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JD EDWARDS WORLD

Programmer's Guide for JD Edwards World A8.1

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Programmer's Guide for JD Edwards World A8.1

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Overview

This publication provides detailed technical information for the A8.1 software release from J.D. Edwards. It is written for programmers who integrate other software with J.D. Edwards software, or who customize J.D. Edwards software for particular needs. It does not provide an understanding of the "big picture," or how programs work together within the J.D. Edwards system, but it has details of specific interest to the programmer.

About This Publication

This publication includes database and system changes for the following products:

- Financial and Fixed Asset systems
- Distribution and Manufacturing systems
- Human Resources and Payroll systems
- Service Billing and Contract Billing systems
- Architecture, Engineering, and Construction systems
- Utility Customer Information system
- Technical Foundation

Database changes include items such as added or changed fields, new or obsolete files, and new or changed logical files. For detailed database changes, see *Database Changes* in the product sections that apply to you.

System changes describe various enhancements, such as new servers, programs, and files. The descriptions provide helpful information you should be aware of as you integrate or customize J.D. Edwards software. For detailed system changes, see the system changes in the product sections that apply to you (such as *Financial System Changes*).

In addition, this publication includes information about:

- Performance considerations for programmers
- National language support
- Double-byte enablement
- Scanning tool for year-2000 date fields

General Considerations

If your programs use files that have database changes, review the following items and make the appropriate changes.

- If an added or changed field applies to an entry screen, modify the screen by adding or changing the field. Clear the fields in S001.
- If the program can add records to the file, initialize the added or changed fields before you add records.
- Check for internally-defined data structures that describe file records. To accommodate field changes, add fields and/or change the size of the data structure.

Added Fields

To determine the programs that the added fields affect, perform cross-references to the following items after you review the Added Fields tables in this publication.

- *Physical files.* Consider the programs in update status only.
- *Logical files.* Consider the programs in update status only. Use the IBM command DSPDBR to display all of the logical files associated with an updated physical file.
- *File aliases.* Consider the programs in update status only.
- *I/O servers.* Consider only the calls to servers that write to an updated physical file (where @@OPER is set to WRITE).

  NOTE: The Added Fields tables list I/O servers in the File column with the respective files.

Initialize each added field to *BLANKS (for alpha fields) or *ZEROS (for numeric fields). Some fields require you to perform additional tasks. These instructions appear in the appropriate chapter for system changes (such as *Financial System Changes*).

Changed Fields

For left-justified alpha fields that have increased in size, additional spaces are filled with blanks. Right-justified alpha fields that have increased in size do not require the blanks. For example, if a left-justified field increases its size from 20 to 40 alpha characters, and it previously stored the value '5555430 ', it now stores the value as '5555430 '.

For functional servers, I/O servers, and other programs that use files in which field sizes have changed, check the data structures, the format definitions, and the work fields for related size definitions. Work fields usually have hard-coded definitions if they are defined the same as data items in a file or data structure. J.D. Edwards recommends that you use a *LIKE/DEFN structure instead of hard-coding the field length. For example:

Instead of:

```
MOVE WPPH1   $PH1  20  (Hard-coded length of 20)
```

Use:

```
Subroutine S999 – Housekeeping
*LIKE     DEFN   WPPH1    $PH1
```

NOTE: You may need to adjust hard-coded references to alpha fields that have increased in size.

File Layout Issues

The following types of file changes also require file layouts to change.

- New fields
- Changed field sizes
- Deleted fields
- Reorganized or shifted fields
- New key fields

You may need to reorganize data structures that are over these files or their aliases (files that resemble them). In addition, you may need to adjust the beginning and ending values for added or changed fields. Review the database change chapters in this publication to identify file changes, and then refer to the appropriate chapters for system changes (such as *Financial System Changes*) to determine file specifications for specific field organization.

Other Publications

Use this publication with the technical upgrade notes, which are provided by J.D. Edwards in two ways:

- The *Technical Upgrade Notes Guide (Stand-Alone Version – JDETUN)* with accompanying tape
- The Work With Tech Upgrade Notes selection on the Software Upgrade Menu (A97IBM)

  NOTE: For more information about this selection, refer to the *Upgrade Reference Guide.*

Other helpful publications include:

- *Reinstallation Workbook*
- *Upgrade Reference Guide*

If you have suggestions for items to include or not include in this document, call your J.D. Edwards Worldwide Customer Support representative.

Financial and Fixed Asset Systems

This section provides database and system changes for the Financial and Fixed Asset systems.

Database Changes

This chapter lists database changes for the Financial and Fixed Asset systems.

NOTE: If two asterisks (**) appear in the Explanation column of a table, refer to *Financial and Fixed Asset System Changes* for specific information about the particular item.

Financials

Added Fields

File	Aliases	Field Description	Data Item	Explanation
F0006		AFE Number	AFE	
XF0006		Current Effective Date Flag	CEDF	
		Date – From	DTFR	
		Date – Through	DTTO	
		System Business Unit	TSBU	
F0009		Configured Hub Flag	CHBF	
		A/P Aging As of Date	DAGP	**
		Effective Date for B. U. Account	EFTD	
		Line of Business Processing	LOBP	
F0010		Target Address Number	AN8C	
		Source Alias Company	THCO	
		Company Originating (Hub)	TSCO	
		Target System Identifier	TSID	
F0011		Amount – Input Total	AIPT	(formerly AME)
		Work Station ID	JOBN	
		Batch Run ID	RNID	
F0014		Discount Due Date Rule	DDDR	
		Net Due Date Rule	NDDR	
F0015		Company	CO	
		Order Type	DCTO	
		Document (Order No, Invoice, etc.)	DOCO	
		System Code	SY	
F0018		Currency Code – Base	BCRC	**
		Batch Run ID	RNID	

File	Aliases	Field Description	Data Item	Explanation
F00189		Currency Code – Base	BCRC	
		Batch Number	ICU	
		Batch Type	ICUT	
		Batch Run ID	RNID	
		Date Updated	UPMJ	
		Time Last Updated	UPMT	
F0022		Tax Service Date Selection	TXSD	
F0030		Country	CTR	
		Next Automatic Debit Number	NXTA	
F0050		Summarization Sort Number	CSRT	
		Level of Detail – B.U.	LDM	
F0101, XF0101	F0101U, F0101Z1, F01901, G0101, TT0101Z1, T0101ZW	Electronic Mail Client Designator	EMCD	
F0101Z1		Account No Cr Bank	CACT	
		Date Expired	CEXP	
		Electronic Mail Client Designator	EMCD	
		Phone Number Typ1	PHT1	
F0301	XF0301	Auto Receipts Execution	ARL	
		Account Number – Credit/Bank	CACT	
		Date – Expired (Julian)	CEXP	
		Default Configuration	CFDF	
		Configuration Pick and Pack	CFPP	
		Configuration Standard Carton Pack	CFSP	
		Default Identification Code Qualifier 1	DR03	
		Default Identification Code Qualifier 2	DR04	
		Default Reference Number Qualifier 1	DR08	
		Default Identification Code Qualifier	DR09	
		Claim Manager	MAN8	
		Policy Number A	PLY	
		Requires Packaging Code	RQ01	
		Requires Weight Code	RQ02	
		Requires Identification – Code 1	RQ03	
		Requires Identification – Code 2	RQ04	
		Requires Transportation Method	RQ05	
		Requires Routing	RQ06	
		Requires Equipment	RQ07	
		Requires Reference Number 1	RQ08	
		Requires Reference Number 2	RQ09	
		Version Name – Shipping Label Program	SLDW	
		Program Name – Shipping Labels	SLPG	
		Tax Service Date Selection	TXSD	

File	Aliases	Field Description	Data Item	Explanation
F0311	F0311P, F0311X, F0311Z1, TT0311Z1, T0311A, T0311P, T034301, T035001, T098141, F00311E, XF0311, F0311A, F0357	Localization Reserved Flag	LRFL	
		User Reserved Number	URAB	
		User Reserved Amount	URAT	
		User Reserved Code	URC1	
		User Reserved Date	URDT	
		User Reserved Reference	URRF	
F0411	F0411A, F0411P, F0411E, F0411Z1, TT0411Z1, T0411A, T0411P, T098145	Currency Code – Base	BCRC	**
		Deferred Tax Status VAT	DTXS	
		Localization Reserved Flag	LRFL	
		Batch Run ID	RNID	
		Transit Number – Bank	TNST	**
		Category Codes	YC01–10	**
F0413	F0413A, F0413P, TT0413, T0413A, T0413P, T098150	Localization Reserved Flag	LRFL	
		Multicurrency Intercompany Payment	MIP	
		Batch Run ID	RNID	
F0414	F0414A, F0414P, TT0414, T0414A, T0414P	Currency Code – Base	BCRC	**
		Batch Number	ICU	**
		Batch Type	ICUT	**
		Localization Reserved Flag	LRFL	
		Batch Run ID	RNID	
F0417	F04571	Payment Attachment Program Version	AVN	
		Payment Debit Program Version	DVN	
		Payment Print Program Version	PVN	
		Payment Register Program Version	RVN	
F04572		Currency Conversion Rate – Spot Rate	CRR	
		Date – Effective (Added)	EFTJ	**
		Tape File Name	FILE	
		Tape File Member ID	MID	
		Payment Type (Manual/Automatic)	PTYF	
		Payment Print Program Version	PVN	
F04573		Document Type (PO)	PDCT	**
		Document Number (PO)	PKCO	**
		Purchase Order	PO	**
		Original Pay Status	PSTO	**
		File Line Identifier	RC7	**

File	Aliases	Field Description	Data Item	Explanation
F0901	XF0901	Current Effective Date Flag	CEDF	
		Date – From	DTFR	
		Date – Through	DTTO	
		Tax Expl Code 1	EXR1	
		Tax Expl Code 2	EXR2	
		Fixed Asset Posting Edit Code	FPEC	
		Type Code (Future Use)	STPC	
		Target Object Account	TOBJ	
		Target Subsidiary	TSUB	
		Tax Rate/Area	TXA1	
		Tax Rate/Area2	TXA2	
		GL Account Taxable Flag	TXGL	
F0902		Activity Based Cost Code 1	ABR1	
		Activity Based Cost Code 2	ABR2	
		Activity Based Cost Code 3	ABR3	
		Activity Based Cost Code 4	ABR4	
		Activity Based Cost Type 1	ABT1	
		Activity Based Cost Type 2	ABT2	
		Activity Based Cost Type 3	ABT3	
		Activity Based Cost Type 4	ABT4	
		Item Number – Short	ITM	

File	Aliases	Field Description	Data Item	Explanation
F0911	F0911P, XF0911, F0911R, X091101, F0911Z1, TT0911Z1, T0911P, T09422	Activity Based Cost Code 1	ABR1	
		Activity Based Cost Code 2	ABR2	
		Activity Based Cost Code 3	ABR3	
		Activity Based Cost Code 4	ABR4	
		Activity Based Cost Type 1	ABT1	
		Activity Based Cost Type 2	ABT2	
		Activity Based Cost Type 3	ABT3	
		Activity Based Cost Type 4	ABT4	
		Currency Code – Base	BCRC	**
		Currency Mode F/D	CRRM	**
		Exchange Rate Override – Dual Currency	DCFL	
		User Reserved Date	DRFJ	
		Company – Originating (HUB)	HCO–	**
		Item Number – Short	ITM	
		Localization Reserved Flag	LRFL	
		Posting Code 1 – Managerial Accounting	PM01	
		Posting Code 2 – Managerial Accounting	PM02	
		Posting Code 3 – Managerial Accounting	PM03	
		Posting Code 4 – Managerial Accounting	PM04	
		Posting Code 5 – Managerial Accounting	PM05	
		Posting Code 6 – Managerial Accounting	PM06	
		Posting Code 7 – Managerial Accounting	PM07	
		Posting Code 8 – Managerial Accounting	PM08	
		Posting Code 9 – Managerial Accounting	PM09	
		Posting Code 10 – Managerial Accounting	PM10	
		Batch Run ID	RNID	
F1011		Beginning Effective Date	EFTB	

File	Aliases	Field Description	Data Item	Explanation
XF1011		Current Effective Date Flag	CEDF	
		Date – From	DTFR	
		Date – Through	DTTO	
		Ending Effective Date	EFTE	
		For Future Use Flag 1	X1	
F1114		Business Unit	MCU	
		Business Unit	MCU2	
		Move CA Ledger or Restate AA Ledger	MOR	
		Object Account	OBJ	
		Object Account – Premium Account	OBJ7	
		Subsidiary	SUB	
		Subsidiary	SUB2	

Changed Fields

File	Field Description	Data Item	Changed: From	To	Explanation
	Phone Number	PH1	20 Alpha	40 Alpha	**
		PSEL	6 Numeric	8 Numeric	**

Deleted Fields

File	Field Description	Data Item	Replaced By
F0101Z1	Finance Charge – Create Entries Y/N	CFCE	
F0011	AME	AME	AIPT
F0301	Bill Frequency	BLFR	
	Finance Charge – Create Entries Y/N	CFCE	
	Amount Decimals	EDAD	
	Customer Type Identifier	EDCI	
	Item Type Identifier	EDII	
	Batch Processing Mode	EDPM	
	Quantity Decimals	EDQD	
	Date License Expiration	LEDJ	
	Next Invoice Date	NIVD	
F1114	Account Id	AID	
	Account Id2	AID2	

Obsolete Files

File	File Description	Explanation
F00141	Advanced Payment Terms	Combined with F0014 (see *Added Fields*)
XS00141	File Server – F00141	Combined with F0014 (see *Added Fields*)

Files with New Key Lists

NOTE: Be aware of file keys that contain changed data items. You may need to change hard-coded references.

File	File Description	Key Fields Before	Key Fields After
F04573	A/P Payment Detail File	KIHDC – Payment Group Control Number KICKC – Check Control Number KIRC – Record Code KIDOC – Document Number KIDCT – Document Type KIKCO – Key Company KISFX – Document Pay Item KISFXE – Pay Item Extension Number	KIHDC – Payment Group Control Number KICKC – Check Control Number KIRC7 – File Line Identifier

Fixed Assets

Added Fields

File	Aliases	Field Description	Data Item	Explanation
F1200		Lock Accumulated Depreciation Account	ADLK	
		Depreciation Calc Use Rules Flag	DCRL	
		Lock Depreciation Expense Account	DELK	
F12002		Date – Beginning Effective	EFTB	
		Date – Ending Effective	EFTE	
		Subledger Derivation Code	SBDC	
		Subledger – G/L	SBL	
		Subledger Type	SBLT	

File	Aliases	Field Description	Data Item	Explanation
F12003		Asset Depreciation Category Code	ACD	
		Major Accounting Class	ACL1	
		Date – Beginning Effective	EFTB	
		Date – Ending Effective	EFTE	
		Subledger – G/L	SBL	
		Subledger Type	SBLT	
F1201		Branch	MMCU	
		Tax Rate/Area	TXA1	
F1202		Activity Based Cost Code 1	ABR1	
		Activity Based Cost Code 2	ABR2	
		Activity Based Cost Code 3	ABR3	
		Activity Based Cost Code 4	ABR4	
		Activity Based Cost Type 1	ABT1	
		Activity Based Cost Type 2	ABT2	
		Activity Based Cost Type 3	ABT3	
		Activity Based Cost Type 4	ABT4	
		Currency Code – Denominated In	CRCX	
		Item Number – Short	ITM	
F12141		Balance Character	CHCD	
		Company	CO	
		Equipment Status	EQST	
		Ledger Type	LT	
		Business Unit	MCU	
		Object	OBJ	
		Subsidiary	SUB	
F12841		Date – Beginning Effective	EFTB	
		Rate Factor	RFAC	
		Revaluation Code	RVCD	

New Physical Files

File	File Description	Prefix	Key Fields
F12141	Disposal Account Rule File	DT	
F12841	Revaluation Index File	RI	

Changed Physical Files

File	File Description	Key Fields
F12003	Default Depreciation Constants	CO, ACL1, ADC, DAOB, DASB, SBLT, SBL, EFTB, LT

New Logical Files

File	File Description	Key Fields
F12003LA	Default Depreciation Constants	CO, DAOB, DASB, LT
F1202LG	Item Balances File	NUMB, CTRY, FY, FQ, SBL, SBLT, LT, CHCD, MCU, OBJ, SUB
F12141LA	Disposal Account Rule File	CHCD, EQST, LT, CO

Obsolete Files

File	File Description	Explanation
F12021	Item Balances File – Prior Year A/D Balance File	

Financial System Changes

This chapter describes changes made to the Financial systems.

BCRC – Base Company Currency Code

This field has been added to F0018, F0411, F0414, and F0911. OneWorld will use BCRC to determine display decimals on videos and reports.

Affected Programs

Any program that writes to files that contain the BCRC field (F0018, F0411, F0414, and F0911).

Implementation Steps for F0911

- If currency is off, BCRC is blank.
- If currency is on, and if Ledger Type is CA, load BCRC with the transaction currency (the same value that is in CRCD).
- If currency is on, and if Ledger Type is anything other than CA or AA, check on whether the Ledger Type is currency-specific (in this case, a currency code appears in the Special Handling Code field in the user defined code table 09/LT), then:
    - If Ledger Type Currency is not blank, load BCRC with this currency, or
    - If Ledger Type Currency is blank, load BCRC with the currency of the company on the record (the G/L account company).

TIP: If you have used XS0013 (as most programs do) to determine the display decimals for the amount you are writing to the database, you easily can determine the proper values for the two conditions above.

EXCEPTION: Programs that create F0911 documents, and that cross companies with different base currencies (those that result in multi-currency, intercompany settlements when posted). In this case, BCRC must be loaded in the AA ledger with the currency of the company that *originated* the transaction rather than the company on the record.

- For voucher distribution (Batch Type V), it will be the voucher company.
- For invoice distribution (Batch Type I), it will be the invoice company.
- For stand-alone journal entries (Batch Type G), it will be the company on the first line of the journal entry.

Multi-Currency Constant	Ledger Type	Currency-Specific Ledger Type	Multi-Currency-Intercompany Transaction	BCRC Value
Off	Any	N/A	N/A	Blank
On	CA	N/A	N/A	Transaction Currency
On	AA	N/A	No	Company Currency
On	AA	N/A	Yes	Originating Currency
On	Not CA or AA	Not Blank	N/A	Ledger Currency
On	Not CA or AA	Blank	N/A	Company Currency

Implementation Steps for All Other Files

- If currency is off, BCRC is blank.
- If currency is on, load BCRC with the currency of the company on the record.

Currency	BCRC
Off	Blank
On	Company Currency

CRRM – Currency Mode – Foreign or Domestic Entry

The CRRM field holds the value of the original mode of entry for currency transactions. The field will be used to warn users when they attempt to change an entry in a mode other than the original mode of entry. Rounding errors can occur if an entry is changed in a mode other than the one in which it was entered originally. The CRRM field is loaded only during an Add action. A Change action updates this field with the mode in which the change took place.

Allowed Values

Values	Explanation
F	When the foreign side of a multi-currency entry is made. Only applies when the multi-currency flag in the General Constants File (F0009) is set on.
D	When a domestic entry is made, or when the domestic side of a multi-currency entry is made. Only applies when the multi-currency flag in the General Constants File (F0009) is set on.
blank	When the multi-currency flag in the General Constants File (F0009) is set off, the value in the CRRM field always will be blank.

C0906 – Posting Edit Code from Account Master

Four new parameters have been added to the C0906 copy module to validate Fixed Asset ID and Type Code.

Affected Programs

The program is affected if the call to C0906 uses the new validations. You do not need to add these new parameters unless you want valid code to be checked for Fixed Asset ID and Type Code.

New Call to C0906 for Validating Fixed Asset Posting Edit Code

```
MOVE GMFPEC #FPEC
MOVE GLASID #ASTID
EXSR C0906
---- ------------
```

C0906 Parameter List

Type	Name	Len	Value	Description
Input	#FPEC	1		Fixed Asset Posting Edit Code
Input	#ASID	25		Fixed Asset ID
Output	#ERROR	1	F	Invalid Use of Fixed Asset Posting Edit Code

New Call to C0906 for Subledger Specified for Account

```
MOVE GLSBLT #SBLT
MOVE GMSTPC #STPC
EXSR C0906
---- -----------
```

C0906 Parameter List

Type	Name	Len	Value	Description
Input	#SBLT	1		Subledger Type
Input	#STPC	1		Type Code
Output	#ERROR	1	T	Disagreement between Type Code and Subledger Type

DAGP – A/P Aging As of Date

In previous releases of Accounts Payable, the As of Date data area (AP411A) was loaded by the build of the A/P "As of" File. Because data areas cannot be used in OneWorld, we have moved this date into A/P Constants to preserve coexistence between OneWorld and World.

All programs that use aging for the purpose of "As of" processing should use this new date in the General Constants File (F0009). The obsolete code will appear as follows:

1. Replace this data structure from the I-Specs.

   Obsolete structure:

```
I*************************************************************
I*
I*    Data Area Data Structure for ASOF date.
I*
IAP411A     UDS
I                                        1   6 $$ASOF
I*************************************************************
```

New data structure:

```
I*************************************************************
I*
I*    Externally defined Data Structure – F0009.
I*
IDS0009    E DSF0009
```

2. Replace the As of Data Area logic with new logic that is based on General Constants.

Obsolete logic:

```
C*
C*   If using "As Of" date processing, retrieve the "As Of" date.
C*   If ASOF date in data area is blank, use the asof date in
C*   work file generation processing option 1.
C*
CSR         $ASOF     IFEQ '1'
C*
C*    Define data area for ASOF date.
C*
CSR         *NAMVAR   DEFN           AP411A
CSR                   IN   AP411A
CSR         $$ASOF    IFNE *BLANKS
CSR                   MOVE $$ASOF    $AODT
CSR                   ELSE
C*
CSR                   MOVEL'P04901  'PSPID
CSR                   MOVEL'ZJDE0001'PSVERS
CSR                   EXSR C9803
CSR                   MOVEL@OP,1     $AODT   60
CSR                   ENDIF
C*
CSR                   OUT  AP411A
CSR                   ENDIF
```

New logic:

```
C*
C*   If using "As Of" date processing, retrieve the "As Of" date
C*   from the General Constants.  If As Of date in the General
C*   Constants is blank, use the as of date in the work file
C*   generation processing option number 1.
C*
CSR         $ASOF     IFEQ '1'
C*
C*    Retrieve the As of date in General Constants.
C*
CSR                   CLEARPS@@
CSR                   CALL 'XS0009'
C*                    ---- --------
CSR                   PARM           PS@@
CSR                   PARM           DS0009
C*
CSR         GCDAGP    IFNE *BLANKS
CSR                   MOVE GCDAGP    $AODT
CSR                   ELSE
C*
C*    Retrieve the As of date from the As of Build.
C*
CSR                   MOVEL'P04901  'PSPID
CSR                   MOVEL'ZJDE0001'PSVERS
CSR                   EXSR C9803
C*                    ---- -----
CSR                   MOVEL@OP,1     $AODT   60
CSR                   ENDIF
CSR                   ENDIF
C*-------------------------------------------------------------------
```

EFTJ – Date Effective (Deleted)

This field has been moved from F04573. Populate the field with the same value it had when it was in F04573. Change the file prefix from KI (F04573) to KK (F04572).

HCO – Company Origination (HUB)

Originating Company (GLHCO) was added to the Account Ledger file (F0911) in the A8.1 release. This field indicates the origin company where the transaction originated. It must be populated.

Affected Programs

Any program that writes records in the Account Ledger file (F0911).

Rules for Populating Origination Company in the Account Ledger File

1. Journal Entries – G/L Company in the first line of the document
2. Vouchers – Voucher Company
3. Invoices – Invoice Company
4. A/P Payments – Bank Account Company
5. Cash Receipts – Bank Account Company
6. A/R Adjustments – Adjustment Account Company
7. A/R Spreads – First Spread Account Company created in the A/R pre-post

ICU – Batch Number

Populate from F0413 ICU.

ICUT – Batch Type

Populate from F0413 ICUT.

NLS – National Language Support

In compliance with the IBM National Language Support program, we have discontinued using certain characters in our software. The following user input characters in our programs have been changed.

Was	Changed To
##	&&
#	&
@	*
$	Programmer's discretion

The fields that used the variant characters in our software were:

Variant Characters	Fields
##	DCT (Document Type)
#	ANI (Account Number – Input)
#	USER (User ID)

Examples

'##' for Document Type in Journal Entry, '#' for invalid accounts in Journal Entry, and '#' for User in General Journal Review.

