The secondary master file contains 2 in the Update column. Add files to retrieve descriptions if necessary.

C.20.5 Special Considerations

This program type chains to the secondary master file in subroutine S003. Update the key field or key list prior to this chain. The system does not automatically update key fields in this program type.

This program type contains subroutine S005 for all calculations. Add all special logic code between the read of the primary master file and the update or write of the secondary master file.

This program updates the master file records in subroutine S010.

C.20.6 Quick Start Generation

You cannot generate this program type using the Quick Start CL Generator.

C.21 X0030 - Batch Update with Subroutine S001

C.21.1 Description

Use this program type to create a batch update program that you manipulate using DREAM Writer. This program type processes two master files. The system uses the primary master file to retrieve data from the secondary master file. You choose the data for the batch update program using DREAM Writer Data Selection and Data Sequence parameters. Do not create user defined options and function exits.

C.21.2 Printer File Definition

You do not use a printer file with this program type.

C.21.3 CL Program Definition

Copy and revise the model CL program J98MODEL2 to create a CL program for use with this program type. Use the Quick Start CL Generator to automatically create your CL program.

C.21.4 File Specifications

This program type requires that you define a key for both the master file and secondary file. The master file contains 1 in the Input column. The secondary master file has 2 in the Update column. Add files to retrieve descriptions if necessary.

C.21.5 Special Considerations

This program type clears the non-key fields from the primary master file between each record the system processes.

This program type chains to the secondary master file in subroutine S003. Update the key field or key list prior to the chain. Key fields do not automatically update in this program type.

This program type includes subroutine S005 for all calculations. Add all special logic necessary between the read of the primary master file and the update of the secondary master file.

This program updates the master file records in subroutine S010.

C.21.6 Quick Start Generation

You cannot generate this program type using the Quick Start CL Generator.

C.22 X0040 - Batch Update with Report

C.22.1 Description

Use this program type to create a batch update program that you manipulate using DREAM Writer. Create a printer file prior to generating this program type. You should design the printer file to print an audit trail of each record that the system updates. This program type processes two master files. The system interprets the primary

master file and updates the second master file. You choose the data for the batch update program using DREAM Writer Data Selection and Data Sequence parameters. Do not create user defined options and function exits.

C.22.2 Printer File Definition

This program type prints an audit trail for each record that the system saves in the second master file. Formats HEADING1 and DETAIL1 must exist in the printer file. Format TOTAL1 is optional, and you can use this to have the system compute totals for the level breaks that you define in the DREAM Writer Data Sequence.

C.22.3 CL Program Definition

Copy and revise the model CL program J98MODEL2 to create a CL program for use with this program type. Use the Quick Start CL Generator to automatically create your CL program.

C.22.4 File Specifications

This program type requires that you define a key for both the master file and secondary file. The master file contains 1 in the Input column. The secondary master file has 2 in the Update column. Add files to retrieve descriptions, if necessary.

C.22.5 Special Considerations

This program type chains to the secondary master file in subroutine S003. Update the key field or key list prior to this chain. Key fields do not automatically update in this program.

This program type uses subroutine S004 to format fields for output to the report. Add any special logic necessary between the read of the primary master file and the update of the second master file.

This program type uses subroutine S005 to scrub and edit the fields in the second master file. Use the Detailed Programming Facility to associate fields in the primary master file with fields in the second master file. Add any special logic that is necessary to compute the proper value that the system loads to the output fields.

Subroutine S010 controls the printing of the report.

Subroutine S011 updates the records in the second master file.

C.22.6 Quick Start Generation

You can not generate this program type using the Quick Start CL Generator.

C.23 Y0010 - Conversion, Two Files with Error Report

C.23.1 Description

Use this program type to create a batch conversion program that you manipulate using DREAM Writer. This program type processes two master files. The system interprets the primary master file and updates the second master file. You choose the data for the batch update program using DREAM Writer Data Selection and Data Sequence parameters. Do not create user defined options and function exits.

C.23.2 Printer File Definition

This program type requires that formats HEADING1, DETAIL1, and ERROR1 exist in the printer file. Format TOTAL1 is optional for totals.

C.23.3 CL Program Definition

Copy and revise the model CL program J98MODEL6 to create a CL program for use with this program type. Use the Quick Start CL Generator to automatically create your CL program.

C.23.4 File Specifications

This program type requires that you define a key for both the master file and secondary file. The master file contains 1 in the Input column. The secondary master file had 2 in the Update column. The printer file begins with R and has blank selection columns. Add files to retrieve descriptions if necessary.

C.23.5 Special Considerations

If you are printing totals using format TOTAL1, use the special keywords for Data Dictionary description (VC1ROW), data key field (VC1KEY), and data key description (VC1DSC).

When printing the error report, format ERROR1 must contain the special fields for error message description (RRDSCA) and error message number (RREKEY).

When creating your DREAM Writer Version, enter 2 in the Type Report Totaling field on the Additional Parameters screen. This allows hierarchal totaling and page breaks in the Data Sequence.

This program type chains to the secondary master file in subroutine S003. Update the key field or key list prior to the chain. Key fields do not automatically update in this program type.

This program type includes subroutine S005 for all calculations. Add all special logic necessary between the read of the primary master file and the update of the secondary master file.

This program updates the master file records in subroutine S010.

C.23.6 Quick Start Generation

You cannot generate this program type using the Quick Start CL Generator.

C.24 Y0020 - Conversion, One File Update with Error Report

C.24.1 Description

Use this program type to create a batch conversion program that you manipulate using DREAM Writer. This program type processes a single master file by key. You choose the data for the batch update program using DREAM Writer Data Selection and Data Sequence parameters. You do not use Lockout Action Codes, user defined options, and function exits.

C.24.2 Printer File Definition

This program type requires that formats HEADING1, DETAIL1, and ERROR1 exist in the printer file. Format TOTAL1 is optional for totals.

C.24.3 CL Program Definition

Copy and revise the model CL program J98MODEL6 to create a CL program for use with this program type. Use the Quick Start CL Generator to automatically create your CL program.

C.24.4 File Specifications

This program type requires that you define a key for a single master file. The master file contains 1 in the Update column. This program type does not update the master file. Clear the X from the Add column, if necessary. The printer file begins with R and has blank selection columns. Add files to retrieve descriptions if necessary.

C.24.5 Special Considerations

If you are printing totals using format TOTAL1, use the special keywords for Data Dictionary description (VC1ROW), data key field (VC1KEY), and data key description (VC1DSC).

When printing the error report, format ERROR1 must contain the special fields for error message description (RRDSCA) and error message number (RREKEY).

When creating your DREAM Writer Version, enter 2 in the Type Report Totaling field on the Additional Parameters screen. This allows hierarchal totaling and page breaks in the Data Sequence.

This program type uses subroutine S005 for all calculations. Add special logic necessary between the read of the primary master file and the update of the master file.

This program updates the master file records in subroutine S010.

C.24.6 Quick Start Generation

You cannot generate this program type using the Quick Start CL Generator.

C.25 Y0030 - Conversion, One File Write with Error Report

C.25.1 Description

Use this program type to create a batch conversion program that you manipulate using DREAM Writer. This program type processes a single master file by key. You choose the data for the batch update program using DREAM Writer Data Selection and Data Sequence parameters. You do not use Lockout Action Codes, user defined options, and function exits.

C.25.2 Printer File Definition

This program type requires that formats HEADING1, DETAIL1, and ERROR1 exist in the printer file. Format TOTAL1 is optional for totals.

C.25.3 CL Program Definition

Copy and revise the model CL program J98MODEL6 to create a CL program for use with this program type. Use the Quick Start CL Generator to automatically create your CL program.

C.25.4 File Specifications

This program type requires that you define a key for a single master file. The master file contains 1 in the Update column. As this program type updates the master file, enter X in the Add column. The printer file begins with R and has blank selection columns. Add files to retrieve descriptions if necessary.

C.25.5 Special Considerations

If you are printing totals using format TOTAL1, use the special keywords for Data Dictionary description (VC1ROW), data key field (VC1KEY), and data key description (VC1DSC).

When printing the error report, format ERROR1 must contain the special fields for error message description (RRDSCA) and error message number (RREKEY).

When creating your DREAM Writer Version, enter 2 in the Type Report Totaling field on the Additional Parameters screen. This allows hierarchal totaling and page breaks in the Data Sequence.

This program type uses subroutine S005 for all calculations. Add special logic necessary between the read of the primary master file and the update of the master file.

This program updates the master file records in subroutine S010.

C.25.6 Quick Start Generation

You cannot generate this program type using the Quick Start CL Generator.

D

Source Listings

This appendix contains these topics:

- Section D.1, "Program Status Data Structure - I00DSPROG,"
- Section D.2, "Copy Module - Retrieve Soft Coding Data Structure - I00SC,"
- Section D.3, "Item Master Information - P928011."

D.1 Program Status Data Structure - I00DSPROG

Figure D–1 Program Status Data Structure Source Code (1 of 2)

```
 98330                                   JD Edwards World
 I00DSPROG .JDFSRC61                       Print Source Code                          Date - 27.01.17
Seq No.
--------                                                                          Mod Date
   1.00     I*****************************************************************   00003 08.02.85
   2.00     I*                                                                          08.02.85
   3.00     I*    PROGRAM STATUS DATA STRUCTURE                                         08.02.85
   4.00     I*    ----------------------------                                          08.02.85
   5.00     I*                                                                          08.02.85
   6.00     I*    Portions of this data structure are loaded at the time the            08.02.85
   7.00     I*    program is loaded.  Other portions of this data structure             08.02.85
   8.00     I*    are loaded as you perform I/O.                                        08.02.85
   9.00     I*                                                                          08.02.85
  10.00     I*    PURPOSE                                                               08.02.85
  11.00     I*    -------                                                               08.02.85
  12.00     I*    This common subroutine is set up to be used with C0000                08.02.85
  13.00     I*     (Business Unit Security) common subroutine and C0001(Edit            08.02.85
  14.00     I*    Action Code) common subroutine.  Those two subroutines                08.02.85
  15.00     I*    will retrieve ##USER for the user name.                               08.02.85
  16.00     I*                                                                          08.02.85
  17.00     I*    No program calcs are done in this subroutine.                         08.02.85
  18.00     I*                                                                          08.02.85
  19.00     I##PSDS      SDS                                                            18.12.89
  20.00     I*                                                                          08.02.85
  21.00     I*           Program Name                                                   08.02.85
  22.00     I                                    1  10 ##PROG                           08.02.85
  23.00     I*           Status Code(09999=I/O Error)                                   08.02.85
  24.00     I                                   11  150##STAT                           08.02.85
  25.00     I*           Previous Status code                                           08.02.85
  26.00     I                                   16  200##PSTA                           08.02.85
  27.00     I*           RPG Source Statement Sequence Number                           08.02.85
  28.00     I                                   21  28 ##SEQN                           08.02.85
  29.00     I*           RPG Routine in Which Exception/Error Occured                   08.02.85
  30.00     I                                   29  36 ##ROUT                           08.02.85
  31.00     I*           Number of Parameters Passed to This Program                    08.02.85
  32.00     I                                   37  390##PARM                           08.02.85
  33.00     I*           Exception Type(MCH=Machine, CPF=CPF)                           08.02.85
  34.00     I                                   40  42 ##ETYP                           08.02.85
  35.00     I*           Exception Message Number                                       08.02.85
  36.00     I                                   43  46 ##ENBR                           08.02.85
  37.00     I*           Machine Instruction/Object Definition Template Number          08.02.85
  38.00     I                                   47  50 ##MINO                           08.02.85
  39.00     I*           Work Area for Messages                                         08.02.85
  40.00     I                                   51  80 ##WWRK                           08.02.85
  41.00     I*           Name of Library in Which Program is Located                    08.02.85
  42.00     I                                   81  90 ##PLIB                           08.02.85
  43.00     I*           Retrieved Exdeption Data.  CPF Messages.                       08.02.85
  44.00     I                                   91 170 ##MSG                            08.02.85
  45.00     I*           Identification of Exception That Caused RPG9001                08.02.85
  46.00     I                                  171 174 ##9001                           08.02.85
  47.00     I*           Unused                                                         08.02.85
  48.00     I                                  175 200 ##FLR1                           08.02.85
  49.00     I*           Name of File for Last I/O(Only Updated if Error)               08.02.85
  50.00     I                                  201 208 ##LFIL                           08.02.85
  51.00     I*           Status Info on Last File Used(Only on Error)                   08.02.85
  52.00     I                                  209 243 ##LFST                           08.02.85
  53.00     I*           Status Code on Last File Used(Only on Error)                   15.12.89
  54.00     I                                  209 213 ##LFS5                           15.12.89
  55.00     I*           Job Name                                                       08.02.85
  56.00     I                                  244 253 ##JOBN                           08.02.85
```

Figure D–2 Program Status Data Structure Source Code (2 of 2)

```
 98330                                   JD Edwards World
 I00DSPROG .JDFSRC61                       Print Source Code                          Date - 27.01.17
Seq No.
--------                                                                            Mod Date
                                                                                    --------
   57.00     I*          User Name From User Profile                                08.02.85
   58.00     I                                          254 263 ##USER              08.02.85
   59.00     I*          Job Number                                                 08.02.85
   60.00     I                                          264 2690##JOB#              08.02.85
   61.00     I*          Date Job Entered the System(MMDDYY)                        08.02.85
   62.00     I                                          270 2750##JDT               08.02.85
   63.00     I*          Date of Program Execution(MMDDYY)                          08.02.85
   64.00     I                                          276 2810##EDT               08.02.85
   65.00     I*          Time of Program Execttion(HHMMSS)                          08.02.85
   66.00     I                                          282 2870##ETM               08.02.85
   67.00     I*          Date Program Was Compiled                                  08.02.85
   68.00     I                                          288 2930##CDT               08.02.85
   69.00     I*          Time Program Was Compiled                                  08.02.85
   70.00     I                                          294 2990##CTM               08.02.85
   71.00     I*          Level of the Compiler                                      08.02.85
   72.00     I                                          300 303 ##LVL               08.02.85
   73.00     I*          Source File Name                                           08.02.85
   74.00     I                                          304 313 ##SRCN              08.02.85
   75.00     I*          Source Library Name                                        08.02.85
   76.00     I                                          314 323 ##SRCL              08.02.85
   77.00     I*          Source File Member Name                                    08.02.85
   78.00     I                                          324 333 ##SRCM              08.02.85
   79.00     I*          Unused                                                     08.02.85
   80.00     I                                          334 429 ##FLR2              09.06.87
```

D.2 Copy Module - Retrieve Soft Coding Data Structure - I00SC

Figure D–3 Copy Module - Retrieve Soft Coding Data Structure report (1 of 7)

```
 98330                                   JD Edwards World
 I00SC     .JDFSRC61                       Print Source Code                          Date - 27.01.17
Seq No.
--------                                                                            Mod Date
                                                                                    --------
    1.00     I*************************************************************          12.02.88
    2.00     I*  This is part of a composite common subroutine. In                  12.02.88
    3.00     I*  order for the subroutine to work correctly, the                    12.02.88
    4.00     I*  RPG program must /COPY in the following members:                   12.02.88
    5.00     I*   I00SC, C00SC                                                       12.02.88
    6.00     I*                                                                     25.04.88
    7.00     I*  NOTE:  The "SRVFDS" file information data structure must           25.04.88
    8.00     I*         be specified in a continuation record for the display       25.04.88
    9.00     I*         file (File Description Specification "KINFDS").             25.04.88
   10.00     I*                                                                     25.04.88
   11.00     I*************************************************************          12.02.88
   12.00     I*    PROGRAM INPUT SPECIFICATIONS AND DATA STRUCTURES                 12.02.88
   13.00     I*    ------------------------------------------------                 12.02.88
   14.00     I*                                                                     12.02.88
   15.00     II00SC       DS                                                        07.01.91
   16.00     I*                                                                     12.02.88
   17.00     I*    Function keys 1 thru 32.                                         17.02.88
   18.00     I*                                                                     12.02.88
   19.00     I                                        1  32 I00SCF                  17.02.88
   20.00     I*                                                                     25.04.88
   21.00     I*    Function - End of Job                                            25.04.88
   22.00     I                                        1   1 #FEOJ                   17.02.88
   23.00     I*                                                                     25.04.88
   24.00     I*    Function - Clear Screen                                          25.04.88
   25.00     I                                        2   2 #FCLR                   17.02.88
   26.00     I*                                                                     25.04.88
   27.00     I*    Function - Help                                                  25.04.88
   28.00     I                                        3   3 #FHELP                  17.02.88
   29.00     I*                                                                     25.04.88
   30.00     I*    Function - Values List Display                                   25.04.88
   31.00     I                                        4   4 #FVLST                  17.02.88
   32.00     I*                                                                     25.04.88
   33.00     I*    Function - Roll Up                                               25.04.88
   34.00     I                                        5   5 #FROLU                  17.02.88
   35.00     I*                                                                     25.04.88
   36.00     I*    Function - Roll Down                                             25.04.88
   37.00     I                                        6   6 #FROLD                  17.02.88
   38.00     I*                                                                     25.04.88
   39.00     I*    Function - Window Screen Left                                    25.04.88
   40.00     I                                        7   7 #FWLFT                  17.02.88
   41.00     I*                                                                     25.04.88
   42.00     I*    Function - Window Screen Right                                   25.04.88
   43.00     I                                        8   8 #FWRGT                  17.02.88
   44.00     I*                                                                     25.04.88
   45.00     I*    Function - Question Mark/Cursor Sensitive Help                   25.04.88
   46.00     I                                        9   9 #FQMRK                  17.02.88
   47.00     I*                                                                     25.04.88
   48.00     I*    Function - Display Error Message(s)                              25.04.88
   49.00     I                                       10  10 #FERRD                  17.02.88
   50.00     I*                                                                     25.04.88
   51.00     I*    Function - Exit to Address Book                                  25.04.88
   52.00     I                                       11  11 #FAB                    17.02.88
   53.00     I*                                                                     25.04.88
```

Figure D–4 Copy Module - Retrieve Soft Coding Data Structure report (2 of 7)

```
   54.00     I*    Function - Exit to Name Search                                  25.04.88
   55.00     I                                     12  12 #FNS                     17.02.88
   56.00     I*                                                                    25.04.88
 98330                                     JD Edwards World
 I00SC     .JDFSRC61                         Print Source Code                        Date - 27.01.17
Seq No.
--------                                                                           Mod Date
   57.00     I*    Function - Return to Previous Panel/Menu                        25.04.88
   58.00     I                                     13  13 #FPRV                     17.02.88
   59.00     I*                                                                    25.04.88
   60.00     I*    Function - Display Alternate Panel                              25.04.88
   61.00     I                                     14  14 #FALT                     17.02.88
   62.00     I*                                                                    25.04.88
   63.00     I*    Function - Exit to Display Valid Function Keys                  19.09.89
   64.00     I                                     15  15 #FKEYS                    19.09.89
   65.00     I*                                                                    25.04.88
   66.00     I*    Function - Return to Primary Menu                               25.04.88
   67.00     I                                     16  16 #FMM                      17.02.88
   68.00     I*                                                                    25.04.88
   69.00     I*    Function - Hard Copy Print                                      25.04.88
   70.00     I                                     17  17 #FPRT                     21.04.88
   71.00     I*                                                                    25.04.88
   72.00     I*    Function - Variable by Program (1 thru 15)                      25.04.88
   73.00     I                                     18  18 #F01                      21.04.88
   74.00     I                                     19  19 #F02                      21.04.88
   75.00     I                                     20  20 #F03                      21.04.88
   76.00     I                                     21  21 #F04                      21.04.88
   77.00     I                                     22  22 #F05                      21.04.88
   78.00     I                                     23  23 #F06                      21.04.88
   79.00     I                                     24  24 #F07                      21.04.88
   80.00     I                                     25  25 #F08                      21.04.88
   81.00     I                                     26  26 #F09                      21.04.88
   82.00     I                                     27  27 #F10                      21.04.88
   83.00     I                                     28  28 #F11                      21.04.88
   84.00     I                                     29  29 #F12                      21.04.88
   85.00     I                                     30  30 #F13                      21.04.88
   86.00     I                                     31  31 #F14                      21.04.88
   87.00     I                                     32  32 #F15                      21.04.88
   88.00     I*                                                                    17.02.88
   89.00     I*    Selections 1 thru 24.                                           17.02.88
   90.00     I*                                                                    17.02.88
   91.00     I                                     33  80 I00SCS                    17.02.88
   92.00     I*                                                                    25.04.88
   93.00     I*    Selection - Select/Work With                                    25.04.88
   94.00     I                                     33  340#SSELC                    07.06.88
   95.00     I*                                                                    25.04.88
   96.00     I*    Selection - Change/Revise                                       25.04.88
   97.00     I                                     35  360#SCHNG                    07.06.88
   98.00     I*                                                                    25.04.88
   99.00     I*    Selection - Copy/Hold                                           25.04.88
  100.00     I                                     37  380#SCOPY                    07.06.88
  101.00     I*                                                                    25.04.88
  102.00     I*    Selection - Delete/Cancel                                       25.04.88
  103.00     I                                     39  400#SDELT                    07.06.88
  104.00     I*                                                                    25.04.88
  105.00     I*    Selection - Display/View                                        25.04.88
  106.00     I                                     41  420#SDSPL                    07.06.88
  107.00     I*                                                                    25.04.88
  108.00     I*    Selection - Print/Release                                       25.04.88
  109.00     I                                     43  440#SPRNT                    07.06.88
  110.00     I*                                                                    25.04.88
  111.00     I*    Selection - Rename                                              25.04.88
  112.00     I                                     45  460#SRENM                    07.06.88
 98330                                     JD Edwards World
 I00SC     .JDFSRC61                         Print Source Code                        Date - 27.01.17
Seq No.
--------                                                                           Mod Date
  113.00     I*                                                                    25.04.88
  114.00     I*    Selection - Display Attributes                                  25.04.88
  115.00     I                                     47  480#SDATR                    07.06.88
  116.00     I*                                                                    25.04.88
  117.00     I*    Selection - Variable by Program (1 thru 16)                     25.04.88
  118.00     I                                     49  500#S01                      07.06.88
  119.00     I                                     51  520#S02                      07.06.88
  120.00     I                                     53  540#S03                      07.06.88
  121.00     I                                     55  560#S04                      07.06.88
  122.00     I                                     57  580#S05                      07.06.88
  123.00     I                                     59  600#S06                      07.06.88
  124.00     I                                     61  620#S07                      07.06.88
  125.00     I                                     63  640#S08                      07.06.88
  126.00     I                                     65  660#S09                      07.06.88
  127.00     I                                     67  680#S10                      07.06.88
  128.00     I                                     69  700#S11                      07.06.88
  129.00     I                                     71  720#S12                      07.06.88
  130.00     I                                     73  740#S13                      07.06.88
  131.00     I                                     75  760#S14                      07.06.88
  132.00     I                                     77  780#S15                      07.06.88
  133.00     I                                     79  800#S16                      07.06.88
  134.00     I*                                                                    22.02.88
  135.00     I*    Global JD Edwards World Variables                                          07.01.91
  136.00     I*                                                                    22.02.88
  137.00     I                                     81 120 I00SCG                    07.01.91
  138.00     I*    Future use space, room to grow                                  25.02.91
```

Figure D–5 Copy Module - Retrieve Soft Coding Data Structure report (3 of 7)

```
  139.00    I*-----------------------------------------------------------------   07.01.91
  140.00    I*                                                                    07.01.91
  141.00    I*    File Information Data Structure for Panel/Report file.          07.01.91
  142.00    I*                                                                    07.01.91
  143.00    ISRVFDS      DS                                                       22.02.88
  144.00    I*                                                                    22.02.88
  145.00    I*           Internal program file name                               22.02.88
  146.00    I                                     1   8 @@IFIL                   22.02.88
  147.00    I*                                                                    22.02.88
  148.00    I*           Open indication (1=OPEN)                                 22.02.88
  149.00    I                                     9   9 @@OPEN                   22.02.88
  150.00    I*                                                                    22.02.88
  151.00    I*           End Of File indication (1=End of file)                   22.02.88
  152.00    I                                    10  10 @@EOF                    22.02.88
  153.00    I*                                                                    22.02.88
  154.00    I*           Status code (09999=I/O Error)                            22.02.88
  155.00    I                                    11  150@@STAT                   22.02.88
  156.00    I*                                                                    22.02.88
  157.00    I*           Operation code                                           22.02.88
  158.00    I                                    16  21 @@OPCD                   22.02.88
  159.00    I*                                                                    22.02.88
  160.00    I*           Name of RPG routine exception/error occured              22.02.88
  161.00    I                                    22  29 @@ROUT                   22.02.88
  162.00    I*                                                                    22.02.88
  163.00    I*           RPG source statement sequence number                     22.02.88
  164.00    I                                    30  37 @@SEQN                   22.02.88
  165.00    I*                                                                    22.02.88
  166.00    I*           User-Specified reason for error on *SPECIAL file         22.02.88
  167.00    I                                    38  420@@RESN                   22.02.88
  168.00    I*                                                                    22.02.88
 98330                                   JD Edwards World
 I00SC     .JDFSRC61                       Print Source Code                        Date - 27.01.17
Seq No.
-------                                                                          Mod Date
                                                                                 --------
  169.00    I*           Recore format being processed (External file)            22.02.88
  170.00    I*           Record ID (Left justified for internal file)             22.02.88
  171.00    I                                    38  45 @@FRMT                   22.02.88
  172.00    I*                                                                    22.02.88
  173.00    I*           Machine OR CPF message number                            22.02.88
  174.00    I                                    46  52 @@EXNO                   22.02.88
  175.00    I*                                                                    22.02.88
  176.00    I*           Machine instruction/Object definition template number    22.02.88
  177.00    I                                    53  56 @@MI                     22.02.88
  178.00    I*                                                                    22.02.88
  179.00    I*           UNUSED                                                   22.02.88
  180.00    I                                    57  80 @@FLR1                   22.02.88
  181.00    I*                                                                    22.02.88
  182.00    I*           Open data path type (DS-Device DB-Data Base SP-Spool)    22.02.88
  183.00    I                                    81  82 @@ODP                    22.02.88
  184.00    I*                                                                    22.02.88
  185.00    I*           Name of file actually opened                             22.02.88
  186.00    I                                    83  92 @@FILE                   22.02.88
  187.00    I*                                                                    22.02.88
  188.00    I*           Name of library containing file (Blank if spool file)    22.02.88
  189.00    I                                    93 102 @@LIBR                   22.02.88
  190.00    I*                                                                    22.02.88
  191.00    I*           Name of spooled file (set only on spool files)           22.02.88
  192.00    I                                   103 112 @@SFNM                   22.02.88
  193.00    I*                                                                    22.02.88
  194.00    I*           Name of library where spooled file is located            22.02.88
  195.00    I                                   113 122 @@SFLB                   22.02.88
  196.00    I*                                                                    22.02.88
  197.00    I*           Spooled file number (set only on spool files)            22.02.88
  198.00    I                                 B 123 124@@SFNO                    22.02.88
  199.00    I*                                                                    22.02.88
  200.00    I*           Primary record length (bytes transferred at a time)      22.02.88
  201.00    I                                 B 125 126@@PRCL                    22.02.88
  202.00    I*                                                                    22.02.88
  203.00    I*           Secondary record length (bytes transferred at a time)    22.02.88
  204.00    I                                 B 127 128@@SRCL                    22.02.88
  205.00    I*                                                                    22.02.88
  206.00    I*           Member Name:                                             22.02.88
  207.00    I*                        .  If ODP type is DB, this entry is the     22.02.88
  208.00    I*                           member name in file named in position    22.02.88
  209.00    I*                           83 through 92.                           22.02.88
  210.00    I*                        .  If ODP type is SP, this entry is the     22.02.88
  211.00    I*                           member name in the file named in         22.02.88
  212.00    I*                           positions 103 through 112.               22.02.88
  213.00    I*                                                                    22.02.88
  214.00    I                                   129 138 @@MBR                    22.02.88
  215.00    I*                                                                    22.02.88
  216.00    I*           Input buffer length (zero if no buffer allocated)        22.02.88
  217.00    I                                 B 139 142@@IBLN                    22.02.88
  218.00    I*                                                                    22.02.88
  219.00    I*           Output buffer length (zero if no buffer allocated)       22.02.88
  220.00    I                                 B 143 146@@OBLN                    22.02.88
  221.00    I*                                                                    22.02.88
  222.00    I*           Device Class (supplied only if ODP type is DS or SP)     22.02.88
  223.00    I*             1 = Display                                            22.02.88
  224.00    I*             2 = Printer                                            22.02.88
 98330                                   JD Edwards World
 I00SC     .JDFSRC61                       Print Source Code                        Date - 27.01.17
Seq No.
-------                                                                          Mod Date
```

Figure D–6 Copy Module - Retrieve Soft Coding Data Structure report (4 of 7)

```
225.00    I*          3 = Card                                          22.02.88
226.00    I*          4 = Diskette                                      22.02.88
227.00    I*          5 = Tape                                          22.02.88
228.00    I                              B 147 1480@@DVCL               22.02.88
229.00    I*                                                            22.02.88
230.00    I*        Diskette location(value from 1 to 23 = slot location) 22.02.88
231.00    I                                149 151 @@DKLC               22.02.88
232.00    I*                                                            22.02.88
233.00    I*        Number of rows on display screen or lines on a page 22.02.88
234.00    I                              B 152 1530@@VDRW               22.02.88
235.00    I*                                                            22.02.88
236.00    I*        Number of columns on display screen or printed line 22.02.88
237.00    I                              B 154 1550@@VDCM               22.02.88
238.00    I*                                                            22.02.88
239.00    I*        Number of records in file at time of open           22.02.88
240.00    I                              B 156 1590@@RCNT               22.02.88
241.00    I*                                                            22.02.88
242.00    I*        Access type (only supplied if ODP type is DB)       22.02.88
243.00    I*          KU = Keyed, Unique                                22.02.88
244.00    I*          KF = Keyed, FIFO W/Duplicate keys                 22.02.88
245.00    I*          KI = Keyed, LIFO W/Duplicate keys                 22.02.88
246.00    I*          AR = Arrival sequence                             22.02.88
247.00    I                                160 161 @@ACTY               22.02.88
248.00    I*                                                            22.02.88
249.00    I*        Duplicate key indication (D=Allowed U=Not allowed)  22.02.88
250.00    I                                162 162 @@DUPK               22.02.88
251.00    I*                                                            22.02.88
252.00    I*        Source file indication (Y=Source file)              22.02.88
253.00    I                                163 163 @@SRCI               22.02.88
254.00    I*                                                            22.02.88
255.00    I*        User file control block parameters in effect        22.02.88
256.00    I                                164 173 @@FCBP               22.02.88
257.00    I*                                                            22.02.88
258.00    I*        User file control block overrides in effect         22.02.88
259.00    I                                174 183 @@FCBO               22.02.88
260.00    I*                                                            22.02.88
261.00    I*        Offset to volume label fields of open feedback      22.02.88
262.00    I*          (Supplied only for tape or diskette)              22.02.88
263.00    I                              B 184 1850@@OVLF               22.02.88
264.00    I*                                                            22.02.88
265.00    I*        Number of records to be transferred on file open    22.02.88
266.00    I                              B 186 1870@@RTFO               22.02.88
267.00    I*                                                            22.02.88
268.00    I*        Overflow line number (printer files only)           22.02.88
269.00    I                              B 188 1890@@OFLN               22.02.88
270.00    I*                                                            22.02.88
271.00    I*        UNUSED                                              22.02.88
272.00    I                                190 240 @@FLR2               22.02.88
273.00    I*                                                            22.02.88
274.00    I*        Offset to device dependent feedback information     22.02.88
275.00    I*          (See Appendix D of the CPF Programmer's Guide for 22.02.88
276.00    I*           layout of feedback information for specific      22.02.88
277.00    I*           devices)                                         22.02.88
278.00    I                              B 241 2420@@ODFB               22.02.88
279.00    I*                                                            22.02.88
280.00    I*        Put operation count                                 22.02.88
98330                          JD Edwards World
I00SC     .JDFSRC61              Print Source Code                        Date - 27.01.17
Seq No.
-------                                                               Mod Date
                                                                      --------
281.00    I                              B 243 2460@@PUTC               22.02.88
282.00    I*                                                            22.02.88
283.00    I*        Get operation count                                 22.02.88
284.00    I                              B 247 2500@@GETC               22.02.88
285.00    I*                                                            22.02.88
286.00    I*        PutGet operation count                              22.02.88
287.00    I                              B 251 2540@@PGC                22.02.88
288.00    I*                                                            22.02.88
289.00    I*        Non-I/O operation count (update of subfile records) 22.02.88
290.00    I                              B 255 2580@@NIOC               22.02.88
291.00    I*                                                            22.02.88
292.00    I*        Current operation (Last operation requested)        22.02.88
293.00    I*          X'01' = Get                                       22.02.88
294.00    I*          X'02' = Get W/Subfile record number               22.02.88
295.00    I*          X'03' = Get by key                                22.02.88
296.00    I*          X'05' = Put                                       22.02.88
297.00    I*          X'06' = PutGet                                    22.02.88
298.00    I*          X'07' = Update                                    22.02.88
299.00    I*          X'08' = Delete                                    22.02.88
300.00    I*          X'09' = Force End of Data                         22.02.88
301.00    I*          X'0D' = Release                                   22.02.88
302.00    I                                259 260 @@COPR               22.02.88
303.00    I*                                                            22.02.88
304.00    I*        Name of record format just processed:               22.02.88
305.00    I*          .  Specified on the I/O request, or               22.02.88
306.00    I*          .  Determined by default processing               22.02.88
307.00    I                                261 270 @@CFMT               22.02.88
308.00    I*                                                            22.02.88
309.00    I*        Device Class                                        22.02.88
310.00    I*          Position 271                                      22.02.88
311.00    I*          X'00' = Data Base                                 22.02.88
312.00    I*          X'01' = Keyboard display                          22.02.88
313.00    I*          X'02' = Printer                                   22.02.88
```

Figure D–7 Copy Module - Retrieve Soft Coding Data Structure report (5 of 7)

```
  314.00     I*            X'03' = Card                                          22.02.88
  315.00     I*            X'04' = Diskette                                      22.02.88
  316.00     I*            X'05' = Tape                                          22.02.88
  317.00     I*            Position 272 (If position 271 contains X'00')         22.02.88
  318.00     I*            X'00' = Monkeyed file                                 22.02.88
  319.00     I*            X'01' = Keyed file                                    22.02.88
  320.00     I*            Position 272 (If position 271 not X'00')              22.02.88
  321.00     I*            X'00' = 5250 Display station, 960 characters          22.02.88
  322.00     I*            X'01' = System console, 1024 characters               22.02.88
  323.00     I*            X'02' = 5256 Printer                                  22.02.88
  324.00     I*            X'03' = 5211/3262 Printer                             22.02.88
  325.00     I*            X'04' = MFCU                                          22.02.88
  326.00     I*            X'05' = 3411/3410 Tape                                22.02.88
  327.00     I*            X'06' = 72M Diskette                                  22.02.88
  328.00     I*            X'07' = 5250 Display station, 1920 characters         22.02.88
  329.00     I*            X'08' = Spooled                                       22.02.88
  330.00     I                                  271 272 @@DCLS                   22.02.88
  331.00     I*                                                                  22.02.88
  332.00     I*          Device name (Last completed operation)                  22.02.88
  333.00     I                                  273 282 @@DNAM                   22.02.88
  334.00     I*                                                                  22.02.88
  335.00     I*          Length of last I/O record processed                     22.02.88
  336.00     I                                B 283 2860@@LIOL                   22.02.88
 98330                                   JD Edwards World
 I00SC     .JDFSRC61                       Print Source Code                        Date - 27.01.17
Seq No.
--------                                                                          Mod Date
                                                                                  --------
  337.00     I*                                                                  22.02.88
  338.00     I*          Routing data information                                22.02.88
  339.00     I                                  287 366 @@RDTA                   22.02.88
  340.00     I*                                                                  22.02.88
  341.00     I*          Current line number within a printer page               22.02.88
  342.00     I                                B 367 3680@@CLNO                   22.02.88
  343.00     I*                                                                  22.02.88
  344.00     I*          AID character indication:                               22.02.88
  345.00     I*            X'F1' = Enter/Rec Adv                                 22.02.88
  346.00     I*            X'F5' = Roll up                                       22.02.88
  347.00     I*            X'F4' = Roll down                                     22.02.88
  348.00     I*            X'F6' = Print                                         22.02.88
  349.00     I*            X'F8' = Home                                          22.02.88
  350.00     I*            X'BD' = Clear                                         22.02.88
  351.00     I*            X'F3' = Help                                          22.02.88
  352.00     I*            X'3F' = Auto Enter                                    22.02.88
  353.00     I*            X'31' = Command Key 01                                09.08.91
  354.00     I*            X'32' = Command Key 02                                22.02.88
  355.00     I*            X'33' = Command Key 03                                22.02.88
  356.00     I*            X'34' = Command Key 04                                22.02.88
  357.00     I*            X'35' = Command Key 05                                22.02.88
  358.00     I*            X'36' = Command Key 06                                22.02.88
  359.00     I*            X'37' = Command Key 07                                22.02.88
  360.00     I*            X'38' = Command Key 08                                22.02.88
  361.00     I*            X'39' = Command Key 09                                22.02.88
  362.00     I*            X'3A' = Command Key 10                                22.02.88
  363.00     I*            X'3B' = Command Key 11                                22.02.88
  364.00     I*            X'3C' = Command Key 12                                22.02.88
  365.00     I*            X'B1' = Command Key 13                                22.02.88
  366.00     I*            X'B2' = Command Key 14                                22.02.88
  367.00     I*            X'B3' = Command Key 15                                22.02.88
  368.00     I*            X'B4' = Command Key 16                                22.02.88
  369.00     I*            X'B5' = Command Key 17                                22.02.88
  370.00     I*            X'B6' = Command Key 18                                22.02.88
  371.00     I*            X'B7' = Command Key 19                                22.02.88
  372.00     I*            X'B8' = Command Key 20                                22.02.88
  373.00     I*            X'B9' = Command Key 21                                22.02.88
  374.00     I*            X'BA' = Command Key 22                                22.02.88
  375.00     I*            X'BB' = Command Key 23                                22.02.88
  376.00     I*            X'BC' = Command Key 24                                22.02.88
  377.00     I                                  369 369 @@AID                    22.02.88
  378.00     I*                                                                  22.02.88
  379.00     I*          Cursor line in hex (display files only)                 22.02.88
  380.00     I                                  370 370 @@CURL                   22.02.88
  381.00     I*                                                                  22.02.88
  382.00     I*          Cursor position in hex (display files only)             22.02.88
  383.00     I                                  371 371 @@CURP                   22.02.88
  384.00     I*                                                                  22.02.88
  385.00     I*            Note:  By simply defining a 2 byte binary field       22.02.88
  386.00     I*                   and moving the cursor line/position field      22.02.88
  387.00     I*                   into it right justified you will have the      22.02.88
  388.00     I*                   numerical value of the line/position field.    22.02.88
  389.00     I*                   Remember the binary field must be set to       22.02.88
  390.00     I*                   zero prior to the move.                        22.02.88
  391.00     I*                                                                  22.02.88
  392.00     I*          Number of records transmitted                           22.02.88
 98330                                   JD Edwards World
 I00SC     .JDFSRC61                       Print Source Code                        Date - 27.01.17
Seq No.
--------                                                                          Mod Date
                                                                                  --------
  393.00     I                                B 371 3720@@RTRM                   22.02.88
  394.00     I*                                                                  22.02.88
  395.00     I*          UNUSED                                                  22.02.88
  396.00     I                                  373 375 @@FLR4                   22.02.88
  397.00     I*                                                                  22.02.88
  398.00     I*          RRN of last subfile record written/updated              22.02.88
```

Figure D–8 Copy Module - Retrieve Soft Coding Data Structure report (6 of 7)

```
399.00    I                                   B 376 3770@@SRRN                    22.02.88
400.00    I*                                                                      22.02.88
401.00    I*          RRN of first subfile record on display                      22.02.88
402.00    I                                   B 378 3790@@SRCN                    22.02.88
403.00    I*                                                                      22.02.88
404.00    I*          UNUSED                                                      22.02.88
405.00    I                                     380 396 @@FLRS                    02.10.89
406.00    I*                                                                      22.02.88
407.00    I*          RRN of data base record                                     22.02.88
408.00    I                                   B 397 4000@@RRN                     22.02.88
409.00    I*                                                                      22.02.88
410.00    I*          Data base file key                                          22.02.88
411.00    I                                     401 528 @@RKEY                    22.02.88
412.00    I*-------------------------------------------------------------         22.02.88
413.00    I*                                                                      30.08.89
414.00    I*    Cursor Sensitive Help Values                                      30.08.89
415.00    I*                                                                      30.08.89
416.00    II00CSR       DS                                                        30.08.89
417.00    I*                                                                      30.08.89
418.00    I*    Returned field name.                                              30.08.89
419.00    I                                       1  10 **FLDN                    30.08.89
420.00    I*    Returned value.                                                   30.08.89
421.00    I                                      11  40 **RVAL                    29.09.89
422.00    I*    Returned description.                                             30.08.89
423.00    I                                      41  70 **RDSC                    29.09.89
424.00    I*    Returned location: Row.                                           31.08.89
425.00    I                                      71  730**RROW                    29.09.89
426.00    I*    Returned location: Column.                                        31.08.89
427.00    I                                      74  760**RCOL                    29.09.89
428.00    I*    Dictionary Field Name (non-blank=override)                        03.11.89
429.00    I                                      77  86 **DTAI                    29.09.89
430.00    I*    Returned Display File Format                                      29.09.89
431.00    I                                      87  96 **RFMT                    29.09.89
432.00    I*    RPG Indicator Array                                               29.09.89
433.00    I                                      97 195 **IN                      29.09.89
434.00    I*    Override Reporting System (Jargon)                                06.10.92
435.00    I                                     196 199 ***SYR                    06.10.92
436.00    I*-------------------------------------------------------------         30.08.89
437.00    I*                                                                      27.11.89
438.00    I*    Hidden Fields for Subfile Attribute Indicators                    27.11.89
439.00    I*                                                                      27.11.89
440.00    ISHIN         DS                                                        27.11.89
441.00    I                                       1   1 SHIN01                    27.11.89
442.00    I                                       2   2 SHIN02                    27.11.89
443.00    I                                       3   3 SHIN03                    27.11.89
444.00    I                                       4   4 SHIN04                    27.11.89
445.00    I                                       5   5 SHIN05                    27.11.89
446.00    I                                       6   6 SHIN06                    27.11.89
447.00    I                                       7   7 SHIN07                    27.11.89
448.00    I                                       8   8 SHIN08                    27.11.89
 98330                                 JD Edwards World
 I00SC     .JDFSRC61                      Print Source Code                          Date - 27.01.17
Seq No.
--------                                                                          Mod Date
                                                                                  --------
449.00    I                                       9   9 SHIN09                    27.11.89
450.00    I                                      10  10 SHIN10                    27.11.89
451.00    I                                      11  11 SHIN11                    27.11.89
452.00    I                                      12  12 SHIN12                    27.11.89
453.00    I                                      13  13 SHIN13                    27.11.89
454.00    I                                      14  14 SHIN14                    27.11.89
455.00    I                                      15  15 SHIN15                    27.11.89
456.00    I                                      16  16 SHIN16                    27.11.89
457.00    I                                      17  17 SHIN17                    27.11.89
458.00    I                                      18  18 SHIN18                    27.11.89
459.00    I                                      19  19 SHIN19                    27.11.89
460.00    I                                      20  20 SHIN20                    27.11.89
461.00    I                                      21  21 SHIN21                    27.11.89
462.00    I                                      22  22 SHIN22                    27.11.89
463.00    I                                      23  23 SHIN23                    27.11.89
464.00    I                                      24  24 SHIN24                    27.11.89
465.00    I                                      25  25 SHIN25                    27.11.89
466.00    I                                      26  26 SHIN26                    27.11.89
467.00    I                                      27  27 SHIN27                    27.11.89
468.00    I                                      28  28 SHIN28                    27.11.89
469.00    I                                      29  29 SHIN29                    27.11.89
470.00    I                                      30  30 SHIN30                    27.11.89
471.00    I                                      31  31 SHIN31                    27.11.89
472.00    I                                      32  32 SHIN32                    27.11.89
473.00    I                                      33  33 SHIN33                    27.11.89
474.00    I                                      34  34 SHIN34                    27.11.89
475.00    I                                      35  35 SHIN35                    27.11.89
476.00    I                                      36  36 SHIN36                    27.11.89
477.00    I                                      37  37 SHIN37                    27.11.89
478.00    I                                      38  38 SHIN38                    27.11.89
479.00    I                                      39  39 SHIN39                    27.11.89
480.00    I                                      40  40 SHIN40                    30.11.89
481.00    I                                      41  41 SHIN41                    27.11.89
482.00    I                                      42  42 SHIN42                    27.11.89
483.00    I                                      43  43 SHIN43                    27.11.89
484.00    I                                      44  44 SHIN44                    27.11.89
485.00    I                                      45  45 SHIN45                    27.11.89
486.00    I                                      46  46 SHIN46                    27.11.89
487.00    I                                      47  47 SHIN47                    27.11.89
488.00    I                                      48  48 SHIN48                    27.11.89
```

Figure D–9 Copy Module - Retrieve Soft Coding Data Structure report (7 of 7)

```
  489.00    I                                   49  49 SHIN49                    27.11.89
  490.00    I                                   50  50 SHIN50                    27.11.89
  491.00    I                                   51  51 SHIN51                    27.11.89
  492.00    I                                   52  52 SHIN52                    27.11.89
  493.00    I                                   53  53 SHIN53                    27.11.89
  494.00    I                                   54  54 SHIN54                    27.11.89
  495.00    I                                   55  55 SHIN55                    27.11.89
  496.00    I                                   56  56 SHIN56                    27.11.89
  497.00    I                                   57  57 SHIN57                    27.11.89
  498.00    I                                   58  58 SHIN58                    27.11.89
  499.00    I                                   59  59 SHIN59                    27.11.89
  500.00    I                                   60  60 SHIN60                    27.11.89
  501.00    I                                   61  61 SHIN61                    27.11.89
  502.00    I                                   62  62 SHIN62                    27.11.89
  503.00    I                                   63  63 SHIN63                    27.11.89
  504.00    I                                   64  64 SHIN64                    27.11.89
 98330                                   JD Edwards World
 I00SC     .JDFSRC61                       Print Source Code                        Date - 27.01.17
Seq No.
-------                                                                          Mod Date
                                                                                 --------
  505.00    I                                   65  65 SHIN65                    27.11.89
  506.00    I                                   66  66 SHIN66                    27.11.89
  507.00    I                                   67  67 SHIN67                    27.11.89
  508.00    I                                   68  68 SHIN68                    27.11.89
  509.00    I                                   69  69 SHIN69                    27.11.89
  510.00    I                                   70  70 SHIN70                    27.11.89
  511.00    I                                   71  71 SHIN71                    27.11.89
  512.00    I                                   72  72 SHIN72                    27.11.89
  513.00    I                                   73  73 SHIN73                    27.11.89
  514.00    I                                   74  74 SHIN74                    27.11.89
  515.00    I                                   75  75 SHIN75                    27.11.89
  516.00    I                                   76  76 SHIN76                    27.11.89
  517.00    I                                   77  77 SHIN77                    27.11.89
  518.00    I                                   78  78 SHIN78                    27.11.89
  519.00    I                                   79  79 SHIN79                    27.11.89
  520.00    I                                   80  80 SHIN80                    27.11.89
  521.00    I                                   81  81 SHIN81                    27.11.89
  522.00    I                                   82  82 SHIN82                    27.11.89
  523.00    I                                   83  83 SHIN83                    27.11.89
  524.00    I                                   84  84 SHIN84                    27.11.89
  525.00    I                                   85  85 SHIN85                    27.11.89
  526.00    I                                   86  86 SHIN86                    27.11.89
  527.00    I                                   87  87 SHIN87                    27.11.89
  528.00    I                                   88  88 SHIN88                    27.11.89
  529.00    I                                   89  89 SHIN89                    27.11.89
  530.00    I                                   90  90 SHIN90                    27.11.89
  531.00    I                                   91  91 SHIN91                    27.11.89
  532.00    I                                   92  92 SHIN92                    27.11.89
  533.00    I                                   93  93 SHIN93                    27.11.89
  534.00    I                                   94  94 SHIN94                    27.11.89
  535.00    I                                   95  95 SHIN95                    27.11.89
  536.00    I                                   96  96 SHIN96                    27.11.89
  537.00    I                                   97  97 SHIN97                    27.11.89
  538.00    I                                   98  98 SHIN98                    27.11.89
  539.00    I                                   99  99 SHIN99                    27.11.89
  540.00    I*-----------------------------------------------------------------   27.11.89
  541.00    I*                                                                   09.06.93
  542.00    I*    Hidden Fields for Subfile Mode and Cursor Position             09.06.93
  543.00    I*                                                                   09.06.93
  544.00    II00MDE      DS                                                      09.06.93
  545.00    I*    Subfile Mode                                                   09.06.93
  546.00    I                                    1   1 ####MD                    09.06.93
  547.00    I*    Subfile Relative Record Number                                 09.06.93
  548.00    I                                    2  60###RNO                     09.06.93
  549.00    I*    Cursor Location - Record Format                                09.06.93
  550.00    I                                    7  16 ###CRC                    09.06.93
  551.00    I*    Cursor Location - Field Name                                   09.06.93
  552.00    I                                   17  26 ###CFL                    09.06.93
  553.00    I*-----------------------------------------------------------------   09.06.93
```

D.3 Item Master Information - P928011

Figure D–10 Item Master Information report (1 of 32)

```
1.00        H/TITLE P928011-Item Master Information
2.00        H*-----------------------------------------------------------------------------
3.00        H*
4.00        H*    Copyright (c) 1993
5.00        H*     J. D. Edwards & Company
6.00        H*
7.00        H*        This unpublished material is proprietary to
8.00        H*        J. D. Edward & Company. All rights reserved.
9.00        H*        The methods and techniques described herein are
10.00       H*        considered trade secrets and/or confidential.
11.00       H*        ReproduC*ion or distribution, in whole or in part,
12.00       H*        is forbidden except by express written permission
13.00       H*         of J. D. Edwards & Company.
14.00       H*
15.00       H*-----------------------------------------------------------------------------
16.00       P*
17.00       P*     PROGRAM REVISION LOG
18.00       P*      --------------------
19.00       P*
20.00       P*            Date      Programmer     Nature of Revison
21.00       P*        ---------  ----------  ------------------------------------
22.00AUTHRF*             12/07/93   Quarles        SAR #   241883     (AS/400  A/G)
23.00       P*
24.00       P*     B0010         - Standard Maintenance Program Type
25.00       P*                     This program provides the standard single cycle
26.00       P*                     processing for adding, changing, deleting and
27.00       P*                     inquiring into data records as requested.
28.00       P*
29.00       P*****************************************************************************
30.00       P*
31.00       FP001     IF     E      K          DISK
32.00       FF92801   UP     E      K          DISK                                    A
33.00       FV928011  CP     E                 WORKSTN          KINFDS     SFVRDS
34.00       P*****************************************************************************
35.00       P*
36.00       P*     Copy Member for Composite Common Subroutine - C0001
37.00       P*
38.00       P/COPY JDECPY,D0001
39.00       P*****************************************************************************
40.00       E*****************************************************************************
41.00       E*     PROGRAM TABLES AND ARRAYS
42.00       E*     -------------------------
43.00       E*
44.00       E                     EMK          64    4            Error Msg
45.00       E                     @MK          64    1            Error Msg
46.00       E                     @ER          64    4            Error Msg
47.00       E                     @DV          40    1            Dflt Wrk
48.00       E                     @C          256    1            Literal Work
49.00       E*
50.00       E*
51.00       E*     Copy Member for Composite Common Subroutine - C0001
52.00       E*
53.00       E*/COPY JDECPY,E0001
54.00       E*****************************************************************************
55.00       E*
56.00       E*     Copy Member for Composite Common Subroutine - C0012
57.00       E*
58.00       E/COPY JDECPY,E0012
59.00       E*****************************************************************************
60.00       E*     Copy Member for Composite Common Subroutine - C997
61.00       E*
62.00       E*
63.00       E/COPY JDECPY,E997
64.00       I*****************************************************************************
65.00       I*****************************************************************************
66.00       I*     PROGRAM INPUT SPECIFICATIONS AND DATA STRUC*URES
67.00       I*     ------------------------------------------------
68.00       I*
```

Copyright statement can be changed through the Program Generator

Shows all SARs used to make changes to the program

The Program Generator puts in numeric order. RPG opens from bottom to top so JDE puts more heavily used files at the bottom

Informational data structure for the video

Arrays that handle error messages

Will copy in additional specifications for copy module C0001

Figure D–11 Item Master Information report (2 of 32)

```
 69.00   I*     Data Structures to Load Video Screen Text
 70.00   I*
 71.00   IDSTXT          DS                          1000
 72.00   I                                     1     18 VTX001
 73.00   I*                                   41     58 VTX002
 74.00   I*                                   81     92 VTX003
 75.00   I*                                  121    138 VTX004
 76.00   I*                                  161    178 VTX005
 77.00   I*                                  201    218 VTX006
 78.00   I*                                  241    258 VTX007
 79.00   I*                                  281    298 VTX008
 80.00   I*                                  321    338 VTX009
 81.00   I*                                  361    378 VTX010
 82.00   I*                                  401    418 VTX011
 83.00   I*                                  441    458 VTX012
 84.00   I*                                  481    498 VTX013
 85.00   I*                                  521    536 VTX014
 86.00   I*                                  561    576 VTX015
 87.00   I*                                  601    616 VTX016
 88.00   I*                                  641    656 VTX017
 89.00   I*                                  681    696 VTX018
 90.00   I*                                  721    736 VTX019
 91.00   I*                                  761    776 VTX020
 92.00   I*                                  801    816 VTX021
 93.00   I*                                  841    856 VTX022
 94.00   I*                                  881    896 VTX023
 95.00   I*                                  921    936 VTX024
 96.00   I*                                  961    976 VTX025
 97.00   I*
 98.00   I/COPY JDECPY, IOODSINX
 99.00   I/COPY JDECPY, IOOPS@@
100.00   I/COPY JDECPY, IOODSPROG
101.00   I*
102.00   I*
103.00   I*
104.00   I*     Copy Member for Composite Common Subroutine - COOSC
105.00   I*
106.00   I/COPY JDECPY, IOOSC
107.00   I*************************************************************
108.00   I*
109.00   I*     Copy Member For Server - x0005
110.00   I*
111.00   I/COPY JDECPY, I0005U
112.00   I*************************************************************
113.00   I*
114.00   I*     Copy Member For Server - x0006
115.00   I*
116.00   I/COPY JDECPY, I000661
117.00   I*************************************************************
118.00   I*
119.00   I*     Copy Member For Server - x9800E
120.00   I*
121.00   I/COPY JDECPY, I9800e
122.00   I*************************************************************
123.00   C*************************************************************
124.00   C*     MAINLINE PROGRAM
125.00   C*     ----------------
126.00   C*
127.00   C*     Process housekeeping.
128.00   C*
129.00   C                    EXSR S999
130.00   C*                    ---- ----
131.00   C*
132.00   C*     If LR on, end program.
133.00   C*
134.00   C          *INLR     CABEQ'1'          EOJ
135.00   C*                   --------          ---
136.00   C*
137.00   C*     If automatic inquiry set, process inquiry.
138.00   C*
139.00   C          $AUTO     CASEQ'1'          S003          24
140.00   C*                   --------          ----
141.00   C*                    End
142.00   C*
143.00   C*     Begin normal program processing.
144.00   C*     --------------------------------
145.00   C*
146.00   C          *INLR     DOWEQ'0'
147.00   C*
148.00   C*     Write video screen.
149.00   C*
```

Each VTX field is 40 long but may not use all 40. Pulls in text from Vocabulary Overrides.

Data structure for commonly used indexes

Data structure used with file servers

Program status data structure

Data structure for vocabulary overrides and function keys

Data structure for file server X0005

One time only functions

If information is passed to this program, it will automatically inquire on the record

Figure D–12 Item Master Information report (3 of 32)

```
150.00    C                    WRITEV9280111
151.00    C                    MOVE /1/          @@AID
152.00    C                    EXSR S001
153.00    C*                   ---- ----
154.00    C*
155.00    C*   Load data field dictionary parameters (one cycle only).
156.00    C*
157.00    C        $998        CASEQ' '          S998
158.00    C*                   --------          ----
159.00    C                    END
160.00    C*
161.00    C*   Begin video screen read processing.
162.00    C*
163.00    C                    SETOF                          999301
164.00    C                    READ V928011                     9998
165.00    C                    Z-ADDO            ##RROW
166.00    C                    Z-ADDO            ##RCOL
167.00    C*
168.00    C*   If video read timed out, end program.
169.00    C*
170.00    C          *IN99     CABEQ'1'          EOJ              LR
171.00    C*                   -------           ---
172.00    C          @@AID     CABEQ#FEOJ        EOJ              LR
173.00    C*                   ----------        ---
174.00    C*
175.00    C*    If vaild function key pressed, process and return.
176.00    C*
177.00    C          *IN15     IFEQ '1'
178.00    C                    EXSR SOOEX
179.00    C*                   ---- -----
180.00    C           INLR     CABEQ'1'          EOJ
181.00    C*                   --------          ---
182.00    C          *IN15     CABEQ'1'          END
183.00    C*                   --------          ---
184.00    C                    END
185.00    C*
186.00    C*   Edit the action code.
187.00    C*
188.00    C                    EXSR C0001
189.00    C*                   ---- -----
190.00    C*
191.00    C*   If end of job requested, end program.
192.00    C*
193.00    C          @@AID     CABEQ#FEOJ        EOJ
194.00    C*                   ---               ---
195.00    C*
196.00    C*   If clear screen requested, process and return.
197.00    C*
198.00    C          @@AID     IFEQ #FCLR
199.00    C                    EXSR S001
200.00    C*                   ---- ----
201.00    C                    GOTO END
202.00    C*                   ---- ---
203.00    C                    END
204.00    C*
205.00    C*   Load subfile records.
206.00    C*
207.00    C                    EXSR S003
208.00    C*                   ---- ----
209.00    C*
210.00    C*   If add or change, validate all video input.
211.00    C*
212.00    C          *IN93     CASEQ'0'          S005
213.00    C*                   --------          ----
214.00    C                    END
215.00    C*
216.00    C*   If no errors and not inquiry, update file.
217.00    C*
218.00    C          *IN93     IFEQ '0'
219.00    C          *IN24     CASEQ'0'          S010
220.00    C*                   ---               ----
221.00    C                    END
222.00    C                    END
223.00    C*
224.00    C*   Return for next input.
225.00    C*
226.00    C            END     TAG
227.00    C*           ---     ---
228.00    C*
```

Clears fields

One time only. Pulls in Data Dictionary editing information functions

Used for cursor sensitive help. Tells where the cursor is.

All function keys are assigned indicator 15 so if 15 is on, a function key has been pressed

Edits the action code. Checks action code security.