PKCO, PDCT, PO – Purchase Order Information

Purchase order information is being stored now in the F04573. The paid voucher information will populate the PKCO (Purchase Order Document Company), PDCT (Purchase Order Document Type), and PO (Purchase Order Number) fields. This information also is kept at the check level for contract processing.

PSEL – Payments Print Selection Number

This field has been expanded to eight characters, and it has been enabled as a next number. This next number for Print Selection is system code 04, index number 09 (refer to the data dictionary in A8.1).

Key lists, data structure subfields, and work fields that reference this field should be expanded to eight characters.

RC7 – File Line Identifier

This field has been added to further identify the Check Control Number (CKC) within the Payment Group Control Number (HDC). This field should be set to '1' with each new check that is written and/or incremented for each new line within the check.

NOTE: The keyed physical file for payment details (F04573) has changed key lists. If your applications were accustomed to using this file for keyed access, you can use F04573LB. The LB logical has the key of the old F04573 keyed physical from past releases.

Examples

Payment Group Control Number (HDC)	Check Control Number (CKC)	File Line Identifier (RC7)
1	1	1
1	1	2
1	2	1
1	2	2
1	2	3
2	1	1
2	1	2

PH1 – Phone Number Field

The PH1 field has been expanded to 40 Characters to handle Internet addresses.

Affected Programs

Any program that writes a phone number to a report or screen.

Business Issue

Financials will not show an Internet address anywhere except P01075 (Phone Book Information). If Internet were to be brought up in other programs for update where the field cannot be expanded to 40 characters, a truncation problem would occur. It will be necessary to skip the C00161 edit to avoid the MASKing issue.

Placement of Code for Reports

The code will be instance-specific for each report program, but the bold test represents the underlying theme. The UDC table for Phone Type (01/PH) assigns code 'I' to Internet Address.

```
C*    If Internet address, skip edit and MASK.
C*
CSR         'I'       IFNE WPPHTP
CSR         *IN81     IFNE *ON
C*
CSR                   MOVE *BLANK    #SINBR
CSR                   MOVELWPAR1     #SINBR
CSR                   MOVE T@AR1     #DTYP
CSR                   MOVE W@AR1     #EWRD
CSR                   MOVE E@AR1     #EC
CSR                   MOVE F@AR1     #DSPD
CSR                   MOVE G@AR1     #DATD
CSR                   MOVE J@AR1     #ALR
CSR                   MOVE ' '       #ECOR
CSR                   MOVE ' '       #DCOR
CSR                   EXSR C00161
C*                    ---- ------
CSR         #ALR      IFEQ 'L'
CSR                   MOVEL#SINBR    $AR1
CSR                   ELSE
CSR                   MOVE #SINBR    $AR1
CSR                   ENDIF
C*
C*    Move to data structure #AH1 – Phone Number 1
C*
CSR                   MOVE *BLANK    #SINBR
CSR                   MOVELWPPH1     #SINBR
CSR                   MOVE T@PH1     #DTYP
CSR                   MOVE W@PH1     #EWRD
CSR                   MOVE E@PH1     #EC
CSR                   MOVE F@PH1     #DSPD
CSR                   MOVE G@PH1     #DATD
CSR                   MOVE J@PH1     #ALR
CSR                   MOVE ' '       #ECOR
CSR                   MOVE ' '       #DCOR
CSR                   EXSR C00161
C*                    ---- ------
CSR         #ALR      IFEQ 'L'
CSR                   MOVEL#SINBR    $PH1
CSR                   ELSE
CSR                   MOVE #SINBR    $PH1
CSR                   ENDIF
C*
CSR                   ELSE
CSR                   MOVELWPPH1     #AH1
CSR                   ENDIF
```

Placement of Code for Programs

The code will be instance-specific for each program, but the bold test represents the underlying theme.

The boxed area in the following code represents logic for output to a display field of only 20 characters in length. If the output is longer than 20 characters, do not display it because the user cannot maintain it. This helps eliminate the problem of truncation for change actions as well.

```
CSR                        MOVE *OFF      $2LNG
CSR         $2LNG      DOWNE*ON
CSR                    MOVE *BLANK    VDAR1
CSR                    MOVE *BLANK    VDPH1
CSR                    MOVE *BLANK    VDPHTP
CSR                    MOVEL'WPKY00'  @@KLST
CSR                    MOVEL'READ '   @@OPER
CSR                    MOVE 'N'       @@LOCK
CSR                    Z-ADD2         @@KNUM
CSR                    CALL 'XF0115'
C*                     ---- --------
CSR                    PARM           PS@@1
CSR                    PARM           I0115
CSR         @@IOR      COMP 'NE'                      82
CSR         @@IOR      COMP 'RL'                      99
CSR         ' '        CHECKWPPH1:21                  79
CSR         *IN79      IFEQ *OFF
CSR                    MOVE *ON       $2LNG   1
CSR                    ENDIF
CSR                    ENDDO
C*
CSR         *IN82      IFEQ '0'
CSR                    Z-ADDWPRCK7    SHRCK7
C*
C*    If Internet address, skip edit and MASK.
C*
CSR         'I'        IFEQ WPPHTP
CSR                    MOVELWPPH1     VDPH1
CSR                    ELSE
C*
CSR         WPAR1      IFNE *BLANKS
CSR                    MOVE *BLANK    #SINBR
CSR                    MOVELWPAR1     #SINBR
CSR                    MOVE T@AR1     #DTYP
CSR                    MOVE W@AR1     #EWRD
CSR                    MOVE E@AR1     #EC
CSR                    MOVE F@AR1     #DSPD
CSR                    MOVE G@AR1     #DATD
CSR                    MOVE J@AR1     #ALR
CSR                    MOVE ' '       #ECOR
CSR                    MOVE ' '       #DCOR
CSR                    EXSR C00161
C*                     ---- ------
CSR         #ALR       IFEQ 'L'
CSR                    MOVEL#SINBR    VDAR1
CSR                    ELSE
CSR                    MOVE #SINBR    VDAR1
CSR                    ENDIF
CSR                    ENDIF
C*
C*    Move to output - Phone Number
C*
CSR         WPPH1      IFNE *BLANKS
CSR                    MOVE *BLANK    #SINBR
CSR                    MOVELWPPH1     #SINBR
CSR                    MOVE T@PH1     #DTYP
CSR                    MOVE W@PH1     #EWRD
CSR                    MOVE E@PH1     #EC
CSR                    MOVE F@PH1     #DSPD
CSR                    MOVE G@PH1     #DATD
CSR                    MOVE J@PH1     #ALR
CSR                    MOVE ' '       #ECOR
CSR                    MOVE ' '       #DCOR
CSR                    EXSR C00161
C*                     ---- ------
CSR         #ALR       IFEQ 'L'
CSR                    MOVEL#SINBR    VDPH1
CSR                    ELSE
CSR                    MOVE #SINBR    VDPH1
CSR                    ENDIF
CSR                    ENDIF
CSR                    ENDIF
C*
```

TNST – Transit Number in the A/P Ledger

The Transit Number (RPTNST) must be populated for all programs that write records to the Accounts Payable Ledger file (F0411). If you use the Accounts Payable Voucher Functional Server (XT0411Z1) to write these records, disregard this section. The A/P Functional Server automatically will populate the field correctly.

To preserve functionality across OneWorld and World, the Payee's Transit Number (RPTNST) was added to the A/P Ledger (F0411). Before writing new vouchers to the database, your program needs to access the Bank Account Information File (F0030) for the Payee Address Number on the voucher. The record that you retrieve for the payee should have a bank account type of 'V'. If a bank account record is found, move the Transit Number (AYTNST) from the bank account to the Transit Number (RPTNST) on the voucher. If a bank account record does not exist, initialize the field to blanks, then continue.

Example

File specifications:

```
F*
FF0030   IF  E           K        DISK
```

Prior to writing the F0411 records:

```
C*
C*    Retrieve Bank Account Information.
C*
CSR                     Z-ADDRPPYE        AYAN8
CSR                     MOVEL'V'          AYBKTP
CSR         AYKLST      CHAINI0030                    8199
CSR         *IN81       IFEQ *ON

CSR         *IN99       OREQ *ON
CSR                     MOVEL*BLANK       RPTNST
CSR                     ELSE
CSR                     MOVELAYTNST       RPTNST
CSR                     ENDIF
C*
C*
```

Key list declaration:

```
C*
C*    Key list:  Bank Account Information File.
C*
CSR         AYKLST      KLIST
CSR                     KFLD              AYAN8
CSR                     KFLD              AYBKTP
C*
```

C0411 – F0411 Category Code Algorithm

The C0411 copy module has been created to map data to the F0411 voucher category codes.

C0411 maps data based on the user defined code table specified in the data dictionary for a particular voucher category code. If the user defined code table is related to an Address Book user defined code table, the information for a particular Address Book number will be inherited by the F0411 voucher category codes.

Affected Programs

Any write to the F0411 will require C0411.

Placement of C0411

Place the execution to C0411 directly before the write to the F0411.

```
C*
C*    Perform Category retrieval for F0411.
C*
CSR                  EXSR C0411
C*                   ---- -----
C*
C*    Update/Write Voucher record
C*
CSR                  WRITEI0411E
C*                   -----------
```

Insert the I9800E module at the top of the program.

```
I*********************************************
I*
I*    Copy Member for Server – X9800E
I*
I/COPY JDECPY,I9800E
I*********************************************
```

Insert the C0411 copy module at the bottom of the program.

```
C*********************************************
C*    Copy Common Subroutine –  F0411 Category
C*                              code Algorithm
C*
C/COPY JDECPY,C0411
C*********************************************
```

Changes to I/O Server Functionality

The versioning feature of I/O Servers has proven to be ineffective. For Financial systems, we have removed the RPG that referred to the @@FMT field from the I/O Servers. Therefore, you can remove any code that refers to the @@FMT field.

Example

Before:

```
CSR             MOVEL'A71'          @@FMT
CSR             MOVELWWAN8          ABAN8
CSR             MOVEL'CHAIN'        @@OPER
CSR             MOVEL'N'            @@LOCK
CSR             CALL    'XF0101'
```

After:

```
CSR             MOVELWWAN8          ABAN8
CSR             MOVEL'CHAIN'        @@OPER
CSR             MOVEL'N'            @@LOCK
CSR             CALL    'XF0101'
```

Copy Module Naming Conventions

The names of many of the copy modules have changed in A8.1. We changed the copy modules to no longer use the version suffix.

Example

Before:

```
I/COPY JDECPY,I010171
```

After:

```
I/COPY JDECPY,I0101
```

Changed Module Listing

Obsolete Member	New Member	Description
I000661, I000671	I0006	Cost Center Master
I010171	I0101	Address Book Information
I012661	**	** *obsolete* **
I011171	I0111	Who's Who Information
I011261	I0112	Flash Message Schedule

Obsolete Member	New Member	Description
I011361	**	** *obsolete* **
I011571	I0115	Phone Number Information
I011671	I0116	Mailing Address Information
I011771	I0117	Postal Code Transactions
I030171	I0301	Customer Master Information
I040171	I0401	Supplier Master Information
I031171	I0311	A/R Ledger
I090161, I090171	I0901	Account Master
I090261	I0902	Account Balances
I091161, I091171	I0911	G/L Ledger

Exceptions

The copy modules I010161 will remain named the same. I010161 will only be used in connection with calls to XS0101LA. C00161 (Format Numeric Fields) is an example of a copy module that might be selected by mistake.

Copy Module Source Code Conversion

Program P00CHGCOPY, which is a conversion program that is driven by DREAM Writer, changes the names of the copy modules in the Financial systems from A6.2 or A7.1 versions to A8.1 versions. To run this program, select Copy Module Rename – Financials from the A8 Conversion Utilities menu (BA6). The names of these copy modules previously contained suffixes that represented corresponding software versions. Now suffixes are no longer used. P00CHGCOPY renames the copy modules in the source code without the suffixes as follows:

I0006	I0113	I0126	I0901
I0012	I0115	I0301	I0902
I0101	I0116	I0311	I0911
I0111	I0117	I0401	I1011
I0112			

If another job locks source code that must be changed, P00CHGCOPY prints an error report from program P00LOCKED.

Payment Terms – Common Routines

The due date calculation module has been amended to call X03021 (Compute Due Date for Advanced Payment Terms) in situations that use an advanced payment term. Three required parameters have been added to this module to support enhanced term calculations.

X0302 has been amended so that it determines whether a payment term that is passed is a simple one (one of the current payment terms) or an advanced one (one of the new payment terms). If the payment term is an advanced one, X03021 will be called within the existing X0302 module. Enhanced Payment terms (X03021) can calculate due date based on the invoice date, the G/L date, or the Service/Tax date. The three new parameters must be passed from the calling program to X0302, which passes the appropriate date to X03021.

The X0302 server currently has four mandatory parameters and an optional one. However, the three new parameters have been inserted before the current optional parameter, which results in seven mandatory parameters and an optional one.

Affected Programs

Any program that calls X0302 to calculate due date.

X0302 Implementation Steps

Current call statement to X0302:

```
CSR        CALL 'X0302'
C*         ---- --------
CSR        PARM              PSDDJ  6  due date           (MANDATORY)
CSR        PARM *ZEROS       PSDDDJ 6  discount date      (MANDATORY)
CSR        PARM RPPTC        PSPTC  3  payment term       (MANDATORY)
CSR        PARM *BLANK       PSERRM 4  error              (MANDATORY)
CSR        PARM              PS0014    F0014 record        (OPTIONAL)
```

New call statement to X0302:

```
CSR         MOVE RPPTC       PSPTC
CSR         MOVE RPDIVJ      PSDDJ
CSR         MOVE RPDIVJ      PSDIVJ
CSR         MOVE RPDGJ       PSDGJ
CSR         MOVE RPDSVJ      PSDSVJ
CSR         CALL 'X0302'
C*          ----  --------
CSR         PARM             PSDDJ  6 due date          (MANDATORY)
CSR         PARM *BLANKS     PSDDDJ 6 discount date     (MANDATORY)
CSR         PARM             PSPTC  3 payment term      (MANDATORY)
CSR         PARM *BLANKS     PSERRM 4 error             (MANDATORY)
CSR         PARM             PSDIVJ 6 invoice date      (MANDITORY)
CSR         PARM             PSDGJ  6 G/L date          (MANDITORY)
CSR         PARM             PSDSVJ 6 Service date      (MANDITORY)
CSR         PARM             PS0014   F0014 record      (OPTIONAL)
```

Parameters PSDDJ, PSDIVJ, PSDGJ, and PSDSVJ must have a date value passed as input.

X0302 New Parameter List

Type	Name	Len	Description
IN/OUT	PSDDJ	6	This parameter probably will not change with your implementation of the new parameter list. As an input parameter, you must load a date as a basis for calculating a non-enhanced payment term due date and a discount due date. As an output parameter, this will represent the calculated due date and discount due date for both enhanced and non-enhanced payment terms.
IN	PSPTC	3	Payment term.
OUT	PSERRM	4	Data dictionary error message. Load into an empty error in the standard array EMK in your program.
IN	PSDIVJ	6	Invoice date.
IN	PSDGJ	6	G/L date.
IN	PSDSVJ	6	Service/tax date.
IN	PS0014		F0014 record image.

Database Servers for A/R

While developing OneWorld A/R, we normalized the file structure while keeping the World A/R database the same. Much like the A7.1 Accounts Payable database, the cash receipts records (Matching Records) are in a different file than the invoicing records (Original Records). There is no co-existence between World A/R and OneWorld A/R. Because of this, we will be developing an A/R invoicing interface through APIs for your verticals to use. This is a change that should be done in A8.1 if you want your invoicing features to co-exist in World and OneWorld software.

Affected Programs

Any program that performs invoicing features with the A/R Ledger File (F0311). You potentially can run on the B81.1 OneWorld A/R database while still running on the A8.1 World version of J.D. Edwards software. This means that your World RPG programs will need to have a way to perform invoice processing to the new OneWorld A/R database on an AS/400. Fortunately, programs that have the Invoicing Functional Server (XT0311Z1) virtually will be unaffected by this issue.

If you have not implemented the A/R Invoicing Functional Server, perform the following procedure:

1. Find all of your programs that access the A/R Ledger File (F0311) or the associated logical files.
2. Determine whether your program uses the file for any receipts-related processing.
3. Determine which logical file the program uses over the A/P Ledger File (F0311).

World Systems Cash Receipts and Batch Cash Receipts functions will be limited to World Financial Systems A/R. An interface from World Cash Receipts to the OneWorld database will not be provided.

Customer Master by Line of Business is a OneWorld feature only. World Financials will not support any line-of-business features.

For A/R invoicing features, RPG programs use the A/R Ledger (F0311) and the associated logical files in a limited number of ways. Consider your programs and how they use the A/R Ledger File (F0311) for the following tasks:

- Invoice creation and update
- Invoice delete, void, and gross amount adjustment (RE documents)
- Inquiry processing and validations

XF0311 Server

The following information applies to any RPG programs that use the A/R Ledger File (F0311) for any invoice processing. Your application will need the Functional Server (XT0311Z1), or you will need to interface with the new server XF0311. These two servers allow applications in World to operate with the OneWorld A/R database.

The I/O Server XF0311 is very similar to a standard I/O server with two differences:

- It supports only a subset of the logical files associated with F0311/F03B11.
- Matching Documents cannot be accessed by this server.

This server assumes that your application handles all of the business rules associated with an invoice. All RPG database I/O operation codes are supported by this server. UPDATC is not available with this server.

Logical Files Supported

If your application uses one or more of the following files, you must implement the XF0311 I/O server in your application:

F0311 Logical	F03B11 Logical
F0311LA	F03B11LU
F0311LB	*N/A*
F0311LD	F03B11LV, F03B112
F0311LE	F03B11LW
F0311LG	F03B11LX
F0311LH	*N/A*
F0311LL	F03B11LY
F0311LR	F03B11LZ
F0311LU	F03B11LT
F0311LZ	F03B11LS

NOTES:

- The F0311LD logical has matching document information in it. We have included this logical for writing adjustment records (RE records). If you are not writing an adjustment (RE in Matching Document field), you will be allowed to use only four of the six keys.
- The F0311LB and F0311LH logical files do not have matching logical files on the OneWorld database. These logical views have the matching document data item in them. When the OneWorld A/R database is active, this logical view will not be supported.
- F0311 physical file sequential processing will be supported on the OneWorld and World databases. This will be handled through XF0311. If you are performing an OPNQRYF or a DREAM Writer (or similar report writer) over the F0311 database, you will need to consider a new application program that will handle the new F03B11 database.
- F0311 physical file relative record number processing will be supported on the OneWorld and World databases. Use the XF0311 server to handle this.

F0311 Logical Files Not Supported

The following files will not be supported by the XF0311 I/O server for several reasons. These logical files are either related to matching documents or are used only by the World Accounts Receivable system.

F0311LC	F0311LM	F0311LS
F0311LF	F0311LN	F0311LT
F0311LI	F0311LO	F0311LV
F0311LJ	F0311LP	F0311LY
F0311LK	F0311LQ	

Processing Voids, Gross Adjustments, and Deletes to Invoices

The XF0311 server lets you do the following:

Voids and Gross Adjustments (RE Documents): If your application is processing voids or adjustments, you should write the adjusting document (RE record) with the F0311LD logical. The server XF0311 will automatically write to the new adjustments file if OneWorld A/R is enabled.

Deleting Invoices: This can be accomplished with any of the logical files that the XF0311 server supports.

Inquiring on Invoices

This type of processing will be handled if you use the XF0311 I/O server. For a list of files that require XF0311 I/O server implementation, see *Logical Files Supported* earlier in this chapter.

Invoice Posting Processes

Batch-type switching will be handled by the XF0311 I/O server. The posting process uses the Batch Type to determine which batches to consider for posting. The following new batch types exist in the OneWorld A/R system.

Batch Type	Description
I	Invoice Processing
IB	Invoice Processing – OneWorld

Scenario: The OneWorld A/R product is enabled, the new database is active. The client has Service Billing on World and Sales Order as a co-existing vertical product desktop by desktop. The client is running Sales Order Update in both World and OneWorld products to the new database. What batch type do we use for Sales Order Update, as well as for the Service Billing A/R batches?

- We must use the new Batch Type IB. This batch type will be set internally in the XF0311 I/O server program. To process these World-originated batches properly, the batch type for OneWorld A/R programs must be changed in this way.
- Therefore, all of your Accounts Receivable batches will have to be posted in OneWorld. This includes all A/R Original and Matching Document Batches.

XF0311 Implementation

You must include two /COPY members in your program to ensure that the server functions properly.

I-specifications:

```
I/COPY JDECPY,I00XFSRV
I/COPY JDECPY,I0311
```

Obsolete chain operation (only for a CHAIN operation):

```
CSR                     MOVE $$AN8        RPAN8
CSR                     MOVE $$DCT        RPDCT
CSR                     MOVE $$DOC        RPDOC
CSR                     MOVE $$KCO        RPKCO
CSR                     MOVEL$$SFX        RPSFX
CSR         RPKY01      CHAINI0311E                9997
C*
C*    Edit result of Chain.
C*
CSR         *IN97       IFEQ '1'
CSR         *IN99       OREQ '1'
CSR                     MOVEL'1'          @MK,03
CSR                     SETON                      46
CSR                     ENDIF
```

Replace with the following server call:

```
CSR                     MOVE $$AN8        RPAN8
CSR                     MOVE $$DCT        RPDCT
CSR                     MOVE $$DOC        RPDOC
CSR                     MOVE $$KCO        RPKCO
CSR                     MOVEL$$SFX        RPSFX
CSR                     MOVEL'RPKY05'     @@KLST
CSR                     Z-ADD5            @@KNUM
CSR                     MOVEL'CHAIN'      @@OPER
CSR                     MOVEL'N'          @@LOCK
CSR                     CALL 'XF0311'
C*                      ---- --------
CSR                     PARM              PS@@1
CSR                     PARM              I0311
C*
C*    Edit result of Chain.
C*
CSR         @@IOR       IFNE *BLANKS
CSR                     MOVEL'1'          @MK,03
CSR                     SETON                      46
CSR                     ENDIF
```

Retrieve Address Number (X0101) – Common Routines

X0101 has been modified for performance to retrieve field information and descriptions, which eliminates successive calls to retrieve the descriptions.

Current Call to X0101

```
CSR                MOVELVDTAX     PS#N8     P
CSR                CALL 'X0101'
C*                 ---- -------
CSR                PARM ' '       PSSYM   1   (MANDATORY)
CSR                PARM '3'       PSOMOD  1   (MANDATORY)
CSR                PARM '3'       PSIMOD  1   (MANDATORY)
CSR                PARM           PS#N8  21   (MANDATORY)
CSR                PARM           PSSHT   80  (MANDATORY)
CSR                PARM           PSLAB  20   (MANDATORY)
CSR                PARM           PSTAX  20   (MANDATORY)
CSR                PARM *BLANK    PSER    4   (MANDATORY)
```

New Call to X0101

```
CSR                MOVELVDTAX     PS#N8     P
CSR                CALL 'X0101'
C*                 ---- -------
CSR                PARM ' '       PSSYM   1   (MANDATORY)
CSR                PARM '3'       PSOMOD  1   (MANDATORY)
CSR                PARM '3'       PSIMOD  1   (MANDATORY)
CSR                PARM           PS#N8  21   (MANDATORY)
CSR                PARM           PSSHT   80  (MANDATORY)
CSR                PARM           PSLAB  20   (MANDATORY)
CSR                PARM           PSTAX  20   (MANDATORY)
CSR                PARM *BLANK    PSER    4   (MANDATORY)
CSR                PARM I0101     PS0101  4   (OPTIONAL)
```

E-Mail Message Server (X00PPAT1)

ZZ#ND# Send the Distribution to the Internet

This field is used to inform the PPAT system that it is done with the Internet message, and that it is ready to be sent. For example, a message going to one AN8 number may be composed of one or more data dictionary glossary items. This field informs the PPAT system when no more items need to be accumulated, and that the message is ready to be sent.

In A8.1, changes were made to X00PPAT1 for Internet/PPAT functionality. As a result, any program that calls X00PPAT1 will need to load the ZZ#ND# field. This field exists already in the I00PPAT1 copy module, which is required by X00PPAT1. The only change required is to populate the ZZ#ND# field with a value of '1' before the call to X00PPAT1. The example below shows how to make this change.

NOTE: If your program uses ZZ#ND# already, you do not need to change anything in the call to X00PPAT1.

Example

Current call to X00PPAT1:

```
            MOVE *ZEROS    ZZ#SRK
            MOVE 'JDE4317' ZZ#DD#
            MOVELVTX020    DSDATA
            MOVEL$PPTVS    PSVERS 10
PSVERS      IFEQ *BLANKS
            MOVEL'ZJDE0002'PSVERS
            ENDIF
            MOVEL*BLANKS   PSERRM  4
            CALL 'X00PPAT1'
            ----  --------
            PARM           DTASTR
            PARM           DSDATA
            PARM           PSVERS
            PARM           PSERRM
```

New call to X00PPAT1:

```
            MOVE *ZEROS    ZZ#SRK
            MOVE 'JDE4317' ZZ#DD#
            MOVE '1'       ZZ#ND#  1
            MOVELVTX020    DSDATA
            MOVEL$PPTVS    PSVERS 10
PSVERS      IFEQ *BLANKS
            MOVEL'ZJDE0002'PSVERS
            ENDIF
            MOVEL*BLANKS   PSERRM  4
            CALL 'X00PPAT1'
            ----  --------
            PARM           DTASTR
            PARM           DSDATA
            PARM           PSVERS
            PARM           PSERRM
```

Distribution and Manufacturing Systems

This section provides database and system changes for the Distribution and Manufacturing systems.

Database Changes

This chapter lists database changes for the Distribution and Manufacturing systems.

Distribution System

Added Fields

File	Field Description	Data Item	Explanation
F0301	Credit Card Number	CACT	
	Credit Card Expiration	CEXP	
F38001	Borrow Search at S.O.E.	BSCH	Enhancement
	Bulk Search Flag	KITB	Enhancement
	Packed Kit Search Flag	KITP	Enhancement
F38010	Transaction Qty Control	QED2	Enhancement
	Balance Qty Control	QED3	Enhancement
	Tolerance Percentage	RPQT	Enhancement
F38011	Transaction Qty Control	QED2	Enhancement
	Balance Qty Control	QED3	Enhancement
	Tolerance Percentage	RPQT	Enhancement
F38014	Destination	DES	Enhancement
	Destination Type	DESY	Enhancement
	Effective Date	EFTJ	Enhancement
	Expiration Date	EXDJ	Enhancement
	Source	PSR	Enhancement
	Source Type	PSRY	Enhancement
F3901	Replacement Costing Method	CSMT	Identify Replacement Cost Method to Value
	Period Number	PNC	Identify last period processed
	Future Use – Code	SVCE	
	Future Use – Date (Julian)	SVDT	
	Future Use – Flag	SVF1	
	Future Use – Flag	SVF2	
	Future Use – Flag	SVF3	
	Future Use – Flag	SVF4	
	Future Use – Flag	SVF5	

File	Field Description	Data Item	Explanation
F39011	Workstation ID	JOBN	
	Program ID	PID	
	Future Use – Code	SVCE	
	Future Use – Date (Julian)	SVDT	
	Future Use – Flag	SVF1	
	Future Use – Flag	SVF2	
	Future Use – Flag	SVF3	
	Future Use – Flag	SVF4	
	Future Use – Flag	SVF5	
	Time of Day	TDAY	
	Date Updated	UPMJ	
	User ID	USER	
F3902	Future Use – Code	SVCE	
	Future Use – Date (Julian)	SVDT	
	Future Use – Flag	SVF1	
	Future Use – Flag	SVF2	
	Future Use – Flag	SVF3	
	Future Use – Flag	SVF4	
	Future Use – Flag	SVF5	
F39051	Currency Code	CRCD	
	Exchange Rate	CRR	
	Workstation ID	JOBN	
	Program ID	PID	
	Future Use – Code	SVCE	
	Future Use – Date (Julian)	SVDT	
	Exchange Rate Date	SVED	
	Future Use – Flag	SVF1	
	Future Use – Flag	SVF2	
	Future Use – Flag	SVF3	
	Future Use – Flag	SVF4	
	Future Use – Flag	SVF5	
	Future Use – Quantity	SVQT	
	Future Use – UOM	SVUM	
	Time of Day	TDAY	
	Date Updated	UPMJ	
	User ID	USER	
F39052	Currency Code	CRCD	
	Exchange Rate	CRR	
	Future Use – Code	SVCE	
	Future Use – Date (Julian)	SVDT	
	Exchange Rate Date	SVED	
	Future Use – Flag	SVF1	
	Future Use – Flag	SVF2	
	Future Use – Flag	SVF3	
	Future Use – Flag	SVF4	
	Future Use – Flag	SVF5	
	Future Use – Quantity	SVQT	
	Future Use – UOM	SVUM	

File	Field Description	Data Item	Explanation
F39053	Currency Code	CRCD	
	Exchange Rate	CRR	
	Future Use – Code	SVCE	
	Future Use – Date (Julian)	SVDT	
	Exchange Rate Date	SVED	
	Future Use – Flag	SVF1	
	Future Use – Flag	SVF2	
	Future Use – Flag	SVF3	
	Future Use – Flag	SVF4	
	Future Use – Flag	SVF5	
	Future Use – Quantity	SVQT	
	Future Use – UOM	SVUM	
F3906	Currency Code	CRCD	
	Exchange Rate	CRR	
	Future Use – Code	SVCE	
	Future Use – Date (Julian)	SVDT	
	Exchange Rate Date	SVED	
	Future Use – Flag	SVF1	
	Future Use – Flag	SVF2	
	Future Use – Flag	SVF3	
	Future Use – Flag	SVF4	
	Future Use – Flag	SVF5	
	Future Use – Quantity	SVQT	
	Future Use – UOM	SVUM	
F4001Z	Actual Delivery Date	ADLJ	Future Use (Chevron)
	Currency Code – Base	BCRC	Base Company Currency Code, which is to be used for OneWorld requirements
	Bill – To Number	BTAN	Future Use
	Credit Card Number	CACT	
	Credit Card Expiration	CEXP	
	Currency Code – To	CRDC	OneWorld
	Pmt. Terms Disc. Days Due	DCD	
	Pmt. Terms Disc. Percent	DCP	
	Requested Delivery Time	DRQT	Future Use and ITLS
	Address Number – Mark For	MKFR	Mark-for Support
	Pmt. Terms Net Days to Pay	NDTP	
	Pmt. Terms Prox. Days Due	PXDD	
	Pmt. Terms Prox. Month Due	PXDM	
	Requested	RQSJ	
	Promised Delivery Time	RSDT	Distribution Base
	Requested Ship Time	RSHT	Future Use
	Reference – Mark-for	VR03	E-Comm – Mark-for Address

File	Field Description	Data Item	Explanation
F4009	Master Adjustment Schedule	CP09	Master Adjustment Schedule
	Master Adjustment Schedule	CP10	A.P.A. – Master Adj. Schedule
	Future Constant	CP11	Add for new System Constant Setting (Distribution)
	Future Constant	CP12	Add for new System Constant Setting (Distribution)
	Future Constant	CP13	Add for new System Constant Setting (Distribution)
	Future Constant	CP14	Add for new System Constant Setting (Distribution)
	Future Constant	CP15	Add for new System Constant Setting (Distribution)
	Master Schedule Flag	MAYN	Master Adjustment Schedule

File	Field Description	Data Item	Explanation
F4011Z	Actual Grade	ACGD	Distribution Base
	Actual Delivery Date	ADLJ	Future Use (Chevron)
	Actual Potency	APOT	Distribution Base
	Currency Code – Base	BCRC	Base Company Currency Code, which is to be used for OneWorld requirements
	Bill – To Number	BTAN	Future Use
	Credit Card Number	CACT	Distribution Base
	Credit Card Expiration	CEXP	Distribution Base
	Currency Code – To	CRDC	OneWorld
	Configured String ID	CSID	Configurator
	Pmt. Terms Disc. Days Due	DCD	
	Pmt. Terms Disc. Percent	DCP	
	Demand Business Unit	DMBU	Distribution Base
	Borrow Agr Supplement	DMS1	Enhancement
	Borrow Agr	DMT1	Enhancement
	Requested Delivery Time	DRQT	Future Use and ITLS
	Header Business Unit	HDBU	OneWorld
	Hold Code	HOLD	Distribution Base
	Load Number (ITLS)	LDNM	ITLS
	Item Revision Level	MERL	Added to PO Detail Screen with Override Capabilities
	Address Number – Mark For	MKFR	Mark-for Support
	Pmt. Terms Net Days to Pay	NDTP	
	Sequence Number	OSEQ	Advanced Pricing
	Task Number	PTSK	Warehouse Management
	Pmt. Terms Prox. Days Due	PXDD	
	Pmt. Terms Prox. Month Due	PXDM	
	Sequence Number	QSEQ	Advanced Pricing
	Promised Delivery Time	RSDT	Distribution Base
	Requested Ship Time	RSHT	Future Use
	Requested	RQSJ	
	Shipment Number	SHMT	ITLS/Advanced Transportation
	Shipment ID	SHPN	
	Future Use	SO16	Distribution Base
	Future Use	SO17	Distribution Base
	Future Use	SO18	Distribution Base
	Future Use	SO19	Distribution Base
	Future Use	SO20	Distribution Base
	Ticket Date	TKDA	Distribution Base
	Ticket Number	TKNR	Distribution Base
	Ticket Time	TKTM	Distribution Base
	Reference – Mark-for	VR03	E-Comm – Mark-for Address
F4012Z	Type – Address Number	ANTY	UCC-128 Compliance
F4012ZW	Address Number – Mark For	MKFR	Mark-for Support
	Reference – Mark-for	VR03	E-Comm – Mark-for Address
F4013	Batch Processing Model	EDPM	EC – Priority 2

File	Field Description	Data Item	Explanation
F40205	Exchange Rate Variance	EXVR	New Exchange Rate Variance Enhancement
F4070	Active/Inactive	ASAI	A.P.A. – Master Adj. Schedule
	Restart Adjustment Search	RESR	A.P.A. – Master Adj. Schedule
	Stop Search flag	SSRC	A.P.A. – Master Adj. Schedule
F4071	Order/Basket Adj. UOM	UM10	P42750 Enhancements
F4100	Merge Partials	MPTL	Location Detail Merge Enhancement
	Merge UM Structures	MUMS	Location Detail Merge Enhancement
F41001	Branch/Plant Type	BPID	Consignment
	Future Constant	OT10	Add for new B/P Constant Setting
	Future Constant	OT6Y	Add for Inventory Lot Creation
	FA Interface	OT7Y	ECS Flag for Fixed Asset Interface
	Future Constant	OT8Y	Add for new B/P Constant Setting
	Future Constant	OT9Y	Add for new B/P Constant Setting
F4101	Replenishment Time	AVRT	Repetitive Manufacturing
	Purchasing Internal Lead Time	PILT	Forward Availability Checking (ATP)
	Aggregate – SCC Number	SCC0	UCC-128 Compliance
	Unit of Measure – Aggregate UPC	UMDF	UCC-128 Compliance
	Unit of Measure – SCC (PI=0)	UMS0	UCC-128 Compliance
	Unit of Measure – SCC (PI=1)	UMS1	UCC-128 Compliance
	Unit of Measure – SCC (PI=2)	UMS2	UCC-128 Compliance
	Unit of Measure – SCC (PI=3)	UMS3	UCC-128 Compliance
	Unit of Measure – SCC (PI=4)	UMS4	UCC-128 Compliance
	Unit of Measure – SCC (PI=5)	UMS5	UCC-128 Compliance
	Unit of Measure – SCC (PI=6)	UMS6	UCC-128 Compliance
	Unit of Measure – SCC (PI=7)	UMS7	UCC-128 Compliance
	Unit of Measure – SCC (PI=8)	UMS8	UCC-128 Compliance
	Unit of Measure – UPC	UMUP	UCC-128 Compliance
	UPC Number	UPCN	UCC-128 Compliance
F4102	Replenishment Time	AVRT	Repetitive Manufacturing
	Mix Dates/Lots (Y/N)	MLOT	Added for Lot Processing
	Purchasing Internal Lead Time	PILT	Forward Availability Checking (ATP)
F41021	Quan On Hand at Count	POHC	Add to aid user in locations to select for count through DW Data Selection

File	Field Description	Data Item	Explanation
F4111	Account Number Short ID	AID	Add for reversals and video display
	Serial Number – Equipment Number	ASID	Add for AEC enhancements
	Check Comment Code	CMMT	Add for AEC enhancements
	Commingling Other Owned	CMOO	Add for ECS
	Business Unit – Account	MCUZ	Add for reversals and video display
	Object Account	OBJ	Add for reversals and video display
	Task Number	PTSK	Warehouse Management
	Subledger	SBL	Add for reversals and video display
	Subledger Type	SBLT	Add for reversals and video display
	Subsidiary	SUB	Add for reversals and video display
	Valuation Period Ending	VPEJ	Add for ECS integration to F4111
F4118	Pre-Payment Flag		Flag for indicating a pre-paid layer
F41219	Currency Code	CRCD	
F41500	Discharge Rate	DIHR	Change to 15,0 length
	Fill Rate	FIRH	Change to 15,0 length
	Tank next number	TKNO	Tank number used for FA interface
F41511	Entered Quantity	BPAS	Record the quantity that was entered
F4201	Actual Delivery Date	ADLJ	Future Use (Chevron)
	Currency Code – Base	BCRC	Base Company Currency Code, which is to be used for OneWorld requirements
	Credit Card Number	CACT	
	Credit Card Expiration	CEXT	
	Currency Code – To	CRDC	OneWorld
	Requested Delivery Time	DRQT	Future Use and ITLS
	Address Number – Mark For	MKFR	Mark-for Support
	Requested	RQSJ	
	Promised Delivery Time	RSDT	Distribution Base
	Reference – Mark-for	VR03	E-Comm – Mark-for Address

File	Field Description	Data Item	Explanation
F42019	Actual Delivery Date	ADLJ	Future Use (Chevron)
	Currency Code – Base	BCRC	Base Company Currency Code, which is to be used for OneWorld requirements
	Credit Card Number	CACT	
	Credit Card Expiration	CEXP	
	Currency Code – To	CRDC	OneWorld
	Requested Delivery Time	DRQT	Future Use and ITLS
	Address Number – Mark For	MKFR	Mark-for Support
	Requested	RQSJ	
	Promised Delivery Time	RSDT	Distribution Base
	Reference – Mark-for	VR03	E-Comm – Mark-for Address
F4209	EDI Discrepancy Error ID	EDID	E-Comm – Discrepancy Holds
	Key Value Serial Number	SERK	Approvals/PPAT Changes
F4211	Actual Grade	ACGD	Distribution Base
	Actual Delivery Date	ADLJ	Future Use (Chevron)
	Actual Potency	APOT	Distribution Base
	Currency Code – Base	BCRC	Base Company Currency Code, which is to be used for OneWorld requirements
	Credit Card Number	CACT	Distribution Base
	Currency Code – To	CRDC	OneWorld
	Configured String ID	CSID	Configurator
	Demand Business Unit	DMBU	Distribution Base (add this field to all related files)
	Borrow Agr Supplement	DMS1	Enhancement
	Borrow Agr	DMT1	Enhancement
	Requested Delivery Time	DRQT	Future Use and ITLS
	Header Business Unit	HDBU	OneWorld (add this field to all related files)
	Hold Code	HOLD	Distribution Base
	Load Number (ITLS)	LDNM	ITLS
	Address Number – Mark For	MKFR	Mark-for Support
	Sequence Number	OSEQ	Advanced Pricing
	Task Number	PTSK	Warehouse Management
	Requested	RQSJ	
	Promised Delivery Time	RSDT	Distribution Base
	Shipment Number	SHMT	ITLS/Advanced Transportation
	Shipment ID	SHPN	UCC-128 Compliance
	Future Use	SO16	Distribution Base
	Future Use	SO17	Distribution Base
	Future Use	SO18	Distribution Base
	Future Use	SO19	Distribution Base
	Future Use	SO20	Distribution Base
	Ticket Date	TKDA	Distribution Base
	Ticket Number	TKNR	Distribution Base
	Ticket Time	TKTM	Distribution Base
	Reference – Mark-for	VR03	E-Comm – Mark-for Address

File	Field Description	Data Item	Explanation
F42119	Actual Grade	ACGD	Distribution Base
	Actual Delivery Date	ADLJ	Future Use (Chevron)
	Actual Potency	APOT	Distribution Base
	Currency Code – Base	BCRC	Base Company Currency Code, which is to be used for OneWorld requirements
	Currency Code – To	CRDC	OneWorld
	Configured String ID	CSID	Configurator
	Demand Business Unit	DMBU	Distribution Base
	Borrow Agr Supplement	DMS1	Enhancement
	Borrow Agr	DMT1	Enhancement
	Requested Delivery Time	DRQT	Future Use and ITLS
	Header Business Unit	HDBU	OneWorld
	Hold Code	HOLD	Distribution Base
	Load Number (ITLS)	LDNM	ITLS
	Address Number – Mark For	MKFR	Mark-for Support
	Sequence Number	OSEQ	Advanced Pricing
	Task Number	PTSK	Warehouse Management
	Requested	RQSJ	
	Promised Delivery Time	RSDT	Distribution Base
	Shipment Number	SHMT	ITLS/Advanced Transportation
	Shipment ID	SHPN	
	Future Use	SO16	Distribution Base
	Future Use	SO17	Distribution Base
	Future Use	SO18	Distribution Base
	Future Use	SO19	Distribution Base
	Future Use	SO20	Distribution Base
	Ticket Date	TKDA	Distribution Base
	Ticket Number	TKNR	Distribution Base
	Ticket Time	TKTM	Distribution Base
	Reference – Mark-for	VR03	E-Comm – Mark-for Address

File	Field Description	Data Item	Explanation
F4213	Actual Grade	ACGD	Distribution Base
	Actual Delivery Date	ADLJ	Future Use (Chevron)
	Actual Potency	APOT	Distribution Base
	Currency Code – To	CRDC	OneWorld
	Configured String ID	CSID	Configurator
	Demand Business Unit	DMBU	Distribution Base
	Borrow Agr Supplement	DMS1	Enhancement
	Borrow Agr	DMT1	Enhancement
	Requested Delivery Time	DRQT	Future Use and ITLS
	Header Business Unit	HDBU	OneWorld
	Hold Code	HOLD	Distribution Base
	Load Number (ITLS)	LDNM	ITLS
	Address Number – Mark For	MKFR	Mark-for Support
	Sequence Number	OSEQ	Advanced Pricing
	Task Number	PTSK	Warehouse Management
	Requested	RQSJ	
	Promised Delivery Time	RSDT	Distribution Base
	Shipment Number	SHMT	ITLS/Advanced Transportation
	Shipment ID	SHPN	
	Future Use	SO16	Distribution Base
	Future Use	SO17	Distribution Base
	Future Use	SO18	Distribution Base
	Future Use	SO19	Distribution Base
	Future Use	SO20	Distribution Base
	Ticket Date	TKDA	Distribution Base
	Ticket Number	TKNR	Distribution Base
	Ticket Time	TKTM	Distribution Base
	Reference – Mark-for	VR03	E-Comm – Mark-for Address
F4215	Requested Delivery Time	DRQT	Future Use and ITLS
	Promised Delivery Time	RSDT	Distribution Base

File	Field Description	Data Item	Explanation
F42199	Actual Grade	ACGD	Distribution Base
	Actual Delivery Date	ADLJ	Future Use (Chevron)
	Actual Potency	APOT	Distribution Base
	Currency Code – To	CRDC	OneWorld
	Configured String ID	CSID	Configurator
	Demand Business Unit	DMBU	Distribution Base
	Borrow Agr Supplement	DMS1	Enhancement
	Borrow Agr	DMT1	Enhancement
	Requested Delivery Time	DRQT	Future Use and ITLS
	Header Business Unit	HDBU	OneWorld
	Hold Code	HOLD	Distribution Base
	Load Number (ITLS)	LDNM	ITLS
	Address Number – Mark For	MKFR	Mark-for Support
	Sequence Number	OSEQ	Advanced Pricing
	Task Number	PTSK	Warehouse Management
	Requested	RQSJ	
	Promised Delivery Time	RSDT	Distribution Base
	Shipment Number	SHMT	ITLS/Advanced Transportation
	Shipment ID	SHPN	
	Future Use	SO16	Distribution Base
	Future Use	SO17	Distribution Base
	Future Use	SO18	Distribution Base
	Future Use	SO19	Distribution Base
	Future Use	SO20	Distribution Base
	Ticket Date	TKDA	Distribution Base
	Ticket Number	TKNR	Distribution Base
	Ticket Time	TKTM	Distribution Base
	Reference – Mark-for	VR03	E-Comm – Mark-for Address
F4301	Currency Code – Base	BCRC	Base Company Currency Code, which is to be used for OneWorld requirements
	Bill – To Number	BTAN	Future Use
	Requested Delivery Time	DRQT	Future Use and ITLS
	Address Number – Mark For	MKFR	Mark-for Support
	Requested Ship Time	RSHT	Future Use
	Reference – Mark-for	VR03	E-Comm – Mark-for Address
F4301E	Currency Code – Base	BCRC	Base Company Currency Code, which is to be used for OneWorld requirements
	Bill – To Number	BTAN	Future Use
	Requested Delivery Time	DRQT	Future Use and ITLS
	Address Number – Mark For	MKFR	Mark-for Support
	Requested Ship Time	RSHT	Future Use
	Reference – Mark-for	VR03	E-Comm – Mark-for Address
F43090	Pay On Consumption	POC	Repetitive Manufacturing
	Routing Type Code	ROTP	UCC-128 Compliance

File	Field Description	Data Item	Explanation
F43099	Document Type	DCT	Journal Entries with Receipt Routing
	G/L Date	DGL	Journal Entries with Receipt Routing
	Document Number	DOC	Journal Entries with Receipt Routing
	Intransit/In-stock	ITIS	Journal Entries with Receipt Routing
	Document Company	KCO	Journal Entries with Receipt Routing
	Stock Val Execution Date	VPEJ	Journal Entries with Receipt Routing
F4310	Currency Code – Base	BCRC	Base Company Currency Code, which is to be used for OneWorld requirements
	Bill – To Number	BTAN	Future Use
	Change Order Program ID	CHID	Change Orders
	Change Order Date Updated	CHMJ	Change Orders
	Date – Scheduled Required (Julian)	CHRD	
	Shift Code – Scheduled Required	CHRS	
	Time – Scheduled Required (HH/MM/SS)	CHRT	
	Change Order Time	CHT	Change Orders
	Component Line Number	CPNT	Future Use
	Foreign Tax Amount	CTAM	OneWorld Requirement
	Requested Delivery Time	DRQT	Future Use and ITLS
	Foreign Tax Relieved	FTRL	Future Use
	Kit Master Line Number	KTLN	Future Use
	Load Number (ITLS)	LDNM	ITLS
	Multiple Accounts	MACT	Enhancement SAR #631048
	Item Revision Level	MERL	Added to PO Detail Screen with Override Capabilities
	Address Number – Mark For	MKFR	Mark-for Support
	Requested Ship Time	RSHT	Future Use
	Shipment Number	SHMT	ITLS/Advanced Transportation
	Reference – Mark-for	VR03	E-Comm – Mark-for Address

File	Field Description	Data Item	Explanation
F4311	Currency Code – Base	BCRC	Base Company Currency Code, which is to be used for OneWorld requirements
	Bill – To Number	BTAN	Future Use
	Change Order Program ID	CHID	Change Orders
	Change Order Date Updated	CHMJ	Change Orders
	Date – Scheduled Required (Julian)	CHRD	
	Shift Code – Scheduled Required	CHRS	
	Time – Scheduled Required (HH/MM/SS)	CHRT	
	Change Order Time	CHT	Change Orders
	Component Line Number	CPNT	Future Use
	Foreign Tax Amount	CTAM	OneWorld Requirement
	Requested Delivery Time	DRQT	Future Use and ITLS
	Foreign Tax Relieved	FTRL	Future Use
	Kit Master Line Number	KTLN	Future Use
	Load Number (ITLS)	LDNM	ITLS
	Multiple Accounts	MACT	Enhancement SAR #631048
	Item Revision Level	MERL	Added to PO Detail Screen with Override Capabilities
	Address Number – Mark For	MKFR	Mark-for Support
	Requested Ship Time	RSHT	Future Use
	Shipment Number	SHMT	ITLS/Advanced Transportation
	Reference – Mark-for	VR03	E-Comm – Mark-for Address
F4311E	Currency Code – Base	BCRC	Base Company Currency Code, which is to be used for OneWorld requirements
	Bill – To Number	BTAN	Future Use
	Change Order Program ID	CHID	Change Orders
	Change Order Date Updated	CHMJ	Change Orders
	Date – Scheduled Required (Julian)	CHRD	
	Shift Code – Scheduled Required	CHRS	
	Time – Scheduled Required (HH/MM/SS)	CHRT	
	Change Order Time	CHT	Change Orders
	Component Line Number	CPNT	Future Use
	Foreign Tax Amount	CTAM	OneWorld Requirement
	Requested Delivery Time	DRQT	Future Use and ITLS
	Foreign Tax Relieved	FTRL	Future Use
	Kit Master Line Number	KTLN	Future Use
	Load Number (ITLS)	LDNM	ITLS
	Multiple Accounts	MACT	Enhancement SAR #631048
	Item Revision Level	MERL	Added to PO Detail Screen with Override Capabilities
	Address Number – Mark For	MKFR	Mark-for Support
	Requested Ship Time	RSHT	Future Use
	Shipment Number	SHMT	ITLS/Advanced Transportation
	Reference – Mark-for	VR03	E-Comm – Mark-for Address