Sets the file pointer and calls S004 to load the video/report fields

If an error has occurred, validates and edits data

Updates files

Figure D–13 Item Master Information report (4 of 32)

```
229.00    C*     Set correct message in line 24.
230.00    C*
231.00    C              *IN93     IFEQ '1'
232.00    C                        MOVELSVL24E      VOL24
233.00    C                        ELSE
234.00    C                        MOVELSVL24M      VDL24
235.00    C                        END
236.00    C*
237.00    C                        END
238.00    C*
239.00    C                EOJ     TAG
240.00    C*               ---     ---
241.00    C*
242.00    C*     END MAINLINE PROGRAM
243.00    C*    --------------------
244.00    C*****************************************************************
245.00    C*
246.00    C*     Copy Common Subroutine - Edit Action Code
247.00    C*
248.00    C/COPY JDECPY, C0001
249.00    C*****************************************************************
250.00    C*
251.00    C*     SUBROUTINE SOOEX - Process Function Keys
252.00    C*     ----------------------------------------
253.00    C*
254.00    C     Processing:  1.  Determine function key pressed.
255.00    C*                 2. Process function key request.
256.00    C*
257.00    CSR            SOOEX     BEGSR
258.00    C*             -----     -----
259.00    CSR            TOOEXA    Tag
260.00    C*             ------    ---
261.00    C*
262.00    C*     If EOJ requested, exit subroutine.
263.00    C*
264.00    CSR            @@AID     CABEQ#FEOJ       ENDEXE           LR
265.00    C*                       -----            ------
266.00    C*
267.00    C*     If Display Keys pressed, exit to help facility and return.
268.00    C*     ----------------------------------------------------------
269.00    C*
270.00    CSR            @@AID     IFEQ #FKEYS
271.00    CSR                      CALL 'P9601R'                     98
272.00    C*                       ---- --------
273.00    CSR                      PARM             IOOSC
274.00    CSR                      PARM             SRVFDS
275.00    CSR                      PARM             IOOCSR
276.00    C*
277.00    CSR            @@AID     CABNE#FKEYS      TOOEXA
278.00    C*                       -----            ------
279.00    CSR                      GOTO ENDEXE
280.00    C*                       ---- ------
281.00    CSR                      END
282.00    C*
283.00    C*
284.00    C*     If Cursor Sensitive Help Pressed, exit to CS Help.
285.00    C*     --------------------------------------------------
286.00    CSR            @@AID     IFEQ #FQMRX
287.00    CSR                      MOVEA*IN         ##IN
288.00    CSR                      CALL 'X96CCX'                     98
289.00    C*
290.00    CSR                      PARM             IGOSC
291.00    CSR                      PARM             SRVFDS
292.00    CSR                      PARM             IOOCSR
293.00    CSR                      PARM ' '         ##CCPF  2
294.00    CSR                      PARM             IOGMDE
295.00    C*
296.00    CSR           ##FLDN     IFNE *BLANKS
297.00    CSR                      EXSR SOOVL
298.00    C*                       ---- -----
299.00    C*                       MOVEA##IN        *IN,1
300.00    CSR                      END
301.00    CSR                      MOVEL*BLANKS     ##DTAI
302.00    CSR                      GOTO ENDEXE
303.00    C*                       ---- ------
304.00    CSR                      END
305.00    C*
```

Sets the message for Line 24

Contains what function key was pressed by the user

External programs start with an X. This is the cursor sensitive help program

Parameters passed identifying where the cursor was when F1 was pressed

Figure D–14 Item Master Information report (5 of 32)

```
306.00      C*     If Display errors pressed, exit to error messages
307.00      C*     ------------------------------------------------
308.00      C*
309.00      CSR            @@AID     IFEQ #FERRD
310.00      CSR                      Z-ADD1          #G
311.00      CSR                      Z-ADD1          #H
312.00      CSR               #G     DOWLE64
313.00      CSR           @MK,#G     IFEQ '1'
314.00      CSR                      MOVE EMK,#G     @ER,#H
315.00      CSR                      Add  1          #H
316.00      CSR                      END
317.00      CSR                      ADD  1          #G
318.00      CSR                      END
319.00      CSR                      CALL 'POOOOE'                     98
320.00      C*                       ---- --------
321.00      CSR                      PARM            @ER
322.00      CSR                      GOTO ENDEXE
323.00      C*                       ---- ------
324.00      CSR                      END
325.00      C*
326.00      C*     If HELP key pressed, exit to help facility and return.
327.00      C*     -----------------------------------------------------
328.00      C*
329.00      C*             @@AID     IFEQ #FHELP                        Access JDE Help information
330.00      C*                       CALL 'POOHELP'                    98
331.00      C*                       ---- ---------
332.00      CSR                      PARM            HS@@
333.00      CSR                      PARM            HE@@
334.00      CSR                      PARM            IOOSC
335.00      CSR                      PARM            SRVPDS
336.00      CSR                      GOTO ENDEXE
337.00      C*                       ---- ------
338.00      CSR                      END
339.00      C*
340.00      C*     If Clear screen pressed, clear screen and return.
341.00      C*     ------------------------------------------------
342.00      C*
343.00      CSR            @@AID     IFEQ #FCLR
344.00      CSR                      EXSR S001
345.00      C*                       ---- ----
346.00      CSR                      GOTO ENDEXE
347.00      C*                       ---- ------
348.00      CSR                      END
349.00      C*
350.00      C*     Process roll up and down keys.
351.00      C*     ------------------------------
352.00      C*
353.00      CSR            @@AID     IFEQ #FROLU
354.00      CSR            @@AID     OREQ #FROLD
355.00      C*            $SECUR     DOUEQ' '
356.00      CSR                      MOVE ' '        $SECUR  1
357.00      C*
358.00      C*     If ROLL UP key pressed, process read next.
359.00      C*     ------------------------------------------
360.00      C*
361.00      CSR            @@AID     IFEQ #FROLU
362.00      C*
363.00      C*     Reset error indicators if roll
364.00      C*
365.00      CSR                      MOVEA$RESET     *IN,41
366.00      CSR                      MOVE '0'        *IN,40
367.00      CSR                      SETOF                           818299
368.00      CSR                      READ I92801                       9981
369.00      CSR            *IN81     IFEQ '1'
370.00      CSR           $RUKEY     SETLLI92801
371.00      CSR                      SETOF                             8299
372.00      CSR                      READ I92801                       9982
373.00      C*
374.00      C*     If error on read, set error.
375.00      C*
376.00      CSR            *IN82     IFEQ '1'
377.00      CSR                      SETON                             9341
378.00      CSR                      MOVE '1'        @MK,2
379.00      CSR                      GOTO ENDEXE
380.00      C*                       ---- ------
381.00      CSR                      END
382.00      CSR                      END
```

Figure D–15 Item Master Information report (6 of 32)

```
384.00    CSR                    END
385.00    C*
386.00    C*    If ROLL DOWN key pressed, process read prior.
387.00    C*    ---------------------------------------------
388.00    C*
389.00    CSR          @@AID     IFEQ #FROLD
390.00    C*
391.00    C*    Reset error indicators if roll
392.00    C*
393.00    CSR                    MOVEA$RESET      *IN, 41
394.00    CSR                    MOVE '0'         *IN, 40
395.00    CSR                    SETOF                        010299
396.00    CSR                    READPI92801                    9901
397.00    CSR          *IN01     IFEQ '1'
398.00    CSR         $RDKEY     SETLLI92801
399.00    CSR                    SETOF                          8299
400.00    CSR                    READPI92801                    9902
401.00    C*
402.00    C*    If error on read, set error.
403.00    C*
404.00    CSR          *IN02     IFEQ '1'
405.00    CSR                    SETON                          9341
406.00    CSR                    MOVE '1'         @MK,2
407.00    CSR                    GOTO ENDEXE
408.00    C*                     ---- ------
409.00    CSR                    END
410.00    CSR                    END
411.00    CSR                    END
412.00    C*
413.00    C*    Load video screen data on roll keys.
414.00    C*    ------------------------------------
415.00    C*
416.00    CSR          @@AID     IFEQ #FROLU
417.00    CSR          @@AID     OREQ #FROLD
418.00    C*
419.00    C*    Release record lock or report record in use.
420.00    C*
421.00    CSR          *IN99     IFEQ '0'
422.00    CSR                    EXCPTUNLOCK
423.00    CSR                    ELSE
424.00    CSR                    CALL 'P98BLCK'                  81
425.00    C*                     ---- ---------
426.00    CSR                    PARM             ##PSDS
427.00    CSR                    SETON                          9341
428.00    CSR                    MOVE '1'         @MK,6
429.00    CSR                    GOTO ENDEXE
430.00    C*                     ---- ------
431.00    CSR                    END
432.00    C*
433.00    C*
434.00    C*    Cost Center security edit.
435.00    C*
436.00    CSR                    MOVE'P92801      '#FILE
437.00    CSR                    MOVELQXXCC        #MCU
438.00    CSR           #AUT     IFNE '1'
439.00    CSR          #FAUT     ANDNE'1'
440.00    CSR                    EXSR C0000
441.00    C*                     ---- -----
442.00    CSR                    END
443.00    CSR           #AUT     IFNE '1'
444.00    CSR          #FAUT     ANDNE'1'
445.00    CSR          #MAUT     ANDNE'1'
446.00    CSR                    MOVE '1'        $SECUR
447.00    CSR                    END
448.00    CSR         $SECUR     CASEQ' '         S004
449.00    C*                     ------
450.00    CSR                    END
451.00    C*
452.00    CSR                    END
453.00    C*
454.00    CSR                    END
455.00    CSR                    GOTO ENDEXE
456.00    C*                     ---- ------
57.00     CSR                    END
458.00    C*
459.00    CSR         $SAID      IFNE '1'
460.00    CSR                    SETON                        0193
461.00    CSR                    GOTO ENDEXE
462.00    C*                     ---- ------
463.00    CSR                    END
464.00    C*
465.00    CSR         ENDEXE     ENDSR
```

Program that will display a record lock window when a *record in use* error is encourntere s

Could not find a match in the Function Key Definitions for the function key pressed, so program displays *Invalid Function Key* message.

Figure D–16 Item Master Information report (7 of 32)

```
466.00    C*****************************************************************
467.00    C*
469.00    C*    Copy Common Subroutine - Coat Center Secturity Check
469.00    C*
470.00    C/COPY JDECPY,C0000
471.00    C*****************************************************************
472.00    C*
473.00    C*    SUBROUTINE SGCVL - Cursor Control Return Values
474.00    C*    -----------------------------------------------
475.00    C*
476.00    C*     By format, find the field to upate and move in the
477.00    C*     returned value.  If the format is a subfile, the record
478.00    C*    to change is found in ##RRN.
479.00    C*
480.00    CSR            S00VL     BEGSR
481.00    C*             -----     -----
482.00    C*
483.00    CSR           ##RVAL     IFEQ 'BLANK'
484.00    CS                       MOVE *BLANK      ##RVAL
485.00    C*                       END
486.00    C*
487.00    C*     Return values for fields in format V9280111
488.00    C*
489.00    CSR           ##RFMT     IFEQ 'V9280111'
490.00    C*
491.00    CSR           ##PLDN     IFEQ 'ACTION     '
492.00    CSR                      MOVE##RVAL        ACTION
493.00    CSR                      GOTO ENDOVL
494.00    C*                       ---- ------
495.00    CSR                      END
496.00    C*
497.00    CSR           ##PLDN     IFEQ 'VDXIT      '
498.00    CSR                      MOVEL##RVAL       VDXIT
499.00    CSR                      GOTO ENDOVL
500.00    C*                       ---- ------
501.00    CSR                      END
502.00    C*
503.00    CSR           ##PLDN     IFEQ 'VDXDS      '
504.00    CSR                      MOVEL##RVAL       VDXDS
505.00    CSR                      GOTO ENDOVL
506.00    C*                       ---- ------
507.00    CSR                      END
508.00    C
509.00    CSR           ##PLDN     IFEQ 'VDXCC      '
510.00    CSR                      MOVEL##RVAL       VDXCC
511.00    CSR                      GOTO ENDOVL
512.00    C*                       ---- ------
513.00    CSR                      END
514.00    C*
515.00    CSR           ##PLDN     IFEQ 'VDXTY      '
516.00    CSR                      MOVEL##RVAL       VDXTY
517.00    CRS                      GOTO ENDOVL
518.00    C*                       ---- ------
519.00    CSR                      END
520.00    C*
521.00    CSR           ##PLDN     IFEQ 'VDXDT      '
522.00    CSR                      MOVEL##RVAL       VDXDT
523.00    CSR                      GOTO ENDOVL
524.00    C*                       ---- ------
525.00    CSR                      END
526.00    C*
527.00    CSR           ##PLDN     IFEQ 'VDXQT      '
528.00    CSR                      MOVEL##RVAL       VDXQT
529.00    CSR                      GOTO ENDOVL
530.00    C*                       ---- ------
531.00    CSR                      END
532.00    C*
533.00    CSR           ##PLDN     IFEQ 'VDXUM      '
534.00    CSR                      MOVEL##RVAL      VDXUM
535.00    CSR                      GOTO ENDOVL
536.00    C*                       ---- ------
537.00    CSR                      END
538.00    C*
539.00    CSR           ##PLDN     IFEQ 'VDX001     '
540.00    CSR                      MOVEL##RVAL       VDX001
541.00    CSR                      GOTO ENDOVL
542.00    C*                       ---- ------
```

For cursor sensitive help. Information was retrieved in program X96CCX. The retrieved information is returned to the video fields in this subroutine.

Figure D–17 Item Master Information report (8 of 32)

```
543.00    CSR                    END
544.00    C*
545.00    CSR          ##FLDN    IFEQ 'VDX002     '
546.00    CSR                    MOVEL##RVAL       VDX002
547.00    CSR                    GOTO ENDOVL
548.00    C*                     ---- ------
549.00    CSR                    END
550.00    C*
551.00    CSR           #FLDN    IFEQ 'VDX003     '
552.00    CSR                    MOVEL##RVAL       VDX003
553.00    CSR                    GOTO ENDOVVL
554.00    C*                     ---- ------
555.00    CSR                    END
556.00    C*
557.00    CSR          ##FLDN    IFEQ 'VDX004     '
558.00    CSR                    MOVEL##RVAL       VDX004
559.00    CSR                    GOTO ENDOVL
561.00    CSR                    END
562.00    C*
563.00    CSR          ##FLDN    IFEQ 'VDX005     '
564.00    CSR                    MOVEL##RVALL      VDX005
565.00    CSR                    GOTO ENDOVL
566.00    C*                     ---- -------
567.00    CSR                    END
568.00    CSR                    END
569.00    C*
570.00    CSR          ENDOVL    ENDSR
571.00    C*****************************************************************
572.00    C*
573.00    C*     SUBROUTINE S001 - Clear Fields
574.00    C*     ------------------------------
575.00    C*
576.00    C*      Processing:  1.  Reset all video screen and data file fields
577.00    C*                       for next transaction.
578.00    C*                   2.  Clear action code only if roquested.
579.00    C*
580.00    CSR            S001    BEGSR
581.00    C*             ----    -----
582.00    C*
583.00    C*     Reset fields for next transaction.
584.00    C*
585.00    CSR           NOKEY    CLEARI92801
586.00    CSR                    MOVE *BLANK       ###CLF
587.00    CSR                    MOVE *BLANK       ###CRC
588.00    CSR                    Z-ADD*ZERO        ##RCOL
589.00    CSR                    Z-ADD*ZERO        ##RROW
590.00    CSR                    MOVE *BLANK       VDXCC
591.00    CSR                    MOVE *BLANK       VDXDS
592.00    CSR                    MOVE *BLANK       VDXD3
593.00    CSR                    MOVE *BLANK       VDXIT
594.00    CSR                    MOVE *BLANK       VDXQT
595.00    CSR                    MOVE *BLANK       VDXTY
596.00    CSR                    MOVE *BLANK       VDXUM
597.00    CSR                    MOVE *BLANK       VDX001
598.00    CSR                    MOVE *BLANK       VDX002
599.00    CSR                    MOVE *BLANK       VDX003
600.00    CSR                    MOVE *BLANK       VDX004
601.00    CSR                    MOVE *BLANK       VDX005
602.00    CSR                    MOVELSVL24M       VDL24
603.00    CSR                    MOVE ' '          @IN37   1
604.00    C*
605.00    C*     Clear action code only if clear screen action.
606.00    C*
607.00    CSR           ##AID    IFEQ #PCLR
608.00    CSR                    MOVE *ALL'0'      $RESET
609.00    CSR                    MOVEA$RESET       *IN,41
610.00    CSR                    MOVE ' '          ACTION   1
611.00    CSR                    Z-ADD*ZERO        QXXIT
612.00    CSR                    MOVE *BLANK       VC0001
613.00    CSR                    MOVE *BLANK       VC0002
614.00    CSR                    MOVE *BLANK       VC0003
615.00    CSR                    MOVE *BLANK       VC0004
616.00    CSR                    MOVE *BLANK       VC0005
617.00    CSR                    MOVE *BLANK       VC0006
618.00    CSR                    MOVE *BLANK       VC0007
619.00    CSR                    MOVE *BLANK       VC0008
620.00    CSR                    Z-ADD*ZERO        $$EDT   60
621.00    CSR                    END
622.00    C*
623.00    CSR                    END001            ENDSR
```

Clears all the fields in the record format for P92801

Clears the video fields

These fields will only be cleared if the user presses the function key to clear the screen. We want to save certain information like key fields and descriptions of they don't get cleared everytime S001 is executed.

Figure D–18 Item Master Information report (9 of 32)

```
624.00    C*****************************************************************
625.00    C*
626.00    C*     SUBROUTINE S003 - Edit Key                    Sets the file pointer and
627.00    C*                                                   edit the key
628.00    C*
629.00    C*     Processing:   1. Clear error indicators and arrays.
630.00    C*                   2. Load input keys.
631.00    C*                   3. Validate Master file key.
632.00    C*                   4. Release master file record lock.
633.00    C*                    5. Load video screen output on inquiry.
634.00    C*
635.00    CSR            $003    BEGSR
636.00    C*             ----    -----
637.00    C*
638.00    C*     Load data field dictionary parameters (one cycle only).
639.00    C*
640.00    CSR            $999    CASEQ' '          $999
641.00    C*                     -----             ----
642.00    CSR                    END
643.00    C*
644.00    C*     Reset error indicators and arrays.
645.00    C*
646.00    CSR                    MOVE *ALL'0'      $RESET 39
647.00    CSR                    MOVE *BLANK       $REST1 63
648.00    CSR                    MOVEA$RESET       *IN, 41
649.00    CSR                    MOVEA$REST1       @MK, 2
650.00    CSR                    CLEAR@ER
651.00    C*-------------------------------------------------------------
652.00    C*
653.00    C*     Load video input field for - Item ID
654.00    C*
655.00    CSR                    MOVEAVDXIT       @NM
656.00    CSR                    EXSR C0012
657.00    C*                     ---- -----
658.00    CSR                    Z-ADD@NUMR        $NBR09 90
659.00    CSR                    MOVE $NBR09       QXXIT
660.00    C*
661.00    C*    Automatic Next Number for - Item ID
662.00    C*
663.00    CSR            *IN21   IFEQ '1'
664.00    CSR            VDXIT   ANDEQ*BLANK
665.00    CSR                    SETON                     91
666.00    CSR            *IN91   DOWEQ'1'
667.00    CSR                    MOVE N@XIT        PSIDX   2
668.00    CSR                    CALL 'X0010'                 92
669.00    C*                     ---- -------
670.00    CSR                    PARM S@XIT        NNSY    4
671.00    CSR                    PARM PSIDX
672.00    CSR                    PARM *ZERO        #NXTNO  90
673.00    CSR                    MOVE #NXTNO       QXXIT
674.00    CSR                    MOVE #NTXTNO      VDXIT
675.00    CSR            QXXIT   SETLLF92901                 9291
676.00    CSR                    END
677.00    CSR                    END
678.00    C*-------------------------------------------------------------
679.00    CSR          QXKY01    CHAIN192901                9999
680.00    C*
681.00    C*    Cost Center security edit.
682.00    C*
683.00    CSR                    MOVEL'P92901      '@FILE
684.00    CSR                    MOVELQXXCC        @MCU
685.00    CSR             #AUT   IFNE '1'
686.00    CSR            #FAUT   ANDNE'1'
687.00    CSR                    EXSR C0000                   Checks cost center security
688.00    C*                     ---- -----
689.00    CSR                    END
690.00    CSR             #AUT   IFNE '1'
691.00    CSR            #FAUT   ANDNE'1'
692.00    C*             #MAUT   ANDNE'1'
693.00    CSR                    MOVE '1'          $$SECR   1
694.00    CSR                    END
695.00    C*
696.00    C*    If security violation, set error condition.
697.00    C*
698.00    CSR          $$SECR    IFEQ '1'
699.00    CSR                    MOVE '1'          @MK,9
700.00    CSR                    SETON                       9341
```

Figure D–19 Item Master Information report (10 of 32)

```
701.00      CSR                     MOVE ' '        $$SEFCR   1
702.00      CSR                     GOTO END003
703.00      C*                      ---- ------
704.00      CSR                     END
705.00      C*
706.00      C*     Edit result of read and action code.
707.00      C*
708.00      CSR            *IN98    IFEQ '1'
709.00      CSR            *IN21    COMP '0'                                    41 *error*
710.00      CSR                     ELSE
711.00      CSR            *IN21    COMP '1'                                    41 *error*
712.00      CSR                     END
713.00      C*
714.00      C*     If indicator 41 on, invalid key for action code.
715.00      C*
716.00      CSR            *IN41    IFEQ '1'
717.00      CSR                     MOVE '1'        @MK,2
718.00      CSR                     SETON                            93
719.00      CSR                     END
720.00      C*
721.00      C*     If indicator 99 on, record in use.
722.00      C*
723.00      CSR            *IN99    IFEQ '1'
724.00      CSR                     CALL 'P98RLCK'                   01
725.00      CSR                     ---- ---------
726.00      CSR                     PARM            ##PSDS
727.00      CSR                     MOVE '1'        @MK,6
728.00      CSR                     SETON                          9341
729.00      CSR                     END
730.00      C*-------------------------------------------------------------
731.00      C*
732.00      C*     If not inquiry, skip remainder of subroutine.
733.00      C*
734.00      CSR            *IN24    CABEQ'0'        END003
735.00      CSR                     -------         ------
736.00      C*-------------------------------------------------------------
737.00      C*
738.00      C*     Release record lock on master file
739.00      C*
740.00      CSR            *IN98    IFEQ '0'
741.00      CSR            (IN99    ANDEQ'0'
742.00      CSR                     EXCPTUNLOCK
743.00      CSR                     END
744.00      C*
745.00      CSR     If errors, skip remainder of subroutine.
746.00      C*
747.00      CSR            *IN93    CABEQ'1'        END003
748.00      C*                      --------        ------
749.00      C*-------------------------------------------------------------
750.00      C*
751.00      C*     Move data base information to video screen.
752.00      C*
753.00      CSR                     EXSR S004
754.00      CSR                     ---- ----
755.00      C*-------------------------------------------------------------
756.00      CSR           END003    ENDSR
757.00      C*************************************************************
758.00      C*
759.00      C*     Copy Common Subroutine - Right Justify Numeric Fields
760.00      C*
761.00      C/COPY JDECPY, C0012
762.00      C*************************************************************
763.00      C*
764.00      C*     SUBROUTINE S004 Load Video Screen Data
765.00      C*     --------------------------------------
766.00      C*
767.00      C*     Processing  1.  Move data base information to video screen.
768.00      C*                     All video screen fields re alpha and
769.00      C*                     therefore numeric information must be
770.00      C*                     processed through subroutine C0014 to set
771.00      C*                     proper decimals and provide editing for
772.00      C*                     display on screen.
773.00      C*
774.00      C*                     Date fields must be converted from their
775.00      C*                     internal format of month, day and year or
776.00      C*                     Julian to the system format using program
777.00      C*                     X0020.
```

JDE uses this or SETLL to release record locks

Moves information to the video/report fields

Figure D–20 Item Master Information report (11 of 32)

```
778.00      C*
779.00      CSR            S004     BEGSR
780.00      C*             ----     -----
781.00      C*
782.00      C*
783.00      C*     Move to output -Description for Cost Center
784.00      C*
785.00      CSR                     CALL 'X0006'                        01
786.00      C*                      ---- -------
787.00      CSR                     PARM *BLANKS     PSCMOD  1
788.00      CSR                     PARM '1'         PSIMOD  1
789.00      CSR                     PARM QXXCC       PSMCU  12
790.00      CSR                     PARM *BLANKS     PSERRM  4
791.00      CSR                     PARM             I0006
792.00      C*
793.00      CSR                     MOVE *BLANK      VC0001
794.00      CSR           PDRTRM    IFEQ *BLANK
795.00      CSR                     MOVELMCDL01      VC0001
796.00      CSR                     END
797.00      C*-------------------------------------------------------------
798.00      C*
799.00      C*     Description display for - Item Type
800.00      C*
801.00      CSR                     CLEARI005U
802.00      CSR                     MOVELS@XTY       #USX
803.00      CSR                     MOVE R@XTY       #URT
804.00      CSR                     MOVE QXXTY       #UKY
805.00      CSR                     CALL 'X0005'                        01
806.00      C*                      ---- -------
807.00      CSR                     PARM             *0005U
808.00      CSR                     MOVE *BLANK      VC0002
809.00      CSR           #UERR     IFEQ '0'
810.00      CSR                     MOVEL#UDL01      VC0002
811.00      CSR                     END
812.00      C*-------------------------------------------------------------
813.00      C*
814.00      C*     Description display for - Item Unit of Measure
815.00      C*
816.00      CSR                     CLEARI0005U
817.00      CSR                     MOVELS@XUM       #USY
818.00      CSR                     MOVE R@XUM       #URT
819.00      CSR                     MOVE QXXUM       #UKY
820.00      CSR                     CALL 'X0005'                        01
821.00      C*                      ---- -------
822.00      CSR                     PARM             I0005U
823.00      CSR                     MOVE *BLANK      VC0003
824.00      CSR           #UERR     IFEQ '0'
825.00      CSR                     MOVEL#UDL01      VC0003
826.00      CSR                     END
827.00      C*-------------------------------------------------------------
828.00      C*
829.00      C*     Description display for - Item Category Code 001
830.00      C*
831.00      CSR                     CLEARI0005U
832.00      CSR                     MOVELS@X001      #USY
833.00      CSR                     MOVE R@X001      #URT
834.00      CSR                     MOVE QXX001      #UKY
835.00      CSR                     CALL 'X0005'                        01
836.00      C*                      ---- -------
837.00      CSR                     PARM             I0005U
838.00      CSR                     MOVE *BLANK      VC0004
839.00      CSR           #UERR     IFEQ '0'
840.00      CSR                     MOVEL#UDL01      VC0004
841.00      CSR                     END
842.00      C*-------------------------------------------------------------
843.00      C*
844.00      C*     Description display for - Item Category Code 002
845.00      C*
846.00      CSR                     CLEARI0005U
847.00      CSR                     MOVELS@X002      #USY
848.00      CSR                     MOVE R@X002      #URT
849.00      CSR                     MOVE QXX002      #UKY
850.00      CSR                     CALL 'X0005'                        01
851.00      C*                      ---- -------
852.00      CSR                     PARM             I0005U
853.00      CSR                     MOVE *BLANK      VC0005
854.00      CSR           #UERR     IFEQ '0'
```

File server for user defined codes

Figure D–21 Item Master Information report (12 of 32)

```
955.00      CSR                     MOVEL#UDL01      VC0005
956.00      CSR                     END
957.00      C*-------------------------------------------------------------
958.00      C*
959.00      C*     Description display for - Item Category Code 003
960.00.     CSR
961.00      CSR                     CLEARI0005U
962.00      CSR                     MOVELS#X003      #USY
963.00      CSR                     MOVE R#X003      #URT
964.00      CSR                     MOVE QXX003      #UKY
965.00      C*                      CALL 'X0005'                      01
966.00      CSR                     ---- -------
967.00      CSR                     PARM             I0005U
968.00      CSR                     MOVE *BLANK      VC0006
969.00      CSR            #UERR    IFEQ '0'
970.00      CSR                     MOVEL#UDL01      VC0005
971.00      CSR                     END
972.00      C*-------------------------------------------------------------
973.00      C*
974.00      C*     Description display for - Item Category Code 004
975.00      C*
976.00      CSR                     CLEARI0005U
977.00      CSR                     MOVELS#X004      #USY
978.00      CSR                     MOVE R#X004      #URT
979.00      CSR                     MOVE QXX004      #UKY
980.00      C*                      CALL 'X0005'                      01
981.00      CSR                     ---- -------
982.00      CSR                     PARM             I0005U
983.00      CSR                     MOVE *BLANK      VC0007
984.00      CSR            #UERR    IFEQ '0'
985.00      CSR                     MOVEL#UDL01      VC0007
986.00      CSR                     END
987.00      C*-------------------------------------------------------------
988.00      C*
989.00      C*     Description display for - Item Category Code 005
990.00      C*
991.00      CSR                     CLEARI0005U
992.00      CSR                     MOVELS#X005      #USY
993.00      CSR                     MOVE R#X005      #URT
994.00      CSR                     MOVE QXX005      #UKY
995.00      C*                      CALL 'X0005'                      01
996.00      CSR                     ---- -------
997.00      CSR                     PARM             I0005U
998.00      CSR                     MOVE *BLANK      VC0008
999.00      CSR            #UERR    IFEQ '0'
900.00      CSR                     MOVEL#UDL01      VC0008
901.00      CSR                     END
902.00      C*-------------------------------------------------------------
903.00      C*
904.00      C*     Move to output - Cost Center
905.00      C*
906.00      CSR                     MOVE *BLANK      #SINBR
907.00      CSR                     MOVELQXXCC       #SINBR
908.00      CSR                     MOVE T#XCC       #DTYP
909.00      CSR                     MOVE W#XCC       #EWRD
910.00      CSR                     MOVE E#XCC       #EC
911.00      CSR                     MOVE P#XCC       #DSPD
912.00      CSR                     MOVE G#XCC       #DATD
913.00      CSR                     MOVE J#XCC       #ALR
914.00      CSR                     MOVE ' '         #ECOR
915.00      CSR                     MOVE ' '         #DCOR
916.00      CSR                     EXSR C00161
917.00      CSR                     ---- -------
918.00      CSR             #ALR    IFEQ 'L'
919.00      CSR                     MOVEL#SINBR      VDXCC
920.00      CSR                     ELSE
921.00      CSR                     MOVE #SINBR      VDXCC
922.00      CSR                     END
923.00      C*-------------------------------------------------------------
924.00      C*
925.00      C*     Move to output - Description
926.00      C*
927.00      CSR                     MOVELQXXDS       VDXDS
928.00      C*-------------------------------------------------------------
929.00      C*
930.00      C*     Move to Output - Date Last Ship
931.00      C*
```

Editing information retrieved in S998

Copy module to edit field for use on screen/report

Figure D–22 Item Master Information report (13 of 32)

```
 932.00     CSR                    MOVE QXXDT        #SIDAT   6
 933.00     CSR                    MOVE *BLANK       #EDAT    8
 934.00     CSR                    MOVEL'*JUL       '#FPMT    7
 935.00     CSR                    MOVEL'*SYSVAL    '#TPMT    7
 936.00     CSR                    MOVEL'*SYSVAL    '#SKP     7
 937.00     CSR                    MOVE ' '          $KRTST   7
 938.00     CSR                    CALL 'X0026      '                  81
 939.00     C*                     ---- ------
 940.00     CSR                    PARM             #SIDAT
 941.00     CSR                    PARM             #EDAT
 942.00     CSR                    PARM             #FPMT
 943.00     CSR                    PARM             #TPMT
 944.00     CSR                    PARM             #SKP
 945.00     CSR                    PARM             $KRTST
 946.00     C*                     MOVEL#EDAT       VDXDT
 947.00     C*-------------------------------------------------------------
 949.00     C*
 949.00     C*     Move to output - Iten ID
 950.00     C*
 951.00     CSR                    MOVE *BLANK      #SINBR
 952.00     CSR                    MOVELQXXIT       #SINBR
 953.00     CSR                    MOVE T@XIT       #DTYP
 954.00     CSR                    MOVE W@XIT       #EWRD
 955.00     CSR                    MOVE E@XIT       #EC
 956.00     CSR                    MOVE F@XIT       #DSPD
 957.00     CSR                    MOVE G@XIT       #DATD
 958.00     CSR                    MOVE J@XIT       #ALR
 959.00     CSR                    MOVE ' '         #ECOR
 960.00     CSR                    MOVE ' '         #DCOR
 961.00     CSR                    EXSR C00161
 962.00     C*                     ---- ------
 963.00     CSR            #ALR    IFEQ 'L'
 964.00     CSR                    MOVEL#SINBR      VDXIT
 965.00     CSR                    ELSE
 966.00     CSR                    MOVE #SINBR      VDXIT
 967.00     CSR                    END
 969.00     C*-------------------------------------------------------------
 969.00     C*
 970.00     C*     Move to output - Quantity - On hand
 971.00     C*
 972.00     CSR                    MOVE *BLANK      #SINBR
 973.00     CSR                    MOVELQXXQT       #SINBR
 974.00     CRR                    MOVE T@XQT       #DTYP
 975.00     CSR                    MOVE W@XQT       #RWRD
 976.00     CSR                    MOVE E@XQT       #EC
 977.00     CSR                    MOVE F@XQT       #DSPD
 978.00     CSR                    MOVE G@XQT       #DATD
 979.00     CSR                    MOVE J@XQT       #ALR
 980.00     CSR                    MOVE ' '         #ECOR
 981.00     CSR                    MOVE ' '         #DCOR
 982.00     CSR                    EXSR C00161
 983.00     C*                     ---- ------
 984.00     CSR            #ALR    IFEQ 'L'
 985.00     CSR                    MOVEL#SINBR      VDXQT
 986.00     CSR                    ELSE
 987.00     CSR                    MOVE #SINBR      VDXQT
 989.00     CSR                    END
 989.00     C*-------------------------------------------------------------
 990.00     C*
 991.00     C*     Move to output - Item Type
 992.00     C*
 993.00     CSR                    MOVELQXXTY       VDXTY
 994.00     C*-------------------------------------------------------------
 995.00     C*
 996.00     C*     Move to output - Item Unit of Measure
 997.00     C*
 999.00     CSR                    MOVELQXXUM       VDXUM
 999.00     C*-------------------------------------------------------------
1000.00     C*
1001.00     C*     Move to output - Item Category Code 001
1002.00     C*
1003.00     CSR                    MOVE *BLANK      #SINBR
1004.00     CSR                    MOVELQXX001      #SINBR
1005.00     CSR                    MOVE T@X001      #DTYP
1006.00     CSR                    MOVE W@X001      #EWRD
1007.00     CSR                    MOVE E@X001      #EC
1009.00     CSR                    MOVE G@X001      #DATD
```

External program used to edit dates.