File	Field Description	Data Item	Explanation
F43121	Currency Code – Base	BCRC	Base Company Currency Code, which is to be used for OneWorld requirements
	Foreign Tax Amount	CTAM	OneWorld Requirement
	Future Use	FUF3	Future Use
	Future Use	FUF4	Future Use
	Future Use	FUF5	Future Use
	Future Use	FUF6	Future Use
	Load Number (ITLS)	LDNM	ITLS
	Multiple Accounts	MACT	Enhancement SAR #631048
	SSCC Number – Tare Level	PAK	UCC-128 Compliance
	SSCC Number – Tare Level	PLT	UCC-128 Compliance
	SCC Number	SCCN	UCC-128 Compliance
	SCC Quantity	SCCQ	UCC-128 Compliance
	SCC Unit of Measure	SCUM	UCC-128 Compliance
	Shipment Number	SHMT	ITLS/Advanced Transportation
	Amount – Tax	STAM	OneWorld
	UPC Number	UPCN	UCC-128 Compliance
	UPC Quantity	UPQT	UCC-128 Compliance
	UPC Unit of Measure	UPUM	UCC-128 Compliance
	Reference	VR01	Enh SAR 1454645-WINS
	Reference 2	VR02	Enh SAR 1454645-WINS
F43199	Currency Code – Base	BCRC	Base Company Currency Code, which is to be used for OneWorld requirements
	Bill – To Number	BTAN	Future Use
	Change Order Program ID	CHID	Change Orders
	Date – Scheduled Required (Julian)	CHRD	
	Shift Code – Scheduled Required	CHRS	
	Time – Scheduled Required (HH/MM/SS)	CHRT	
	Change Order Date Updated	CHMJ	Change Orders
	Change Order Time	CHT	Change Orders
	Component Line Number	CPNT	Future Use
	Foreign Tax Amount	CTAM	OneWorld Requirement
	Requested Delivery Time	DRQT	Future Use and ITLS
	Foreign Tax Relieved	FTRL	Future Use
	Kit Master Line Number	KTLN	Future Use
	Load Number (ITLS)	LDNM	ITLS
	Multiple Accounts	MACT	Enhancement SAR #631048
	Item Revision Level	MERL	Added to PO Detail Screen with Override Capabilities
	Address Number – Mark For	MKFR	Mark-for Support
	Requested Ship Time	RSHT	Future Use
	Shipment Number	SHMT	ITLS/Advanced Transportation
	Reference – Mark-for	VR03	E-Comm – Mark-for Address
F4322	Currency Code	CRCD	

File	Field Description	Data Item	Explanation
F4343	Currency Code – Base	BCRC	Base Company Currency Code, which is to be used for OneWorld requirements
F43800	Currency Code – Base	BCRC	Base Company Currency Code, which is to be used for OneWorld requirements
F4600	Load Number (ITLS)	LDNM	ITLS
	Address Number – Mark For	MKFR	Mark-for Support
	Shipment Number	SHMT	ITLS/Advanced Transportation
	Shipment ID	SHPN	
	Reference – Mark-for	VR03	E-Comm – Mark-for Address
F46010	FIFO Receipt Date	FIFR	Location Detail Merge Enhancement
	Merge Partials	MPTL	Location Detail Merge Enhancement
	Merge UM Structures	MUMS	Location Detail Merge Enhancement
F46091	Girth	GRTH	Future Use
F4611	Load Number (ITLS)	LDNM	ITLS
	Address Number – Mark For	MKFR	Mark-for Support
	Shipment Number	SHMT	ITLS/Advanced Transportation
	Shipment ID	SHPN	
	Reference – Mark-for	VR03	E-Comm – Mark-for Address
F47011	Actual Delivery Date	ADLJ	Future Use (Chevron)
	Currency Code – Base	BCRC	Base Company Currency Code, which is to be used for OneWorld requirements
	Bill – To Number	BTAN	Future Use
	Credit Card Number	CACT	
	Credit Card Expiration	CEXP	
	Currency Code – To	CRDC	OneWorld
	Pmt. Terms Disc. Days Due	DCD	
	Pmt. Terms Disc. Percent	DCP	
	Requested Delivery Time	DRQT	Future Use and ITLS
	Address Number – Mark For	MKFR	Mark-for Support
	Pmt. Terms Net Days to Pay	NDTP	
	Pmt. Terms Prox. Days Due	PXDD	
	Pmt. Terms Prox. Month Due	PXDM	
	Requested	RQSJ	
	Promised Delivery Time	RSDT	Distribution Base
	Requested Ship Time	RSHT	Future Use
	Reference – Mark-for	VR03	E-Comm – Mark-for Address

File	Field Description	Data Item	Explanation
F47012	Actual Grade	ACGD	Distribution Base
	Actual Delivery Date	ADLJ	Future Use (Chevron)
	Actual Potency	APOT	Distribution Base
	Currency Code – Base	BCRC	Base Company Currency Code, which is to be used for OneWorld requirements
	Bill – To Number	BTAN	Future Use
	Credit Card Number	CACT	
	Credit Card Expiration	CEXP	
	Currency Code – To	CRDC	OneWorld
	Configured String ID	CSID	Configurator
	Pmt. Terms Disc. Days Due	DCD	
	Pmt. Terms Disc. Percent	DCP	
	Demand Business Unit	DMBU	Distribution Base
	Borrow Agr Supplement	DMS1	Enhancement
	Borrow Agr	DMT1	Enhancement
	Requested Delivery Time	DRQT	Future Use and ITLS
	Header Business Unit	HDBU	OneWorld
	Hold Code	HOLD	Distribution Base
	Load Number (ITLS)	LDNM	ITLS
	Item Revision Level	MERL	Added to PO Detail Screen with Override Capabilities
	Address Number – Mark For	MKFR	Mark-for Support
	Pmt. Terms Net Days to Pay	NDTP	
	Sequence Number	OSEQ	Advanced Pricing
	Task Number	PTSK	Warehouse Management
	Pmt. Terms Prox. Days Due	PXDD	
	Pmt. Terms Prox. Month Due	PXDM	
	Requested	RQSJ	
	Promised Delivery Time	RSDT	Distribution Base
	Requested Ship Time	RSHT	Future Use
	Shipment Number	SHMT	ITLS/Advanced Transportation
	Shipment ID	SHPN	
	Future Use	SO16	Distribution Base
	Future Use	SO17	Distribution Base
	Future Use	SO18	Distribution Base
	Future Use	SO19	Distribution Base
	Future Use	SO20	Distribution Base
	Ticket Date	TKDA	Distribution Base
	Ticket Number	TKNR	Distribution Base
	Ticket Time	TKTM	Distribution Base
	Reference – Mark-for	VR03	E-Comm – Mark-for Address
F47013	Type – Address Number	ANTY	UCC-128 Compliance
	Sequence Number	SEQN	Added to make file unique for OneWorld
F47013W	Address Number – Mark-for	MKFR	E-Comm – Mark-for Address
	Reference – Mark-for	VR03	E-Comm – Mark-for Address

File	Field Description	Data Item	Explanation
F47016	Acknowledgment Type	ACKT	
	Currency Code – Base	BCRC	Base Company Currency Code, which is to be used for OneWorld requirements
	Bill – To Number	BTAN	Future Use
	Pmt. Terms Disc. Days Due	DCD	
	Pmt. Terms Disc. Percent	DCP	
	Requested Delivery Time	DRQT	Future Use and ITLS
	Address Number – Mark For	MKFR	Mark-for Support
	Pmt. Terms Net Days to Pay	NDTP	
	Pmt. Terms Prox. Days Due	PXDD	
	Pmt. Terms Prox. Month Due	PXDM	
	Requested Ship Time	RSHT	Future Use
	Reference – Mark-for	VR03	E-Comm – Mark-for Address

File	Field Description	Data Item	Explanation
F47017	Contract Balances Updated Y/N	BALU	
	Currency Code – Base	BCRC	Base Company Currency Code, which is to be used for OneWorld requirements
	Bill – To Number	BTAN	Future Use
	Category Codes		Electronic Commerce – Priority 2
	Change Order Program ID	CHID	Change Orders
	Change Order Date Updated	CHMJ	Change Orders
	Change Order Time	CHT	Change Orders
	Component Line Number	CPNT	Future Use
	Send Method	CRMD	
	Foreign Tax Amount	CTAM	OneWorld Requirement
	Pmt. Terms Disc. Days Due	DCD	
	Pmt. Terms Disc. Percent	DCP	
	Requested Delivery Time	DRQT	Future Use and ITLS
	Foreign Tax Relieved	FTRL	Future Use
	Kit Master Line Number	KTLN	Future Use
	Load Number (ITLS)	LDNM	ITLS
	Multiple Accounts	MACT	Enhancement SAR #631048
	Item Revision Level	MERL	Added to PO Detail Screen with Override Capabilities
	Address Number – Mark For	MKFR	Mark-for Support
	Pmt. Terms Net Days to Pay	NDTP	
	Transfer/Direct Ship Flag	PS01	
	Purchase Order Status 02	PS02	
	Purchase Order Status 03	PS03	
	Purchase Order Status 04	PS04	
	Purchase Order Status 05	PS05	
	Purchase Order Status 06	PS06	
	Purchase Order Status 07	PS07	
	Purchase Order Status 08	PS08	
	Purchase Order Status 09	PS09	
	Purchase Order Status 10	PS10	
	Pmt. Terms Prox. Days Due	PXDD	
	Pmt. Terms Prox. Month Due	PXDM	
	Requested Ship Time	RSHT	Future Use
	Shipment Number	SHMT	ITLS/Advanced Transportation
	Reference – Mark-for	VR03	E-Comm – Mark-for Address

File	Field Description	Data Item	Explanation
F47021	Acknowledgment Type	ACKT	
	Currency Code – Base	BCRC	Base Company Currency Code, which is to be used for OneWorld requirements
	Bill – To Number	BTAN	Future Use
	Pmt. Terms Disc. Days Due	DCD	
	Pmt. Terms Disc. Percent	DCP	
	Requested Delivery Time	DRQT	Future Use and ITLS
	Address Number – Mark For	MKFR	Mark-for Support
	Pmt. Terms Net Days to Pay	NDTP	
	Pmt. Terms Prox. Days Due	PXDD	
	Pmt. Terms Prox. Month Due	PXDM	
	Requested Ship Time	RSHT	Future Use
	Reference – Mark-for	VR03	E-Comm – Mark-for Address

File	Field Description	Data Item	Explanation
F47022	Contract Balances Updated Y/N	BALU	
	Currency Code – Base	BCRC	Base Company Currency Code, which is to be used for OneWorld requirements
	Bill – To Number	BTAN	Future Use
	Change Order Program ID	CHID	Change Orders
	Change Order Date Updated	CHMJ	Change Orders
	Change Order Time	CHT	Change Orders
	Component Line Number	CPNT	Future Use
	Send Method	CRMD	
	Foreign Tax Amount	CTAM	OneWorld Requirement
	Pmt. Terms Disc. Days Due	DCD	
	Pmt. Terms Disc. Percent	DCP	
	Requested Delivery Time	DRQT	Future Use and ITLS
	Foreign Tax Relieved	FTRL	Future Use
	Kit Master Line Number	KTLN	Future Use
	Load Number (ITLS)	LDNM	ITLS
	Line Item Status Code	LSTS	
	Multiple Accounts	MACT	Enhancement SAR #631048
	Item Revision Level	MERL	Added to PO Detail Screen with Override Capabilities
	Address Number – Mark For	MKFR	Mark-for Support
	Pmt. Terms Net Days to Pay	NDTP	
	Transfer/Direct Ship Flag	PS01	
	Purchase Order Status 02	PS02	
	Purchase Order Status 03	PS03	
	Purchase Order Status 04	PS04	
	Purchase Order Status 05	PS05	
	Purchase Order Status 06	PS06	
	Purchase Order Status 07	PS07	
	Purchase Order Status 08	PS08	
	Purchase Order Status 09	PS09	
	Purchase Order Status 10	PS10	
	Pmt. Terms Prox. Days Due	PXDD	
	Pmt. Terms Prox. Month Due	PXDM	
	Requested Ship Time	RSHT	Future Use
	Shipment Number	SHMT	ITLS/Advanced Transportation
	Reference – Mark-for	VR03	E-Comm – Mark-for Address

File	Field Description	Data Item	Explanation
F47026	Acknowledgment Type	ACKT	
	Actual Delivery Date	ADLJ	Future Use (Chevron)
	Currency Code – Base	BCRC	Base Company Currency Code, which is to be used for OneWorld requirements
	Bill – To Number	BTAN	Future Use
	Pmt. Terms Disc. Days Due	DCD	
	Pmt. Terms Disc. Percent	DCP	
	Address Number – Mark For	MKFR	Mark-for Support
	Pmt. Terms Net Days to Pay	NDTP	
	Pmt. Terms Prox. Days Due	PXDD	
	Pmt. Terms Prox. Month Due	PXDM	
	Requested	RQSJ	
	Promised Delivery Time	RSDT	Distribution Base
F47027	Actual Grade	ACGD	Distribution Base
	Actual Delivery Date	ADLJ	Future Use (Chevron)
	Actual Potency	APOT	Distribution Base
	Currency Code – Base	BCRC	Base Company Currency Code, which is to be used for OneWorld requirements
	Bill – To Number	BTAN	Future Use
	Pmt. Terms Disc. Days Due	DCD	
	Pmt. Terms Disc. Percent	DCP	
	Demand Business Unit	DMBU	Distribution Base
	Borrow Agr Supplement	DMS1	Enhancement
	Borrow Agr	DMT1	Enhancement
	Header Business Unit	HDBU	OneWorld
	Load Number (ITLS)	LDNM	ITLS
	Line Item Status Code	LSTS	
	Item Revision Level	MERL	Added to PO Detail Screen with Override Capabilities
	Address Number – Mark For	MKFR	Mark-for Support
	Pmt. Terms Net Days to Pay	NDTP	
	Sequence Number	OSEQ	Advanced Pricing
	Task Number	PTSK	Warehouse Management
	Pmt. Terms Prox. Days Due	PXDD	
	Pmt. Terms Prox. Month Due	PXDM	
	Requested	RQSJ	
	Promised Delivery Time	RSDT	Distribution Base
	Shipment Number	SHMT	ITLS/Advanced Transportation
	Ticket Date	TKDA	Distribution Base
	Ticket Number	TKNR	Distribution Base
	Ticket Time	TKTM	Distribution Base

File	Field Description	Data Item	Explanation
F47031	Currency Code – Base	BCRC	Base Company Currency Code, which is to be used for OneWorld requirements
	Bill – To Number	BTAN	Future Use
	Pmt. Terms Disc. Days Due	DCD	
	Pmt. Terms Disc. Percent	DCP	
	Requested Delivery Time	DRQT	Future Use and ITLS
	Address Number – Mark For	MKFR	Mark-for Support
	Pmt. Terms Net Days to Pay	NDTP	
	Pmt. Terms Prox. Days Due	PXDD	
	Pmt. Terms Prox. Month Due	PXDM	
	Requested Ship Time	RSHT	Future Use
	Reference – Mark-for	VR03	E-Comm – Mark-for Address

File	Field Description	Data Item	Explanation
F47032	Address Line 1	ADD1	UCC-128 Compliance
	Address Line 2	ADD2	UCC-128 Compliance
	Address Line 3	ADD3	UCC-128 Compliance
	Address Line 4	ADD4	UCC-128 Compliance
	State or Province	ADDS	UCC-128 Compliance
	Postal Code	ADDZ	UCC-128 Compliance
	Address Number – 1st	AN81	UCC-128 Compliance
	Type – Address Number	ANTY	UCC-128 Compliance
	Contract Balances Updated Y/N	BALU	
	Currency Code – Base	BCRC	Base Company Currency Code, which is to be used for OneWorld requirements
	Bill – To Number	BTAN	Future Use
	Change Order Program ID	CHID	Change Orders
	Change Order Date Updated	CHMJ	Change Orders
	Change Order Time	CHT	Change Orders
	County	COUN	UCC-128 Compliance
	Component Line Number	CPNT	Future Use
	Send Method	CRMD	
	Foreign Tax Amount	CTAM	OneWorld Requirement
	Country Code	CTR	UCC-128 Compliance
	City	CTY1	UCC-128 Compliance
	Pmt. Terms Disc. Days Due	DCD	
	Pmt. Terms Disc. Percent	DCP	
	Requested Delivery Time	DRQT	Future Use and ITLS
	Equipment Description Code	EQCD	UCC-128 Compliance
	Equipment Initial	EQIN	UCC-128 Compliance
	Equipment Number	EQNB	UCC-128 Compliance
	Foreign Tax Relieved	FTRL	Future Use
	Shipment Hierarchical Configuration	HLCF	
	Hierarchical Structure Code	HLSC	
	Identification Code 1	ID1	UCC-128 Compliance
	Identification Code 2	ID2	UCC-128 Compliance
	Identification Code Qualifier 1	IDQ1	UCC-128 Compliance
	Identification Code Qualifier 2	IDQ2	UCC-128 Compliance
	Kit Master Line Number	KTLN	Future Use
	Load Number (ITLS)	LDNM	ITLS
	Work Order – Line Number	LINS	UCC-128 Compliance
	Match Type	MATC	Distribution Base
	Item Revision Level	MERL	Added to PO Detail Screen with Override Capabilities
	Address Number – Mark For	MKFR	Mark-for Support
	Name – Mailing	MLNM	UCC-128 Compliance
	Pmt. Terms Net Days to Pay	NDTP	
	SSCC Number – Tare Level	PAK	UCC-128 Compliance
	SSCC Number – Tare Level	PLT	UCC-128 Compliance
	Packaging Code	PKCD	
	Pmt. Terms Prox. Days Due	PXDD	
	Pmt. Terms Prox. Month Due	PXDM	
	Reference Number 1	RF1	UCC-128 Compliance
	Reference Number 2	RF2	UCC-128 Compliance

File	Field Description	Data Item	Explanation
F47032 (Cont.)	Reference Number Qualifier 1	RFQ1	UCC-128 Compliance
	Reference Number Qualifier 2	RFQ2	UCC-128 Compliance
	Routing	ROTE	UCC-128 Compliance
	Requested Ship Time	RSHT	Future Use
	SCC Number	SCCN	UCC-128 Compliance
	SCC Quantity	SCCQ	UCC-128 Compliance
	SCC Unit of Measure	SCUM	UCC-128 Compliance
	Shipment Number	SHMT	ITLS/Advanced Transportation
	Type Code	STPC	UCC-128 Compliance
	Message Text Line	TXLN	UCC-128 Compliance
	UPC Number	UPCN	UCC-128 Compliance
	UPC Quantity	UPQT	UCC-128 Compliance
	UPC Unit of Measure	UPUM	UCC-128 Compliance
	Reference – Mark-for	VR03	E-Comm – Mark-for Address
	Weight Qualifier	WGQ	UCC-128 Compliance
	Weight	WGTS	UCC-128 Compliance
	Weight UOM	WGTU	UCC-128 Compliance

File	Field Description	Data Item	Explanation
F47037	Actual Grade	ACGD	Distribution Base
	Address Line 1	ADD1	UCC-128 Compliance
	Address Line 2	ADD2	UCC-128 Compliance
	Address Line 3	ADD3	UCC-128 Compliance
	Address Line 4	ADD4	UCC-128 Compliance
	State or Province	ADDS	UCC-128 Compliance
	Postal Code	ADDZ	UCC-128 Compliance
	Actual Delivery Date	ADLJ	Future Use (Chevron)
	Address Number – 1st	AN81	UCC-128 Compliance
	Type – Address Number	ANTY	UCC-128 Compliance
	Actual Potency	APOT	Distribution Base
	Currency Code – Base	BCRC	Base Company Currency Code, which is to be used for OneWorld requirements
	Bill – To Number	BTAN	Future Use
	County	COUN	UCC-128 Compliance
	Country Code	CTR	UCC-128 Compliance
	City	CTY1	UCC-128 Compliance
	Pmt. Terms Disc. Days Due	DCD	
	Pmt. Terms Disc. Percent	DCP	
	Demand Business Unit	DMBU	Distribution Base
	Requested Delivery Time	DRQT	Future Use and ITLS
	Equipment Description Code	EQCD	UCC-128 Compliance
	Equipment Initial	EQIN	UCC-128 Compliance
	Equipment Number	EQNB	UCC-128 Compliance
	Header Business Unit	HDBU	OneWorld
	Shipment Hierarchical Configuration	HLCF	UCC-128 Compliance
	Hierarchical Structure Code	HLSC	UCC-128 Compliance
	Identification Code 1	ID1	UCC-128 Compliance
	Identification Code 2	ID2	UCC-128 Compliance
	Identification Code Qualifier 1	IDQ1	UCC-128 Compliance
	Identification Code Qualifier 2	IDQ2	UCC-128 Compliance
	Load Number (ITLS)	LDNM	ITLS
	Work Order – Line Number	LINS	UCC-128 Compliance
	Address Number – Mark For	MKFR	Mark-for Support
	Name – Mailing	MLNM	UCC-128 Compliance
	Pmt. Terms Net Days to Pay	NDTP	
	SSCC Number – Tare Level	PAK	UCC-128 Compliance
	SSCC Number – Tare Level	PLT	UCC-128 Compliance
	Task Number	PTSK	Warehouse Management
	Packaging Code	PKCD	UCC-128 Compliance
	Pmt. Terms Prox. Days Due	PXDD	
	Pmt. Terms Prox. Month Due	PXDM	
	Reference Number 1	RF1	UCC-128 Compliance
	Reference Number 2	RF2	UCC-128 Compliance

File	Field Description	Data Item	Explanation
F47037 (Cont.)	Reference Number Qualifier 1	RFQ1	UCC-128 Compliance
	Reference Number Qualifier 2	RFQ2	UCC-128 Compliance
	Routing	ROTE	UCC-128 Compliance
	Requested	RQSJ	
	Promised Delivery Time	RSDT	Distribution Bast
	Requested Ship Time	RSHT	Future Use
	SCC Number	SCCN	UCC-128 Compliance
	SCC Quantity	SCCQ	UCC-128 Compliance
	SCC Unit of Measure	SCUM	UCC-128 Compliance
	Shipment Number	SHMT	Advanced Transportation
	Shipment ID	SHPN	
	Type Code	STPC	UCC-128 Compliance
	Ticket Date	TKDA	Distribution Base
	Ticket Number	TKNR	Distribution Base
	Ticket Time	TKTM	Distribution Base
	Message Text Line	TXLN	UCC-128 Compliance
	UPC Number	UPCN	UCC-128 Compliance
	UPC Quantity	UPQT	UCC-128 Compliance
	UPC Unit of Measure	UPUM	UCC-128 Compliance
	Reference – Mark-for	VR03	E-Comm – Mark-for Address
	Weight Qualifier	WGQ	UCC-128 Compliance
	Weight	WGTS	UCC-128 Compliance
	Weight UOM	WGTU	UCC-128 Compliance
F47046	Actual Delivery Date	ADLJ	Future Use (Chevron)
	Currency Code – Base	BCRC	Base Company Currency Code, which is to be used for OneWorld requirements
	Bill – To Number	BTAN	Future Use
	Pmt. Terms Disc. Days Due	DCD	
	Pmt. Terms Disc. Percent	DCP	
	Requested Delivery Time	DRQT	Future Use and ITLS
	Address Number – Mark For	MKFR	Mark-for Support
	Pmt. Terms Net Days to Pay	NDTP	
	Pmt. Terms Prox. Days Due	PXDD	
	Pmt. Terms Prox. Month Due	PXDM	
	Requested	RQSJ	
	Promised Delivery Time	RSDT	Distribution Base
	Requested Ship Time	RSHT	Future Use
	Reference – Mark-for	VR03	E-Comm – Mark-for Address