Figure D–23 Item Master Information report (14 of 32)

```
1010.00     CSR                     MOVE J@X001      #ALR
1011.00     CSR                     MOVE ' '         #ECOR
1012.00     CSR                     MOVE ' '         #DCOR
1013.00     CSR                     EXSR C00161
1014.00     C*                      ---- ------
1015.00     CSR             #ALR    IFEQ 'L'
1016.00     CSR                     MOVEL#SINBR      VDX0001
1017.00     CSR                     ELSE
1018.00     CSR                     MOVE #SINBR      VDXIT
1019.00     CSR                     END
1020.00     C*-------------------------------------------------------------
1021.00     C*
1022.00     C*     Move to output - Item Category Code 002
1023.00     C*
1024.00     CSR                     MOVE *BLANK      #SINBR
1025.00     CSR                     MOVELQXX002      #SINBR
1026.00     CRR                     MOVE T@X002      #DTYP
1027.00     CSR                     MOVE W@X002      #EWRD
1028.00     CSR                     MOVE E@X002      #EC
1029.00     CSR                     MOVE F@X002      #DSPD
1030.00     CSR                     MOVE G@X002      #DATD
1031.00     CSR                     MOVE J@X002      #ALR
1032.00     CSR                     MOVE ' '         #ECOR
1033.00     CSR                     MOVE ' '         #DCOR
1034.00     CSR                     EXSR C00161
1035.00     C*                      ---- ------
1036.00     CSR             #ALR    IFEQ 'L'
1037.00     CSR                     MOVEL#SINBR      VDX002
1038.00     CSR                     ELSE
1039.00     CSR                     MOVE #SINBR      VDX002
1040.00     CSR                     END
1041.00     C*-------------------------------------------------------------
1042.00     C*
1043.00     C*     Move to output - Item Category Code 003
1044.00     C*
1045.00     CSR                     MOVE *BLANK      #SINBR
1046.00     CSR                     MOVELQXX003      #SINBR
1047.00     CSR                     MOVE T@X003      #DTYP
1048.00     CSR                     MOVE W@X003      #EWRD
1049.00     CSR                     MOVE E@X003      #EC
1050.00     CSR                     MOVE F@X003      #DSPD
1051.00     CSR                     MOVE G@X003      #DATD
1052.00     CSR                     MOVE J@X003      #ALR
1053.00     CSR                     MOVE ' '         #ECOR
1054.00     CSR                     MOVE ' '         #DCOR
1055.00     CSR                     EXSR C00161
1056.00     C*                      ---- ------
1057.00     CSR             #ALR    IFEQ 'L'
1058.00     CSR                     MOVEL#SINBR      VDX003
1059.00     CSR                     ELSE
1060.00     CSR                     MOVE #SINBR      VDX003
1061.00     CSR                     END
1062.00     C*-------------------------------------------------------------
1063.00     C*
1064.00     C*     Move to output - Item Category Code 004
1065.00     C*
1066.00     CSR                     MOVE *BLANK      #SINBR
1067.00     CSR                     MOVELQXX004      #SINBR
1068.00     CSR                     MOVE T@X004      #DTYP
1069.00     CSR                     MOVE W@X004      #EWRD
1070.00     CSR                     MOVE E@X004      #EC
1071.00     CSR                     MOVE F@X004      #DSPD
1072.00     CSR                     MOVE G@X004      #DATD
1072.00     CSR                     MOVE J@X004      #ALR
1074.00     CSR                     MOVE ' '         #ECOR
1075.00     CSR                     MOVE ' '         #DCOR
1076.00     CSR                     EXSR C00161
1077.00     C*                      ---- ------
1078.00     CSR             #ALR    IFEQ 'L'
1079.00     CSR                     MOVEL#SINBR      VDX004
1080.00     CSR                     ELSE
1081.00     CSR                     MOVE #SINBR      VDX004
1082.00     CSR                     END
1083.00     C*-------------------------------------------------------------
1084.00     C*
1085.00     C*     Move to output - Item Category Code 005
1086.00     C*
```

Figure D–24 Item Master Information report (15 of 32)

```
1087.00   CSR                    MOVE *BLANK      #SINBR
1088.00   CSR                    MOVELQXX005      #SINBR
1089.00   CRR                    MOVE T@X005      #DTYP
1090.00   CSR                    MOVE W@X005      #EWRD
1091.00   CSR                    MOVE E@X005      #EC
1092.00   CSR                    MOVE P@X005      #DSPD
1093.00   CSR                    MOVE G@X005      #DATD
1094.00   CSR                    MOVE J@X005      #ALR
1095.00   CSR                    MOVE ' '         #ECOR
1096.00   CSR                    MOVE ' '         #DCOR
1097.00   CSR                    EXSR C00161
1098.00   C*                     ---- ------
1099.00   CSR             #ALR   IFEQ 'L'
1100.00   CSR                    MOVEL#SINBR      VDX005
1101.00   CSR                    ELSE
1102.00   CSR                    MOVE #SINBR      VDX005
1103.00   CSR                    END
1104.00   C*-------------------------------------------------------------
1105.00   CSR           END004   ENDSR
1106.00   C*************************************************************
1107.00   C*
1108.00   C*     Copy Common Subroutine - Format Numeric Fields for Output with Override
1109.00   C*
1110.00   C/COPY JDECPY,C00161
1111.00   C*************************************************************
1112.00   C*
1113.00   C*     SUBROUTINE S005 - Scrub Input
1114.00   C*     -----------------------------
1115.00   C*
1116.00   C*     Processing:  1.  Validate all video input.
1117.00   C*                      All numberic fields must be processed
1118.00   C*                      through subroutines C0012 and C0015 in order
1119.00   C*                      to scrub the alpha input field and convert
1120.00   C*                      15 digits and 0 decimals.
1121.00   C*
1122.00   C*                      Date fields must be converted from system
1123.00   C*                      format to their internal format of month,
1124.00   C*                      day and year or julian using program X0028.
1125.00   C*                  2.  Update data record fields from video.
1126.00   C*
1127.00   CSR             S005   BEGSR
1128.00   C*              ----   -----
1129.00   C*
1130.00   C*     If not addition or change, bypass subroutine
1131.00   C*
1132.00   CSR            *IN21   IFEQ '0'
1133.00   CSR            *IN22   ANDEQ'0'
1134.00   CSR                    GOTO END005
1135.00   C*                     ---- ------
1136.00   CSR                    END
1137.00   C*
1138.00   C*
1139.00   C*
1140.00   C*     Scrub and edit - Cost Center
1141.00   C*
1142.00   CSR                    CALL 'X0006'                          99
1143.00   C*                     ---- ------
1144.00   CSR                    PARM '1'         PSOMOD   1
1145.00   CSR                    PARM '1'         PSIMOD   1
1146.00   CSR                    PARM VDXCC       PSMCU   12
1147.00   CSR                    PARM *BLANKS     PSERRM   4
1148.00   CSR                    PARM             I0006
1149.00   C*
1150.00   CSR           PSERRM   IFNE *BLANK
1151.00   CSR                    SETON                                4393
1152.00   CSR                    MOVELPSERRM      EMK,10
1153.00   CSR                    MOVE '1'         GMK,10
1154.00   CSR                    END
1155.00   CSR                    MOVE PSMCU       QXXCC
1156.00   C*-------------------------------------------------------------
1157.00   C*
1158.00   C*     Scrub and edit - Description
1159.00   C*
1160.00   CSR                    MOVELVDXDS       QXXDS
1161.00   C*
1162.00   C*     Set default value - Description
1163.00   C*
```

Validates and edits data entered by the user

Only performs this subroutine if a record is added or changed

Figure D–25 Item Master Information report (16 of 32)

```
1165.00   CSR          QXXDS    UFEQ *BLANK
1166.00   CSR          D@XDS    IFNE *BLANK
1167.00   CSR                   MOVEAD@XDS      @DV
1168.00   CSR                   MOVE@DV         QXXDS
1169.00   CSR          @DV,1    IFEQ ''''
1170.00   CSR                   MOVE ' '        @DV,1
1171.00   CSR                   Z-ADD2          #M
1172.00   CSR             #M    DOWLE40
1173.00   CSR         @DV,#M    IFEQ ''''
1174.00   CSR                   MOVE ' '        @DV,#m
1175.00   CSR                   END
1176.00   CSR                   ADD    1        #M
1177.00   CSR                   END
1178.00   CSR                   MOVEA@DV,2      QXXDS
1179.00   CSR                   END
1180.00   CSR                   END
1181.00   CSR                   END
1182.00   C*
1183.00   C*     Edit allowed values - Description
1184.00   C*
1185.00   CSR          A@XDS    IFEQ '*NB'
1186.00   CSR          QXXDS    ANDEQ*BLANK
1187.00   CSR                   MOVE '1'        @MX,03
1188.00   CSR                   SETON                           4293
1189.00   CSR                   END
1190.00   C*-----------------------------------------------------------------
1191.00   C*
1192.00   C*     Scrub and edit - Date Last Ship
1193.00   C*
1194.00   CSR                   MOVEAVDXDT      @NM                                A
1195.00   CSR                   EXSR C0012
1196.00   C*                    ---- -----
1197.00   CSR                   Z-ADD$NUME      NBR6            60
1198.00   CSR                   MOVE $NBR6      QXXDT
1199.00   C*
1200.00   C*     Edit julian date - Date Last Ship
1201.00   C*
1202.00   CSR          VDXDT    IFNE * BLANK
1203.00   CSR                   MOVE QXXDT       #SIDAT   6
1204.00   CSR                   MOVE *BLANK      #EDAT    8
1205.00   CSR                   MOVEL'*SYSVAL   '#PFMT    7
1206.00   CSR                   MOVEL'*JUL      '#TFMT    7
1207.00   CSR                   MOVEL'*NONE     '#SKP     7
1208.00   CSR                   MOVEL' '         $ERTST   1
1209.00   CSR                   CALL 'X0028     '                99
1210.00   C*                    ---- ------
1211.00   CSR                   PARM            #SIDAT
1212.00   CSR                   PARM            #EDAT
1213.00   CSR                   PARM            #PFMT
1214.00   CSR                   PARM            #TFMT
1215.00   CSR                   PARM            #SKP
1216.00   CSR                   PARM            $ERTST
1217.00   CSR                   MOVEL#SIDAT     QXXDT
1218.00   CSR         $ERTST    IFEW '1'
1219.00   CRS                   MOVE '1'        @MX,04
1220.00   CSR                   SETON                           4593
1221.00   CSR                   END
1222.00   CSR                   END
1223.00   C*-----------------------------------------------------------------
1224.00   C*
1225.00   C*     Scrub and edit - Item ID
1226.00   C*
1227.00   CSR                   MOVEAVDXIT      @NM
1228.00   CSR                   EXSR C0012
1229.00   C*                    ---- ------
1230.00   CSR                   MOVE F@XIT      #DSPD
1231.00   CSR                   MOVE G@XIT      #DATD
1232.00   CSR                   EXSR C00151
1233.00   C*-----------------------------------------------------------------
1234.00   CSR                   MOVE #NUMBR     QXXIT
1235.00   C*
1236.00   C*     Set default value - Item ID
1237.00   C*
1238.00   CSR          VDXIT    IFEQ *BLANK
1239.00   CSR          D@XIT    ANDNE*BLANK
1240.00   CSR                   MOVEAD@XIT      @NM
1241.00   CSR                   EXSR C0012
```

Work fields used in the RPG program begin with $

Work fields used in a copy module begin with #

Figure D–26 Item Master Information report (17 of 32)

```
1242.00     C*                      ---- -----
1243.00     CSR                     MOVE P@XIT       #DSPD
1244.00     CSR                     MOVE G@XIT       #DATD
1245.00     CSR                     EXSR C00151
1246.00     C*                      ---- -----
1247.00     CSR                     MOVE #NUMBR      QXXIT
1248.00     CSR                     END
1249.00     C*
1250.00     C*      Edit upper and lower range - Item ID
1251.00     C*
1252.00     CSR            L@XIT    IFNE *BLANK
1253.00     CSR                     MOVE *BLANK      X@XIT   15
1254.00     CSR                     MOVE '1'         $ERTST   1
1255.00     CSR                     MOVELQXXIT       X@XIT
1256.00     CSR            X@XIT    IFEQ L@XIT
1257.00     CSR            X@XIT    ANDLEU@XIT
1258.00     CSR                     MOVE ' '         $ERTST
1259.00     CSR                     END
1260.00     CSR           $ERTST    IFEQ '1'
1261.00     CSR                     MOVE '1'         @MK,07
1262.00     CSR                     SETON                            4193
1263.00     CSR                     END
1264.00     CSR                     END
1265.00     C**-------------------------------------------------------------------
1266.00     C*
1267.00     C*     Scrub and edit - Quantity - On Hand
1268.00     C*
1269.00     CSR                     MOVEAVDXQT       @NM
1270.00     CSR                     EXSR C0012
1271.00     C*                      ---- ------
1272.00     CSR                     MOVE P@XQT       #DSPD
1273.00     CSR                     MOVE G@XQT       #DATD
1274.00     CSR                     EXSR C00151
1275.00     C*                      ---- ------
1276.00     CSR                     MOVE #NUMBR      QXXQT
1277.00     C*
1278.00     C*     Set default value - Quantity - On Hand
1279.00     C*
1280.00     CSR            VDXQT    IFEQ *BLANK
1281.00     CSR            D@XQT    ANDNE*BLANK
1282.00     CSR                     MOVEAD@XQT       @NM
1283.00     CSR                     EXSR C0012
1284.00     C*                      ---- ---
1285.00     CSR                     MOVE P@XQT       #DSPD
1286.00     CSR                     MOVE G@XQT       #DATD
1287.00     CSR                     EXSR C00151
1288.00     C*                      ---- ------
1289.00     CSR                     MOVE #NUMBR      QXXQT
1290.00     CSR                     END
1291.00     C*
1292.00     C*     Edit upper and lower range - Quantity - On Hand
1293.00     C*
1294.00     CSR            L@XQT    IFNE *BLANK
1295.00     CSR                     MOVE *BLANK      X@XQT   15
1296.00     CSR                     MOVE '1'         $ERTST   1
1297.00     CSR                     MOVELQXXQT       X@XQT
1298.00     CSR            X@XQT    IFEQ L@XQT
1299.00     CSR            X@XQT    ANDLEU@XQT
1300.00     CSR                     MOVE ' '         $ERTST
1301.00     CSR                     END
1302.00     CSR           $ERTST    IFEQ '1'
1303.00     CSR                     MOVE '1'         @MK,07
1304.00     CSR                     SETON                            4693
1305.00     CSR                     END
1306.00     CSR                     END
1307.00     C**-------------------------------------------------------------------
1308.00     C*
1309.00     C*     Scrub and edit - Item Type
1310.00     C*
1311.00     CSR                     MOVELVDXTY       QXXTY
1312.00     C*
1313.00     C*     Set default value - Item Type
1314.00     C*
1315.00     CSR            QXXTY    IFEQ *BLANK
1316.00     CSR            D@XTY    IFNE *BLANK
1317.00     CSR                     MOVEAD@XTY       @40
1318.00     CSR                     MOVEA@40         QXXTY
```

Default value from Data Dictionary

Upper and lower ranges from Data Dictionary

Figure D–27 Item Master Information report (18 of 32)

```
1319.00     CSR          @40,1       IFEQ ''''
1320.00     CSR                      MOVE ' '          @40,1
1321.00     CSR                      Z-ADD2            #M
1322.00     CSR          #M          DOWLE40
1323.00     CSR          @40,#M      IFEQ ''''
1324.00     CSR                      MOVE ' '          @40,#M
1325.00     CSR                      END
1326.00     CSR                      ADD  1            #M
1327.00     CSR                      END
1328.00     CSR                      MOVEA@40,2        QXXTY
1329.00     CSR                      END
1330.00     CSR                      END
1331.00     CSR                      END
1332.00     C*
1333.00     C*     Edit allowed values - Item Type
1334.00     C*
1335.00     CSR          A@XTY       IFNE *BLANK
1336.00     CSR          A@XTY       IFEQ '*NB'
1337.00     CSR          QXXTY       ANDEQ*BLANK
1338.00     CSR                      MOVE '1'          @MK,03
1339.00     CSR                      SETON                            4493
1340.00     CSR                      ELSE
1341.00     CSR                      MOVEAA@XTY        @40
1342.00     CSR                      MOVE *HIVAL       @AV
1343.00     CSR                      EXSR C997
1344.00     C*                       ---- ----
1345.00     CSR                      MOVE ' '          $ERTST  1
1346.00     CSR                      MOVE *BLANK       $WRK10 10
1347.00     CSR                      MOVELQXXTY        $WRK10
1348.00     CSR          @AV,1       IFNE *HIVAL
1349.00     CSR          $WRK10      LOKPUP@AV                         81
1350.00     CSR          *IN81       IFEQ '0'
1351.00     CSR                      MOVE '1'          $ERTST
1352.00     CSR                      END
1353.00     CSR          $ERTST      IFEQ '1'
1354.00     C*                       MOVE '1'            O*,07
1355.00     CSR                      SETON                            4493
1356.00     CSR                      END
1357.00     CSR                      END
1358.00     CSR                      END
1359.00     CSR                      END
1360.00     C*
1361.00     C*     Edit upper and lower range - Item Type
1362.00     C*
1363.00     CSR          LQXTY       IFNE *BLANK
1364.00     CSR                      MOVE '1'          $ERTST
1365.00     CSR          QXXTY       IFGE L@XTY
1366.00     CSR          QXXTY       ANDLEU@XXTY
1367.00     CSR                      MOVE ' '          $ERTST
1368.00     CSR                      END
1369.00     CSR          $ERTST      IFEQ '1'
1370.00     CSR                      MOVE '1'          @MK,07
1371.00     CSR                      SETON                            4493
1372.00     CSR                      END
1373.00     CSR                      END
1374.00     C*
1375.00     C*     Edit from User Defined Codes - Item Type
1376.00     C*
1377.00     CSR          R@XTY       IFNE *BLANK
1378.00     CSR                      CLEARZ0005U
1379.00     C*                       MOVELS@XTY        #USY
1380.00     CSR                      MOVE R@XTY        #URT
1381.00     CSR                      MOVE QXXTY        #UKR
1382.00     CSR                      CALL 'X0005'                      81
1383.00     C*
1384.00     CSR                      PARM              I0005U
1385.00     CSR          #UERR       IFEQ '1'
1386.00     CSR                      MOVE '1'          @MK,09
1387.00     CSR                      SETON                            4493
1388.00     CSR                      END
1389.00     CSR                      END
1390.00     C*-----------------------------------------------------------------------
1391.00     C*
1392.00     C*     Scrub and edit - Item Unit of Measure
1393.00     C*
1394.00     CSR                      MOVELVDXUN        QXXUM
1395.00     C*
```

Figure D–28 Item Master Information report (19 of 32)

```
1396.00     C*    Set default value - Item Unit of Measure
1397.00     C*
1398.00     CSR            QXXUM     IFEQ *BLANK
1399.00     CSR            E!XUM     IFNE *BLANK
1400.00     CSR                      MOVEAD@XUM        @40
1401.00     CSR                      MOVEA@40          QXXUM
1402.00     CSR           @40,1      IFEQ ''''
1403.00     CSR                      MOVE ' '            @40,1
1404.00     CSR                      Z-ADD2            #M
1405.00     CSR               #M     DOWLE40
1406.00     C*            @40,#M     IFEQ ''''
1407.00     CSR                      MOVE ' '          @40,#MN
1408.00     CSR                      END
1409.00     CSR                      ADD  1            #M
1410.00     CSR                      END
1411.00     CSR                      MOVEA@40,2        QXXUM
1412.00     CSR                      END
1413.00     CSR                      END
1414.00     CSR                      END
1415.00     C*
1416.00     C*    Edit allowed values - Item Unit of Measure
1417.00     C*
1418.00     CSR            A@XUM     IFNE *BLANK
1419.00     CSR            A@XUM     IFEQ '*NB'
1420.00     CSR             QXUM     ANDEQ*BLANK
1421.00     CSR                      MOVE '1'          @MK,03
1422.00     CSR                      SETON                                4793
1423.00     CSR                      ELSE
1424.00     CSR                      MOVEAA@XUM        @40
1425.00     CSR                      MOVE *HIVAL       @AV
1426.00     CSR                      EXSR C997
1427.00     C*                       ---- ----
1428.00     CSR                      MOVE ' '          $ERTST  1
1429.00     CSR                      MOVE *BLANK       $WRK10 10
1430.00     CSR                      MOVELQXXUM        $WRK10
1431.00     CSR           @AV,1      IFNE *HIVAL
1432.00     CSR          $WRRK10     LOKUP@AV                              81
1433.00     CSR           *IN8I      IFEQ '0'
1434.00     CSR                      MOVE '1'          $ERTST
1435.00     CSR                      END
1436.00     C*            $ERTST     IFEQ '1'
1437.00     CSR                      MOVE '1'          @MK,07
1438.00     CSR                      SETON                                4793
1439.00     CSR                      END
1440.00     CSR                      END
1441.00     CSR                      END
1442.00     CSR                      END
1443.00     C*
1444.00     C*    Edit upper and lower range - Item Unit of Measure
1445.00     C*
1446.00     CSR           L@XUN      IFNE *BLANK
1447.00     CSR                      MOVE '1'          $ERTST
1448.00     CSR           QXXUM      IFGE L@XUM
1449.00     CSR           OXTON      kNO~U0X0N
1450.00     CSR                      MOVE ' '          $ERTST
1451.00     CSR                      END
1452.00     CSR           $ERTST     IFEQ '1'
1453.00     C*                       MOVE '1'          @MK,07
1454.00     CSR                      SETON                                4793
1455.00     CSR                      END
1456.00     C*                       END
1457.00     C*
1458.00     C*    Edit from User Defined Codes - Item Unit of Measure
1459.00     C*
1460.00     CSR           R@XUM      IFNE *BLANK
```

Figure D–29 Item Master Information report (20 of 32)

```
1473.00     C*-------------------------------------------------------------------------------
1474.00     C*
1475.00     C*     Scrub and edit - Item Category Code 001
1476.00     C*
1477.00     CSR                         MOVELVDX001      QXX001
1478.00     C*
1479.00     C*    Set default value - Item Category Code 001
1480.00     C*
1481.00     CSR            QXX001       IFEQ *BLANK
1482.00     CSR            D@X001       IFNE *BLANK
1483.00     CSR                         MOVEAD@X001      @40
1484.00     CSR                         MOVEA@40         QXX001
1485.00     CSR             @40,1       IFEQ ''''
1486.00     CSR                         MOVE ' '         @40,1
1487.00     CSR                         Z-ADD2           #M
1488.00     CSR              #M         DOWLE40
1489.00     CSR            @40,#m       IFEQ
1490.00     CSR                         MOVE ' '         @40,#M
1491.00     CSR                         END
1492.00     CSR                         ADD  1           #M
1493.00     CSR                         END
1494.00     CSR                         MOVEA@40,2       QXX001
1495.00     CSR                         END
1496.00     CSR                         END
1497.00     CSR                         END
1498.00     C*
1499.00     C*    Edit allowed values - Item Category Code 001
1500.00     C*
1501.00     CSR            A@X001       IFNE *BLANK
1502.00     CSR            A@X001       IFEQ '*NB'
1503.00     CSR            QXX001       ANDEQ*BLANK
1504.00     CSR                         MOVE '1'         @Mk,03
1505.00     CSR                         SETON                            4893
1506.00     CSR                         ELSE
1507.00     CSR                         MOVEAA@X001      @40
1508.00     CSR                         MOVE *HIVAL      @AV
1509.00     CSR                         EXSR C997
1510.00     C*                          ---- ----
1511.00     CSR                         MOVE ' '         $ERTST  1
1512.00     CSR                         MOVE *BLANK      $WRK10 10
1513.00     CSR                         MOVELQXX001      $WRK10
1514.00     CSR            @AV,1        IFNE *HIVAL
1515.00     CSR            $WRK10       LOKUP@AV                          81
1516.00     CSR            *IN81        IFEQ '0'
1517.00     CSR                         MOVE '1'         $ERTST
1518.00     CSR                         END
1519.00     CSR            $ERTST       IFEQ '1'
1520.00     CSR                         MOVE '1'         @MK,07
1521.00     CSR                         SETON                            4893
1522.00     CSR                         END
1523.00     CSR                         END
1524.00     CSR                         END
1525.00     CSR                         END
1526.00     C*
1527.00     C*     Edit upper and lower range - Item Category Code 001
1528.00     C*
1529.00     CSR            L@X001       IFNE *BLANK
1530.00     CSR                         MOVE '1'         $ERTST
1531.00     CSR            QXX001       IFGE L@X001
1532.00     CSR            QXX001       ANDLEU@X001
1533.00     CSR                         MOVE ' '           $ERTST
1534.00     CSR                         END
1535.00     CSR            $ERTST       IFEQ '1'
1536.00     CSR                         MOVE '1'         @MK,07
1537.00     CSR                         SETON                            4893
1538.00     CSR                         END
1539.00     CSR                         END
1540.00     C*
1541.00     C*     Edit from User Defined Codes - Item Category Code 001
1542.00     C*
1543.00     CSR            R@X001       IFNE *BLANK
1544.00     CSR                         CLEARI0005U
1545.00     CSR                         MOVELS@X001      #USY
1546.00     CSR                         MOVE R@X001      #URT
1547.00     CSR                         MOVE QXX001      #UKY
1548.00     CSR                         CALL 'X0005'                      81
1549.00     C*                          ---- -------
```