File	Field Description	Data Item	Explanation
F47047	Actual Grade	ACGD	Distribution Base
	Actual Delivery Date	ADLJ	Future Use (Chevron)
	Actual Potency	APOT	Distribution Base
	Currency Code – Base	BCRC	Base Company Currency Code, which is to be used for OneWorld requirements
	Bill – To Number	BTAN	Future Use
	Pmt. Terms Disc. Days Due	DCD	
	Pmt. Terms Disc. Percent	DCP	
	Demand Business Unit	DMBU	Distribution Base
	Borrow Agr Supplement	DMS1	Enhancement
	Borrow Agr	DMT1	Enhancement
	Requested Delivery Time	DRQT	Future Use and ITLS
	Header Business Unit	HDBU	OneWorld
	Hold Code	HOLD	Distribution Base
	Load Number (ITLS)	LDNM	ITLS
	Item Revision Level	MERL	Added to PO Detail Screen with Override Capabilities
	Address Number – Mark For	MKFR	Mark-for Support
	Pmt. Terms Net Days to Pay	NDTP	
	Task Number	PTSK	Warehouse Management
	Pmt. Terms Prox. Days Due	PXDD	
	Pmt. Terms Prox. Month Due	PXDM	
	Requested	RQSJ	
	Promised Delivery Time	RSDT	Distribution Base
	Requested Ship Time	RSHT	Future Use
	Shipment Number	SHMT	ITLS/Advanced Transportation
	Ticket Date	TKDA	Distribution Base
	Ticket Number	TKNR	Distribution Base
	Ticket Time	TKTM	Distribution Base
	Reference – Mark-for	VR03	E-Comm – Mark-for Address
F47071	Currency Code – Base	BCRC	Base Company Currency Code, which is to be used for OneWorld requirements
	Bill – To Number	BTAN	Future Use
	Pmt. Terms Disc. Days Due	DCD	
	Pmt. Terms Disc. Percent	DCP	
	Requested Delivery Time	DRQT	Future Use and ITLS
	Address Number – Mark For	MKFR	Mark-for Support
	Pmt. Terms Net Days to Pay	NDTP	
	Pmt. Terms Prox. Days Due	PXDD	
	Pmt. Terms Prox. Month Due	PXDM	
	Requested Ship Time	RSHT	Future Use
	Reference – Mark-for	VR03	E-Comm – Mark-for Address

File	Field Description	Data Item	Explanation
F47072	Contract Balances Updated Y/N	BALU	
	Currency Code – Base	BCRC	Base Company Currency Code, which is to be used for OneWorld requirements
	Bill – To Number	BTAN	Future Use
	Change Order Program ID	CHID	Change Orders
	Change Order Date Updated	CHMJ	Change Orders
	Change Order Time	CHT	Change Orders
	Component Line Number	CPNT	Future Use
	Send Method	CRMD	
	Foreign Tax Amount	CTAM	OneWorld Requirement
	Pmt. Terms Disc. Days Due	DCD	
	Pmt. Terms Disc. Percent	DCP	
	Requested Delivery Time	DRQT	Future Use and ITLS
	Load Number (ITLS)	FTRL	Future Use
	Foreign Tax Relieved	KTLN	Future Use
	Kit Master Line Number	LDNM	ITLS
	Multiple Accounts	MACT	
	Item Revision Level	MERL	Added to PO Detail Screen with Override Capabilities
	Address Number – Mark For	MKFR	Mark-for Support
	Pmt. Terms Net Days to Pay	NDTP	
	SSCC Number – Tare Level	PAK	UCC-128 Compliance
	SSCC Number – Tare Level	PLT	UCC-128 Compliance
	Transfer/Direct Ship Flag	PS01	
	Purchase Order Status 02	PS02	
	Purchase Order Status 03	PS03	
	Purchase Order Status 04	PS04	
	Purchase Order Status 05	PS05	
	Purchase Order Status 06	PS06	
	Purchase Order Status 07	PS07	
	Purchase Order Status 08	PS08	
	Purchase Order Status 09	PS09	
	Purchase Order Status 10	PS10	
	Pmt. Terms Prox. Days Due	PXDD	
	Pmt. Terms Prox. Month Due	PXDM	
	Requested Ship Time	RSHT	Future Use
	SCC Number	SCCN	UCC-128 Compliance
	SCC Quantity	SCCQ	UCC-128 Compliance
	SCC Unit of Measure	SCUM	UCC-128 Compliance
	Shipment Number	SHMT	ITLS/Advanced Transportation
	UPC Number	UPCN	UCC-128 Compliance
	UPC Quantity	UPQT	UCC-128 Compliance
	UPC Unit of Measure	UPUM	UCC-128 Compliance
	Reference – Mark-for	VR03	E-Comm – Mark-for Address

File	Field Description	Data Item	Explanation
F47076	Currency Code – Base	BCRC	Base Company Currency Code, which is to be used for OneWorld Requirements
	Bill – To Number	BTAN	Future Use
	Pmt. Terms Disc. Days Due	DCD	
	Pmt. Terms Disc. Percent	DCP	
	Requested Delivery Time	DRQT	Future Use and ITLS
	Address Number – Mark For	MKFR	Mark-for Support
	Pmt. Terms Net Days to Pay	NDTP	
	Pmt. Terms Prox. Days Due	PXDD	
	Pmt. Terms Prox. Month Due	PXDM	
	Requested Ship Time	RSHT	Future Use
	Reference – Mark-for	VR03	E-Comm – Mark-for Address
F47077	Contract Balances Updated Y/N	BALU	
	Currency Code – Base	BCRC	Base Company Currency Code, which is to be used for OneWorld requirements
	Bill – To Number	BTAN	Future Use
	Change Order Program ID	CHID	Change Orders
	Change Order Date Updated	CHMJ	Change Orders
	Change Order Time	CHT	Change Orders
	Component Line Number	CPNT	Future Use
	Send Method	CRMD	
	Foreign Tax Amount	CTAM	OneWorld Requirement
	Pmt. Terms Disc. Days Due	DCD	
	Pmt. Terms Disc. Percent	DCP	
	Requested Delivery Time	DRQT	Future Use and ITLS
	Foreign Tax Relieved	FTRL	Future Use
	Kit Master Line Number	KTLN	Future Use
	Load Number (ITLS)	LDNM	ITLS
	Multiple Accounts	MACT	Enhancement SAR #631048
	Item Revision Number	MERL	Added to PO Detail Screen with Override Capabilities
	Address Number – Mark For	MKFR	Mark-for Support
	Pmt. Terms Net Days to Pay	NDTP	
	Transfer/Direct Ship Flag	PS01	
	Purchase Order Status 02	PS02	
	Purchase Order Status 03	PS03	
	Purchase Order Status 04	PS04	
	Purchase Order Status 05	PS05	
	Purchase Order Status 06	PS06	
	Purchase Order Status 07	PS07	
	Purchase Order Status 08	PS08	
	Purchase Order Status 09	PS09	
	Purchase Order Status 10	PS10	
	Pmt. Terms Prox. Days Due	PXDD	
	Pmt. Terms Prox. Month Due	PXDM	
	Requested Ship Time	RSHT	Future Use
	Shipment Number	SHMT	ITLS/Advanced Transportation
	Reference – Mark-for	VR03	E-Comm – Mark-for Address

File	Field Description	Data Item	Explanation
F47082	Commodity Code	CDCD	EDI Price/Sales Catalog Enhancement
	Component Type	COTY	EDI Price/Sales Catalog Enhancement
	Dispatch Group	DSGP	EDI Price/Sales Catalog Enhancement
	From Grade	FRGD	EDI Price/Sales Catalog Enhancement
	Item Flash Message	IFLA	EDI Price/Sales Catalog Enhancement
	Print Message	INMG	EDI Price/Sales Catalog Enhancement
	Lot Potency	LOTP	EDI Price/Sales Catalog Enhancement
	Item Revision Level	MERL	Added to PO Detail Screen with Override Capabilities
	Country of Origin	ORIG	EDI Price/Sales Catalog Enhancement
	Product Group	PDGR	EDI Price/Sales Catalog Enhancement
	Item Pool Code	PRP0	EDI Price/Sales Catalog Enhancement
	Commodity Class	PRP1	EDI Price/Sales Catalog Enhancement
	Commodity Sub Class	PRP2	EDI Price/Sales Catalog Enhancement
	Supplier Rebate Code	PRP3	EDI Price/Sales Catalog Enhancement
	Master Planning Family	PRP4	EDI Price/Sales Catalog Enhancement
	Item Dimension Group	PRP6	EDI Price/Sales Catalog Enhancement
	Warehouse Process Group 1	PRP7	EDI Price/Sales Catalog Enhancement
	Warehouse Process Group 2	PRP8	EDI Price/Sales Catalog Enhancement
	Warehouse Process Group 3	PRP9	EDI Price/Sales Catalog Enhancement
	Aggregate – SCC Number	SCC0	UCC-128 Compliance
	Shipping Condition Code	SHCN	EDI Price/Sales Catalog Enhancement
	Shelf Life Days	SLD	EDI Price/Sales Catalog Enhancement
	Category Code 10	SRP0	EDI Price/Sales Catalog Enhancement
	Sales Catalog Section	SRP1	EDI Price/Sales Catalog Enhancement
	Sub Section	SRP2	EDI Price/Sales Catalog Enhancement

File	Field Description	Data Item	Explanation
F47082 (Cont.)	Sales Category Code 3	SRP3	EDI Price/Sales Catalog Enhancement
	Sales Category Code 4	SRP4	EDI Price/Sales Catalog Enhancement
	Sales Category Code 5	SRP5	EDI Price/Sales Catalog Enhancement
	Category Code 6	SRP6	EDI Price/Sales Catalog Enhancement
	Category Code 7	SRP7	EDI Price/Sales Catalog Enhancement
	Category Code 8	SRP8	EDI Price/Sales Catalog Enhancement
	Category Code 9	SRP9	EDI Price/Sales Catalog Enhancement
	Standard Grade	STDG	EDI Price/Sales Catalog Enhancement
	Standard Potency	STDP	EDI Price/Sales Catalog Enhancement
	Sales Taxable	TAX1	EDI Price/Sales Catalog Enhancement
	Thru Grade	THGD	EDI Price/Sales Catalog Enhancement
	Thru Potency	THRP	EDI Price/Sales Catalog Enhancement
	Purchasing Taxable (Y/N)	TX	EDI Price/Sales Catalog Enhancement
	Unit of Measure – Aggregate UPC	UMDF	UCC-128 Compliance
	Unit of Measure – UPC	UMUP	UCC-128 Compliance
	Unit of Measure	UOM1	EDI Price/Sales Catalog Enhancement
	Pricing UOM	UOM4	EDI Price/Sales Catalog Enhancement
	Units Per Container	UPC	EDI Price/Sales Catalog Enhancement
	UPC Number	UPCN	UCC-128 Compliance
	Unit of Measure – Volume	UVM1	EDI Price/Sales Catalog Enhancement
	Unit of Measure – Weight	UWUM	EDI Price/Sales Catalog Enhancement
F47086	Catalog Name	CATN	EDI Price/Sales Catalog Enhancement
	Ship To	SHAN	EDI Price/Sales Catalog Enhancement

File	Field Description	Data Item	Explanation
F47087	Commodity Code	CDCD	EDI Price/Sales Catalog Enhancement
	Component Type	COTY	EDI Price/Sales Catalog Enhancement
	Dispatch Group	DSGP	EDI Price/Sales Catalog Enhancement
	From Grade	FRGD	EDI Price/Sales Catalog Enhancement
	Item Flash Message	IFLA	EDI Price/Sales Catalog Enhancement
	Print Message	INMG	EDI Price/Sales Catalog Enhancement
	Lot Potency	LOTP	EDI Price/Sales Catalog Enhancement
	Item Revision Level	MERL	Added to PO Detail Screen with Override Capabilities
	Country of Origin	ORIG	EDI Price/Sales Catalog Enhancement
	Product Group	PDGR	EDI Price/Sales Catalog Enhancement
	Item Pool Code	PRP0	EDI Price/Sales Catalog Enhancement
	Commodity Class	PRP1	EDI Price/Sales Catalog Enhancement
	Commodity Sub Class	PRP2	EDI Price/Sales Catalog Enhancement
	Supplier Rebate Code	PRP3	EDI Price/Sales Catalog Enhancement
	Master Planning Family	PRP4	EDI Price/Sales Catalog Enhancement
	Item Dimension Group	PRP6	EDI Price/Sales Catalog Enhancement
	Warehouse Process Group 1	PRP7	EDI Price/Sales Catalog Enhancement
	Warehouse Process Group 2	PRP8	EDI Price/Sales Catalog Enhancement
	Warehouse Process Group 3	PRP9	EDI Price/Sales Catalog Enhancement
	Aggregate – SCC Number	SCC0	UCC-128 Compliance
	Shipping Condition Code	SHCN	EDI Price/Sales Catalog Enhancement
	Shelf Life Days	SLD	EDI Price/Sales Catalog Enhancement
	Category Code 10	SRP0	EDI Price/Sales Catalog Enhancement
	Sales Catalog Section	SRP1	EDI Price/Sales Catalog Enhancement
	Sub Section	SRP2	EDI Price/Sales Catalog Enhancement

File	Field Description	Data Item	Explanation
F47087 (Cont.)	Sales Category Code 3	SRP3	EDI Price/Sales Catalog Enhancement
	Sales Category Code 4	SRP4	EDI Price/Sales Catalog Enhancement
	Sales Category Code 5	SRP5	EDI Price/Sales Catalog Enhancement
	Category Code 6	SRP6	EDI Price/Sales Catalog Enhancement
	Category Code 7	SRP7	EDI Price/Sales Catalog Enhancement
	Category Code 8	SRP8	EDI Price/Sales Catalog Enhancement
	Category Code 9	SRP9	EDI Price/Sales Catalog Enhancement
	Standard Grade	STDG	EDI Price/Sales Catalog Enhancement
	Standard Potency	STDP	EDI Price/Sales Catalog Enhancement
	Sales Taxable	TAX1	EDI Price/Sales Catalog Enhancement
	Thru Grade	THGD	EDI Price/Sales Catalog Enhancement
	Thru Potency	THRP	EDI Price/Sales Catalog Enhancement
	Purchasing Taxable (Y/N)	TX	EDI Price/Sales Catalog Enhancement
	Unit of Measure – Aggregate UPC	UMDF	UCC-128 Compliance
	Unit of Measure – UPC	UMUP	UCC-128 Compliance
	Unit of Measure	UOM1	EDI Price/Sales Catalog Enhancement
	Pricing UOM	UOM4	EDI Price/Sales Catalog Enhancement
	Units Per Container	UPC	EDI Price/Sales Catalog Enhancement
	UPC Number	UPCN	UCC-128 Compliance
	Unit of Measure – Volume	UVM1	EDI Price/Sales Catalog Enhancement
	Unit of Measure – Weight	UWUM	EDI Price/Sales Catalog Enhancement

File	Field Description	Data Item	Explanation
F47091	Actual Delivery Date	ADLJ	Future Use (Chevron)
	Currency Code – Base	BCRC	Base Company Currency Code, which is to be used for OneWorld requirements
	Bill – To Number	BTAN	Future Use
	Credit Card Number	CACT	
	Credit Card Expiration	CEXP	
	Currency Code – To	CRDC	OneWorld
	Pmt. Terms Disc. Days Due	DCD	
	Pmt. Terms Disc. Percent	DCP	
	Requested Delivery Time	DRQT	Future Use and ITLS
	Address Number – Mark For	MKFR	Mark-for Support
	Pmt. Terms Net Days to Pay	NDTP	
	Pmt. Terms Prox. Days Due	PXDD	
	Pmt. Terms Prox. Month Due	PXDM	
	Requested	RQSJ	
	Promised Delivery Time	RSDT	Distribution Base
	Requested Ship Time	RSHT	Future Use
	Reference – Mark-for	VR03	E-Comm – Mark-for Address

File	Field Description	Data Item	Explanation
F47092	Actual Grade	ACGD	Distribution Base
	Actual Delivery Date	ADLJ	Future Use (Chevron)
	Actual Potency	APOT	Distribution Base
	Currency Code – Base	BCRC	Base Company Currency Code, which is to be used for OneWorld requirements
	Bill – To Number	BTAN	Future Use
	Credit Card Number	CACT	
	Credit Card Expiration	CEXP	
	Currency Code – To	CRDC	OneWorld
	Configured String ID	CSID	Configurator
	Pmt. Terms Disc. Days Due	DCD	
	Pmt. Terms Disc. Percent	DCP	
	Demand Business Unit	DMBU	Distribution Base
	Borrow Agr Supplement	DMS1	Enhancement
	Borrow Agr	DMT1	Enhancement
	Requested Delivery Time	DRQT	Future Use and ITLS
	Header Business Unit	HDBU	OneWorld
	Hold Code	HOLD	Distribution Base
	Load Number (ITLS)	LDNM	ITLS
	Item Revision Level	MERL	Added to PO Detail Screen with Override Capabilities
	Address Number – Mark For	MKFR	Mark-for Support
	Pmt. Terms Net Days to Pay	NDTP	
	Sequence Number	OSEQ	Advanced Pricing
	Task Number	PTSK	Warehouse Management
	Pmt. Terms Prox. Days Due	PXDD	
	Pmt. Terms Prox. Month Due	PXDM	
	Requested	RQSJ	
	Promised Delivery Time	RSDT	Distribution Base
	Requested Ship Time	RSHT	Future Use
	Shipment Number	SHMT	ITLS/Advanced Transportation
	Shipment ID	SHPN	
	Future Use	SO16	Distribution Base
	Future Use	SO17	Distribution Base
	Future Use	SO18	Distribution Base
	Future Use	SO19	Distribution Base
	Future Use	SO20	Distribution Base
	Ticket Date	TKDA	Distribution Base
	Ticket Number	TKNR	Distribution Base
	Ticket Time	TKTM	Distribution Base
	Reference – Mark-for	VR03	E-Comm – Mark-for Address
F47093	Type – Address Number	ANTY	UCC-128 Compliance
	Sequence Number	SEQN	Added to make file unique for OneWorld
F47093W	Address Number – Mark-for	MKFR	E-Comm – Mark-for Address
	Reference – Mark-for	VR03	E-Comm – Mark-for Address

File	Field Description	Data Item	Explanation
F47096	Bill – To Number	BTAN	Future Use
	Currency Code – Base	BCRC	Base Company Currency Code, which is to be used for OneWorld requirements
	Pmt. Terms Disc. Days Due	DCD	
	Pmt. Terms Disc. Percent	DCP	
	Requested Delivery Time	DRQT	Future Use and ITLS
	Address Number – Mark For	MKFR	Mark-for Support
	Pmt. Terms Net Days to Pay	NDTP	
	Pmt. Terms Prox. Days Due	PXDD	
	Pmt. Terms Prox. Month Due	PXDM	
	Required Response Date	RQQJ	A8 DB Changes
	Requested Ship Date	RSHT	Future Use
	Reference – Mark-for	VR03	E-Comm – Mark-for Address
F47097	Currency Code – Base	BCRC	Base Company Currency Code, which is to be used for OneWorld requirements
	Bill – To Number	BTAN	Future Use
	Change Order Program ID	CHID	Change Orders
	Change Order Date Updated	CHMJ	Change Orders
	Change Order Time	CHT	Change Orders
	Component Line Number	CPNT	Future Use
	Foreign Tax Amount	CTAM	OneWorld Requirement
	Pmt. Terms Disc. Days Due	DCD	
	Pmt. Terms Disc. Percent	DCP	
	Requested Delivery Time	DRQT	Future Use and ITLS
	Foreign Tax Relieved	FTRL	Future Use
	Kit Master Line Number	KTLN	Future Use
	Load Number (ITLS)	LDNM	ITLS
	Item Revision Level	MERL	Added to PO Detail Screen with Override Capabilities
	Address Number – Mark For	MKFR	Mark-for Support
	Pmt. Terms Net Days to Pay	NDTP	
	Pmt. Terms Prox. Days Due	PXDD	
	Pmt. Terms Prox. Month Due	PXDM	
	Required Response Date	RQQJ	A8 DB Changes
	Requested Ship Time	RSHT	Future Use
	Shipment Number	SHMT	ITLS/Advanced Transportation
	Reference – Mark-for	VR03	E-Comm – Mark-for Address

File	Field Description	Data Item	Explanation
F47098	Address Number	AN8	A8 DB Changes
	Cancel Date	CNDJ	A8 DB Changes
	Currency Code	CRCD	
	Order Type	DCTO	A8 DB Changes
	Document (Order No., Invoice, and so forth)	DOCO	A8 DB Changes
	EDI – Document Type	EDCT	A8 DB Changes
	EDI – Line Number	EDLN	A8 DB Changes
	EDI – Document Number	EDOC	A8 DB Changes
	Record Sequence	EDSQ	A8 DB Changes
	Record Type	EDTY	A8 DB Changes
	Document Key Company	EKCO	A8 DB Changes
	Workstation ID	JOBN	
	Order Company (Order Number)	KCOO	A8 DB Changes
	Line Number	LNID	A8 DB Changes
	Promised Delivery Date	PDDJ	A8 DB Changes
	Program ID	PID	
	Amount – Unit Cost	PRRC	A8 DB Changes
	Time of Day	TDAY	
	Transaction Originator	TORG	A8 DB Changes
	Units – Order/Transaction Quantity	UORG	A8 DB Changes
	Date Updated	UPMJ	
	User ID	USER	A8 DB Changes
F47101	Currency Code – Base	BCRC	Base Company Currency Code, which is to be used for OneWorld requirements
	Bill – To Number	BTAN	Future Use
	Pmt. Terms Disc. Days Due	DCD	
	Pmt. Terms Disc. Percent	DCP	
	Requested Delivery Time	DRQT	Future Use and ITLS
	Address Number – Mark For	MKFR	Mark-for Support
	Pmt. Terms Net Days to Pay	NDTP	
	Pmt. Terms Prox. Days Due	PXDD	
	Pmt. Terms Prox. Month Due	PXDM	
	Required Response Date	RQQJ	A8 DB Changes
	Requested Ship Time	RSHT	Future Use
	Reference – Mark-for	VR03	E-Comm – Mark-for Address

File	Field Description	Data Item	Explanation
F47102	Currency Code – Base	BCRC	Base Company Currency Code, which is to be used for OneWorld requirements
	Bill – To Number	BTAN	Future Use
	Change Order Program ID	CHID	Change Orders
	Change Order Date Updated	CHMJ	Change Orders
	Change Order Time	CHT	Change Orders
	Component Line Number	CPNT	Future Use
	Foreign Tax Amount	CTAM	OneWorld Requirement
	Pmt. Terms Disc. Days Due	DCD	
	Pmt. Terms Disc. Percent	DCP	
	Requested Delivery Time	DRQT	Future Use and ITLS
	Foreign Tax Relieved	FTRL	Future Use
	Kit Master Line Number	KTLN	Future Use
	Load Number (ITLS)	LDNM	ITLS
	Item Revision Level	MERL	Added to PO Detail Screen with Override Capabilities
	Address Number – Mark For	MKFR	Mark-for Support
	Pmt. Terms Net Days to Pay	NDTP	
	Pmt. Terms Prox. Days Due	PXDD	
	Pmt. Terms Prox. Month Due	PXDM	
	Required Response Date	RQQJ	A8 DB Changes
	Requested Ship Time	RSHT	Future Use
	Shipment Number	SHMT	ITLS/Advanced Transportation
	Reference – Mark-for	VR03	E-Comm – Mark-for Address
F47103	Address Number	AN8	A8 DB Changes
	Cancel Date	CNDJ	A8 DB Changes
	Currency Code	CRCD	
	Order Type	DCTO	A8 DB Changes
	Document (Order No., Invoice, and so forth)	DOCO	A8 DB Changes
	EDI – Document Type	EDCT	A8 DB Changes
	EDI – Line Number	EDLN	A8 DB Changes
	EDI – Document Number	EDOC	A8 DB Changes
	Record Sequence	EDSQ	A8 DB Changes
	Record Type	EDTY	A8 DB Changes
	Document Key Company	EKCO	A8 DB Changes
	Workstation ID	JOBN	
	Order Company (Order Number)	KCOO	A8 DB Changes
	Line Number	LNID	A8 DB Changes
	Promised Delivery Date	PDDJ	A8 DB Changes
	Program ID	PID	
	Amount – Unit Cost	PRRC	A8 DB Changes
	Time of Day	TDAY	
	Transaction Originator	TORG	A8 DB Changes
	Units – Order/Transaction Quantity	UORG	A8 DB Changes
	Date Updated	UPMJ	
	User ID	USER	