Figure D–30 Item Master Information report (21 of 32)

```
1550.00     CSR                     PARM            I0005U
1551.00     CSR          $UERR      IFEQ '1'
1552.00     CSR                     MOVE '1'        @MX,09
1553.00     CSR                     SETON                           4893
1554.00     CSR                     END
1555.00     CSR                     END
1556.00     C*-------------------------------------------------------------------------------
1557.00     C*
1558.00     C*    Scrub and edit - Item Category Code 002
1559.00     C*
1560.00     CSR                     MOVELVDX002     QXX002
1561.00     C*
1562.00     C*    Set default value - Item Category Code 002
1563.00     C*
1564.00     CSR         QXX002      IFEQ *BLANK
1565.00     CSR         D@X002      IFNE *BLANK
1566.00     CSR                     MOVEADX002      @40
1567.00     CSR                     MOVEA@40        QXX002
1568.00     CSR         @40,1       IFEQ ''''
1569.00     CSR                     MOVE ' '        @40,1
1570.00     CSR                     Z-ADD2          #M
1571.00     CSR          #M         DOWLE40
1572.00     CSR          @40,#M     IFEQ ''''
1573.00     CSR                     MOVE ' '        @40,#M
1574.00     CSR                     END
1575.00     CSR                     ADD  1          #M
1576.00     CSR                     END
1577.00     CSR                     MOVEA@40,2      QXX002
1578.00     CSR                     END
1579.00     CSR                     END
1580.00     CSR                     END
1581.00     C*
1582.00     C*   Edit allowed values - Item Category Code 002
1583.00     C*
1584.00     CSR         A@X002      IFNE *BLANK
1595.00     CSR         A@X002      IFEQ '*NB'
1586.00     CSR         QXX002      ANDEQ*BLANK
1587.00     CSR                     MOVE '1'        @MX,03
1588.00     CSR                     SETON                           4993
1589.00     CSR                     ELSE
1590.00     CSR                     MOVEAAX002      @40
1591.00     CSR                     MOVE *NIVAL     @AV
1592.00     CSR                     EXSR C997
1593.00     C*                      ---- ----
1594.00     CSR                     MOVE ' '        $ERTST  1
1595.00     CSR                     MOVE *BLANK     $WRK10 10
1596.00     CSR                     MOVELQXX002     $WRK10
1597.00     CSR         @AV,1       IFNE *NIVAL
1598.00     CSR        $WFRK10      LOKUP@AV                         81
1599.00     CSR        *IN81        IFEQ '0'
1600.00     CSR                     MOVE '1'        $ERTST
1601.00     CSR                     END
1602.00     CSR         $ERTST      IFEQ '1'
1603.00     CSR                     MOVE '1'        @MX,07
1604.00     CSR                     SETON                           4993
1605.00     CSR                     END
1606.00     CSR                     END
1607.00     CSR                     END
1608.00     CSR                     END
1609.00     C*
1610.00     C*     Edit upper and lower range - Item Category Code 002
1611.00     C*
1612.00     CSR         L@X002      IFNE *BLANK
1613.00     CSR                     MOVE '1'        $ERTST
1614.00     CSR         QXX002      IFGE L@X002
1615.00     CSR         QXX002      ANDLEU@X002
1616.00     CSR                     MOVE ' '        $ERTST
1617.00     CSR                     END
1618.00     CSR         $ERTST      IFEQ '1'
1619.00     CSR                     MOVE '1'        @MX,07
1620.00     CSR                     SETON                           4993
1621.00     CSR                     END
1622.00     CSR                     END
1623.00     C*
1624.00     C*     Edit from User Defined Codes - Item Category Code 002
1625.00     C*
1626.00     CSR         R@X002      IFNE *BLANK
```

Figure D–31 Item Master Information report (22 of 32)

```
1627.00     CSR                     CLEARI0005U
1628.00     CSR                     MOVELS@X002      #USY
1629.00     CSR                     MOVE R@X002      #URT
1630.00     CSR                     MOVE QXX002      OUKr
1631.00     CSR                     CALL 'X0005'                        81
1632.00     C*                      ---- -------
1633.00     CSR                     PARM             I0005U
1634.00     CSR          #UERR      IPEQ '1'
1635.00     CSR                     MOVE '1'         @MK,09
1636.00     CSR                     SETON                           4993
1637.00     CSR                     END
1638.00     CSR                     END
1639.00     C*-----------------------------------------------------------------------
1640.00     C*
1641.00     C*     Scrub and edit - Item Category Code 003
1642.00     C*
1643.00     CSR                     MOVELVDX003      QXX003
1644.00     C*
1645.00     C*    Set default value - Item Category Code 003
1646.00     C*
1647.00     CSR           QXX003    IPEQ *BLANK
1648.00     CSR           D@X003    IPNE *BLANK
1649.00     CSR                     MOVEAD@X003      @40
1650.00     CSR                     MOVEA@40         QXX003
1651.00     CSR            @40,1    IPEQ ''''
1652.00     CSR                     MOVE ' '         @40,1
1653.00     CSR                     Z-ADD2           #M
1654.00     CSR               #M    DOWLE40
1655.00     CSR           @40,#M    IPEQ ''''
1656.00     CSR                     MOVE ' '         @40,#M
1657.00     CSR                     END
1658.00     CSR                     ADD  1           #M
1659.00     CSR                     END
1660.00     CSR                     MOVEA@40,2       QXX003
1661.00     CSR                     END
1662.00     CSR                     END
1663.00     CSR                     END
1664.00     C*
1665.00     C*    Edit allowed values - Item Category Code 003
1666.00     C*
1667.00     CSR           A@X003    IPNE *BLANK
1668.00     CSR           A@X003    IPEQ '*NB'
1669.00     CSR           QXX003    ANDEQ*BLANK
1670.00     CSR                     MOVE '1'         @MK,03
1671.00     CSR                     SETON                           5093
1672.00     CSR                     ELSE
1673.00     CSR                     MOVEAA@003       @40
1674.00     CSR                     MOVE *HIVAL      @AV
1675.00     CSR                     EXSR C997
1676.00     C*                      ---- ----
1677.00     CSR                     MOVE ' '         $ERTST  1
1678.00     CSR                     MOVE *BLANK      $WRK10 10
1679.00     CSR                     MOVELQXX003      $WRK10
1680.00     CSR            @AV,1    IPNE *HIVAL
1681.00     CSR           $WRK10    LOKUP@AV                            81
1682.00     CSR            *IN81    IPEQ '0'
1683.00     CSR                     MOVE '1'         $ERTST
1684.00     CSR                     END
1685.00     CSR           $ERTST    IPEQ '1'
1686.00     CSR                     MOVE '1'         @MK,07
1687.00     CSR                     SETON                           5093
1688.00     CSR                     END
1689.00     CSR                     END
1690.00     CSR                     END
1691.00     CSR                     END
1692.00     C*
1693.00     C*    Edit upper and lower range - Item Category Code 003
1694.00     C*
1695.00     CSR           L@X003    IPNE *BLANK
1696.00     CSR                     MOVE '1'         $ERTST
1697.00     CSR           QXX003    IPGE L@X003
1698.00     CSR           QXX003    ANDLEU@X003
1699.00     CSR                     MOVE ' '         $ERTST
1700.00     CSR                     END
1701.00     CSR           $ERTST    IPEQ '1'
1702.00     CSR                     MOVE '1'         @MK,07
1703.00     CSR                     SETON                           5093
```

Figure D–32 Item Master Information Report (23 of 32)

```
1704.00     CSR                     END
1705.00     CSR                     END
1706.00     C*
1707.00     C*     Edit from User Defined Codes - Item Category Code 003
1708.00     C*
1709.00     CSR          R@X003     IFNE *BLANK
1710.00     CSR                     CLEARI0005U
1711.00     CSR                     MOVELS@X003      #USY
1712.00     CSR                     MOVE R@X003      #URT
1713.00     CSR                     MOVE QXX003      #UKY
1714.00     CSR                     CALL 'X0005'                        81
1715.00     C*                      ---- -------
1716.00     CSR                     PARM             I0005U
1717.00     CSR          #UERR      IFEQ '1'
1718.00     CSR                     MOVE '1'         @MX,09
1719.00     CSR                     SETON                            5093
1720.00     CSR                     END
1721.00     CSR                     END
1722.00     C*-----------------------------------------------------------------------
1723.00     C*
1724.00     C*     Scrub and edit - Item Category Code 004
1725.00     C*
1726.00     CSR                     MOVELVDX004      QXX004
1727.00     C*
1728.00     C*    Set default value - Item Category Code 004
1729.00     C*
1730.00     CSR         QXX004      IFEQ *BLANK
1731.00     CSR         D@X004      IFNE *BLANK
1732.00     CSR                     MOVEAD@X004      @40
1733.00     CSR                     MOVEA@40         QXX004
1734.00     CSR         @40,1       IFEQ ''''
1735.00     CSR                     MOVE ' '         @40,1
1736.00     CSR                     Z-ADD2           #M
1737.00     CSR          #M         DOWLE40
1738.00     CSR          @40,#M     IFEQ ''''
1739.00     CSR                     MOVE ' '         @40,#M
1740.00     CSR                     END
1741.00     CSR                     ADD  1           #M
1742.00     CSR                     END
1743.00     CSR                     MOVEA@40,2       QXX004
1744.00     CSR                     END
1745.00     CSR                     END
1746.00     CSR                     END
1747.00     C*
1748.00     C*    Edit allowed values - Item Category Code 004
1749.00     C*
1750.00     CSR         A@X004      IFNE *BLANK
1751.00     CSR         A@X004      IFEQ '*NB'
1752.00     CSR         QXX004      AND*EQ*BLANK
1753.00     CSR                     MOVE '1'         @MX,03
1754.00     CSR                     SETON                            5193
1755.00     CSR                     ELSE
1756.00     CSR                     MOVEAA@X004      @40
1757.00     CSR                     MOVE *HIVAL      @AV
1758.00     CSR                     EXSR C997
1759.00     C*                      ---- ----
1760.00     CSR                     MOVE ' '         $ERTST
1761.00     CSR                     MOVE *BLANK      $WRK10 10
1762.00     CSR                     MOVELQXX004      $WRK10
1763.00     CSR         @AV,1       IFNE *HIVAL
1764.00     CSR         $WRK10      LOKUP@AV                            81
1765.00     CSR         *IN81       IFEQ '0'
1766.00     CSR                     MOVE '1'         $ERTST
1767.00     CSR                     END
1768.00     CSR         $ERTST      IFEQ '1'
1769.00     CSR                     MOVE '1'         @MX,07
1770.00     CSR                     SETON                            5193
1771.00     CSR                     END
1772.00     CSR                     END
1773.00     CSR                     END
1774.00     CSR                     END
1775.00     C*
1776.00     C*     Edit upper and lower range - Item Category Code 004
1777.00     C*
1778.00     CSR         L@X004      IFNE *BLANK
1779.00     CSR                     MOVE '1'         $ERTST
1780.00     CSR         QXX004      IFGE L@X004
```

Figure D–33 Item Master Information report (24 of 32)

```
1781.00   CSR          QXX004    ANDLEU@X004
1782.00   CSR                    MOVE '          $ERTST
1783.00   CSR                    END
1704.00   CSR         $ERTST     IPEQ '1'
1785.00   CSR                    MOVE '1'        @MK,07
1786.00   CSR                    SETON                          5193
1797.00   CSR                    END
1788.00   CSR                    END
1789.00   C*
1790.00   C*     Edit from User Defined Codes - Item Category Code 004
1791.00   C*
1792.00   CSR         R@X004     IPNE *BLANK
1793.00   CSR                    CLEARI0005U
1794.00   CSR                    MOVELS@X004     #USY
1795.00   CSR                    MOVE R@X004     #URT
1796.00   CSR                    MOVE QXX004     #UKY
1797.00   CSR                    CALL 'X0005'                     81
1798.00   C*                     ---- -------
1799.00   CSR                    PARM            I0005U
1800.00   CSR         #UERR      IPEQ '1'
1801.00   CSR                    MOVE '1'        @MK,09
1802.00   CSR                    SETON                          5193
1803.00   CSR                    END
1804.00   CSR                    END
1805.00   C*-----------------------------------------------------------------------
1806.00   C*
1807.00   C*     Scrub and edit - Item Category Code 005
1808.00   C*
1809.00   CSR                    MOVELVOXOOS     QXX005
1810.00   C*
1811.00   C*    Set default value - Item Category Code 005
1812.00   C*
1813.00   CSR        QXX005      IPEQ *BLANK
1814.00   CSR        D@XOOS      IPNE *BLANK
1815.00   CSR                    MOVEAD@XOOS     @40
1816.00   CSR                    MOVEA@40        QXX005
1817.00   CSR        @40,1       IPEQ ''''
1818.00   CSR                    MOVE ' '        @40,1
1819.00   CSR                    Z-ADD2          #M
1820.00   CSR         #M         DOWLE40
1821.00   CSR        @40, #M     IPEQ ''''
1822.00   CSR                    MOVE ' '        @40,#M
1823.00   CSR                    END
1824.00   CSR                    ADD  1          #M
1825.00   CSR                    END
1826.00   CSR                    MOVEA@40,2      QXX005
1827.00   CSR                    END
1928.00   CSR                    END
1829.00   CSR                    END
1830.00   C*
1931.00   C*     Edit allowed values - Item Category Code 005
1832.00   C*
1833.00   CSR        A@XOO5      IPNE *BLANK
1834.00   CSR        A@XOO5      IPEQ '*NB'
1835.00   CSR        QXX005      ANDEQ*BLANK
1836.00   CSR                    MOVE '1'        @MK,03
1837.00   CSR                    SETON                          5293
1838.00   CSR                    ELSE
1839.00   CSR                    MOVEAA@X005     @40
1840.00   CSR                    MOVE *HIVAL     @AV
1841.00   CSR                    EXSR C997
1842.00   C*                     ---- ----
1843.00   CSR                    MOVE ' '        $ERTST  1
1844.00   CSR                    MOVE *BLANK     $WRK10 10
1845.00   CSR                    MOVELQXX005     $WRK10
1846.00   CSR        @AV,1       IPNE *HIVAL
1847.00   CSR        $WRK10      LOKUP@AV                         81
1848.00   CSR        *IN81       IPEQ '0'
1849.00   CSR                    MOVE '1'        $ERTST
1850.00   CSR                    END
1851.00   CSR        $ERTST      IPEQ '1'
1852.00   CSR                    MOVE '1'        @MX.07
1853.00   CSR                    SETON                          5293
1854.00   CSR                    END
1855.00   CSR                    END
1856.00   CSR                    END
1857.00   CSR                    END
```

Figure D–34 Item Master Information report (25 of 32)

```
1858.00     C*
1859.00     C*     Edit upper and lower range - Item Category Code 005
1860.00     C*
1861.00     CSR         L@X005       IFNE *BLANK
1862.00     CSR                      MOVE '1'         $ERTST
1863.00     CSR         QXX005       IFGE L@X005
1864.00     CSR         QXX005       ANDLEU@X005
1865.00     CSR                      MOVE ' '         $ERTST
1866.00     CSR                      END
1867.00     CSR         $ERTST       IFEQ '1'
1868.00     CSR                      MOVE '1'         @MK,07
1869.00     CSR                      SETON                            5293
1870.00     CSR                      END
1871.00     CSR                      END
1872.00     C*
1873.00     C*     Edit from User Defined Codes - Item Category Code 005
1874.00     C*
1875.00     CSR          R@X005      IFNE *BLANK
1876.00     CSR                      CLEARI0005U
1877.00     CSR                      MOVELS@X005      #UGY
1878.00     CSR                      MOVE R@X005      #URT
1879.00     CSR                      MOVE QXX005      #UKY
1880.00     CSR                      CALL 'X0005'                      81
1881.00     C*                       ---- -------
1882.00     CSR                      PARM             I0005U
1883.00     CSR          #UERR       IFEQ '1'
1884.00     CSR                      MOVE '1'         @MK,09
1885.00     CSR                      SETON                            5293
1886.00     CSR                      END
1887.00     CSR                      END
1888.00     C*-----------------------------------------------------------------------
1889.00     CSR            END005    ENDSR
1890.00     C*****************************************************************************
1891.00     C*
1892.00     C*     Copy Common Subroutine - Currency - Translate Video Fields to Data Base
1893.00     C*
1894.00     C/COPY JDECPY,C00151
1895.00     C*****************************************************************************
1896.00     C*
1897.00     C*     Copy Common Subroutine - Build Allowed Values Work Array
1898.00     C*
1899.00     C/COPY JDECPY,C997
1900.00     C*****************************************************************************
1901.00     C*
1902.00     C*     Subroutine S010 - Update Data Base
1903.00     C*     ----------------------------------
1904.00     C*
1905.00     C*     Processing:  1.  Update data base file based upon valid
1906.00     C*                      action codes.
1907.00     C*
1908.00     CSR             S010     BEGSR
1909.00     C*              ----     -----
1910.00     C*
1911.00     C*     If add action, add record.
1912.00     C*
1913.00     CSR            *IN21     IFEQ '1'
1914.00     CSR                      WRITEI92801                      99
1915.00     CSR                      END
1916.00     C*
1917.00     C*     If change action, update record.
1918.00     C*
1919.00     CSR            *IN22     IFEQ '1'
1920.00     CSR                      UPDATI92801                      99
1921.00     CSR                      END
1922.00     C*
1923.00     C*     If delete action, delete record.
1924.00     C*
1925.00     CSR            *IN23     IFEQ '1'
1926.00     CSR                      DELETI92801                      99
1927.00     CSR                      END
1928.00     C*
```

Figure D–35 Item Master Information report (26 of 32)

```
1929.00   C*   Clear data field for next transaction
1930.00   C*
1931.00   CSR                    MOVE #PCLR       @@AID
1932.00   CSR                    EXSR S001
1933.00   C*                     ---- ----
1934.00   CSR          END010    ENDSR
1935.00   C*****************************************************************************
1936.00   C*
1936.00   C*   SUBROUTINE S998 - Load dictionary parameters.
1937.00   C*   --------------------------------------------
1938.00   C*
1939.00   CSR            S998    BEGSR
1940.00   C*             ----    -----
1941.00   C*
1942.00   C*
1943.00   C*
1944.00   C*     Dictionary parameters for - Cost Center
1945.00   C*
1946.00.  CSR                    MOVE *BLANK      FRDTAI
1947.00   CSR                    MOVEL'XCC'       FRDTAI
1948.00   CSR                    CALL 'X9800E'                    81
1949.00   C*                     ---- --------
1950.00   CSR                    PARM             I9800E
1951.00   CSR         FRERR      IFEQ '0'
1952.00   CSR                    MOVE FRDSCR      B@XCC     40
1953.00   CSR                    MOVE FRDTAT      T@XCC      1
1954.00   CSR                    MOVE FREC        E@XCC      1
1955.00   CSR                    MOVE FRDTAS      C@XCC     50
1956.00   CSR                    MOVE FRDTAD      G@XCC     20
1957.00   CSR                    MOVE FRCDEC      F@XCC      1
1958.00   CSR                    MOVELFRSY        S@XCC      4
1959.00   CSR                    MOVE FRRT        R@XCC      2
1960.00   CSR                    MOVE FRDVAL      D@XCC     40
1961.00   CSR                    MOVE FRVAL       A@XCC     40
1962.00   CSR                    MOVE FRLVAL      L@XCC     40
1963.00   CSR                    MOVE FRUVAL      U@XCC     40
1964.00   CSR                    MOVE FREDWR      W@XCC     30
1965.00   CSR                    MOVE FRLR        J@XCC     1
1966.00   CSR                    MOVE FRNNIX      N@XCC     20
1967.00   CSR                    Z-ADD1           #@XCC    110
1968.00   CSR                    MOVE P@XCC       #A
1969.00   CSR                    DO   #A
1970.00   CSR                    MULT 10          #@XCC
1971.00   CSR                    END
1972.00   CSR                    END
1973.00   C*-----------------------------------------------------------------------------
1974.00   C*
1975.00   C*     Dictionary parameters for - Description
1976.00   C*
1977.00   CSR                    MOVE *BLANK      FRDTAI
1978.00   CSR                    MOVEL'XDS'       FRDTAI
1979.00   CSR                    CALL 'X9800E'                    81
1980.00   C*                     ---- --------
1981.00   CSR                    PARM             I9800E
1982.00   CSR         FRERR      IFEQ '0'
1983.00   CSR                    MOVE FRDSCR      B@XDS     40
1984.00   CSR                    MOVE FRDTAT      T@XDS      1
1985.00   CSR                    MOVE FREC        E@XDS      1
1986.00   CSR                    MOVE FRDTAS      C@XDS     50
1987.00   CSR                    MOVE FRDTAD      G@XDS     20
1988.00   CSR                    MOVE FRCDEC      F@XDS      1
1989.00   CSR                    MOVELLFRSY       S@XDS      4
1990.00   CSR                    MOVE FRRT        R@XDS      2
1991.00   CSR                    MOVE FRDVAL      D@XDS     40
1992.00   CSR                    MOVE FRVAL       A@XDS     40
1993.00   CSR                    MOVE FRLVAL      L@XDS      40
1994.00   CSR                    MOVE FRUVAL      U@XDS     40
1995.00   CSR                    MOVE FREDWR      W@XDS     30
1996.00   CSR                    MOVE FRLR        J@XDS      1
1997.00   CSR                    MOVE FRNNIX      N@XDS     20
1998.00   CSR                    Z-1DD1           #@XDS    110
1999.00   CSR                    MOVE P@XDS       #A
2000.00   CSR                    DO    #A
2001.00   CSR                    MULT 10          #@XDS
2002.00   CSR                    END
2003.00   CSR                    END
2004.00   C*-----------------------------------------------------------------------------
2005.00   C*
```

Forces clear of everything before processing next record. Simulates user pressing the *Clear Screen* function key.

Retrieves all of the Data Dictionary editing parameters for necessary data items used in the program and moves the information into constant fields

Data Dictionary file server

Figure D–36 Item Master Information report (27 of 32)

```
2006.00     C*     Dictionary parameters for - Date Last Ship
2007.00     C*
2008.00.    CSR                    MOVE *BLANK      FRDTAI
2009.00     CSR                    MOVEL'XDT'       FRDTAI
2010.00     CSR                    CALL 'X9800E'                        81
2011.00     C*                     ---- --------
2012.00     CSR                    PARM             I9800E
2013.00     CSR         FRERR      IFEQ '0'
2014.00     CSR                    MOVE FRDSCR      B@XDT     40
2015.00     CSR                    MOVE FRDTAT      T@XDT      1
2016.00     CSR                    MOVE FREC        E@XDT      1
2017.00     CSR                    MOVE FRDTAS      C@XDT     50
2018.00     CSR                    MOVE FRDTAD      G@XDT     20
2019.00     CSR                    MOVE FRCDEC      P@XDT      1
2020.00     CSR                    MOVELFRSY        S@XDT      4
2021.00     CSR                    MOVE FRRT        R@XDT      2
2022.00     CSR                    MOVE FRDVAL      D@XDT     40
2023.00     CSR                    MOVE FRVAL       A@XDT     40
2024.00     CSR                    MOVE FRLVAL      L@XDT     40
2025.00     CSR                    MOVE FRUVAL      U@XDT     40
2026.00     CSR                    MOVE FREDWR      W@XDT     30
2027.00     CSR                    MOVE FRLR        J@XDT      1
2028.00     CSR                    MOVE FRNNIX      N@XDT     20
2029.00     CSR                    Z-ADD1           #@XDT    110
2030.00     CSR                    MOVE P@XDT       #A
2031.00     CSR                    DO    #A
2032.00     CSR                    MULT 10          #@XDT
2033.00     CSR                    END
2034.00     CSR                    END
2035.00     C*-------------------------------------------------------------------------------
2036.00     C*
2037.00     C*     Dictionary parameters for - Item ID
2038.00     C*
2039.00     CSR                    MOVE *BLANK      FRDTAI
2040.00     CSR                    MOVEL'XIT'       FRDTAI
2041.00     CSR                    CALL 'X9800E'                        81
2042.00     C*                     ---- --------
2043.00     CSR                    PARM             I9800E
2044.00     CSR         FRERR      IFEQ '0'
2045.00     CSR                    MOVE FRDSCR      B@XIT     40
2046.00     CSR                    MOVE FRDTAT      T@XIT      1
2047.00     CSR                    MOVE FREC        E@XIT      1
2048.00     CSR                    MOVE FRDTAS      C@XIT     50
2049.00     CSR                    MOVE FRDTAD      G@XIT     20
2050.00     CSR                    MOVE FRCDEC      P@XIT      1
2051.00     CSR                    MOVELLFRSY       S@XIT      4
2052.00     CSR                    MOVE FRRT        R@XIT      2
2053.00     CSR                    MOVE FRDVAL      fT     40
2054.00     CSR                    MOVE FRVAL       A@XIT     40
2055.00     CSR                    MOVE FRLVAL      L@XIT      40
2056.00     CSR                    MOVE FRUVAL      U@XIT     40
2057.00     CSR                    MOVE FREDWR      W@XIT     30
2058.00     CSR                    MOVE FRLR        J@XIT      1
2059.00     CSR                    MOVE FRNNIX      N@XIT     20
2060.00     CSR                    Z-1DD1           #@XIT    110
2061.00     CSR                    MOVE P@XZT       #A
2062.00     CSR                    DO    #A
2063.00     CSR                    MULT 10          #@XIT
2064.00     CSR                    END
2065.00     CSR                    END
2066.00     C*-------------------------------------------------------------------------------
----------
2067.00     C*
2068.00     C*     Dictionary parameters for - gnantity On Hand
2069.00     C*
2070.00     CSR                    MOVE *BLANK      FRDTAI
2071.00     CSR                    MOVEL'XQT'       FRDTAI
2072.00     CSR                    CALL 'X9800E'                        81
2073.00     C*
2074.00     CSR                    PARM             I9800E
2075.00     CSR         FRERR      IFEQ '0'
2076.00     CSR                    MOVE FRDSCR      B@XOT     40
2077.00     CSR                    MOVE FRDTAT      T@XQT      1
2078.00     CSR                    MOVE FREC        E@XQT      1
2079.00     C5R                    MOVE FRDTAS      C@XQT     50
2080.00     CSR                    MOVE FRDTAD      G@XQT     20
2081.00     CSR                    MOVE FRCDEC      P@XQT      1
2082.00     CSR                    MOVELFRSY        @SXQT      4
```

Figure D–37 Item Master Information report (28 of 32)

```
2083.00     CSR                     MOVE PRRT        RXQT       2
2084.00     CSR                     MOVE PRDVAL      D@XQT     40
2085.00     CSR                     MOVE PRVAL       A@XQT     40
2086.00     CSR                     MOVE PRLVAL      L@XQT     40
2087.00     CSR                     MOVE PRUVAL      U@XQT     40
2088.00     CSR                     MOVE PRRDWR      W@XQT     30
2089.00     CSR                     MOVE PRLR        J@XQT      1
2090.00     CSR                     MOVE PRNNIX      N@XQT     20
2091.00     CSR                     Z-ADD1           #@XQT    110
2092.00     CSR                     MOVE P@XQT       #A
2093.00     CSR                     DO    #A
2094.00     CSR                     MULT 10          #@XQT
2095.00     CSR                     END
2096.00     CSR                     END
2097.00     C*-------------------------------------------------------------------------------
2098.00     C*
2099.00     C*     Dictionary parameters for - Item Type
2100.00     C*
2101.00     CSR                     MOVE *BLANK      PRDTAI
2102.00     CSR                     MOVEL'XTY'       PRDTAI
2103.00     CSR                     CALL 'X9800E'                        81
2104.00     C*                      ---- --------
2105.00     CSR                     PARM             I9800E
2106.00     CSR         PRERR       IFEQ '0'
2107.00     CSR                     MOVE PRDSCR      B@XTY     40
2108.00     CSR                     MOVE PRDTAT      T@XTY      1
2109.00     CSR                     MOVE PREC        E@XTY      1
2110.00     CSR                     MOVE PRDTAS      C@XTY     50
2111.00     CSR                     MOVE PRDTAT      G@XTY     20
2112.00     CSR                     MOVE PRCDEC      P@XTY      1
2113.00     CSR                     MOVELPRSY        S@XTY      4
2114.00     CSR                     MOVE PRRT        R@XTY      2
2115.00     CSR                     MOVE PRDVAL      D@XTY     40
2116.00     CSR                     MOVE  PRVAL      A@XTY     40
2117.00     CSR                     MOVE PRLVAL      L@XTY     40
2118.00     CSR                     MOVE PRUVAL      U@XTY     40
2119.00     CSR                     MOVE PRRDWR      W@XTY     30
2120.00     CSR                     MOVE PRLR        J@XTY      1
2121.00     CSR                     MOVE PRNNIX      N@XTY     20
2122.00     CSR                     Z-ADD1           #@XTY    110
2123.00     CSR                     MOVE P@XTY       #A
2124.00     CSR                     DO    #A
2125.00     CSR                     MULT 10          #@XTY
2126.00     CSR                     END
2127.00     CSR                     END
2128.00     C*-------------------------------------------------------------------------------
-------------
2129.00     C*
2130.00     C*     Dictionary parameters for - Item Unit of Measure
2131.00     C*
2132.00     CSR                     MOVE *BLANK      PRDTAI
2133.00     CSR                     MOVEL'XUM'       PRDTAI
2134.00     CSR                     CALL 'X9800E'                        81
2135.00     C*                      ---- --------
2136.00     CSR                     PARM             I9800E
2137.00     CSR         PRERR       IFEQ '0'
2138.00     CSR                     MOVE PRDSCR      B@XUM     40
2139.00     CSR                     MOVE PRDTAT      T@XUM      1
2140.00     CSR                     MOVE PREC        E@XUM      1
2141.00     CSR                     MOVE PRDTAS      C@XUM     50
2142.00     CSR                     MOVE PRDTAD      G@XUM     20
2143.00     CSR                     MOVE PRCDEC      P@XUM      1
2144.00     CSR                     MOVELPRSY        S@XUM      4
2145.00     CSR                     MOVE PRRT        R@XUM      2
2146.00     CSR                     MOVE PRDVAL      D@XDM     40
2147.00     CSR                     MOVE PRVAL       A@XUM     40
2148.00     CSR                     MOVE PRLVAL      L@XUM     40
2149.00     CSR                     MOVE PRUVAL      U@XUM     40
2150.00     CSR                     MOVE PRRDWR      W@XUM     30
2151.00     CSR                     MOVE PRLR        J@XUM      1
2152.00     CSR                     MOVE PRNNIX      N@XUM     20
2153.00     CSR                     Z-ADD1           #@XUM    110
2154.00     CSR                     MOVE P@XUM       #A
2155.00     CSR                     DO    #A
2156.00     CSR                     MULT 10          #@XUM
2157.00     CSR                     END
2158.00     CSR                     END
2159.00     C*-----------------------------------------------------------------------
```