File	Field Description	Data Item	Explanation
F47106	Actual Delivery Date	ADLJ	Future Use (Chevron)
	Currency Code – Base	BCRC	Base Company Currency Code, which is to be used for OneWorld requirements
	Bill – To Number	BTAN	Future Use
	Pmt. Terms Disc. Days Due	DCD	
	Pmt. Terms Disc. Percent	DCP	
	Requested Delivery Time	DRQT	Future Use and ITLS
	Address Number – Mark For	MKFR	UCC-128 Compliance
	Pmt. Terms Net Days to Pay	NDTP	
	Pmt. Terms Prox. Days Due	PXDD	
	Pmt. Terms Prox. Month Due	PXDM	
	Requested	RQSJ	
	Promised Delivery Time	RSDT	Distribution Base
	Requested Ship Time	RSHT	Future Use
	Reference – Mark-for	VR03	E-Comm – Mark-for Address
F47107	Actual Grade	ACGD	Distribution Base
	Actual Delivery Date	ADLJ	Future Use (Chevron)
	Actual Potency	APOT	Distribution Base
	Currency Code – Base	BCRC	Base Company Currency Code, which is to be used for OneWorld requirements
	Bill – To Number	BTAN	Future Use
	Pmt. Terms Disc. Days Due	DCD	
	Pmt. Terms Disc. Percent	DCP	
	Demand Business Unit	DMBU	Distribution Base
	Borrow Agr Supplement	DMS1	Enhancement
	Borrow Agr	DMT1	Enhancement
	Requested Delivery Time	DRQT	Future Use and ITLS
	Header Business Unit	HDBU	OneWorld
	Hold Code	HOLD	Distribution Base
	Load Number (ITLS)	LDNM	ITLS
	Item Revision Level	MERL	Added to PO Detail Screen with Override Capabilities
	Address Number – Mark For	MKFR	UCC-128 Compliance
	Pmt. Terms Net Days to Pay	NDTP	
	Sequence Number	OSEQ	Advanced Pricing
	Task Number	PTSK	Warehouse Management
	Pmt. Terms Prox. Days Due	PXDD	
	Pmt. Terms Prox. Month Due	PXDM	
	Requested	RQSJ	
	Promised Delivery Time	RSDT	Distribution Base
	Requested Ship Time	RSHT	Future Use
	Shipment Number	SHMT	ITLS/Advanced Transportation
	Ticket Date	TKDA	Distribution Base
	Ticket Number	TKNR	Distribution Base
	Ticket Time	TKTM	Distribution Base
	Reference – Mark-for	VR03	E-Comm – Mark-for Address
F47122	Serial Number – Equipment Number	ASID	Add for AEC enhancements

File	Field Description	Data Item	Explanation
F47127	Serial Number – Equipment Number	ASID	Add for AEC enhancements
F47131	Actual Delivery Date	ADLJ	Future Use (Chevron)
	Currency Code – Base	BCRC	Base Company Currency Code, which is to be used for OneWorld requirements
	Bill – To Number	BTAN	Future Use
	Pmt. Terms Disc. Days Due	DCD	
	Pmt. Terms Disc. Percent	DCP	
	Requested Delivery Time	DRQT	Future Use and ITLS
	Address Number – Mark For	MKFR	UCC-128 Compliance
	Pmt. Terms Net Days to Pay	NDTP	
	Pmt. Terms Prox. Days Due	PXDD	
	Pmt. Terms Prox. Month Due	PXDM	
	Requested	RQSJ	
	Promised Delivery Time	RSDT	Distribution Base
	Requested Ship Time	RSHT	Future Use
	Reference – Mark-for	VR03	E-Comm – Mark-for Address
F47132	Actual Grade	ACGD	Distribution Base
	Actual Delivery Date	ADLJ	Future Use (Chevron)
	Actual Potency	APOT	Distribution Base
	Currency Code – Base	BCRC	Base Company Currency Code, which is to be used for OneWorld requirements
	Bill – To Number	BTAN	Future Use
	Pmt. Terms Disc. Days Due	DCD	
	Pmt. Terms Disc. Percent	DCP	
	Demand Business Unit	DMBU	Distribution Base
	Borrow Agr Supplement	DMS1	Enhancement
	Borrow Agr	DMT1	Enhancement
	Requested Delivery Time	DRQT	Future Use and ITLS
	Header Business Unit	HDBU	OneWorld
	Hold Code	HOLD	Distribution Base
	Load Number (ITLS)	LDNM	ITLS
	Item Revision Level	MERL	Added to PO Detail Screen with Override Capabilities
	Address Number – Mark For	MKFR	UCC-128 Compliance
	Pmt. Terms Net Days to Pay	NDTP	
	Sequence Number	OSEQ	Advanced Pricing
	Task Number	PTSK	Warehouse Management
	Pmt. Terms Prox. Days Due	PXDD	
	Pmt. Terms Prox. Month Due	PXDM	
	Requested	RQSJ	
	Promised Delivery Time	RSDT	Distribution Base
	Requested Ship Time	RSHT	Future Use
	Shipment Number	SHMT	ITLS/Advanced Transportation
	Ticket Date	TKDA	Distribution Base
	Ticket Number	TKNR	Distribution Base
	Ticket Time	TKTM	Distribution Base
	Reference – Mark-for	VR03	E-Comm – Mark-for Address

File	Field Description	Data Item	Explanation
F47136	Acknowledgment Type	ACKT	
	Currency Code – Base	BCRC	Base Company Currency Code, which is to be used for OneWorld requirements
	Requested Delivery Time	DRQT	Future Use and ITLS
	Address Number – Mark For	MKFR	UCC-128 Compliance
	Requested Ship Time	RSHT	Future Use
	Reference – Mark-for	VR03	E-Comm – Mark-for Address
F47137	Contract Balances Updated Y/N	BALU	
	Currency Code – Base	BCRC	Base Company Currency Code, which is to be used for OneWorld requirements
	Bill – To Number	BTAN	Future Use
	Change Order Program ID	CHID	Change Orders
	Change Order Date Updated	CHMJ	Change Orders
	Change Order Time	CHT	Change Orders
	Component Line Number	CPNT	Future Use
	Send Method	CRMD	
	Foreign Tax Amount	CTAM	OneWorld Requirement
	Pmt. Terms Disc. Days Due	DCD	
	Pmt. Terms Disc. Percent	DCP	
	Requested Delivery Time	DRQT	Future Use and ITLS
	Foreign Tax Relieved	FTRL	Future Use
	Kit Master Line Number	KTLN	Future Use
	Load Number (ITLS)	LDNM	ITLS
	Multiple Accounts	MACT	Enhancement SAR #631048
	Item Revision Level	MERL	Added to PO Detail Screen with Override Capabilities
	Address Number – Mark For	MKFR	UCC-128 Compliance
	Pmt. Terms Net Days to Pay	NDTP	
	Transfer/Direct Ship Flag	PS01	
	Purchase Order Status 02	PS02	
	Purchase Order Status 03	PS03	
	Purchase Order Status 04	PS04	
	Purchase Order Status 05	PS05	
	Purchase Order Status 06	PS06	
	Purchase Order Status 07	PS07	
	Purchase Order Status 08	PS08	
	Purchase Order Status 09	PS09	
	Purchase Order Status 10	PS10	
	Pmt. Terms Prox. Days Due	PXDD	
	Pmt. Terms Prox. Month Due	PXDM	
	Requested Ship Time	RSHT	Future Use
	Shipment Number	SHMT	ITLS/Advanced Transportation
	Reference – Mark-for	VR03	E-Comm – Mark-for Address

File	Field Description	Data Item	Explanation
F47141	Currency Code – Base	BCRC	Base Company Currency Code, which is to be used for OneWorld requirements
	Bill – To Number	BTAN	Future Use
	Pmt. Terms Disc. Days Due	DCD	
	Pmt. Terms Disc. Percent	DCP	
	Requested Delivery Time	DRQT	Future Use and ITLS
	Address Number – Mark For	MKFR	UCC-128 Compliance
	Pmt. Terms Net Days to Pay	NDTP	
	Pmt. Terms Prox. Days Due	PXDD	
	Pmt. Terms Prox. Month Due	PXDM	
	Requested Ship Time	RSHT	Future Use
	Reference – Mark-for	VR03	E-Comm – Mark-for Address
F47142	Contract Balances Updated Y/N	BALU	
	Currency Code – Base	BCRC	Base Company Currency Code, which is to be used for OneWorld requirements
	Bill – To Number	BTAN	Future Use
	Change Order Program ID	CHID	Change Orders
	Change Order Date Updated	CHMJ	Change Orders
	Change Order Time	CHT	Change Orders
	Component Line Number	CPNT	Future Use
	Send Method	CRMD	
	Foreign Tax Amount	CTAM	OneWorld Requirement
	Pmt. Terms Disc. Days Due	DCD	
	Pmt. Terms Disc. Percent	DCP	
	Requested Delivery Time	DRQT	Future Use and ITLS
	Foreign Tax Relieved	FTRL	Future Use
	Kit Master Line Number	KTLN	Future Use
	Load Number (ITLS)	LDNM	ITLS
	Multiple Accounts	MACT	Enhancement SAR #631048
	Item Revision Level	MERL	Added to PO Detail Screen with Override Capabilities
	Address Number – Mark For	MKFR	UCC-128 Compliance
	Pmt. Terms Net Days to Pay	NDTP	
	Transfer/Direct Ship Flag	PS01	
	Purchase Order Status 02	PS02	
	Purchase Order Status 03	PS03	
	Purchase Order Status 04	PS04	
	Purchase Order Status 05	PS05	
	Purchase Order Status 06	PS06	
	Purchase Order Status 07	PS07	
	Purchase Order Status 08	PS08	
	Purchase Order Status 09	PS09	
	Purchase Order Status 10	PS10	
	Pmt. Terms Prox Days Due	PXDD	
	Pmt. Terms Prox. Month Due	PXDM	
	Requested Ship Time	RSHT	Future Use
	Shipment Number	SHMT	ITLS/Advanced Transportation
	Reference – Mark-for	VR03	E-Comm – Mark-for Address

File	Field Description	Data Item	Explanation
F47146	Actual Delivery Date	ADLJ	Future Use (Chevron)
	Currency Code – Base	BCRC	Base Company Currency Code, which is to be used for OneWorld requirements
	Bill – To Number	BTAN	Future Use
	Pmt. Terms Disc. Days Due	DCD	
	Pmt. Terms Disc. Percent	DCP	
	Requested Delivery Time	DRQT	Future Use and ITLS
	Address Number – Mark For	MKFR	UCC-128 Compliance
	Pmt. Terms Net Days to Pay	NDTP	
	Pmt. Terms Prox. Days Due	PXDD	
	Pmt. Terms Prox. Month Due	PXDM	
	Requested	RQSJ	
	Promised Delivery Time	RSDT	Distribution Base
	Requested Ship Time	RSHT	Future Use
	Reference – Mark-for	VR03	E-Comm – Mark-for Address
F47147	Actual Grade	ACGD	Distribution Base
	Actual Delivery Date	ADLJ	Future Use (Chevron)
	Actual Potency	APOT	Distribution Base
	Currency Code – Base	BCRC	Base Company Currency Code, which is to be used for OneWorld requirements
	Bill – To Number	BTAN	Future Use
	Pmt. Terms Disc. Days Due	DCD	
	Pmt. Terms Disc. Percent	DCP	
	Demand Business Unit	DMBU	Distribution Base
	Borrow Agr Supplement	DMS1	Enhancement
	Borrow Agr	DMT1	Enhancement
	Requested Delivery Time	DRQT	Future Use and ITLS
	Header Business Unit	HDBU	OneWorld
	Hold Code	HOLD	Distribution Base
	Load Number (ITLS)	LDNM	ITLS
	Item Revision Level	MERL	Added to PO Detail Screen with Override Capabilities
	Address Number – Mark For	MKFR	UCC-128 Compliance
	Pmt. Terms Net Days to Pay	NDTP	
	Sequence Number	OSEQ	Advanced Pricing
	Task Number	PTSK	Warehouse Management
	Pmt. Terms Prox. Days Due	PXDD	
	Pmt. Terms Prox. Month Due	PXDM	
	Requested	RQSJ	
	Promised Delivery Date	RSDT	Distribution Base
	Requested Ship Time	RSHT	Future Use
	Shipment Number	SHMT	ITLS/Advanced Transportation
	Ticket Date	TKDA	Distribution Base
	Ticket Number	TKNR	Distribution Base
	Ticket Time	TKTM	Distribution Base
	Reference – Mark-for	VR03	E-Comm – Mark-for Address

File	Field Description	Data Item	Explanation
F47156	Currency Code – Base	BCRC	Base Company Currency Code, which is to be used for OneWorld requirements
	Address Number – Mark For	MKFR	UCC-128 Compliance
	Reference – Mark-for	VR03	E-Comm – Mark-for Address
F47157	Currency Code – Base	BCRC	Base Company Currency Code, which is to be used for OneWorld requirements
	Load Number (ITLS)	LDNM	ITLS
	Item Revision Level	MERL	Added to PO Detail Screen with Override Capabilities
	Address Number – Mark For	MKFR	UCC-128 Compliance
	Shipment Number	SHMT	ITLS/Advanced Transportation
	Reference – Mark-for	VR03	E-Comm – Mark-for Address
F49001	Freight G/L Class	GLC	Future Use
	Default Load Type	LDTY	Future Use
	Default Lead-time	LTDL	Future Use
	Minimum Weight	MNWT	Future Use
	Maximum Cubes	MXCB	Future Use
	Maximum Weight	MXWT	Future Use
	Default Vehicle Type	VTYP	Future Use
F49075	Prohibit Product Code	TYPI	Enhancement
F4911	Actual Ambient Qty	AABR	Enhancement, SAR #998940
	Adjust Actual	ADST	Enhancement, SAR #998940
	Actual Weight Qty	AWGT	Enhancement, SAR #998940
	Dispatch Type	DATY	Enhancement, SAR #998940
	Volume Standard	STOK	Enhancement, SAR #998940
F4914	Business Unit – Account	MCUZ	Add for reversals and video display
F49511	SV Processed Date	SVPP	Flag for SV for in-transit processing in prior periods
F49582	Delivery Document Re-Create	DRCF	Future Use
	Document Register	DRGF	Future Use
	Program ID External Doc #	PIDN	Future Use
	Reference Qualifier	REFQ	Future Use
F49197	Job Number	JOBN4	Future Use
	Output Queue 4	OUT4	Future Use
	Output Queue 5	OUT5	Future Use
	Program ID	PID	
	Time of Day	TDAY	
	Date Updated	UPMJ	
	User ID	USER	

File	Field Description	Data Item	Explanation
F49579	Time of Day	TDAY	Needs to be replaced with a time field with more precision (SAR #1229229). Many transactions per second are performed.
F49580	Flag – Document Advance Status	DASF	Future Use
	Status Code Next	NXT2	Future Use
F49582	Delivery Document Re-Create	DRCF	Future Use
	Document Register	DRGF	Future Use
	Business Unit – Account	MCUZ	Add for reversals and video display
	Program ID External Doc #	PIDN	Future Use
	Reference Qualifier	REFQ	Future Use
F49584	Load Number (ITLS)	LDNM	ITLS
	Business Unit – Account	MCUZ	Add for reversals and video display
	Reference Number	REFN	Future Use
	Reference Qualifier	REFQ	Future Use
	Routing Step Number	RSSN	Future Use
	Shipment ID	SHPN	
	Shipment Source	SRCO	Future Use
	Trip Leg	TRPL	Future Use
	Planning Depot	VMCU	Future Use
F49585	Carrier Number	CARS	Future Use
	Reference Number	REFN	Future Use
	Reference Qualifier	REFQ	Future Use
F49680	Document Print Control Required	DPCR	Enhancement
	Forms Type	FID	Enhancement
F49690	Carrier Number	CARS	Future Use
	Reference Number	REFN	Future Use
	Reference Qualifier	REFQ	Future Use
F49691	Shipment Source	SRCO	Future Use
F49692	Load Number (ITLS)	LDNM	ITLS
	Routing Step Number	RSSN	Future Use
	Shipment ID	SHPN	
	Trip Leg	TRPL	Future Use
T49550	Business Unit – Account	MCUZ	Add for reversals and video display
T49710	Re-grade Item Number	IRTM	Enhancement
T49715	Re-grade Item Number	IRTM	Enhancement
	Fixed or Variable Quantity	FORQ	Over/Under Completions
	Level of Detail	LDA	Future Use
	Work Center	MCU	Future Use

Deleted Fields

File	Field Description	Data Item	Replaced By
F47032	Approval Route Code	ARTG	
	Adjustment Schedule	ASN	
	Catalog	CATN	
	Pricing Category Level	CLVL	
	Tax Explanation Code	EXR1	
	Item Price Group	PRGR	
	Purchasing Taxable	TX	
	Tax Rate/Area	TXA1	

File	Field Description	Data Item	Replaced By
F47037	Apply Commission	ACOM	
	Account ID	AID	
	Buyer Number	ANBY	
	Account Number	ANI	
	Adjustment Schedule	ASN	
	Backorders Allowed	BACK	
	Commodity Code	CDCD	
	Pricing Category Level	CLVL	
	Commission Category	CMCG	
	Commitment Method	CMGL	
	Inventory Costing Method	CMGP	
	Draft Number	DFTN	
	Agreement Supplement	DMCS	
	Agreement Number	DMCT	
	Tax Explanation Code	EXR1	
	Discount Application	FAPP	
	Trade Discount (Old)	FUN2	
	Ledger Type	LT	
	Object Account	OBJ	
	Project Cost Center	OMCU	
	Order Repriced Indicator	ORP	
	Order Reprice Group	ORPR	
	Item Price Group	PRGR	
	Promotion Number	PRMO	
	Price Override Code	PROV	
	Supplier Rebate Code	PRP3	
	Master Planning Family	PRP4	
	Landed Cost Rule	PRP5	
	Date – Projected Available	PSDJ	
	Printed Code	RESL	
	Basket Reprice Group	RPRC	
	Substitutes Allowed	SBAL	
	Subledger	SBL	
	Subledger Type	SBLT	
	Salesperson Commission	SLCM	
	Salesperson Commission	SLC2	
	Salesperson Code 01	SLSM	
	Salesperson Code 02	SLM2	
	Inter Branch Sales	SO01	
	On Hand Updated	SO02	
	Configurator Print Flag	SO03	
	Sales Order Status 04	SO04	

File	Field Description	Data Item	Replaced By
F47037 (Cont.)	Substitute Item Indicator	SO05	
	Preference Commitment	SO06	
	Ship Date Overridden	SO07	
	Price Adjustment Line	SO08	
	Price Adjustment History	SO09	
	Preference Product	SO10	
	Transfer/Direct Ship	SO11	
	Sales Order Status 12	SO12	
	Sales Order Status 13	SO13	
	Sales Order Status 14	SO14	
	Sales Order Status 15	SO15	
	Subsidiary	SUB	
	Warehouse Status Code	SWMS	
	Sales Taxable	TAX1	
	Temporary Price	TPC	
	Tax Rate/Area	TXA1	
	Freeze Code	UNCD	
	Price Code 1	UPC1	
	Price Code 2	UPC2	
	Price Code 3	UPC3	
	Primary/Last Supplier	VEND	
F47082	Address Number	AN8	
	Basis	BSCD	
	Formula Name	FRMN	
	Factor Value	FVTR	
	Item/Customer Key ID	ICID	
	Cost Method	LEDG	
	Location	LOCN	
	LOT/SN	LOTN	
F47087	Address Number	AN8	
	Basis	BSCD	
	Formula Name	FRMN	
	Factor Value	FVTR	
	Item/Customer Key ID	ICID	
	Cost Method	LEDG	
	Location	LOCN	
	Lot/SN	LOTN	

New Physical Files

File	File Description	Prefix	Explanation
F39021	G/L Adjustment History		
F4142	AWM to Cycle/Tag Inventory	CT	
F4211W	WF – Sales Order/Shipment/ Customer Detail Records	SD, XD, H, L	

File	File Description	Prefix	Explanation
F4215	Shipment Header	XH	
F4216	Shipment Detail	XD	
F43094	Additional Routes	P5	UCC-128 Compliance
F4316	PO Multiple Account File	P3	
F4316M	Model PO Multiple Account File	P4	
F4501	Master Adjustment Schedule	MS	
F46010	New Logical for AWM Performance	IP	
F46027	AWM Performance	AV	
F46029	AWM Performance	LP	
F4700	EDI – Unutilized Data File		
	EDI – Processing Control File		
F47018	EDI – Outbound PO SDQ		
F470261	Outbound Ord. Ack – Addl. Header		
F470271	Outbound Ord. Ack – Addl. Detail		
F47048	EDI – Outbound Invoice SDQ		
F470661	EDI – Outbound Plan Schd Release		
F470671	EDI – Outbound Plan Schd Release		
F470681	EDI – Outbound Plan Schd Release		
F47098	EDI – Request for Quote Detail Quantity – Outbound	SQ	
F47103	EDI Response to RFQ Detail Quantity – Inbound	SQ	
F471061	Outbound Resp to RFQ – Addl Header		
F471071	Outbound Resp to RFQ – Addl Detail		
F47156	EDI Shipping Schedule Header – Outbound	MJ	
F47157	EDI Shipping Schedule Detail – Outbound	MY	
F4716	EDI – Item Text – Outbound/ Inbound	FZ	EDI Price/Sales Catalog Enhancement

File	File Description	Prefix	Explanation
F47HL	Hierarchical Configuration Definition	HL	
T30835	Temporary Cost Update	IE	
T4102	Temporary Item/branch master	IB	

Changed Physical Files

File	Current Key List	Previous Key List if Not a New File
F38014	DMCT, DMCS, DTO, ITM, PSR, PSRY, DES, DESY, EFTJ, EXDJ	DMCT, DMCS, DTO, ITM
F49582	BN01, MCUZ, DCCD	BN01, DCCD
F49584	BN01, MCUZ, DCCD, SEQN	BN01, DCCD, SEQN

New Logical Files

File	File Description	Key Fields
F38012LH	Agreement Management Source/ Destination	DP
F38012LI	Product Source/Destination Master – by Destination	DP
F4001ZLG	Batch Receiver File – Order Headings	SYEDOC, SYEDCT, SYEKCO, SYEDLN
F4011ZLC	Batch Receiver File – Order Details	SYEDOC, SYEDCT, SYEKCO, SYEDLN
F41500LE	LF – Tank Number	PP
F4211JA	Sales Order/Shipment Detail	SD/XD
F4211LU	LF – Ship ID, Ord#, Type, Co, Lin	SD
F4211LV	Sales Order Detail	ITM, MCU, RSDJ, DRQJ, UORG, DOCO, DCTO, LNID, AN8
F43099LD	LD – Order, Type, Key Co, Suffix, Line, Date, Time	PODOCO, PODCTO, POKCOO, POSFXO, POLNID, POUPMJ, POTDAY, PONLIN
F43121LN	LF – Tare SSCC, Ord#, Type, Co	PRPLT, PRDOCO, PRDCTO, PRKCOO, PRLNID, PRNLIN
F43121LO	LF – Pack SSCC, Ord#, Type, Co	PRPAK, PRDOCO, PRDCTO, PRKCOO, PRLNID, PRNLIN
F46027LA	New Logical for AWM Performance	AV