Figure D–38 Item Master Information report (29 of 32)

```
2160.00     C*
2161.00     C*     Dictionary parameters for - Item Category Code 001
2162.00     C*
2163.00     CSR                    MOVE *BLANK      FRDTAI
2164.00     CSR                    MOVEL'X001'      FRDTAI
2165.00     CSR                    CALL 'X9800E'                        81
2166.00     C*                     ---- --------
2167.00     CSR                    PARM             I9800E
2168.00     CSR            FRERR   IFEQ '0'
2169.00     CSR                    MOVE FRDSCR      B@X001     40
2170.00     CSR                    MOVE FRDTAT      T@X001     1
2171.00     CSR                    MOVE FREC        E@X001     1
2172.00     CSR                    MOVE FRDTAS      C@X001     50
2173.00     CSR                    MOVE FRDTAD      G@X001     20
2174.00     CSR                    MOVE FRCDEC      F@X001     1
2175.00     CSR                    MOVELFRST        S@X001     4
2176.00     CSR                    MOVE FRRT        R@X001     2
2177.00     CSR                    MOVE FRDVAL      D@X001     40
2178.00     CSR                    MOVE FRVAL       A@X001     40
2179.00     CSR                    MOVE FRLVAL      L@X001     40
2180.00     CSR                    MOVE FRDVAL      U@X001     40
2181.00     CSR                    MOVE FREDWR      W@X001     30
2182.00     CSR                    MOVE FRLR        J@X001     1
2183.00     CSR                    MOVE FRNNIX      N@X001     20
2184.00     CSR                    Z-ADD1           #@X001     110
2185.00     CSR                    MOVE F@X001      #A
2186.00     CSR                    DO    #A
2187.00     CSR                    MULT 10          #@X001
2188.00     CSR                    END
2189.00     CSR                    END
2190.00     C*-------------------------------------------------------------------------------
2191.00     C*
2192.00     C*     Dictionary parameters for - Item Category Code 002
2193.00     C*
2194.00     CSR                    MOVE *BLANK      FRDTAI
2195.00     CSR                    MOVEL'X002'      FRDTAI
2196.00     CSR                    CALL 'X9800E'                        81
2197.00     C*                     ---- --------
2198.00     CSR                    PARM             I9800E
2199.00     CSR            FRERR   IFEQ '0'
2200.00     CSR                    MOVE FRDSCR      B@X002     40
2201.00     CSR                    MOVE FRDTAT      T@X002     1
2202.00     CSR                    MOVE FREC        E@X002     1
2203.00     CSR                    MOVE FRDTAS      C@X002     50
2204.00     CSR                    MOVE FRDTAD      G@X002     20
2205.00     CSR                    MOVE FRCDEC      F@X002     1
2206.00     CSR                    MOVELFRST        S@X002     4
2207.00     CSR                    MOVE FRRT        R@X002     2
2208.00     CSR                    MOVE FRDVAL      D@X002     40
2209.00     CSR                    MOVE FRVAL       A@X002     40
2210.00     CSR                    MOVE FRLVAL      L@X002     40
2211.00     CSR                    MOVE FRDVAL      U@X002     40
2212.00     CSR                    MOVE FREDWR      W@X002     30
2213.00     CSR                    MOVE FRLR        J@X002     1
2214.00     CSR                    MOVE FRNNIX      N@X002     20
2215.00     CSR                    Z-ADD1           #@X002     110
2216.00     CSR                    MOVE F@X002      #A
2217.00     CSR                    DO    #A
2218.00     CSR                    MULT 10          #@X002
2219.00     CSR                    END
2220.00     CSR                    END
2221.00     C*-------------------------------------------------------------------------------
2222.00     C*
2223.00     C*     Dictionary parameters for - Item Category Code 003
2224.00     C*
2225.00     CSR                    MOVE *BLANK      FRDTAI
2226.00     CSR                    MOVEL'X003'      FRDTAI
2227.00     CSR                    CALL 'X9800E'                        81
2228.00     C*                     ---- --------
2229.00     CSR                    PARM             I9800E
2230.00     CSR            FRERR   IFEQ '0'
2231.00     CSR                    MOVE FRDSCR      B@X003     40
2232.00     CSR                    MOVE FRDTAT      T@X003     1
2233.00     CSR                    MOVE FREC        E@X003     1
2234.00     CSR                    MOVE FRDTAS      C@X003     50
2235.00     CSR                    MOVE FRDTAD      G@X003     20
2236.00     CSR                    MOVE FRCDEC      F@X003     1
```

Figure D–39 Item Master Information report (30 of 32)

```
2237.00     CSR                     MOVELFRSY       S@X003     4
2238.00     CSR                     MOVE FRRT       R@X003     2
2239.00     CSR                     MOVE FRDVAL     D@X003     40
2240.00     CSR                     MOVE FRVAL      A@X003     40
2241.00     CSR                     MOVE FRLVAL     L@X003     40
2242.00     CSR                     MOVE FRDVAL     U@X003     40
2243.00     CSR                     MOVE FREDWR     W@X003     30
2244.00     CSR                     MOVE FRLR       J@X003     1
2245.00     CSR                     MOVE FRNNIX     N@X003     20
2246.00     CSR                     Z-ADD1          #@X003     110
2247.00     CSR                     MOVE P@X003     #A
2248.00     CSR                     DO    #A
2249.00     CSR                     MULT 10         #@X003
2250.00     CSR                     END
2251.00     CSR                     END
2252.00     C*-------------------------------------------------------------------------------
2253.00     C*
2254.00     C*     Dictionary parameters for - Item Category Code 004
2255.00     C*
2256.00     CSR                     MOVE *BLANK     FRDTAI
2257.00     CSR                     MOVEL'X004'     FRDTAI
2258.00     CSR                     CALL 'X9800E'                      81
2259.00     C*                      ---- --------
2260.00     CSR                     PARM            I9800E
2261.00     CSR            FRERR    IFEQ '0'
2262.00     CSR                     MOVE FRDSCR     B@X004     40
2263.00     CSR                     MOVE FRDTAT     T@X004     1
2264.00     CSR                     MOVE FREC       E@X004     1
2265.00     CSR                     MOVE FRDTAS     C@X004     50
2266.00     CSR                     MOVE FRDTAD     G@X004     20
2267.00     CSR                     MOVE FRCDEC     P@X004     1
2268.00     CSR                     MOVELFRSY       S@X004     4
2269.00     CSR                     MOVE FRRT       R@X004     2
2270.00     CSR                     MOVE FRDVAL     D@X004     40
2271.00     CSR                     MOVE FRVAL      A@X004     40
2272.00     CSR                     MOVE FRLVAL     L@X004     40
2273.00     CSR                     MOVE FRDVAL     U@X004     40
2274.00     CSR                     MOVE FREDWR     W@X004     30
2275.00     CSR                     MOVE FRLR       J@X004     1
2276.00     CSR                     MOVE FRNNIX     N@X004     20
2277.00     CSR                     Z-ADD1          #@X004     110
2278.00     CSR                     MOVE P@X004     #A
2279.00     CSR                     DO    #A
2280.00     CSR                     MULT 10         #@X004
2281.00     CSR                     END
2282.00     CSR                     END
2283.00     C*-------------------------------------------------------------------------------
2284.00     C*
2285.00     C*     Dictionary parameters for - Item Category Code 005
2286.00     C*
2287.00     CSR                     MOVE *BLANK     FRDTAI
2288.00     CSR                     MOVEL'X005'     FRDTAI
2289.00     CSR                     CALL 'X9800E'                      81
2290.00     C*                      ---- --------
2291.00     CSR                     PARM            I9800E
2292.00     CSR            FRERR    IFEQ '0'
2293.00     CSR                     MOVE FRDSCR     B@X005     40
2294.00     CSR                     MOVE FRDTAT     T@X005     1
2295.00     CSR                     MOVE FREC       E@X005     1
2296.00     CSR                     MOVE FRDTAS     C@X005     50
2297.00     CSR                     MOVE FRDTAD     G@X005     20
2298.00     CSR                     MOVE FRCDEC     P@X005     1
2299.00     CSR                     MOVELFRSY       S@X005     4
2300.00     CSR                     MOVE FRRT       R@X005     2
2301.00     CSR                     MOVE FRDVAL     D@X005     40
2302.00     CSR                     MOVE FRVAL      A@X005     40
2303.00     CSR                     MOVE FRLVAL     L@X005     40
2304.00     CSR                     MOVE FRDVAL     U@X005     40
2305.00     CSR                     MOVE FREDWR     W@X005     30
2306.00     CSR                     MOVE FRLR       J@X005     1
2307.00     CSR                     MOVE FRNNIX     N@X005     20
2308.00     CSR                     Z-ADD1          #@X005     110
2309.00     CSR                     MOVE P@X005     #A
2310.00     CSR                     DO    #A
2311.00     CSR                     MULT 10         #@X005
2312.00     CSR                     END
2313.00     CSR                     END
```

Figure D–40 Item Master Information report (31 of 32)

```
2314.00   C*
2315.00   C*
2316.00   C*   Set subroutine execution flag.
2317.00   C*
2318.00   CSR                    MOVE '1'        $998            1
2319.00   C*
2320.00   CSR           END998   ENDSR
2321.00   C*****************************************************************
2322.00   C*
2323.00   C*   SUBROUTINE S999- Housekeeping
2324.00   C*
2325.00   C*
2326.00   C*   Processing:  1.    Load video screen text.
2327.00   C*                2.    Retrieve screen title data area, test
2328.00   C*                      for unauthorized access, center video
2329.00   C*                      title and save to video screen.
2330.00   C*                3.    Initialize key list.
2331.00   C*                4.    Load roll keys.
2332.00   C*                5.    Passed parameters.
2333.00   C*                6.    Load error message array.
2334.00   C*
2335.00   CSR             S999    BEGSR
2336.00   C*              ----    -----
2337.00   C*
2338.00   C*   Required program parameters.
2339.00   C*
2340.00   CSR           *ENTRY    PLIST
2341.00   C*
2342.00   C*   Passed Parameter - Item ID
2343.00   C*
2344.00   CSR                     PARM            $$XIT           8
2345.00   C*
2346.00   C*   Move to internal reference - Item ID
2347.00   C*
2348.00   CSR                     MOVE ##XIT      vDXIT
2349.00   C*
2350.00   C*    Test for auto inquiry function.
2351.00   C*
2352.00   CSR             VDXIT   IFNE *BLANK
2353.00   CSR                     MOVE '1'        $AUTO           1
2354.00   CSR                     END
2355.00   C*-----------------------------------------------------------------
2356.00   C*
2357.00   C*   Load video screen text
2358.00   C*
2359.00   CSR                     MOVEL##FILE     PSKEY          10
2360.00   CSR                     Z-ADD025        PSVTX#         30
2361.00   C/COPY JDECPY,C00SC
2362.00   C*-----------------------------------------------------------------
2363.00   C*
2364.00   C*   Key list for - Cost Center Security
2365.00   C*
2366.00   CSR           MSKY01    KLIST
2367.00   CSR                     KFLD            MSUSER
2368.00   CSR                     KFLD            MSFILE
2369.00   CSR                     KFLD            MSMCUT
2370.00   C*-----------------------------------------------------------------
2371.00   C*
2372.00   C*   Key list for -SDM Item Master File
2373.00   C*
2374.00   CSR           ZXKY01    KLIST
2375.00   CSR                     KFLD            QXXIT
2376.00   C*-----------------------------------------------------------------
2377.00   C*
2378.00   C*   Load roll key uppr and lower key values.
2379.00   C*
2380.00   CSR             *LIKE   DEFN QXXIT      $RUKEY
2381.00   CSR             *LIKE   DEFN $RUKEY     $RDKEY
2382.00   CSR                     MOVE *LOVAL     $RUKEY
2383.00   CSR                     MOVE *ALL'9'    $RDKEY
2384.00   C*-----------------------------------------------------------------
2385.00   C*
```

Assures S998 will only be executed once

Parameters passed to program

Set auto-inquiry if information is passed

Retrieves vocabulary overrides

Only loads these VTX fields displayed on the video instead of all 144

Composite keys are defined here

Using *LIKE more and more, especially for work fields.

Figure D–41 Item Master Information report (32 of 32)

```
2386.00     C*          Load error massages array.
2387.00     C*
2388.00     CSR                     MOVE '0001'      EMK,01     Inv Action
2389.00     CSR                     MOVE '0002'      EMK,02     Inv Key
2390.00     CSR                     MOVE '0003'      EMK,03     Inv Blanks
2391.00     CSR                     MOVE '0004'      EMK,04     Inv Date
2392.00     CSR                     MOVE '0005'      EMK,05     Inv Next Nbr
2393.00     CSR                     MOVE '0007'      EMK,06     In Use
2394.00     CSR                     MOVE '0025'      EMK,07     Inv Values
2395.00     CSR                     MOVE '0026'      EMK,08     Inv MCU
2396.00     CSR                     MOVE '0027'      EMK,09     Inv Desc Ttl
2397.00     CSR                     MOVE '0052'      EMK,10
2398.00     C*-----------------------------------------------------------------------
2399.00     C*
2400.00     C*   Load invalid action code array.
2401.00     C*
2402.00     CSR                     MOVEA'     '     @NAC
2403.00     C*-----------------------------------------------------------------------
2404.00     C*
2405.00     Ct   Load systeM date.
2406.00     C*
2407.00     CSR                     TIME             $WRK12   120
2408.00     CSR                     MOVE $WRK12      $$RDT     60
2409.00     CSR                     MOVE $$RDT       $SIDAT     6
2410.00     CSR                     MOVEL' 'SYSVAL ' #FFMT      7
2411.00     CSR                     MOVEL*BLANKS     #EDAT      8
2412.00     CSR                     MOVEL' *JUL    ' #TFMT      7
2413.00     CSR                     MOVEL'*NONE    ' #SKP       7
2414.00     CSR                     MOVE ' '         $ERTST     1
2415.00     CSR                     CALL 'X0028    '
2416.00     C*                      ---- ------
2417.00     CSR                     PARM             $SIDAT
2418.00     CSR                     PARM             #EDAT
2419.00     CSR                     PARM             #FFMT
2420.00     CSR                     PARM             #TFMT
2421.00     CSR                     PARM             #SKP
2422.00     CSR                     PARM             $ERTST
2423.00     CSR                     MOVE #SIDAT      $$UPMJ    60
2424.00     C*-----------------------------------------------------------------------
2425.00     CSR          END999     ENDSR
2426.00     C***********************************************************************
2427.00     C***********************************************************************
2428.00     0I92801  E                    UNLOCK
```

Error message numbers from Data Dictionary

Lockout action code function used with the Program Generator

Use the TIME feature to allow for all date formats

Method of releasing master file record locks

E

JD Edwards World Subroutines and Flows

This appendix contains these topics:

- Section E.1, "Subroutines,"
- Section E.2, "Flows."

E.1 Subroutines

Using subroutines:

- Allows for standard names to make program maintenance easier.
- Launch primarily from Mainline.

The following table includes internal RPG subroutines within JD Edwards World programs:

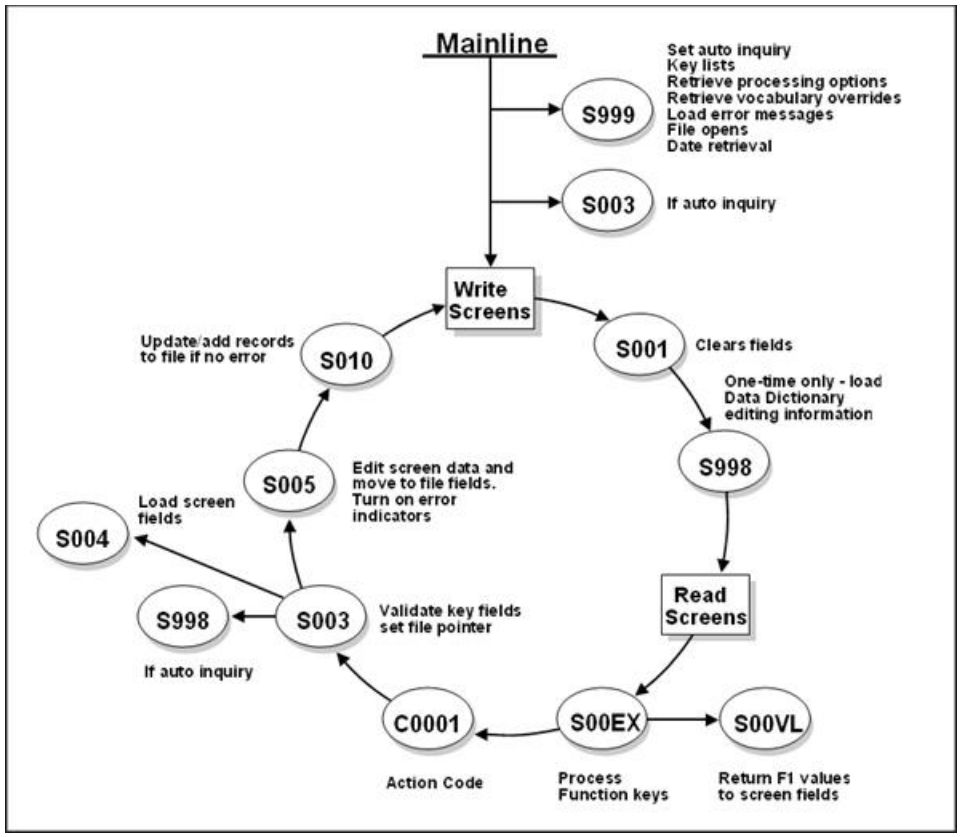
Subroutine	Description
S00EX	Processes all function exits. Choose a function exit and the system launches one of the following programs: ■ Display Functions (F24) to launch P9601H ■ Field Sensitive Help (F1) launches X96CCX. After X96CCX launches, the system launches subroutine S00VL. ■ Display Error Message (F7) launches P0000E ■ HELP launches P00HELP ■ Clear Screen (F22) launches subroutine S001 ■ Launches all programs to process all user defined function keys
S00VL	Retrieves values with Field Level Help. After X96CCX launches, the system launches subroutine S00VL.
S00OP	Subfile Options.
S001	Clears all database and screen fields. This usually only clears key fields and VC0 fields if you choose Clear Screen (F22).
S002	Checks for level breaks for reports. ■ Activates level break markers. ■ Retrieves the total line description

Subroutine	Description
S003	Validates the key fields. Launches subroutine S998 if the system invokes auto inquire. Sets the file pointer. ■ Performs a SETLL and CHAIN if the program is a single record maintenance program ■ Performs a SETLL for subfile programs Launches subroutine S004 to load screen and report fields Monitors that subfile records load if this is a subfile Loads subfile records that the system does not use with blanks
S004	Display and load the screen or report fields.
S005	Scrubs and edits screen and report fields. ■ Moves screen data to database fields ■ Activates error indicators if a field value is in error ■ Updates records in the database file if this is a subfile ■ Updates the subfile
S010	For reports with level breaks it: ■ Prints the total ■ Clears the level break totals ■ Prints the grand total when it reaches the end of the file ■ Prints the detail ■ Adds to the new level break totals Launches subroutine S020 if this is a report with subheadings If this is not a report, S010 updates, adds, or deletes records from the database file. Deactivates the Clear Screen (F22) function and executes S001 to clear the buffer before reading another record.
S020	Print Report Subheadings.
S998	Loads Data Dictionary values, one time only. Retrieves row description for level breaks and subheadings, if applicable.
S999	Housekeeping, one time only. ■ Sets auto inquiry ■ Defines key lists ■ Retrieves processing options and level breaks, if applicable ■ Retrieves vocabulary overrides ■ Loads error messages ■ Opens file ■ Retrieves the current date ■ Defines work fields using *LIKE ■ Prints cover page and Helps in a report

E.2 Flows

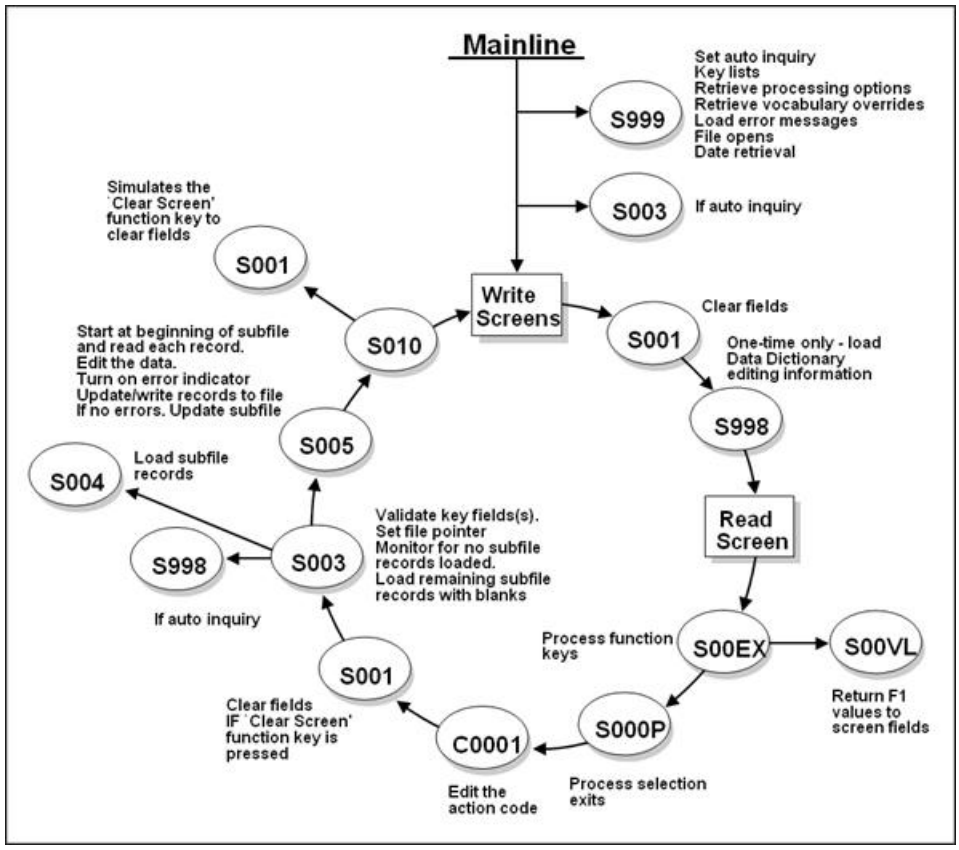
E.2.1 Interactive Non-Subfile Program

Figure E–1 Interactive Non-Subfile Program flow



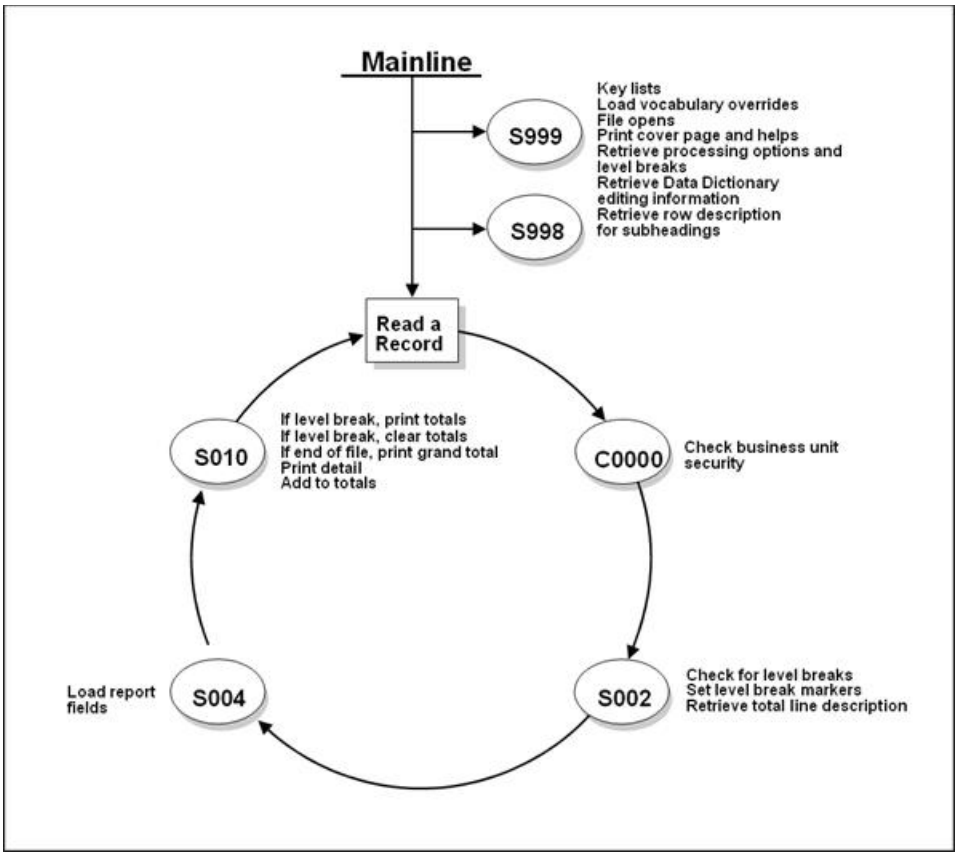
E.2.2 Subfile Program with Options

Figure E–2 Subfile Program With Options flow



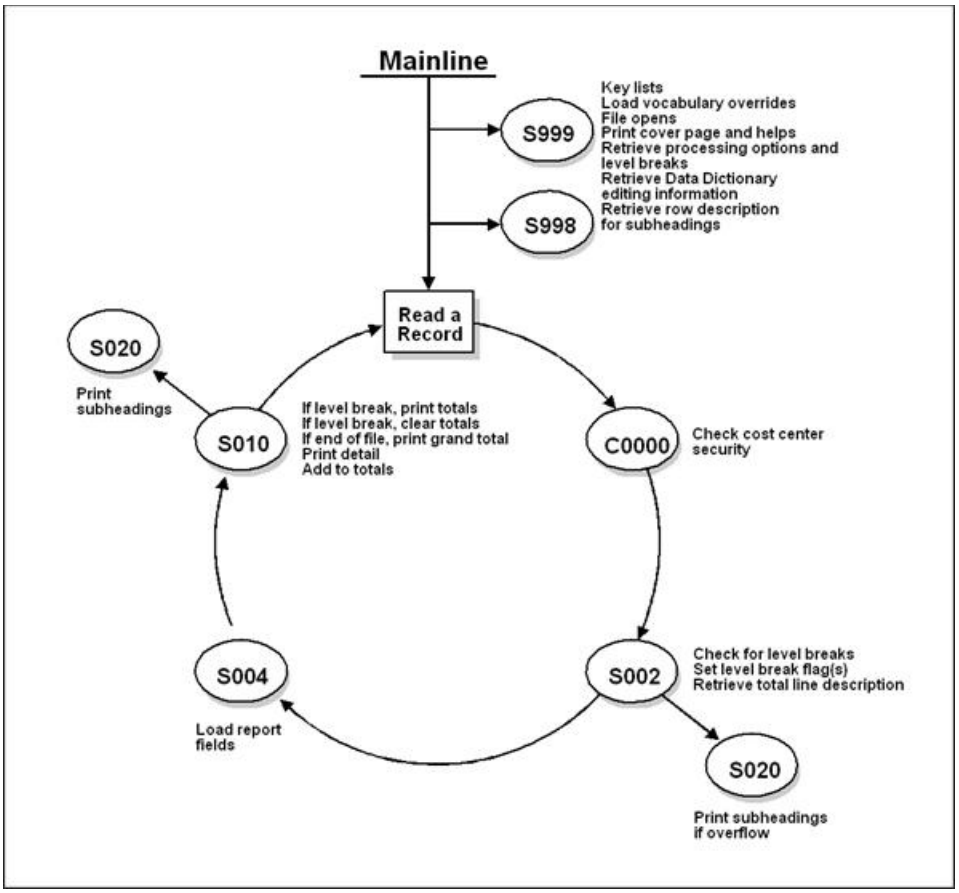
E.2.3 Report Program without Subheadings

Figure E–3 Report Program Without Subheadings flow



E.2.4 Report Program with Subheadings

Figure E–4 Report Program With Subheadings flow



F

Sample Code

Following is the code to create the basic shell for program type B0010.