File	File Description	Key Fields
F46027LB	New Logical for AWM Performance	AV
F46027LC	New Logical for AWM Performance	AV
F46027LD	New Logical for AWM Performance	AV
F46027LE	New Logical for AWM Performance	AV
F46027LF	New Logical for AWM Performance	AV
F46029JA	New Join for AWM Performance	LP
F46029LA	New Logical for AWM Performance	LP
F46821LA	New Logical for AWM Performance	LX
F46821LB	New Logical for AWM Performance	LX
F47011LC	EDI PO Detail – Inbound	SYEDOC, SYEDCT, SYEKCO, SYEDLN (file format I4001Z)
F47012LC	EDI PO Detail – Inbound	SYEDOC, SYEDCT, SYEKCO, SYEDLN (file format I4011Z)
F47016LB	EDI Purchase Order Header – Outbound	SYDOCO, SYDCTO, SYKCOO, SYSFXO
F47017LA	EDI Purchase Order detail – Outbound	SZDOCO, SZDCTO, SZKCOO, SZSFXO, SZLNID
F47091LC	EDI Req for Quote Header – Inbound	SYEDOC, SYEDCT, SYEKCO, SYEDLN (file format I4001Z)
F47092LC	EDI Req for Quote Detail – Inbound	SYEDOC, SYEDCT, SYEKCO, SYEDLN (file format I4011Z)
F47136LB	EDI Purchase Order Change Header – Outbound	SYDOCO, SYDCTO, SYKCOO, SYSFXO
F47137LA	EDI Purchase Order Change Detail – Outbound	SZDOCO, SZDCTO, SZKCOO, SZSFXO, SZLNID
F49075LA	Product Mix	PM
F49584LA	Document Print Control – Document Dtl – batch, doc, sts, seq	DI
F49584LB	Document Print Control – Document Dtl – batch, doc, dccv, doc	DI
F49584LC	Document Print Control – Document Dtl – batch, doc, order keys	DI
T4102LA	Temporary Item/branch master	IB

File	File Description	Key Fields
T4102LB	Temporary Item/branch master	IB
T4102LC	Temporary Item/branch master	IB

Changed Logical Files

File	File Description	Key Fields (New Fields Underlined)
F4011ZLB	Batch Receiver File – Order Details	SZAN8, SZEDOC, SZEDCT, SZEKCO, SZEDLN
F4914LC	Trip Document Detail	BN01, MCUZ, SEQ, DCCD, VMCU, TRP, SHAN, DOCO, DCTO, KCOO, LNID

New Joined Logical Files

File	File Description	Prefix	Explanation
F4211JA	Sales Order Detail/Shipment Detail	SD, XD	UCC-128 Compliance

Obsolete Files

File	File Description	Explanation
F3911	Item Ledger Tag File	F4111
F3911JA	JF – F4111/F3911	F4111
F470821	EDI Price Sales Catalog Cost Info – Inbound	
F470871	EDI Price Sales Catalog Cost Info – Outbound	
F49090	Work Day Calendar – ECS	Replaced by F0007
F49110	Actual Trip Detail	Data was moved to F4911

Manufacturing System

Added Fields

File	Field Description	Data Item	Explanation
F0007	Planned/Scheduled Version	PSVE	Future Use
	Time of Day	TDAY	Repetitive Manufacturing
	Work Day Calendar Key	WDCK	Repetitive Manufacturing
	Work Day Calendar Type	WDCT	Repetitive Manufacturing
F0301	COA Print (Y/N)	SI02	Quality Management

File	Field Description	Data Item	Explanation
F30006	Alternate Work Center Ratio	AWCR	Future Use
	Process Blending Location	BFWC	Process Blending
	Capacity UOM	CAPU	Repetitive Manufacturing
	Completion Location	COLO	Process Blending
	Maximum Capacity	CPMA	Repetitive Manufacturing
	Minimum Capacity	CPMI	Repetitive Manufacturing
	Standard Capacity	CPSD	Repetitive Manufacturing
	Shift Code 4	DC4	Repetitive Manufacturing
	Shift Code 5	DC5	Repetitive Manufacturing
	Shift Code 6	DC6	Repetitive Manufacturing
	Flag for Future Use	FLD0	Future Use
	Flag for Future Use	FLD6	Future Use
	Flag for Future Use	FLD7	Future Use
	Flag for Future Use	FLD8	Future Use
	Flag for Future Use	FLD9	Future Use
	Foreman	FORE	Future Use
	Previous Product	ITML	Process Blending
	Work Center Type Flag	LIC	Repetitive Manufacturing
	Location Branch	LOMC	Repetitive Manufacturing
	Maintenance Supervisor	MAIN	Future Use
	Alternate Work Center	MCUL	Future Use
	Max Num of Parallel Machines	MXMA	Future Use
	Optimize (1/0)	OPTZ	Future Use
	Allow Overtime? (1/0)	OVER	Future Use
	Overtime Percentage Allowed	OVPT	Future Use
	Allow Parallel Machines (1/0)	PLMA	Future Use
	Parallel Machine Threshold	PMAT	Future Use
	QA Supervisor	QASU	Future Use
	Parallel Machine Threshold Type	THTP	Future Use
	Tooling Supervisor	TOSU	Future Use
	Work Day Calendar Key	WDCK	Repetitive Manufacturing
	Work Day Calendar Type	WDCT	Repetitive Manufacturing
	Work Center Efficiency Shift 2	WOE2	Future Use
	Work Center Efficiency Shift 3	WOE3	Future Use
	Work Center Efficiency Shift 4	WOE4	Future Use
	Work Center Efficiency Shift 5	WOE5	Future Use
	Work Center Efficiency Shift 6	WOE6	Future Use
	Work Center Utilization Shift 2	WOU2	Future Use
	Work Center Utilization Shift 3	WOU3	Future Use
	Work Center Utilization Shift 4	WOU4	Future Use
	Work Center Utilization Shift 5	WOU5	Future Use
	Work Center Utilization Shift 6	WOU6	Future Use
F30006 (Cont.)	Work HRS. Shift 2	WRH2	Repetitive Manufacturing
	Work HRS. Shift 3	WRH3	Repetitive Manufacturing
	Work HRS. Shift 4	WRH4	Repetitive Manufacturing
	Work HRS. Shift 5	WRH5	Repetitive Manufacturing
	Work HRS. Shift 6	WRH6	Repetitive Manufacturing
F30008	Work Center Branch	MMCU	Repetitive Manufacturing
F3002	Cost Type	COST	Future Use

File	Field Description	Data Item	Explanation
F30026	Level of Detail	LDA	Future Use
	Business Unit	MCU	Future Use
	Operation Sequence	OPSQ	Future Use
	Work Center Branch	WMCU	Repetitive Manufacturing
F3003	Alt Operation Sequence Number	ALOP	Future Use
	Alt Operation Sequence Number	AOPS	Future Use
	Capacity UOM	CAPU	Repetitive Manufacturing
	Replenishment Location	LOCN	Repetitive Manufacturing
	Resource Units Consumed	RUC	Repetitive Manufacturing
	Fixed Run Time	RUNF	Future Use
	Overlap Quantity	OLQT	Future Use
	Allow Parallel Machines (1/0)	PLMA	Future Use
	Setup Group	SETG	Future Use
	Setup Type	SETT	Future Use
	Work Center Branch	WMCU	Future Use
F3009	Classification Scheme 1	CAT1	Future Use
	Classification Scheme 2	CAT2	Future Use
	Classification Scheme 3	CAT3	Future Use
	Percent Bill Validations	PBVD	Process Blending
	Shift Code	SHFT	Repetitive Manufacturing
	Shift Code 2	SHF2	Future Use
	Shift Code 3	SHF3	Future Use
	Shift Code 4	SHF4	Future Use
	Shift Code 5	SHF5	Future Use
	Shift Code 6	SHF6	Future Use
	Status Code 1	SRS1	Repetitive Manufacturing
	Status Code 2	SRS2	Repetitive Manufacturing
	Status Code 3	SRS3	Future Use
	Status Code 4	SRS4	Future Use
	Status Code 5	SRS5	Future Use
	User Reserved Number	URAB	Repetitive Manufacturing
	User Reserved Amount	URAT	Repetitive Manufacturing
	User Reserved Code	URCD	Repetitive Manufacturing
	User Reserved Date	URDT	Repetitive Manufacturing
	User Reserved Reference	URRF	Repetitive Manufacturing
	Work HRS. Shift 2	WRH2	Repetitive Manufacturing
	Work HRS. Shift 3	WRH3	Repetitive Manufacturing
	Work HRS. Shift 4	WRH4	Repetitive Manufacturing
	Work HRS. Shift 5	WRH5	Repetitive Manufacturing
	Work HRS. Shift 6	WRH6	Repetitive Manufacturing
F3011	Cost Type	COST	Future Use

File	Field Description	Data Item	Explanation
F3013	Bubble Sequence	BSEQ	ECO
	Description	DSC1	ECO
	Feature Cost Percent	F$RP	ECO
	Default Component	FORV	ECO
	From Grade	FRGD	ECO
	From Potency	FRMP	ECO
	Required	FTRC	ECO
	Feature Planned Percent	FTRP	ECO
	Line Type	LNTY	ECO
	Lead-Time Offset Days	LOVD	ECO
	Optional/Standard/Feature	OPTK	ECO
	Unit Price	PRIC	ECO
	Partials Allowed	PRTA	ECO
	Percent of Scrap	SCRP	ECO
	Thru Grade	THGD	ECO
	Thru Potency	THRP	ECO
	Unit Cost	UNCS	ECO
F3102	Engineering Variance	ENGV	Repetitive Manufacturing
	Fixed or Variable Quantity	FORQ	WIP Revaluation
	Level of Detail	LDA	Future Use
	Business Unit	MCU	Future Use
	Branch/Plant	MMCU	WIP Revaluation
	Net Variance	NETV	Repetitive Manufacturing
	Other Variance	OTHV	Repetitive Manufacturing
	Planned Variance	PLNV	Repetitive Manufacturing
	Actual Variance	VACT	Repetitive Manufacturing
	Work Center Branch/Plant	WMCU	Future Use
F3111	Date Scheduled	CHRD	Future Use
	Shift Scheduled	CHRS	Future Use
	Time Scheduled	CHRT	Future Use
	Cost Type	COST	Future Use
	Simultaneous Issue and Receipt	POC	Repetitive Manufacturing
	Planned/Scheduled Version	PSVE	Future Use
	Time Requested	RQTI	Future Use
	Supplier for Receipt	VEND	Repetitive Manufacturing
F3111S	Date Scheduled	CHRD	Future Use
	Shift Scheduled	CHRS	Future Use
	Time Scheduled	CHRT	Future Use
	Cost Type	COST	Future Use
	Simultaneous Issue and Receipt	POC	Repetitive Manufacturing
	Planned/Scheduled Version	PSVE	Future Use
	Time Requested	RQTI	Future Use
	Supplier for Receipt	VEND	Repetitive Manufacturing

File	Field Description	Data Item	Explanation
F3112	Capacity UOM	CAPU	Repetitive Manufacturing
	Current Labor Hours	CLHR	WIP Revaluation
	Current Machine Hours	CMHR	WIP Revaluation
	Completed Time	COTI	Future Use
	Current Setup Hours	CSHR	WIP Revaluation
	Cost Type	COST	Configured costs SAR # 1223871. To store cost type from F3003. In order to create correct cost type in F3102 for configured items.
	Replenishment Location	LOCN	Repetitive Manufacturing
	Overlap Quantity	OLQT	Future Use
	Allow Parallel Machines (1/0)	PLMA	Future Use
	Planned/Scheduled Version	PSVE	Future Use
	Completion Date	RQTI	Future Use
	Resource Units Consumed	RUC	Repetitive Manufacturing
	Fixed Run Time	RUNF	Future Use
	Scheduled End Date	SEED	Future Use
	Scheduled End Shift	SEES	Future Use
	Scheduled End Time	SEET	Future Use
	Scheduled Start Date	SESD	Future Use
	Scheduled Start Shift	SESS	Future Use
	Scheduled Start Time	SEST	Future Use
	Setup Group	SETG	Future Use
	Setup Type	SETT	Future Use
	Start Date	STRT	Future Use
	Start Shift	STRX	Future Use
	Start Time	STTI	Future Use
	Work Center Branch/Plant	WMCU	Future Use

File	Field Description	Data Item	Explanation
F3112S	Capacity UOM	CAPU	Repetitive Manufacturing
	Current Labor Hours	CLHR	WIP Revaluation
	Current Machine Hours	CMHR	WIP Revaluation
	Completed Time	COTI	Future Use
	Current Setup Hours	CSHR	WIP Revaluation
	Cost Type	COST	Configured costs SAR # 1223871. To store cost type from F3003. In order to create correct cost type in F3102 for configured items.
	Replenishment Location	LOCN	Repetitive Manufacturing
	Overlap Quantity	OLQT	Future Use
	Allow Parallel Machines (1/0)	PLMA	Future Use
	Planned/Scheduled Version	PSVE	Future Use
	Completion Date	RQTI	Future Use
	Resource Units Consumed	RUC	Repetitive Manufacturing
	Fixed Run Time	RUNF	Future Use
	Scheduled End Date	SEED	Future Use
	Scheduled End Shift	SEES	Future Use
	Scheduled End Time	SEET	Future Use
	Scheduled Start Date	SESD	Future Use
	Scheduled Start Shift	SESS	Future Use
	Scheduled Start Time	SEST	Future Use
	Setup Group	SETG	Future Use
	Setup Type	SETT	Future Use
	Start Date	STRT	Future Use
	Start Shift	STRX	Future Use
	Start Time	STTI	Future Use
	Work Center Branch/Plant	WMCU	Future Use
F31122	Production Line	LINE	Repetitive Manufacturing
	Reason Code	RCD	Repetitive Manufacturing
	Standard Hours	STH	Repetitive Manufacturing
	User Reserved Number	URAB	Standard Field
	User Reserved Amount	URAT	Standard Field
	User Reserved Code	URCD	Standard Field
	User Reserved Date	URDT	Standard Field
	User Reserved Reference	URRF	Standard Field
F31122S	Production Line	LINE	Repetitive Manufacturing
	Reason Code	RCD	Repetitive Manufacturing
	Standard Hours	STH	Repetitive Manufacturing
	User Reserved Number	URAB	Standard Field
	User Reserved Amount	URAT	Standard Field
	User Reserved Code	URCD	Standard Field
	User Reserved Date	URDT	Standard Field
	User Reserved Reference	URRF	Standard Field

File	Field Description	Data Item	Explanation
F3209	Future Use	FLF1	Future Use
	Future Use	FLF2	Future Use
	Future Use	FLF3	Future Use
	Future Use	FLF4	Future Use
	Future Use	FLF5	Future Use
	Job Number	JOBN	Standard Field
	Program ID	PID	Standard Field
	Time Changed	TDAY	Standard Field
	Date Changed	UPMJ	Standard Field
	User Reserved Number	URAB	Standard Field
	User Reserved Amount	URAT	Standard Field
	User Reserved Code	URCD	Standard Field
	User Reserved Date	URDT	Standard Field
	User Reserved Reference	URRF	Standard Field
	User ID	USER	Standard Field
F3303	Planned/Scheduled Version	PSVE	Future Use
	Work Center Branch/Plant	WMCU	Future Use
F3311	Planned/Scheduled Version	PSVE	Future Use
	Requested Time	RQTI	Future Use
	Requested Shift	RSFT	Future Use
	Scheduled End Date	SEED	Future Use
	Scheduled End Shift	SEES	Future Use
	Scheduled End Time	SEET	Future Use
	Scheduled Start Date	SESD	Future Use
	Scheduled Start Shift	SESS	Future Use
	Scheduled Start Time	SEST	Future Use
	Start Shift	SSFT	Future Use
	Start Time	STTI	Future Use
	Work Center Branch/Plant	WMCU	Future Use

File	Field Description	Data Item	Explanation
F3312	Demand Order Type	DDOT	Future Use
	Demand Order Company	DKCO	Future Use
	Demand Order Line	DLLN	Future Use
	Demand Order Number	DORN	Future Use
	Next Operation Seq Number	NXOP	Future Use
	Operation Sequence Number	OPSQ	Future Use
	Planned/Scheduled Version	PSVE	Future Use
	Previous Operation Seq Number	PVSQ	Future Use
	Requested Time	RQTI	Future Use
	Requested Shift	RSFT	Future Use
	Scheduled End Date	SEED	Future Use
	Scheduled End Shift	SEES	Future Use
	Scheduled End Time	SEET	Future Use
	Scheduled Start Date	SESD	Future Use
	Scheduled Start Shift	SESS	Future Use
	Scheduled Start Time	SEST	Future Use
	Start Shift	SSFT	Future Use
	Start Date	STRT	Future Use
	Start Time	STTI	Future Use
	Total Move Hours	TMOH	Future Use
	Total Queue Hours	TQUH	Future Use
	Total Run Hours	TRUH	Future Use
	Total Setup Hours	TSEH	Future Use
	Total Wait Hours	TWAH	Future Use
	Work Order Freeze Code	UNCD	Future Use
	Work Center Branch/Plant	WMCU	Future Use
F3313	Planned/Scheduled Version	PSVE	Future Use
	Start Shift	SSFT	Future Use
	Start Time	STTI	Future Use
	Work Center Branch/Plant	WMCU	Future Use
F33133	Planned/Scheduled Version	PSVE	Future Use
F3400	Forecast Version	FVER	Future Use
F3403	Branch Relationship Type	BRTP	Branch/Plant Relationships
	Sales Catalog Section	SRP1	Branch/Plant Relationships
F3411	Production Line	LINE	Repetitive Manufacturing
	Planned/Scheduled Version	PSVE	Future Use
	Recommended Complete Time	RDCT	Future Use
	Recommended Start Time	RDST	Future Use
	Requested Shift Time	RQTI	Future Use
	Requested Shift Code	RSFT	Future Use
	Start Shift	SSFT	Future Use
	Start Time	STTI	Future Use

File	Field Description	Data Item	Explanation
F3412	Scheduled Required Date	CHRD	Future Use
	Scheduled Required Shift	CHRS	Future Use
	Scheduled Required Time	CHRT	Future Use
	Demand Order Type	DDOT	Future Use
	Demand Order Company	DKCO	Future Use
	Demand Order Line	DLLN	Future Use
	Demand Order Number	DORN	Future Use
	Order Company	KCOO	Future Use
	Order Line	LNID	Future Use
	Operation Sequence Number	OPSQ	Future Use
	Order Quantity	ORQT	Future Use
	Parent Order Quantity	PAQT	Future Use
	Processed Flag	PRFL	Future Use
	Planned/Scheduled Version	PSVE	Future Use
	Related Order Quantity	ROQT	Future Use
	Related Order Sequence Number	ROSQ	Future Use
	Requested Shift Code	RSFT	Future Use
	Requested Time	TQTI	Future Use
	Freeze Code	UNCD	Future Use
F3413	Planned/Scheduled Version	PSVE	Future Use
	Start Shift	SSFT	Future Use
	Start Time	STTI	Future Use
F3430	Supplier Address Book	AN8	Repetitive Manufacturing
F3460	Forecast Version	FVER	Future Use
F4101	Simultaneous Issue and Receipt	AVRT	Repetitive Manufacturing
	Simultaneous Issue and Receipt	POC	Repetitive Manufacturing
F4102	Simultaneous Issue and Receipt	AVRT	Repetitive Manufacturing
	Simultaneous Issue and Receipt	POC	Repetitive Manufacturing
F41001	Quality Management	OT4Y	Quality Management
F4801	Production Line	LINE	Repetitive Manufacturing
	Schedule Frequency	MWDH	Repetitive Manufacturing
	Internal Lead Time	PSDJ	Future Use
	Schedule Spread	SCSP	Repetitive Manufacturing
	Shift Code	SHFT	Repetitive Manufacturing
	Serialized Component Flag	SRCN	To flag production documents that have a serialized component (this was previously flagged with '99' in WAURCD, SAR #1370433).

Changed Fields

File	Field Description	Data Item	Explanation
F13411	Forecast Type	TPYF	Changed field size from 2 to 8
F13411LA	Forecast Type	TPYF	Changed field size from 2 to 8
F3293	Derived Calculation	DERC	Change field size to 120
F30UI003	Revision Number	RVNO	Changed field size from 2 to 3
F3002	Revision Number	RVNO	Changed field size from 2 to 3
F3002LE	Revision Number	RVNO	Changed field size from 2 to 3
F3011	Revision Number	RVNO	Changed field size from 2 to 3
F3400	Forecast Type	TPYF	Changed field size from 2 to 8
F3400LA	Forecast Type	TPYF	Changed field size from 2 to 8
F3400LB	Forecast Type	TPYF	Changed field size from 2 to 8
F3400LC	Forecast Type	TPYF	Changed field size from 2 to 8
F3400LD	Forecast Type	TPYF	Changed field size from 2 to 8
F34006	Forecast Type	TPYF	Changed field size from 2 to 8
F34006LA	Forecast Type	TPYF	Changed field size from 2 to 8
F34006LB	Forecast Type	TPYF	Changed field size from 2 to 8
F3460	Forecast Type	TPYF	Changed field size from 2 to 8
F3460LA	Forecast Type	TPYF	Changed field size from 2 to 8
F3460LB	Forecast Type	TPYF	Changed field size from 2 to 8
F3460LC	Forecast Type	TPYF	Changed field size from 2 to 8
F3460LD	Forecast Type	TPYF	Changed field size from 2 to 8
F3460LE	Forecast Type	TPYF	Changed field size from 2 to 8
F4101	Revision Number	RVNO	Changed field size from 2 to 3
F4101JB	Revision Number	RVNO	Changed field size from 2 to 3
F4101JC	Revision Number	RVNO	Changed field size from 2 to 3
F4101JD	Revision Number	RVNO	Changed field size from 2 to 3
F4101JE	Revision Number	RVNO	Changed field size from 2 to 3
F4101LE	Revision Number	RVNO	Changed field size from 2 to 3
F41019	Revision Number	RVNO	Changed field size from 2 to 3

File	Field Description	Data Item	Explanation
F47062	Forecast Type	TPYF	Changed field size from 2 to 8
F47062LA	Forecast Type	TPYF	Changed field size from 2 to 8
F47066LZ	Forecast Type	TPYF	Changed field size from 2 to 8
F47067	Forecast Type	TPYF	Changed field size from 2 to 8
F47067LA	Forecast Type	TPYF	Changed field size from 2 to 8

Deleted Fields

File	Field Description	Data Item	Replaced By
F3111	Beginning Time	PBTM	
F3112	Beginning Time Ending Time	PBTM PETM	
F31122	Reason Code	REAC	RCD

New Physical Files

File	File Description	Prefix	Key Fields
F3016	Kanban Master	KM	KID1
F30161	Kanban Card Detail	KD	KID1, #CDN
F3109	Line/Item Relationship	IP	
F31091	Quantity Detail	IQ	DOCO, DCTO, MMCU, ITM, SESD, SHFT
F3701	Test Definition Master	QA	
F3702	Specification Definition Master	QS	
F37021	Specifications Detail	QD	
F3703	Non-Conforming Material Master	QE	
F3711	Test Results	TR	
F37900	Certificate of Analysis Extract	TR	
F40318	Preference Profile – Quality Management	QC	AN8, CS18, ITM, IT18, EXDJ, UOM, MXQ, OSEQ, MCU
T30835	Temporary Cost Update	IE	
T3711W	Test Results – Work File	QR	

New Logical Files

File	File Description	Key Fields
F0007LC	Shop Floor Calendar	MMCU, CTRY, YR, MT, WDCK, SHFT, WDCT
F30006LB	Work Center Master	MMCU, MCU
F3002LQ	Bill of Materials	TBM, KIT, BQTY, ITM, CPNT, EFFF
F3007LD	Work Center Resource Units	MMCU, MCU, YR, MT, UM, SHFT
F3013LI	ECO	TIC, ECPR, ITM, MMCU, TBM, BQTY, EFFF
F3013LJ	ECO	TIC, ECPR, ITM, EFFF
F3013LK	ECO	DOCO, PSQ, CPNT
F3013LL	ECO	TIC, ECPR, ITM, TBM, BQTY, MMCU
F3013LM	ECO	ECPR, MMCU, ITM, TBM, BQTY, EFFF, TRV
F3016LA	Kanban Master	ITM, MMCU, TLOC, LOCN, MCU, KID1
F3016LB	Kanban Master	ITM, LOCN, MCU, TLOC, MMCU, KID1
F3016LC	Kanban Master	TLOC, MMCU, LOCN, MCU, ITM, KID1
F3016LD	Kanban Master	LOCN, MCU, TLOC, MMCU, ITM, KID1
F3016LE	Kanban Master	AN8
F3016LF	Kanban Master	DOCO, DCTO
F3102LB	Production Costs Master	DOCO, ITM, MMCU, OPSQ, FORQ, UOM
F31091LA	Schedule Quantity Detail	MMCU, LINE, SESD, LITM
F31091LB	Schedule Quantity Detail	MMCU, DOCO, SESD, SHFT
F31091LC	Schedule Quantity Detail	MMCU, LINE, DCTO, SESD, LITM
F31091LD	Schedule Quantity Detail	MMCU, LINE, LITM, DOCO, SESD
F31091LE	Schedule Quantity Detail	MMCU, LINE, DCTO, LITM, DOCO, SESD
F31091LF	Schedule Quantity Detail	MMCU, LINE, SESD, SHFT, OPSQ, WR04, WR05, WR06
F31091LG	Schedule Quantity Detail	MMCU, LINE, DCTO, LITM, DOCO, SHFT, SESD
F31091LH	Schedule Quantity Detail	MMCU, LINE, SHFT, SESD, LITM
F31091LI	Schedule Quantity Detail	MMCU, LINE, DCTO, SHFT, SESD, LITM
F31091LJ	Schedule Quantity Detail	MMCU, LINE, SHFT, LITM, DOCO, SESD