Figure F–1 Create/Modify (Basic Shell) screen

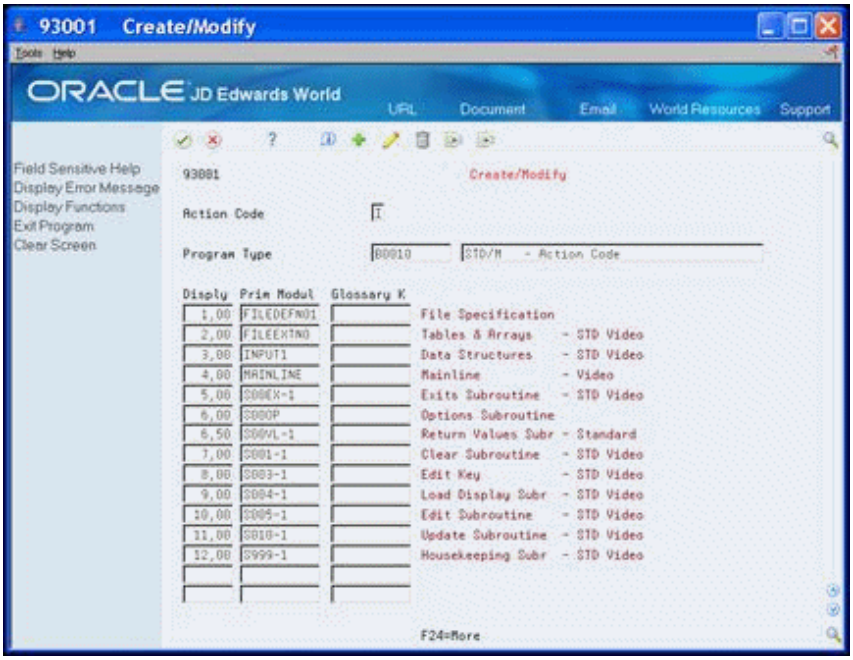


Figure F–2 Program Code for Program Type B0010 (1 of 11)

```
R93950                          B0010      - STD/M   - Action Code                      DATE -  2/02/17
TITLEN/TITLE                                                                   FILEDEFN01 001000000000
     H* ------------------------------------------------------------           FILEDEFN01 002000000000
     H*                                                                        FILEDEFN01 003000000000
     H*    Copyright (c) 2007                                                 FILEDEFN01 004000000000
     H*    JD Edwards World                                             FILEDEFN01 005000000000
     H*                                                                        FILEDEFN01 006000000000
     H*        This unpublished material is proprietary to                   FILEDEFN01 007000000000
     H*        JD Edwards World.  All rights reserved.                      FILEDEFN01 008000000000
     H*        The methods and techniques described herein are               FILEDEFN01 009000000000
     H*        considered trade secrets and/or confidential.                 FILEDEFN01 010000000000
     H*        Reproduction or distribution, in whole or in part,            FILEDEFN01 011000000000
     H*        is forbidden except by express written permission             FILEDEFN01 012000000000
     H*        of JD Edwards World.                                         FILEDEFN01 013000000000
     H*                                                                        FILEDEFN01 014000000000
     H* ------------------------------------------------------------           FILEDEFN01 015000000000
     F*                                                                        FILEDEFN01 016000000000
     F*    PROGRAM REVISION LOG                                                FILEDEFN01 017000000000
     F*    --------------------                                                FILEDEFN01 018000000000
     F*                                                                        FILEDEFN01 019000000000
     F*          Date     Programmer     Nature of Revision                   FILEDEFN01 020000000000
     F*        --------   ----------  ------------------------------------    FILEDEFN01 021000000000
AUTHRF*                              SAR #                (AS/400  A/G)       FILEDEFN01 022000000000
     F*                                                                        FILEDEFN01 023000000000
DESC F*                                                                        FILEDEFN01 024000000000
     F*                                                                        FILEDEFN01 025000000000
     F*************************************************************           FILEDEFN01 026000000000
     F*                                                                        FILEDEFN01 027000000000
FILESF*                                                                        FILEDEFN01 028000000000
COPY F*************************************************************           FILEDEFN01 029000000000
     E*************************************************************           FILEEXTN0  001000000000
     E*    PROGRAM TABLES AND ARRAYS                                           FILEEXTN0  002000000000
     E*    -------------------------                                           FILEEXTN0  003000000000
     E*                                                                        FILEEXTN0  004000000000
     E                   EMK        64  4              Error Msg               FILEEXTN0  005000000000
     E                   8MK        64  1              Error Msg               FILEEXTN0  006000000000
```

Figure F–3 Program Code for Program Type B0010 (2 of 11)

```
     E                    @ER        64  4              Error Msg              FILEEXTN0  007000000000
     E                    @DV        40  1              Dflt Wrk               FILEEXTN0  008000000000
     E                    @C        256  1              Literal Work           FILEEXTN0  011100000000
COPY E*                                                                        FILEEXTN0  012000000000
     I*************************************************************            INPUT1     001000000000
     I*    PROGRAM INPUT SPECIFICATIONS AND DATA STRUCTURES                    INPUT1     002000000000
     I*    ------------------------------------------------                    INPUT1     003000000000
     I*                                                                        INPUT1     004000000000
     I*    Data Structure to Load Video Screen Text                            INPUT1     005000000000
     I*                                                                        INPUT1     006000000000
VTS  IDSTXT       DS                                                           INPUT1     007000000000
VTX  I                                        1  40 VTX001                    INPUT1     008000000000
VTX  I                                       41  80 VTX002                    INPUT1     009000000000
VTX  I                                       81 120 VTX003                    INPUT1     010000000000
VTX  I                                      121 160 VTX004                    INPUT1     011000000000
VTX  I                                      161 200 VTX005                    INPUT1     012000000000
VTX  I                                      201 240 VTX006                    INPUT1     013000000000
VTX  I                                      241 280 VTX007                    INPUT1     014000000000
VTX  I                                      281 320 VTX008                    INPUT1     015000000000
VTX  I                                      321 360 VTX009                    INPUT1     016000000000
VTX  I                                      361 400 VTX010                    INPUT1     017000000000
VTX  I                                      401 440 VTX011                    INPUT1     018000000000
VTX  I                                      441 480 VTX012                    INPUT1     019000000000
VTX  I                                      481 520 VTX013                    INPUT1     020000000000
R93950                            B0010      - STD/M   - Action Code                      DATE -  2/02/17
VTX  I                                      521 560 VTX014                    INPUT1     021000000000
VTX  I                                      561 600 VTX015                    INPUT1     022000000000
VTX  I                                      601 640 VTX016                    INPUT1     023000000000
VTX  I                                      641 680 VTX017                    INPUT1     024000000000
VTX  I                                      681 720 VTX018                    INPUT1     025000000000
VTX  I                                      721 760 VTX019                    INPUT1     026000000000
VTX  I                                      761 800 VTX020                    INPUT1     027000000000
VTX  I                                      801 840 VTX021                    INPUT1     028000000000
VTX  I                                      841 880 VTX022                    INPUT1     029000000000
VTX  I                                      881 920 VTX023                    INPUT1     030000000000
VTX  I                                      921 960 VTX024                    INPUT1     031000000000
VTX  I                                     9611000 VTX025                    INPUT1     032000000000
VTX  I                                    10011040 VTX026                    INPUT1     033000000000
VTX  I                                    10411080 VTX027                    INPUT1     034000000000
VTX  I                                    10811120 VTX028                    INPUT1     035000000000
VTX  I                                    11211160 VTX029                    INPUT1     036000000000
VTX  I                                    11611200 VTX030                    INPUT1     037000000000
VTX  I                                    12011240 VTX031                    INPUT1     038000000000
VTX  I                                    12411280 VTX032                    INPUT1     039000000000
VTX  I                                    12811320 VTX033                    INPUT1     040000000000
VTX  I                                    13211360 VTX034                    INPUT1     041000000000
VTX  I                                    13611400 VTX035                    INPUT1     042000000000
VTX  I                                    14011440 VTX036                    INPUT1     043000000000
VTX  I                                    14411480 VTX037                    INPUT1     044000000000
VTX  I                                    14811520 VTX038                    INPUT1     045000000000
VTX  I                                    15211560 VTX039                    INPUT1     046000000000
VTX  I                                    15611600 VTX040                    INPUT1     047000000000
VTX  I                                    16011640 VTX041                    INPUT1     048000000000
VTX  I                                    16411680 VTX042                    INPUT1     049000000000
VTX  I                                    16811720 VTX043                    INPUT1     050000000000
VTX  I                                    17211760 VTX044                    INPUT1     051000000000
VTX  I                                    17611800 VTX045                    INPUT1     052000000000
VTX  I                                    18011840 VTX046                    INPUT1     053000000000
VTX  I                                    18411880 VTX047                    INPUT1     054000000000
VTX  I                                    18811920 VTX048                    INPUT1     055000000000
VTX  I                                    19211960 VTX049                    INPUT1     056000000000
VTX  I                                    19612000 VTX050                    INPUT1     057000000000
VTX  I                                    20012040 VTX051                    INPUT1     058000000000
VTX  I                                    20412080 VTX052                    INPUT1     059000000000
VTX  I                                    20812120 VTX053                    INPUT1     060000000000
VTX  I                                    21212160 VTX054                    INPUT1     061000000000
VTX  I                                    21612200 VTX055                    INPUT1     062000000000
VTX  I                                    22012240 VTX056                    INPUT1     063000000000
VTX  I                                    22412280 VTX057                    INPUT1     064000000000
VTX  I                                    22812320 VTX058                    INPUT1     065000000000
VTX  I                                    23212360 VTX059                    INPUT1     066000000000
VTX  I                                    23612400 VTX060                    INPUT1     067000000000
VTX  I                                    24012440 VTX061                    INPUT1     068000000000
VTX  I                                    24412480 VTX062                    INPUT1     069000000000
VTX  I                                    24812520 VTX063                    INPUT1     070000000000
VTX  I                                    25212560 VTX064                    INPUT1     071000000000
VTX  I                                    25612600 VTX065                    INPUT1     072000000000
VTX  I                                    26012640 VTX066                    INPUT1     073000000000
VTX  I                                    26412680 VTX067                    INPUT1     074000000000
VTX  I                                    26812720 VTX068                    INPUT1     075000000000
VTX  I                                    27212760 VTX069                    INPUT1     076000000000
VTX  I                                    27612800 VTX070                    INPUT1     077000000000
VTX  I                                    28012840 VTX071                    INPUT1     078000000000
VTX  I                                    28412880 VTX072                    INPUT1     079000000000
R93950                            B0010      - STD/M   - Action Code                      DATE -  2/02/17
VTX  I                                    28812920 VTX073                    INPUT1     080000000000
VTX  I                                    29212960 VTX074                    INPUT1     081000000000
VTX  I                                    29613000 VTX075                    INPUT1     082000000000
VTX  I                                    30013040 VTX076                    INPUT1     083000000000
VTX  I                                    30413080 VTX077                    INPUT1     084000000000
VTX  I                                    30813120 VTX078                    INPUT1     085000000000
VTX  I                                    31213160 VTX079                    INPUT1     086000000000
VTX  I                                    31613200 VTX080                    INPUT1     087000000000
VTX  I                                    32013240 VTX081                    INPUT1     088000000000
VTX  I                                    32413280 VTX082                    INPUT1     089000000000
```

Figure F–4 Program Code for Program Type B0010 (3 of 11)

```
VTX  I                                  32813320 VTX083                    INPUT1     090000000000
VTX  I                                  33213360 VTX084                    INPUT1     091000000000
VTX  I                                  33613400 VTX085                    INPUT1     092000000000
VTX  I                                  34013440 VTX086                    INPUT1     093000000000
VTX  I                                  34413480 VTX087                    INPUT1     094000000000
VTX  I                                  34813520 VTX088                    INPUT1     095000000000
VTX  I                                  35213560 VTX089                    INPUT1     096000000000
VTX  I                                  35613600 VTX090                    INPUT1     097000000000
VTX  I                                  36013640 VTX091                    INPUT1     098000000000
VTX  I                                  36413680 VTX092                    INPUT1     099000000000
VTX  I                                  36813720 VTX093                    INPUT1     100000000000
VTX  I                                  37213760 VTX094                    INPUT1     101000000000
VTX  I                                  37613800 VTX095                    INPUT1     102000000000
VTX  I                                  38013840 VTX096                    INPUT1     103000000000
VTX  I                                  38413880 VTX097                    INPUT1     104000000000
VTX  I                                  38813920 VTX098                    INPUT1     105000000000
VTX  I                                  39213960 VTX099                    INPUT1     106000000000
VTX  I                                  39614000 VTX100                    INPUT1     107000000000
VTX  I                                  40014040 VTX101                    INPUT1     108000000000
VTX  I                                  40414080 VTX102                    INPUT1     109000000000
VTX  I                                  40814120 VTX103                    INPUT1     110000000000
VTX  I                                  41214160 VTX104                    INPUT1     111000000000
VTX  I                                  41614200 VTX105                    INPUT1     112000000000
VTX  I                                  42014240 VTX106                    INPUT1     113000000000
VTX  I                                  42414280 VTX107                    INPUT1     114000000000
VTX  I                                  42814320 VTX108                    INPUT1     115000000000
VTX  I                                  43214360 VTX109                    INPUT1     116000000000
VTX  I                                  43614400 VTX110                    INPUT1     117000000000
VTX  I                                  44014440 VTX111                    INPUT1     118000000000
VTX  I                                  44414480 VTX112                    INPUT1     119000000000
VTX  I                                  44814520 VTX113                    INPUT1     120000000000
VTX  I                                  45214560 VTX114                    INPUT1     121000000000
VTX  I                                  45614600 VTX115                    INPUT1     122000000000
VTX  I                                  46014640 VTX116                    INPUT1     123000000000
VTX  I                                  46414680 VTX117                    INPUT1     124000000000
VTX  I                                  46814720 VTX118                    INPUT1     125000000000
VTX  I                                  47214760 VTX119                    INPUT1     126000000000
VTX  I                                  47614800 VTX120                    INPUT1     127000000000
VTX  I                                  48014840 VTX121                    INPUT1     128000000000
VTX  I                                  48414880 VTX122                    INPUT1     129000000000
VTX  I                                  48814920 VTX123                    INPUT1     130000000000
VTX  I                                  49214960 VTX124                    INPUT1     131000000000
VTX  I                                  49615000 VTX125                    INPUT1     132000000000
VTX  I                                  50015040 VTX126                    INPUT1     133000000000
VTX  I                                  50415080 VTX127                    INPUT1     134000000000
VTX  I                                  50815120 VTX128                    INPUT1     135000000000
VTX  I                                  51215160 VTX129                    INPUT1     136000000000
VTX  I                                  51615200 VTX130                    INPUT1     137000000000
VTX  I                                  52015240 VTX131                    INPUT1     138000000000
R93950                          B0010     - STD/M   - Action Code                      DATE -  2/02/17
VTX  I                                  52415280 VTX132                    INPUT1     139000000000
VTX  I                                  52815320 VTX133                    INPUT1     140000000000
VTX  I                                  53215360 VTX134                    INPUT1     141000000000
VTX  I                                  53615400 VTX135                    INPUT1     142000000000
VTX  I                                  54015440 VTX136                    INPUT1     143000000000
VTX  I                                  54415480 VTX137                    INPUT1     144000000000
VTX  I                                  54815520 VTX138                    INPUT1     145000000000
VTX  I                                  55215560 VTX139                    INPUT1     146000000000
VTX  I                                  55615600 VTX140                    INPUT1     147000000000
VTX  I                                  56015640 VTX141                    INPUT1     148000000000
VTX  I                                  56415680 VTX142                    INPUT1     149000000000
VTX  I                                  56815720 VTX143                    INPUT1     150000000000
VTX  I                                  57215760 VTX144                    INPUT1     151000000000
     I*                                                                    INPUT1     152000000000
     I/COPY JDECPY,I00DSINX                                               INPUT1     153000000000
     I/COPY JDECPY,I00PS@@                                                INPUT1     153100000000
INFDGI/COPY JDECPY,I00DSPROG                                              INPUT1     154000000000
DATESI*                                                                   INPUT1     155000000000
COPY I*                                                                   INPUT1     156000000000
     C*************************************************************      MAINLINE   001000000000
     C*    MAINLINE PROGRAM                                               MAINLINE   002000000000
     C*    ----------------                                               MAINLINE   003000000000
     C*                                                                   MAINLINE   004000000000
     C*    Process housekeeping.                                          MAINLINE   005000000000
     C*                                                                   MAINLINE   006000000000
     C                    EXSR S999                                       MAINLINE   007000000000
     C*                   ---- ----                                       MAINLINE   008000000000
     C*                                                                   MAINLINE   009000000000
     C*    If LR on, end program.                                         MAINLINE   010000000000
     C*                                                                   MAINLINE   011000000000
     C          *INLR     CABEQ'1'       EOJ                             MAINLINE   012000000000
     C*                   -----          ---                             MAINLINE   013000000000
     C*                                                                   MAINLINE   014000000000
     C*     If automatic inquiry set, process inquiry.                    MAINLINE   015000000000
     C*                                                                   MAINLINE   016000000000
     C          $AUTO     CABEQ'1'       S003           24               MAINLINE   017000000000
     C*                   -----          ----                            MAINLINE   018000000000
     C                    END                                             MAINLINE   019000000000
     C*                                                                   MAINLINE   020000000000
     C*    Begin normal program processing.                               MAINLINE   021000000000
     C*    --------------------------------                               MAINLINE   022000000000
     C*                                                                   MAINLINE   023000000000
     C          *INLR     DOWEQ'0'                                        MAINLINE   024000000000
     /*                                                                   MAINLINE   025000000000
     /*     If #SFRNO field, do subfile record number validation          MAINLINE   026000000000
```

Figure F–5 Program Code for Program Type B0010 (4 of 11)

```
     /*                                                                  MAINLINE   027000000000
+FLDNC*          @SFRNO          ZSFLRCDNO                              MAINLINE   028000000000
     /*                                                                  MAINLINE   029000000000
     /*   If SFLCLR is used, process *in38 accordingly                   MAINLINE   030000000000
     /*                                                                  MAINLINE   031000000000
+FLDNC*          ?SFLCLR         ZSFLCLR                                MAINLINE   032000000000
     C*                                                                  MAINLINE   033000000000
     C*   Write video screen.                                            MAINLINE   034000000000
     C*                                                                  MAINLINE   035000000000
     /*                                                                  MAINLINE   036000000000
     /*   If not a subfile display, just write format1                   MAINLINE   037000000000
     /*                                                                  MAINLINE   038000000000
-FLDNC*          ?SFL            ZWRITE                                 MAINLINE   039000000000
     /*                                                                  MAINLINE   040000000000
R93950                            B0010      - STD/M   - Action Code                   DATE -  2/02/17
     /*   If a subfile display, write format1 and formatc                MAINLINE   041000000000
     /*                                                                  MAINLINE   042000000000
+FLDNC*          ?SFL            ZWRITESFL                              MAINLINE   043000000000
     C                    MOVE '1'        @@AID                        MAINLINE   044000000000
     C                    EXSR S001                                    MAINLINE   045000000000
     C*                   ---- ----                                    MAINLINE   046000000000
     C*                                                                MAINLINE   047000000000
     C*   Load data field dictionary parameters (one cycle only).        MAINLINE   048000000000
     C*                                                                  MAINLINE   049000000000
     C          $998      CABEQ' '        S998                         MAINLINE   050000000000
     C*                   -----           ----                         MAINLINE   051000000000
     C                    END                                          MAINLINE   052000000000
     C*                                                                MAINLINE   053000000000
     C*   Begin video screen read processing.                            MAINLINE   054000000000
     C*                                                                  MAINLINE   055000000000
     C                    SETOF                        999301          MAINLINE   056000000000
DSPF C                    READ &01FILE                   9998          MAINLINE   057000000000
     C                    Z-ADD0          ##RROW                       MAINLINE   058000000000
     C                    Z-ADD0          ##RCOL                       MAINLINE   059000000000
     C*                                                                MAINLINE   060000000000
     C*   If video read timed out, end program.                          MAINLINE   061000000000
     C*                                                                  MAINLINE   062000000000
     C          *IN99     CABEQ'1'        EOJ            LR            MAINLINE   063000000000
     C*                   -----           ---                          MAINLINE   064000000000
     C          @@AID     CABEQ#FEOJ      EOJ            LR            MAINLINE   065000000000
     C*                   -----           ---                          MAINLINE   066000000000
     C*                                                                MAINLINE   067000000000
     C*   If valid function key pressed, process and return.             MAINLINE   068000000000
     C*                                                                  MAINLINE   069000000000
     C          *IN15     IFEQ '1'                                     MAINLINE   070000000000
     C                    EXSR S00EX                                   MAINLINE   071000000000
     C*                   ---- ----                                    MAINLINE   072000000000
     C          *INLR     CABEQ'1'        EOJ                          MAINLINE   073000000000
     C*                   -----           ---                          MAINLINE   074000000000
     C          *IN15     CABEQ'1'        END                          MAINLINE   075000000000
     C*                   -----           ---                          MAINLINE   076000000000
     C                    END                                          MAINLINE   077000000000
     /*                                                                  MAINLINE   078000000000
     /*   If any selection exits, exsr S000P                             MAINLINE   079000000000
     /*                                                                  MAINLINE   080000000000
+DTAIC*          SELC            ZS000P                                 MAINLINE   081000000000
     /*                                                                  MAINLINE   082000000000
     /*   If action code then exsr C0001                                 MAINLINE   083000000000
     /*                                                                  MAINLINE   084000000000
+FLDNC*          ACTION          ZACTION                                MAINLINE   085000000000
     C*                                                                  MAINLINE   086000000000
     C*   Load subfile records.                                          MAINLINE   087000000000
     C*                                                                  MAINLINE   088000000000
     C                    EXSR S003                                    MAINLINE   089000000000
     C*                   ---- ----                                    MAINLINE   090000000000
     /*                                                                  MAINLINE   091000000000
     /*   If any update files then exsr S005                             MAINLINE   092000000000
     /*                                                                  MAINLINE   093000000000
+FILEC*          *ANY      DB   ZS005       8                          MAINLINE   094000000000
     /*                                                                  MAINLINE   095000000000
     /*   If any update files and action code then do S010               MAINLINE   096000000000
     /*                                                                  MAINLINE   097000000000
+FILEC*          *ANY      DB   *AND        8                          MAINLINE   098000000000
-FILEC*          *ANY      DB   *AND        2                          MAINLINE   098500000000
R93950                            B0010      - STD/M   - Action Code                   DATE -  2/02/17
+FLDNC*          ACTION          ZS010A                                 MAINLINE   099000000000
     /*                                                                  MAINLINE   100000000000
     /*   If a Master File 2 exists, then do S011.                       MAINLINE   101000000000
     /*                                                                  MAINLINE   102000000000
+FILEC*          *ANY      DB   *AND        8                          MAINLINE   103000000000
+FILEC*          *ANY      DB   *AND        2                          MAINLINE   103500000000
+FLDNC*          ACTION          ZS011                                  MAINLINE   104000000000
     C*                                                                  MAINLINE   105000000000
     C*   Return for next input.                                         MAINLINE   106000000000
     C*                                                                  MAINLINE   107000000000
     C          END       TAG                                          MAINLINE   108000000000
     C*         ---       ---                                          MAINLINE   109000000000
     C*                                                                MAINLINE   110000000000
     C*   Set correct message in line 24.                                MAINLINE   111000000000
     C*                                                                  MAINLINE   112000000000
     C          *IN93     IFEQ '1'                                     MAINLINE   113000000000
     C                    MOVELSVL24E     VDL24                        MAINLINE   114000000000
     C                    ELSE                                         MAINLINE   115000000000
     C                    MOVELSVL24M     VDL24                        MAINLINE   116000000000
     C                    END                                          MAINLINE   117000000000
```

Figure F–6 Program Code for Program Type B0010 (5 of 11)

```
     C*                                                                 MAINLINE  118000000000
     C                   END                                            MAINLINE  119000000000
     C*                                                                 MAINLINE  120000000000
     C          EOJ      TAG                                            MAINLINE  121000000000
     C*         ---      ---                                            MAINLINE  122000000000
     C*                                                                 MAINLINE  123000000000
     C*    END MAINLINE PROGRAM                                         MAINLINE  124000000000
     C*    --------------------                                         MAINLINE  125000000000
COPY C*****************************************************************MAINLINE  126000000000
     C*                                                                 S00EX-1   001000000000
     C*    SUBROUTINE S00EX - Process Function Keys                     S00EX-1   002000000000
     C*    -----------------------------------------                    S00EX-1   003000000000
     C*                                                                 S00EX-1   004000000000
     C*    Processing:  1.  Determine function key pressed.             S00EX-1   005000000000
     C*                 2.  Process function key request.               S00EX-1   006000000000
     C*                                                                 S00EX-1   007000000000
     CSR        S00EX    BEGSR                                         S00EX-1   008000000000
     C*         -----    -----                                         S00EX-1   009000000000
+FLDNC*         #SFRNO        Z##SRCN                                  S00EX-1   009500000000
     CSR        T00EXA   TAG                                           S00EX-1   010000000000
     C*         ------   ---                                           S00EX-1   011000000000
     C*                                                                 S00EX-1   012000000000
     C*    If EOJ requested, exit subroutine.                           S00EX-1   013000000000
     C*                                                                 S00EX-1   014000000000
     CSR        ##AID    CABEQ#FEOJ    ENDEXE        LR                S00EX-1   015000000000
     C*                  -----         ------                          S00EX-1   016000000000
     C*                                                                 S00EX-1   017000000000
     C*    If Display Keys pressed, exit to help facility and return.   S00EX-1   018000000000
     C*    ----------------------------------------------------------   S00EX-1   019000000000
     C*                                                                 S00EX-1   020000000000
     CSR        ##AID    IFEQ #FKEYS                                   S00EX-1   021000000000
     CSR                 CALL 'P9601N'              98                 S00EX-1   022000000000
     C*                  ---- --------                                 S00EX-1   023000000000
     CSR                 PARM          I00SC                          S00EX-1   024000000000
     CSR                 PARM          SRVFDS                         S00EX-1   025000000000
     CSR                 PARM          I00CSR                         S00EX-1   026000000000
     C*                                                                 S00EX-1   027000000000
     CSR        ##AID    CABNE#FKEYS   T00EXA                         S00EX-1   028000000000
     C*                  -----         ------                         S00EX-1   029000000000
R93950                        B0010      - STD/M   - Action Code                  DATE -  2/02/17
     CSR                 GOTO ENDEXE                                  S00EX-1   030000000000
     C*                  ---- ------                                  S00EX-1   031000000000
     CSR                 END                                          S00EX-1   032000000000
     C*                                                               S00EX-1   033000000000
     C*    If Cursor Sensitive Help Pressed, exit to CS Help.           S00EX-1   034000000000
     C*    --------------------------------------------------           S00EX-1   035000000000
     C*                                                                 S00EX-1   036000000000
     CSR        ##AID    IFEQ #FQMRK                                   S00EX-1   037000000000
     CSR                 MOVEA*IN      ##IN                           S00EX-1   038000000000
     CSR                 CALL 'X96CCK'              98                S00EX-1   039000000000
     C*                  ---- --------                                 S00EX-1   040000000000
     CSR                 PARM          I00SC                          S00EX-1   041000000000
     CSR                 PARM          SRVFDS                         S00EX-1   042000000000
     CSR                 PARM          I00CSR                         S00EX-1   043000000000
     CSR                 PARM '  '     ##CCFF  2                      S00EX-1   044000000000
     CSR                 PARM          I00MDE                         S00EX-1   044100000000
     C*                                                               S00EX-1   045000000000
     CSR        ##FLDN   IFNE *BLANKS                                 S00EX-1   046000000000
     CSR                 EXSR S00VL                                   S00EX-1   047000000000
     C*                  ---- -----                                   S00EX-1   048000000000
     CSR                 MOVEA##IN     *IN,1                          S00EX-1   049000000000
     CSR                 END                                          S00EX-1   050000000000
     CSR                 MOVEL*BLANKS  ##DTAI                         S00EX-1   051000000000
     CSR                 GOTO ENDEXE                                  S00EX-1   052000000000
     C*                  ---- ------                                  S00EX-1   053000000000
     CSR                 END                                          S00EX-1   054000000000
     C*                                                               S00EX-1   055000000000
     C*    If Display errors pressed, exit to error messages.           S00EX-1   056000000000
     C*    --------------------------------------------------           S00EX-1   057000000000
     C*                                                                 S00EX-1   058000000000
     CSR        ##AID    IFEQ #FERRD                                   S00EX-1   059000000000
     CSR                 Z-ADD1        #G                             S00EX-1   060000000000
     CSR                 Z-ADD1        #H                             S00EX-1   061000000000
     CSR        #G       DOWLE64                                      S00EX-1   062000000000
     CSR        @MK,#G   IFEQ '1'                                     S00EX-1   063000000000
     CSR                 MOVE EMK,#G   @ER,#H                         S00EX-1   064000000000
     CSR                 ADD  1        #H                             S00EX-1   065000000000
     CSR                 END                                          S00EX-1   066000000000
     CSR                 ADD  1        #G                             S00EX-1   067000000000
     CSR                 END                                          S00EX-1   068000000000
     CSR                 CALL 'P0000E'              98                S00EX-1   069000000000
     C*                  ---- --------                                 S00EX-1   070000000000
     CSR                 PARM          @ER                            S00EX-1   071000000000
     CSR                 GOTO ENDEXE                                  S00EX-1   072000000000
     C*                  ---- ------                                  S00EX-1   073000000000
     CSR                 END                                          S00EX-1   074000000000
     C*                                                               S00EX-1   075000000000
     C*    If HELP key pressed, exit to help facility and return.       S00EX-1   076000000000
     C*    ------------------------------------------------------       S00EX-1   077000000000
     C*                                                                 S00EX-1   078000000000
     CSR        ##AID    IFEQ #FHELP                                   S00EX-1   079000000000
     CSR                 CALL 'P00HELP'             98                S00EX-1   080000000000
     C*                  ---- --------                                 S00EX-1   081000000000
     CSR                 PARM          HS##                           S00EX-1   082000000000
     CSR                 PARM          HE##                           S00EX-1   083000000000
```

Figure F–7 Program Code for Program Type B0010 (6 of 11)

```
     CSR                 PARM          I00SC                                  S00EX-1   084000000000
     CSR                 PARM          SRVFDS                                 S00EX-1   085000000000
     CSR                 PARM          I00CSR                                 S00EX-1   086000000000
     CSR                 GOTO ENDEXE                                          S00EX-1   087000000000
R93950                     B0010      - STD/M   - Action Code                   DATE -  2/02/17
     C*                  ---- ------                                          S00EX-1   088000000000
     CSR                 END                                                  S00EX-1   089000000000
     C*                                                                       S00EX-1   090000000000
     C*   If Clear screen pressed, clear screen and return.                   S00EX-1   091000000000
     C*   ------------------------------------------------                    S00EX-1   092000000000
     C*                                                                       S00EX-1   093000000000
     CSR        @@AID    IFEQ #FCLR                                          S00EX-1   094000000000
     CSR                 EXSR S001                                            S00EX-1   095000000000
     C*                  ---- ----                                            S00EX-1   096000000000
     CSR                 GOTO ENDEXE                                          S00EX-1   097000000000
     C*                  ---- ------                                          S00EX-1   098000000000
EXITCSR                  END                                                  S00EX-1   099000000000
     C*                                                                       S00EX-1   100000000000
     C*   Process roll up and down keys.                                      S00EX-1   101000000000
     C*   ------------------------------                                      S00EX-1   102000000000
     C*                                                                       S00EX-1   103000000000
     CSR        @@AID    IFEQ #FROLU                                         S00EX-1   104000000000
     CSR        @@AID    OREQ #FROLD                                         S00EX-1   105000000000
     CSR        $SECUR   DOUEQ' '                                            S00EX-1   107000000000
     CSR                 MOVE ' '       $SECUR  1                             S00EX-1   108000000000
     C*                                                                       S00EX-1   109000000000
     C*   If ROLL UP key pressed, process read next.                          S00EX-1   110000000000
     C*   ------------------------------------------                          S00EX-1   111000000000
     C*                                                                       S00EX-1   112000000000
     CSR        @@AID    IFEQ #FROLU                                         S00EX-1   113000000000
     C*                                                                       S00EX-1   114000000000
     C*   Reset error indicators if roll                                      S00EX-1   115000000000
     C*                                                                       S00EX-1   116000000000
     CSR                 MOVEA$RESET    *IN,41                                S00EX-1   117000000000
     CSR                 MOVE '0'       *IN,40                                S00EX-1   118000000000
     CSR                 SETOF                        S18299                  S00EX-1   119000000000
MF   CSR        %        READ &01FORMAT                 9981                  S00EX-1   120000000000
     CSR        *IN81    IFEQ '1'                                             S00EX-1   121000000000
MF   CSR        $RUKEY   SETLL&01FORMAT                                       S00EX-1   122000000000
     CSR                 SETOF                        S299                    S00EX-1   123000000000
MF   CSR        %        READ &01FORMAT                 9982                  S00EX-1   124000000000
     C*                                                                       S00EX-1   125000000000
     C*   If error on read, set error.                                        S00EX-1   126000000000
     C*                                                                       S00EX-1   127000000000
     CSR        *IN82    IFEQ '1'                                             S00EX-1   128000000000
     CSR                 SETON                        9341                    S00EX-1   129000000000
     CSR                 MOVE '1'       @MX,2                                 S00EX-1   130000000000
     CSR                 GOTO ENDEXE                                          S00EX-1   131000000000
     C*                  ---- ------                                          S00EX-1   132000000000
     CSR                 END                                                  S00EX-1   133000000000
     CSR                 END                                                  S00EX-1   134000000000
     CSR                 END                                                  S00EX-1   135000000000
     C*                                                                       S00EX-1   136000000000
     C*   If ROLL DOWN key pressed, process read prior.                       S00EX-1   137000000000
     C*   ---------------------------------------------                       S00EX-1   138000000000
     C*                                                                       S00EX-1   139000000000
     CSR        @@AID    IFEQ #FROLD                                         S00EX-1   140000000000
     C*                                                                       S00EX-1   141000000000
     C*   Reset error indicators if roll                                      S00EX-1   142000000000
     C*                                                                       S00EX-1   143000000000
     CSR                 MOVEA$RESET    *IN,41                                S00EX-1   144000000000
     CSR                 MOVE '0'       *IN,40                                S00EX-1   145000000000
     CSR                 SETOF                        S18299                  S00EX-1   146000000000
MF   CSR        %        READP&01FORMAT                 9981                  S00EX-1   147000000000
R93950                     B0010      - STD/M   - Action Code                   DATE -  2/02/17
     CSR        *IN81    IFEQ '1'                                             S00EX-1   148000000000
MF   CSR        $RDKEY   SETLL&01FORMAT                                       S00EX-1   149000000000
     CSR                 SETOF                        S299                    S00EX-1   150000000000
MF   CSR        %        READP&01FORMAT                 9982                  S00EX-1   151000000000
     C*                                                                       S00EX-1   152000000000
     C*   If error on read, set error.                                        S00EX-1   153000000000
     C*                                                                       S00EX-1   154000000000
     CSR        *IN82    IFEQ '1'                                             S00EX-1   155000000000
     CSR                 SETON                        9341                    S00EX-1   156000000000
     CSR                 MOVE '1'       @MX,2                                 S00EX-1   157000000000
     CSR                 GOTO ENDEXE                                          S00EX-1   158000000000
     C*                  ---- ------                                          S00EX-1   159000000000
     CSR                 END                                                  S00EX-1   160000000000
     CSR                 END                                                  S00EX-1   161000000000
     CSR                 END                                                  S00EX-1   162000000000
     C*                                                                       S00EX-1   163000000000
     C*   Load video screen data on roll keys.                                S00EX-1   164000000000
     C*   ------------------------------------                                S00EX-1   165000000000
     C*                                                                       S00EX-1   166000000000
     CSR        @@AID    IFEQ #FROLU                                         S00EX-1   167000000000
     CSR        @@AID    OREQ #FROLD                                         S00EX-1   168000000000
     /*                                                                       S00EX-1   169000000000
     /*   Include record lock logic if update files exist.                    S00EX-1   169100000000
     /*                                                                       S00EX-1   169200000000
+FILEC*         *ANY     DB   ZUNLOCK     0                                  S00EX-1   169300000000
     C*                                                                       S00EX-1   169400000000
MCU01C*                                                                      S00EX-1   169900000000
MCU01C*   Cost Center security edit.                                         S00EX-1   170000000000
MCU01C*                                                                      S00EX-1   171000000000
MCU01CSR                 MOVEL&01(FILE )#FILE                                S00EX-1   172000000000
```

Figure F–8 Program Code for Program Type B0010 (7 of 11)

```
MCU01CSR                    MOVEL&01KEY     #MCU                                S00EX-1    173000000000
MCU01CSR          #AUT      IFNE '1'                                            S00EX-1    174000000000
MCU01CSR          #FAUT     ANDNE'1'                                            S00EX-1    175000000000
MCU01CSR                    EXSR C0000                                          S00EX-1    176000000000
MCU01C*                     ---- -----                                          S00EX-1    177000000000
MCU01CSR                    END                                                 S00EX-1    178000000000
MCU01CSR          #AUT      IFNE '1'                                            S00EX-1    179000000000
MCU01CSR          #FAUT     ANDNE'1'                                            S00EX-1    180000000000
MCU01CSR          #MAUT     ANDNE'1'                                            S00EX-1    181000000000
MCU01CSR                    MOVE '1'        $SECUR                              S00EX-1    182000000000
MCU01CSR                    END                                                 S00EX-1    183000000000
     CSR          $SECUR     CASEQ' '        S004                                S00EX-1    184000000000
     C*                      -----           ----                                S00EX-1    185000000000
     CSR                     END                                                 S00EX-1    186000000000
     C*                                                                          S00EX-1    187000000000
     CSR                     END                                                 S00EX-1    188000000000
     C*                                                                          S00EX-1    189000000000
     CSR                     END                                                 S00EX-1    190000000000
     CSR                     GOTO ENDEXE                                         S00EX-1    191000000000
     C*                      ---- ------                                         S00EX-1    192000000000
     CSR                     END                                                 S00EX-1    193000000000
     C*                                                                          S00EX-1    194000000000
     CSR          @@AID      IFNE '1'                                            S00EX-1    195000000000
     CSR                     SETON                           0193                S00EX-1    196000000000
     CSR                     GOTO ENDEXE                                         S00EX-1    197000000000
     C*                      ---- ------                                         S00EX-1    198000000000
     CSR                     END                                                 S00EX-1    199000000000
     C*                                                                          S00EX-1    200000000000
     CSR          ENDEXE     ENDSR                                               S00EX-1    201000000000
R93950                            B0010      - STD/M   - Action Code                          DATE -  2/02/17
COPY C*****************************************************************         S00EX-1    202000000000
     /*                                                                          S000P      000100000000
     /*    If the display file has the selection option field,                   S000P      000200000000
     /*    include the S000P subroutine to process selection options.            S000P      000300000000
     /*                                                                          S000P      000400000000
+FLDNC**          VDSELC          *AND                                          S000P      001000000000
-FLDNC**          SFSELC          S000P-1                                       S000P      001100000000
     /*                                                                          S000P      001200000000
+FLDNC**          SFSELC          S000P-2                                       S000P      001300000000
     C*                                                                          S00VL-1    001000000000
     C*    SUBROUTINE S00VL - Cursor Control Return Values                       S00VL-1    002000000000
     C*    ---------------------------------------------                         S00VL-1    003000000000
     C*                                                                          S00VL-1    004000000000
     C*    By format, find the field to update and move in the                   S00VL-1    005000000000
     C*    returned value.  If the format is a subfile, the record               S00VL-1    006000000000
     C*    to change is found in @@RRN.                                          S00VL-1    007000000000
     C*                                                                          S00VL-1    008000000000
     CSR          S00VL      BEGSR                                               S00VL-1    009000000000
     C*           -----      -----                                               S00VL-1    010000000000
     C*                                                                          S00VL-1    011000000000
     CSR          @@RVAL     IFEQ '*BLANK'                                       S00VL-1    012000000000
     CSR                     MOVE *BLANK     @@RVAL                              S00VL-1    013000000000
     CSR                     END                                                 S00VL-1    014000000000
S00VLC*                                                                          S00VL-1    015000000000
     C*                                                                          S00VL-1    016000000000
     CSR          ENDOVL     ENDSR                                               S00VL-1    017000000000
COPY C*****************************************************************         S00VL-1    018000000000
     C*                                                                          S001-1     001000000000
     C*    SUBROUTINE S001 - Clear Fields                                        S001-1     002000000000
     C*    ------------------------------                                        S001-1     003000000000
     C*                                                                          S001-1     004000000000
     C*    Processing:  1.  Reset all video screen and data file fields          S001-1     005000000000
     C*                     for next transaction.                                S001-1     006000000000
     C*                 2.  Clear action code only if requested.                 S001-1     007000000000
     C*                                                                          S001-1     008000000000
     CSR          S001       BEGSR                                               S001-1     009000000000
     C*           ----       -----                                               S001-1     010000000000
     C*                                                                          S001-1     011000000000
     C*    Reset fields for next transaction.                                    S001-1     012000000000
     C*                                                                          S001-1     013000000000
MF   CSR          *NOKEY     CLEAR&01FORMAT                                      S001-1     013100000000
CLRY C*                                                                          S001-1     014000000000
     CSR                     MOVELSVL24M     VDL24                               S001-1     015000000000
     CSR                     MOVE ' '        @IN37   1                           S001-1     016000000000
     C*                                                                          S001-1     017000000000
     C*    Clear action code only if clear screen action.                        S001-1     018000000000
     C*                                                                          S001-1     019000000000
     CSR          @@AID      IFEQ #FCLR                                          S001-1     020000000000
     CSR                     MOVE 'ALL'0'    $RESET                              S001-1     021000000000
     CSR                     MOVEA$RESET     *IN,41                              S001-1     022000000000
     CSR                     MOVE ' '        ACTION  1                           S001-1     023000000000
CLRN C*                                                                          S001-1     024000000000
     CSR                     END                                                 S001-1     025000000000
     C*                                                                          S001-1     026000000000
     CSR          END001     ENDSR                                               S001-1     027000000000
COPY C*****************************************************************         S001-1     028000000000
     C*                                                                          S003-1     001000000000
     C*    SUBROUTINE S003 - Edit Key                                            S003-1     002000000000
     C*    --------------------------                                            S003-1     003000000000
R93950                            B0010      - STD/M   - Action Code                          DATE -  2/02/17
     C*                                                                          S003-1     004000000000
     C*    Processing:  1.  Clear error indicators and arrays.                   S003-1     005000000000
     C*                 2.  Load input keys.                                     S003-1     006000000000
     C*                 3.  Validate master file key.                            S003-1     007000000000
     C*                 4.  Release master file record lock.                     S003-1     008000000000
```

Figure F–9 Program Code for Program Type B0010 (8 of 11)

```
     C*                5.  Load video screen output on inquiry.          S003-1    009000000000
     C*                                                                  S003-1    010000000000
     CSR        S003      BEGSR                                         S003-1    011000000000
     C*         ----      -----                                         S003-1    012000000000
     C*                                                                  S003-1    012100000000
     C*    Load data field dictionary parameters (one cycle only).       S003-1    012200000000
     C*                                                                  S003-1    012300000000
     CSR        $998      CABEQ' '        S998                          S003-1    012400000000
     C*                   -----           ----                          S003-1    012500000000
     CSR                  END                                           S003-1    012600000000
     C*                                                                  S003-1    013000000000
     C*    Reset error indicators and arrays.                            S003-1    014000000000
     C*                                                                  S003-1    015000000000
     CSR                  MOVE *ALL'0'    $RESET 39                     S003-1    016000000000
     CSR                  MOVE *BLANK     $REST1 63                     S003-1    016100000000
     CSR                  MOVEA$RESET     *IN,41                        S003-1    017000000000
     CSR                  MOVEA$REST1     @MK,2                         S003-1    018000000000
     CSR                  CLEAR@ER                                      S003-1    019000000000
     C*-------------------------------------------------------------    S003-1    020000000000
KEYS C*                                                                  S003-1    021000000000
     C*-------------------------------------------------------------    S003-1    022000000000
MF   CSR                  CHAIN401FORMAT            9899                S003-1    023000000000
MCU01C*                                                                  S003-1    024000000000
MCU01C*    Cost Center security edit.                                    S003-1    025000000000
MCU01C*                                                                  S003-1    026000000000
MCU01CSR                  MOVEL401(FILE )#FILE                          S003-1    027000000000
MCU01CSR                  MOVEL401KEY     #MCU                          S003-1    028000000000
MCU01CSR        #AUT      IFNE '1'                                      S003-1    029000000000
MCU01CSR        #FAUT     ANDNE'1'                                      S003-1    030000000000
MCU01CSR                  EXSR C0000                                    S003-1    031000000000
MCU01C*                   ---- -----                                    S003-1    032000000000
MCU01CSR                  END                                           S003-1    033000000000
MCU01CSR        #AUT      IFNE '1'                                      S003-1    034000000000
MCU01CSR        #FAUT     ANDNE'1'                                      S003-1    035000000000
MCU01CSR        #MAUT     ANDNE'1'                                      S003-1    036000000000
MCU01CSR                  MOVE '1'        $$SECR  1                     S003-1    037000000000
MCU01CSR                  END                                           S003-1    038000000000
     C*                                                                  S003-1    039000000000
     C*    If security violation, set error condition.                   S003-1    040000000000
     C*                                                                  S003-1    041000000000
     CSR        $$SECR    IFEQ '1'                                      S003-1    042000000000
     CSR                  MOVE '1'        @MK,8                         S003-1    043000000000
     CSR                  SETON                     9341                S003-1    044000000000
     CSR                  MOVE ' '        $$SECR  1                     S003-1    045000000000
     CSR                  GOTO END003                                   S003-1    046000000000
     C*                   ---- ------                                   S003-1    047000000000
     CSR                  END                                           S003-1    048000000000
     C*                                                                  S003-1    049000000000
     C*    Edit result of read and action code.                          S003-1    050000000000
     C*                                                                  S003-1    051000000000
     CSR        *IN98     IFEQ '1'                                      S003-1    052000000000
     CSR        *IN21     COMP '0'                     41 *error*       S003-1    053000000000
     CSR                  ELSE                                          S003-1    054000000000
     CSR        *IN21     COMP '1'                     41 *error*       S003-1    055000000000
R93950                         B0010      - STD/M   - Action Code                  DATE -  2/02/17
     CSR                  END                                           S003-1    056000000000
     C*                                                                  S003-1    057000000000
     C*    If indicator 41 on, invalid key for action code.              S003-1    058000000000
     C*                                                                  S003-1    059000000000
     CSR        *IN41     IFEQ '1'                                      S003-1    060000000000
     CSR                  MOVE '1'        @MK,2                         S003-1    061000000000
     CSR                  SETON                     93                  S003-1    062000000000
     CSR                  END                                           S003-1    063000000000
     C*                                                                  S003-1    064000000000
     C*    If indicator 99 on, record in use.                            S003-1    065000000000
     C*                                                                  S003-1    066000000000
     CSR        *IN99     IFEQ '1'                                      S003-1    067000000000
     CSR                  CALL 'P98RLCK'               81               S003-1    067100000000
     C*                   ---- --------                                 S003-1    067200000000
     CSR                  PARM            **PSDS                        S003-1    067300000000
     CSR                  MOVE '1'        @MK,6                         S003-1    068000000000
     CSR                  SETON                     9341                S003-1    069000000000
     CSR                  END                                           S003-1    070000000000
     C*-------------------------------------------------------------    S003-1    071000000000
     C*                                                                  S003-1    072000000000
     C*    If not inquiry, skip remainder of subroutine.                 S003-1    073000000000
     C*                                                                  S003-1    074000000000
     CSR        *IN24     CABEQ'0'        END003                        S003-1    075000000000
     C*                   -----           ------                        S003-1    076000000000
     C*-------------------------------------------------------------    S003-1    077000000000
     C*                                                                  S003-1    078000000000
     C*    Release record lock on master file.                           S003-1    079000000000
     C*                                                                  S003-1    079100000000
     CSR        *IN98     IFEQ '0'                                      S003-1    079200000000
     CSR        *IN99     ANDEQ'0'                                      S003-1    080000000000
     CSR                  EXCPTUNLOCK                                   S003-1    081000000000
     CSR                  END                                           S003-1    081100000000
     C*                                                                  S003-1    082000000000
     C*    If errors, skip remainder of subroutine.                      S003-1    083000000000
     C*                                                                  S003-1    084000000000
     CSR        *IN93     CABEQ'1'        END003                        S003-1    085000000000
     C*                   -----           ------                        S003-1    086000000000
     C*-------------------------------------------------------------    S003-1    087000000000
     C*                                                                  S003-1    088000000000
     C*    Move data base information to video screen.                   S003-1    089000000000
```

Figure F–10 Program Code for Program Type B0010 (9 of 11)

```
     C*                                                                  S003-1    090000000000
     CSR                    EXSR S004                                   S003-1    091000000000
     C*                     ---- ----                                   S003-1    092000000000
     C*-------------------------------------------------------------    S003-1    093000000000
     CSR            END003  ENDSR                                       S003-1    094000000000
COPY C*****************************************************************S003-1    095000000000
     C*                                                                  S004-1    001000000000
     C*    SUBROUTINE S004 - Load Video Screen Data                      S004-1    002000000000
     C*    ========================================                      S004-1    003000000000
     C*                                                                  S004-1    004000000000
     C*    Processing:  1.  Move data base information to video screen.  S004-1    005000000000
     C*                     All video screen fields are alpha and       S004-1    006000000000
     C*                     therefore numeric information must be       S004-1    007000000000
     C*                     processed through subroutine C0014 to set   S004-1    008000000000
     C*                     proper decimals and provide editing for     S004-1    009000000000
     C*                     display on screen.                          S004-1    010000000000
     C*                                                                 S004-1    011000000000
     C*                     Date fields must be converted from their    S004-1    012000000000
     C*                     internal format of month, day and year or   S004-1    013000000000
R93950                           B0010      - STD/M   - Action Code                DATE -  2/02/17
     C*                     julian to the system format using program   S004-1    014000000000
     C*                     X0028.                                      S004-1    015000000000
     C*                                                                 S004-1    016000000000
     CSR            S004    BEGSR                                       S004-1    017000000000
     C*            ----     -----                                       S004-1    018000000000
DSP1 C*                                                                 S004-1    025000000000
     CSR            END004  ENDSR                                       S004-1    026000000000
COPY C*****************************************************************S004-1    027000000000
     C*                                                                  S005-1    001000000000
     C*    SUBROUTINE S005  - Scrub Input                                S005-1    002000000000
     C*    ==============================                                S005-1    003000000000
     C*                                                                  S005-1    004000000000
     C*    Processing:  1.  Validate all video input.                    S005-1    005000000000
     C*                     All numeric fields must be processed        S005-1    006000000000
     C*                     thru subroutines C0012 and C0015 in order   S005-1    007000000000
     C*                     to scrub the alpha input field and convert  S005-1    008000000000
     C*                     back to internal numeric representation of  S005-1    009000000000
     C*                     15 digits and 0 decimals.                   S005-1    010000000000
     C*                                                                 S005-1    011000000000
     C*                     Date fields must be converted from system   S005-1    012000000000
     C*                     format to their internal format of month,   S005-1    013000000000
     C*                     day and year or julian using program X0028. S005-1    014000000000
     C*                 2.  Update data record fields from video.       S005-1    015000000000
     C*                                                                 S005-1    016000000000
     CSR            S005    BEGSR                                       S005-1    017000000000
     C*            ----     -----                                       S005-1    018000000000
     C*                                                                 S005-1    019000000000
     C*    If not addition or change, bypass subroutine                S005-1    020000000000
     C*                                                                 S005-1    021000000000
     CSR            *IN21   IFEQ '0'                                    S005-1    022000000000
     CSR            *IN22   ANDEQ'0'                                    S005-1    023000000000
     CSR                    GOTO END005                                 S005-1    024000000000
     C*                     ---- ------                                 S005-1    025000000000
     CSR                    END                                         S005-1    026000000000
     C*                                                                 S005-1    028000000000
FIELDC*                                                                 S005-1    029000000000
     CSR            END005  ENDSR                                       S005-1    030000000000
COPY C*****************************************************************S005-1    031000000000
     C*                                                                  S010-1    001000000000
     C*    SUBROUTINE S010  - Update Data Base                           S010-1    002000000000
     C*    ===================================                           S010-1    003000000000
     C*                                                                  S010-1    004000000000
     C*    Processing:  1.  Update data base file based upon valid       S010-1    005000000000
     C*                     action codes.                               S010-1    006000000000
     C*                                                                 S010-1    007000000000
     CSR            S010    BEGSR                                       S010-1    008000000000
     C*            ----     -----                                       S010-1    009000000000
    AC*                                                                 S010-1    010000000000
    AC*    If add action, add record.                                   S010-1    011000000000
    AC*                                                                 S010-1    012000000000
    ACSR            *IN21   IFEQ '1'                                    S010-1    013000000000
MF  ACSR            %       WRITE&01FORMAT              99              S010-1    014000000000
    ACSR                    END                                         S010-1    015000000000
    CC*                                                                 S010-1    016000000000
    CC*    If change action, update record.                             S010-1    017000000000
    CC*                                                                 S010-1    018000000000
    CCSR            *IN22   IFEQ '1'                                    S010-1    019000000000
MF  CCSR            %       UPDAT&01FORMAT              99              S010-1    020000000000
    CCSR                    END                                         S010-1    021000000000
R93950                           B0010      - STD/M   - Action Code                DATE -  2/02/17
    DC*                                                                 S010-1    022000000000
    DC*    If delete action, delete record.                             S010-1    023000000000
    DC*                                                                 S010-1    024000000000
    DCSR            *IN23   IFEQ '1'                                    S010-1    025000000000
MF  DCSR            %       DELET&01FORMAT              99              S010-1    026000000000
    DCSR                    END                                         S010-1    027000000000
     C*                                                                 S010-1    028000000000
     C*    Clear data field for next transaction                        S010-1    029000000000
     C*                                                                 S010-1    030000000000
     CSR                    MOVE #FCLR     @@AID                        S010-1    031000000000
     CSR                    EXSR S001                                   S010-1    032000000000
     C*                     ---- ----                                   S010-1    033000000000
     CSR            END010  ENDSR                                       S010-1    034000000000
COPY C*****************************************************************S010-1    035000000000
     C*                                                                  S999-1    001000000000
```

Figure F–11 Program Code for Program Type B0010 (10 of 11)

```
     C*    SUBROUTINE S998  - Load dictionary parameters.                    S999-1    002000000000
     C*    ----------------------------------------------                    S999-1    003000000000
     C*                                                                      S999-1    004000000000
     CSR         S998      BEGSR                                             S999-1    005000000000
     C*                    -----                                             S999-1    006000000000
DPARMC*                                                                      S999-1    007000000000
     C*                                                                      S999-1    008000000000
     C*    Set subroutine execution flag.                                    S999-1    009000000000
     C*                                                                      S999-1    010000000000
     CSR                   MOVE '1'       $998    1                          S999-1    011000000000
     C*                                                                      S999-1    012000000000
     CSR         END998    ENDSR                                             S999-1    013000000000
     C*****************************************************************      S999-1    014000000000
     C*                                                                      S999-1    015000000000
     C*    SUBROUTINE S999  - Housekeeping                                   S999-1    016000000000
     C*    -------------------------------                                   S999-1    017000000000
     C*                                                                      S999-1    018000000000
     C*    Processing:  1.  Load video screen text.                          S999-1    019000000000
     C*                 2.  Retrieve screen title data area, text            S999-1    020000000000
     C*                     for unauthorized access, center video            S999-1    021000000000
     C*                     title and move to video screen.                  S999-1    022000000000
     C*                 3.  Initialize key list.                             S999-1    023000000000
     C*                 4.  Load roll keys.                                  S999-1    024000000000
     C*                 5.  Passed parameters.                               S999-1    025000000000
     C*                 6.  Load error message array.                        S999-1    026000000000
     C*                                                                      S999-1    027000000000
     CSR         S999      BEGSR                                             S999-1    028000000000
     C*                    -----                                             S999-1    029000000000
     C*                                                                      S999-1    030000000000
     C*    Required program parameters.                                      S999-1    031000000000
     C*                                                                      S999-1    032000000000
ENTRYCSR         *ENTRY    PLIST                                             S999-1    033000000000
AUTOIC*                                                                      S999-1    034000000000
     C*-------------------------------------------------------------------   S999-1    035000000000
     C*                                                                      S999-1    036000000000
     C*    Load video screen text.                                           S999-1    037000000000
     C*                                                                      S999-1    038000000000
     CSR                   MOVEL@@FILE    PSKEY  10                          S999-1    039000000000
VTXI C*                                                                      S999-1    040000000000
     C/COPY JDECPY,C00SC                                                     S999-1    041000000000
     C*-------------------------------------------------------------------   S999-1    042000000000
     /*                                                                      S999-1    043000000000
     /*    If processing options exist, load processing options              S999-1    044000000000
     /*                                                                      S999-1    045000000000
R93950                         B0010       - STD/M   - Action Code            DATE -  2/02/17
+FLDNC*          *OPTION        ZOPTIONX                                     S999-1    046000000000
KLISTC*                                                                      S999-1    047000000000
     C*                                                                      S999-1    048000000000
     C*    Load roll key upper and lower key values.                         S999-1    049000000000
     C*                                                                      S999-1    050000000000
MF   CSR         *LIKE     DEFN &01KEYFLD $RUKEY                            S999-1    051000000000
     CSR         *LIKE     DEFN $RUKEY    $RDKEY                            S999-1    052000000000
     CSR                   MOVE *LOVAL    $RUKEY                            S999-1    053000000000
     CSR                   MOVE *ALL'9'   $RDKEY                            S999-1    054000000000
     C*-------------------------------------------------------------------   S999-1    055000000000
     C*                                                                      S999-1    056000000000
     C*    Load error messages array.                                        S999-1    057000000000
     C*                                                                      S999-1    058000000000
     CSR                   MOVE '0001'    EMK,01          Inv Action         S999-1    059000000000
     CSR                   MOVE '0002'    EMK,02          Inv Key            S999-1    060000000000
     CSR                   MOVE '0003'    EMK,03          Inv Blanks         S999-1    061000000000
     CSR                   MOVE '0004'    EMK,04          Inv Date           S999-1    062000000000
     CSR                   MOVE '0005'    EMK,05          Inv Next Nbr       S999-1    063000000000
     CSR                   MOVE '0007'    EMK,06          In Use             S999-1    064000000000
     CSR                   MOVE '0025'    EMK,07          Inv Values         S999-1    065000000000
     CSR                   MOVE '0026'    EMK,08          Inv MCU            S999-1    066000000000
EMK  CSR                   MOVE '0027'    EMK,09          Inv Desc Ttl       S999-1    067000000000
     C*-------------------------------------------------------------------   S999-1    068000000000
     C*                                                                      S999-1    069000000000
     C*    Load invalid action code array.                                   S999-1    070000000000
     C*                                                                      S999-1    071000000000
ACTN CSR                   MOVEA'     '   @NAC                              S999-1    072000000000
     C*-------------------------------------------------------------------   S999-1    073000000000
     C*                                                                      S999-1    074000000000
     C*    Load system date.                                                 S999-1    075000000000
     C*                                                                      S999-1    076000000000
     CSR                   TIME           $WRK12 120                        S999-1    077000000000
     CSR                   MOVE $WRK12    $$EDT   60                        S999-1    078000000000
     CSR                   MOVE $$EDT     #SIDAT  6                         S999-1    079000000000
     CSR                   MOVEL'*SYSVAL '#FFMT   7                         S999-1    080000000000
     CSR                   MOVEL*BLANKS   #EDAT   8                         S999-1    081000000000
     CSR                   MOVEL'*JUL   ' #TFMT   7                         S999-1    082000000000
     CSR                   MOVEL'*NONE  ' #SEP    7                         S999-1    083000000000
     CSR                   MOVE ' '       $ERTST  1                         S999-1    084000000000
     CSR                   CALL 'X0028  '                                   S999-1    085000000000
     C*                    ----  -----                                      S999-1    086000000000
     CSR                   PARM           #SIDAT                            S999-1    087000000000
     CSR                   PARM           #EDAT                             S999-1    088000000000
     CSR                   PARM           #FFMT                             S999-1    089000000000
     CSR                   PARM           #TFMT                             S999-1    090000000000
     CSR                   PARM           #SEP                              S999-1    091000000000
     CSR                   PARM           $ERTST                            S999-1    092000000000
     CSR                   MOVE #SIDAT    $$UPMJ  60                        S999-1    093000000000
     C*-------------------------------------------------------------------   S999-1    094000000000
     CSR         END999    ENDSR                                             S999-1    095000000000
```

Figure F–12 Program Code for Program Type B0010 (11 of 11)

```
     C*****************************************************************      S999-1    096000000000
     /*                                                                      S999-1    097000000000
     /*    If processing options exist, include copy module                  S999-1    098000000000
     /*                                                                      S999-1    099000000000
     /*                                                                      S999-1    100000000000
+FLDNC*          *OPTION        ZOPTIONC                                     S999-1    101000000000
COPY C*****************************************************************      S999-1    102000000000
MF   0601FMT  E                UNLOCK                                        S999-1    103000000000
```

G

Functional Servers

This appendix contains the topic:

- Section G.1, "Example: Voucher Processing Functional Server."

Several JD Edwards World programs access functional servers. The purpose of functional servers is to provide a central location for standard business rules about entering documents, such as vouchers, invoices, and journal entries. These business rules establish the following:

- Data dictionary default values
- Field edits and valid values
- Error processing
- Relationships between fields or applications

The advantages of using a functional server include:

- Reduces maintenance of entry programs because edit rules reside in one central location.
- Allows you to standardize documents across all applications because you create them using the same business rules.
- Separates the user interface (screen appearance and interaction) from the functions of a program.

The steps for setting up business rules for an entry program are:

1. Create a DREAM Writer version for a specific functional server program (for example, XT0411Z1 for voucher entry).
2. Set the processing options within the version according to your company requirements.
3. 3. Specify the version you want the entry program to use in the processing options for that entry program.

You can have all your entry programs use the same DREAM Writer version (and thus, use the same rules) or you can set up different DREAM Writer versions. JD Edwards World provides DREAM Writer version ZJDE0001 as the default functional server version for your entry programs.

Caution: Only the person responsible for system-wide setup should make changes to the functional server version. For more information about how to set up DREAM Writer versions, see Understand DREAM Writer in the *JD Edwards World Technical Foundation Guide*.

G.1 Example: Voucher Processing Functional Server

The following programs use the voucher processing functional server. JD Edwards World provides two demo versions of the functional server, ZJDE0001 and ZJDE0002.

- Speed Voucher Entry (P040015)
- Standard Voucher Entry (P04105)
- Void Payment Entry (P4704103)
- Credit Tied to Debit Bill (P041010)
- Multi-Voucher (P041017)
- Calculate Withholding (P04580)

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