File	File Description	Key Fields
F31091LK	Schedule Quantity Detail	MMCU, LINE, DCTO, SHFT, LITM, DOCO, SESD
F3109LA	Line/Item Relationship Master	ITM, MMCU, LINE
F3109LB	Line/Item Relationship Master	ITM, MMCU (ONLY DFVL = '1')
F3109LC	Line/Item Relationship Master	MMCU, ITM, LINE
F3111LI	Shop Floor Control Parts List	DOCO, CPIT, CMCU, OPSQ, FORQ, UM
F3111LJ	Shop Floor Control Parts List	CPIT, DRQJ
F31122LH	Work Order Time Transactions	MMCU, MCU, DOCO, OPSQ, UPMJ, SHFT, TDAY
F31122LI	Work Order Time Transactions	MMCU, LINE, DOCO, OPSQ, UPMJ, SHFT, TDAY
F31122LJ	Work Order Time Transactions	MMCU, KIT, DOCO, OPSQ, UMPJ, SHFT, TDAY
F31122LK	Work Order Time Transactions	DOCO, OPSQ, UMPJ, SHFT, TDAY
F31122LL	Work Order Time Transactions	YST, DOCO, DCTO, DGL, SHFT, OPSQ
F31122LO	Work Order Time Transactions	YST, AN8, DGL, DOCO, OPSQ, TYR
F3112LL	Shop Floor Control Routing Instructions	KIT, STRT
F3112LN	Shop Floor Control Routing Instructions	DOCO, STRT
F3112LO	Shop Floor Control Routing Instructions	DOCO, DRQJ
F3112LP	Shop Floor Control Routing Instructions	STRT
F3112LQ	Shop Floor Control Routing Instructions	DRQJ
F3112LR	Shop Floor Control Routing Instructions	LINE, STRT
F3112LS	Shop Floor Control Routing Instructions	LINE, DRQJ
F3460LE	Forecast Master	ITM, DRQJ
F3701LA	Test Definitions Master	QTST, MCU
F37021LA	Specifications Detail	QSPC, MCU, QREV, QTST, MCU2
F37021LB	Specifications Detail	QTST, MCU, QREV

File	File Description	Key Fields
F3702LA	Specifications Definition Master	QSPC, MCU, QREV, EFFF
F3702LB	Specifications Definition Master	QSPC, QREV, MCU, EFFF
F3711LA	Test Results	DOCO, DCTO, KCOO, LOTN, TRSRT
F3711LB	Test Results	QTST, ITM, MCU2, MCU
F3711LC	Test Results	QTST, MCU
F3711LD	Test Results	LOTN, ITM, MCU, RSQQ
F3711LE	Test Results	ITM, MCU, LOTN, QTST, MCU2
F3711LF	Test Results	LOTN, ITM, MCU, TSRT
F3711LG	Test Results	TRP, MCU, LCMP, RSQQ, TSRT
F3711LH	Test Results	TRP, MCU, LCMP, QTST, MCU2
F3711LI	Test Results	DOCO, DCTO, KCOO, LNID, RSQQ
F40318LA	Preference Profiles – Quality Management	AN8, CS18, ITM, IT18, EXDJ, UOM, MXQ, OSEQ, MCU, TSRT
F40318LB	Preference Profiles – Quality Management	QTST, MCU
F40318LC	Preference Profiles – Quality Management	ITM
F37900LA	Certificate of Analysis Extract	ITM, MCU, LOTN, QTST, MCU2
F37900LB	Certificate of Analysis Extract	TRP, MCU, LMCP, QTST, MCU2
F37900LC	Certificate of Analysis Extract	QTST, ITM, MCU, LOTN
F37900LD	Certificate of Analysis Extract	DOCO
F47156LA	EDI 862 Header	EDST
F47156LB	EDI 862 Header	DOCO, DCTO, KCOO, SFXO
F47157LA	EDI 862 Detail	DOCO, DCTO, KCOO, SFXO, LNID

Changed Logical Files

File	File Description	Key Fields (New Fields Underlined)
F30006LA	Production Cost Master	DOCO, PART, MMCU, ITM, COST
F30008LA	Work Center Master	MCUW, MMCU, MCU
F3007LA	Work Center Rates	MMCU, MCU, LEDG

File	File Description	Key Fields (New Fields Underlined)
F3007LB	Work Center Resource Units	MMCU, MCU, YR, MT, UM, SHFT
F3102LA	Work Center Resource Units	MMCU, MCU, UM, SHFT, YR, MT
F3112LA	W.O. Routing	DOCO, OPSQ, OPSC, MCU, WMCU

New Joined Logical Files

File	File Description	Prefix	Explanation
F3102J	Production Costs Temporary Join	IG	Join of T30835, F4801, and F3102 for WIP revaluation

Obsolete Files

File	File Description	Explanation
F3104	Rate Master	Repetitive Manufacturing
F3114	Rate Transactions	Repetitive Manufacturing
F3460LC	Forecast Master	Deleted Year field for Y2K

Distribution System Changes

This chapter describes changes made to the Distribution system.

Barcode Enhancement for Selected Reports

This project will add barcode capability to selected reports. By doing so, clients will be able to record their activities more accurately and more quickly.

The programs affected by this enhancement will be Stock Tags, Inventory Count Sheet, Pick Slips Print, Purchase Receivers Print, Print Simple Work Order, Equipment Work Order Print, and Work Order Generation. Other programs in the Warehouse Management System, such as Movement Slips and Move Tags, will be supported as well.

The major changes to these reports will include new processing options for barcodes. The user also will have a choice of which symbology to use.

Map of Specifications

Program	Description	Batch/ Interactive	Type	New/ Changed
P31410	Print Pick List	Batch	Print	Changed
P41410	Inventory Count Sheets	Batch	Print	Changed
P41531	Stock Tags	Batch	Print	Changed
P42520	Print Pick Slips	Batch	Print	Changed
P43510	Print Purchase Receivers	Batch	Print	Changed
P48415	Print Work Orders	Batch	Print	Changed
P48425	Print Pick List	Batch	Print	Changed

Form/ Menu Report	Description	Type	New/ Changed
R31410	Work Order Exception Report	Print	Changed
R41410	Inventory Count Sheet	Print	Changed
S41531	Stock Tags	Print	Changed
R42520	Pick Slips Print	Print	Changed
R43510	Purchase Receivers Print	Print	Changed
R48415	Print Simple Work Order	Print	Changed
R48425	Equipment Work Order Print	Print	Changed

Compile Specifications for Barcoded Printer Files (Example)

```
4872                    Create Printer File (CRTPRTF)

 Type choices, press Enter.

 File . . . . . .   R41410      Name
   Library  . . . .   PGXOBJ73    Name, *CURLIB
 Source file  . . .   JDESRC      Name, *NONE
   Library  . . . .   PGXSRC73    Name, *LIBL, *CURLIB
 Source member  . .   R41410      Name, *FILE
 Generation severity level  . .   20         0-30
 Flagging severity level  . . .   0          0-30
 Device:
   Printer  . . . .   *JOB       Name, *JOB, *SYSVAL
 Printer device type  . . . . .   *IPDS      *SCS, *IPDS, *USERASCII...
 Text 'description' . . . . . .   *SRCMBRTXT

                                                                    Bottom
 F3=Exit   F4=Prompt   F5=Refresh   F10=Additional parameters   F12=Cancel
 F13=How to use this display        F24=More keys
```

```
4872                    Create Printer File (CRTPRTF)

Type choices, press Enter.

                          Additional Parameters

Source listing options . . . . .   _________     8SRC, *NOSRC, *SOURCE...
              + for more values     _________
Page size:
  Length--lines per page . . . .    51          .001-255.000
  Width--positions per line  . .    198         .001-378.000
  Measurement method . . . . . .    *ROWCOL     *ROWCOL, *UOM
Lines per inch . . . . . . . . .    6           6, 3, 4, 7.5, 7,5, 8, 9, 12
Characters per inch  . . . . . .    15          10, 5, 12, 13.3, 13,3, 15...
Front margin:
  Offset down  . . . . . . . . .    *DEVD       0-57.790, *FRONTMGN, *DEVD
  Offset across  . . . . . . . .    _________   0-57.790

                                                                      More...
F3=Exit   F4=Prompt   F5=Refresh   F12=Cancel   F13=How to use this display
F24=More keys
```

```
                        Create Printer File (CRTPRTF)

Type choices, press Enter.

Back margin:
  Offset down  . . . . . . . . .    *FRONTMGN   0-57.790, *FRONTMGN, *DEVD
  Offset across  . . . . . . . .    _________   0-57.790
Overflow line number . . . . . .    47          1-255
Fold records . . . . . . . . . .    *NO         *NO, *YES
Unprintable character action:
  Replace character  . . . . . .    *YES        *YES, *NO
  Replacement character  . . . .    ' '         40-FE, ' '
Align page . . . . . . . . . . .    *NO         *NO, *YES
Control character  . . . . . . .    *NONE       *NONE, *FCFC
Channel values:
  Channel  . . . . . . . . . . .    *NORMAL     *NORMAL, 1, 2, 3, 4, 5, 6...
  Line number for channel:
  Line . . . . . . . . . . . . .    _______     1-255
              + for more values _
Fidelity . . . . . . . . . . . .    *CONTENT    *CONTENT, *ABSOLUTE

                                                                      More...
F3=Exit   F4=Prompt   F5=Refresh   F12=Cancel   F13=How to use this display
F24=More keys
```

```
                        Create Printer File (CRTPRTF)

Type choices, press Enter.

Coded font . . . . . .   *FNTCHRSET     Name, *FNTCHRSET
  Library  . . . . . .                  Name, *LIBL, *CURLIB
Degree of page rotation  . . . .  90    *AUTO, *DEVD, *COR, 0, 90...
Pages per side . . . . . .  1           1-4
Reduce output  . . . . . .  *TEXT       *TEXT, *NONE
Print text . . . . . .  *JOB
Hardware justification . . . . .  0     0, 50, 100
Print on both sides  . . . . . .  *NO   *NO, *YES, *TUMBLE
Unit of measure  . . . . . .  *INCH     *INCH, *CM
Front side overlay:
  Overlay  . . . . . .  *NONE           Name, *NONE
    Library  . . . . . .                Name, *LIBL, *CURLIB
  Offset down  . . . . . .              0-57.790
  Offset across  . . . . . .            0-57.790



                                                                    More...
F3=Exit   F4=Prompt   F5=Refresh   F12=Cancel   F13=How to use this display
F24=More keys
```

Lot Number Conversion for Century Compliance (SAR #1401789)

Clients who use lot processing types 1 or 5 for generating date specific lot numbers or serial numbers will need to run this conversion. The date-generated lot number uses a year, month, day, and next number format for the lot number. This lot number is not century-specific.

Criteria for Running Conversion

You will need to run this job to convert existing data (year, month, day, and next number lot number) to a century-specific format. To do this, the century will be added as a prefix to all existing lot number data in the system. For example, the lot number 9612310001 will be converted to 199612310001.

Conversion Specifications

You will need to specify the library that contains the Lot Master file (F4108) that will be used to drive the data conversion through all the files that contain log number. You then will need to specify the libraries that contain the data you want the driving library and Lot Master file to convert. Generally, production data is stored in one library.

For this scenario, you will specify the production library for both the F4108 library in processing option 1 and for the first library in processing option 2.

NOTES:

- If you do not have any items that use lot processing type 1 or 5, you do not need to run this conversion.
- If the client chooses to use lot processing type 1 or 5, you may not need to run this conversion after this Cumulative Update has been installed. Contact Customer Support (1-800-289-2999) for more information about the conversions and the issues surrounding this conversion.
- Please see further Customer Support for a more detailed explanation of the conversions and the issues surrounding this conversion. The Customer Support phone number is 1-800-289-2999.
- The user must have QSECOFR authority to run this conversion job.

UCC-128 Compliance Enhancement (SAR #1242263)

Historically, retailers have required that their suppliers receive electronic purchase orders and send electronic invoices. This has resulted in much greater efficiency for the retailer and supplier.

In recent years, most large retailers have been moving toward Quick Response (QR) and Just-In-Time (JIT) environments to reduce cycle times, limit inventory size, and increase profitability. Purchasing and Receiving are most commonly targeted as areas where automation can help achieve these aims. To achieve these goals (and to be recognized as a trading partner by the retailer), suppliers have been asked to contribute to the automation process by providing Advance Ship Notice (EDI 856 Ship Notice/Manifest) EDI Transactions and by barcoding shipments by using the UCC-128/EAN serialized shipping container labels. This combination (Advance Ship Notice [ASN] and the serialized shipping container label) is known in the retail industry as UCC-128 Compliance.

An ASN is an EDI document sent by the supplier when goods are shipped. It tells the retailer exactly what was shipped as well as how it was shipped. This EDI transaction, when combined with a barcoded, serialized shipping container label (applied by the supplier before shipment), can automate many aspects of the receipt process for the retailer. When the shipping label is scanned (as the goods are received by the retailer), the labeled unit is matched automatically to the EDI 856 Ship Notice/Manifest Appropriate internal transaction records are generated.

The UCC-128 Compliance enhancement (SAR #1242263) addresses the changes to the J.D. Edwards Distribution system that the supplier and retailer need in order to comply with the UCC-128 standard.

Route Type Code (ROTP)

This new data element was added to provide for additional routing types within the receipt routing process. Only one route is currently available per supplier/item relationship. This type code was added to allow for multiple route types for a particular supplier/item relationship. The UCC-128 Compliance and Transfer Orders to Receipt Routing enhancements created the need for multiple route types. The two route types added for these enhancements are ASN and Transfer Order.

BCRC – Base Company Currency Code

This field has been added to the F4311, F4301, F43199, F43121, F4343, and F43800 files. BCRC will be used by OneWorld to determine display decimals on videos and reports.

Affected Programs

Any program that writes to files that contain the BCRC field.

Implementation Steps for F4301

- If currency is off, BCRC is blank.
- If currency is on, the program must locate the MCU in the Business Unit Master File (F0006) to find the company (CO field) because the F4301 does not contain the CO field. Then the program will find the company in the Company Constants file (F0010) to load the Company Currency field (CRCD) to BCRC.

Implementation Steps for All Other Files

- If currency is off, BCRC is blank.
- If currency is on, load the Company Currency field (CRCD) to BCRC.

Meter Reading on Bulk Delivery Confirm (Milk Run)

Users want to be able to specify the meter readings on a Milk Run trip when delivered (Bulk Delivery Confirmation for Milk Run). Currently, the Bulk Delivery Confirmation program has the meter reading fields in the fold area, but they are just informational. The quantity delivered will be calculated based on these meter readings. Also, should the ending meter reading be less than the beginning reading, it is assumed that the meter rolled over. This logic was included into the calculation of quantity delivered.

Map of Specifications

Program	Description	Batch/ Interactive	Type	New/ Changed
P49711	Bulk Delivery Confirmation – Milk Run	Interactive	Maint.	Changed

Order-Centric Delivery Confirmation

Users want to be able to specify how much of a particular order was delivered at Bulk Delivery Confirmation. Currently, the Bulk Delivery Confirmation program is a compartment-centric program. However, the compartment that an order was assigned to is not important at Bulk Delivery Confirmation. What is important is the actual quantity that was delivered on a particular order regardless of compartment. The only time the compartment quantities are important is when there is left-on-board quantities after delivery confirmation. The following example shows how it is inconvenient to have a compartment-centric Bulk Delivery Confirmation.

Order #11764 S3 1000 LT
Order #17765 S3 1000 LT
Trip #76

Order Number	Trip Number	Compartment Number	Quantity	UM
11764	76	1	250	LT
11764	76	2	250	LT
11764	76	3	500	LT
11765	76	1	1000	LT

From the table, order number 11764 is assigned to compartments 1 through 3, and order number 11765 is assigned to compartment 3. The following shows what the Bulk Delivery Confirmation form looks like.

```
49710             Confirm Bulk Delivery          Confirming Depot       DEPOT1
                                                 Delivery Date. . . . 11.06.96
Depot. . . . . .      DEPOT1                     UOM Classification . V LT
Trip Number. . .        76          75 Load Confirmed
or Order Number.                 S3
Contractor . . .       249 Model Energy & Chemical Company

Cmprt Product  ....................Order Number/Type ..................
 Num  Number    11764/S3    11765/S3
    1    70640        250
    2    70640        250
    3    70640        500        1000









   F6=Dlvr Cnfrm  F15=Record Cust. Payments  F16=Trip Worksheet Data  F24=More
```

From the screen, it is difficult to see the total order quantity for a particular order. The user needs to add up a column to determine the order quantity. If only 750 LT were delivered for order 11764, the user would have difficulty seeing and updating the whole order quantity.

Map of Specifications

Program	Description	Batch/ Interactive	Type	New/ Changed
P49710W	Bulk Delivery Confirmation Window	Interactive	Maint.	New
P49710	Bulk Delivery Confirm	Interactive		Changed
P4911X	Trip Detail Conversion	Batch		New
P49110X	Actual Trip Detail Conversion	Batch		New
P49510	Bulk Load Confirmation	Interactive		Changed
P49510W	Bulk Load Confirmation Window	Interactive		Changed
P49572	Upload Gantry Data	Interactive		Changed
P49731	Mass Confirmation Batch Process	Batch		Changed
P49911	Purge Trip Files	Batch		Changed
XT49799	Load and Delivery Transaction Server	Interaction		Changed

Program	Description	Batch/ Interactive	Type	New/ Changed
P415403	Throughput Reconciliation Report	Batch		Changed
P49620	Bulk Invoice	Batch		Changed
P49730	Mass Delivery Confirmation	Interactive		Changed

Form/ Menu Report	Description	Type	New/ Changed
F49110	Actual Trip Detail	PF	Obsolete
F49110LA	Actual Trip Detail LF	LF	Obsolete
F4911	Trip Detail	PF	Changed
F4911LA	LF – By Depot, Order #, Doc Type, Key Co	LF	Recompile
F4911LB	LF – By Depot, Trip #	LF	Recompile
F4911LC	LF – By Depot, Contractor #	LF	Recompile
F4911LD	LF – By Order Number, Order Type, Key Co	LF	Recompile
F4911LE	LF – Business Unit, Trip, Vehicle ID	LF	Recompile
F4911LF	LF – By Depot, Trip, Comp, Order/Type, K	LF	Recompile
F4911LG	LF – By Depot, Trip #	LF	Recompile
F4911LH	LF – By Order Number, Order Type, Key Co	LF	Recompile

Database Specifications

Actual Trip Detail (F49110)

File Prefix – TA

This file will become obsolete in A8.

LF – Depot, Trip, Order#, Order Type, Doc Cmp, Line# (F49110LA)

File Prefix – TA

This file will become obsolete in A8.

Trip Detail (F4911)

File Prefix – TD

Add the following fields to the Trip Detail file.

Field Name	Data Item	Type	Size	Primary Key	New Y/N	Notes
Actual Ambient	AABR	P	15	No	Y	N/A
Stock Total	STOK	P	15	No	N	N/A
Actual Weight	AWGT	P	15	No	Y	N/A
Dispatch Type	DATY	A	1	No	N	N/A
Adjust Actuals	ADST	A	1	No	N	N/A

UDC Information

UDC	Code	System	Type	Size	New Y/N	Hardcoded Y/N	Notes
RT	47	49	A	2	Y		On-board Adjustment
RT	57	49	A	2	Y		On-board Adjustment

Batch Bulk Load Confirm

This enhancement will let the users run the load-confirm process in batch mode. The program is driven by DREAM Writer. It lets the user enter the trips or orders to be load-confirmed.

This new program performs the same processes that the interactive Bulk Load Confirm does. The program is driven by DREAM Writer, and it can be run in proof or final mode. The proof version generates an error report and performs no file updates. The final version will generate an error report, and will perform file updates for those trips/orders that passed all validations and edits.

The DREAM Writer allows the flexibility of choosing the trips, or the sales orders to load-confirm. Whether you are load-confirming trips or orders will be based on a processing option. Delivery confirmation will be done to orders only. The trips will have to be delivery-confirmed through the interactive program.

Because there is no area to input 'quantity loaded', it is assumed that the quantity shipped will be the same as the quantity loaded. Also, all defaults will be used for the values of temperature, density, density type, and so forth. If the user wants to load-confirm an order/trip with values other than the defaults, each order/trip will have to be load-confirmed individually through the current interactive version of the program.

Map of Specifications

Program	Description	Batch/ Interactive	Type	New/ Changed
P49515	Batch Bulk Load Confirm	Batch		New

Processing Options	Description	Data Item	Default
1	Enter the incoming Trip Status range to process (Required) – From (Required) – To	TRPS	
2	Enter the incoming Next Order Status range to process (Required) – From (Required) – To	NXTR LTTR	
3	Enter Screen Defaults for the following fields: Depot Delivery Date Load Date Sales Order Type	VMCU PDDJ LOAD DCTO	
4	Enter the owner number to be used as a default for tanks commingled for duty when the duty status indicates that duty is paid.	AN8	
5	Enter the owner number to be used as a default for tanks commingled for duty when the duty status indicates that duty is NOT paid.	AN8	
6	Enter the tolerance that is allowed for the load quantity variances. The value entered here is treated as quantity to calculate the upper and lower limits. + Upper Limit – Lower Limit	#TOL #TOL	
7	Enter 1 to Load confirm by Order. Blank will default to Confirm by Trip only.	CONF	
8	Enter the mode for processing: *blank* Proof Mode 1 Final Mode	UPDT	

Processing Options	Description	Data Item	Default
9	Enter 1 to NOT check for the number of seals required. Blank will print an error message on the report if the seals are required.	SEAL	
	ENTER THE DREAM WRITER VERSION FOR THE FOLLOWING PROGRAMS:		
10	Delivery Confirmation P49710		ZJDE0001
11	Transportation Trans. Server XT49799		ZJDE0001
12	Additional S/O Info-Aviation/Marine P49510A		ZJDE0001

Lot Number Entry at Load Confirm

User wants to be able to enter a lot number when a sales order is load-confirmed. This would be the same functionality that the base package inventory ship-confirm now contains. The lot number will be entered at load-confirm and will commit by the lot number for each confirmed item.

Map of Specifications

Program	Description	Batch/ Interactive	Type	New/ Changed
P49510	Bulk Load Confirmation	Interactive	Maint.	Changed

Journal Entry Generation with Receipt Routing (SAR #1326483)

Journal entry processing in receipt routing was enhanced to allow journal entries at any step within a route. The enhancement also provides the ability to designate any step as the operation at which the order is eligible for payment. With this added functionality, it will be possible to eliminate the extensive time lage that potentially could occur between liability transfer and representation on the general ledger. This will allow for more timely order payments, and will make it possible to accurately recognize the value of inventory in receipt routes.

This enhancement required few database changes. Journal entry fields for the general ledger were added to the Receipt Routing Ledger file (F43199) to adequately record information for journal entries created at a particular point of item processing along the receipt route.

The added fields include:

Field Name	Description	Size
PPKCO	Document Company	5
PPDOC	Document Number	8
PPDCT	Document Type	2
PPDGL	G/L Date	6

Multiple General Ledger Distribution on a Purchase Order Line

The Purchase Order System was enhanced (SAR #631048) to allow multiple accounts in the general ledger to be attached to a single purchase order line. The enhancement also supports the multiple accounts through the distribution process (order, commitment, receipt, and voucher processing). Changes include adding two files, and adding a new data dictionary item (MACT) to existing files.

Purchase Order Multiple Account File (F4316)

This file supports individual multiple account entries, and determines how the original purchase order line will be distributed.

Model Purchase Order Multiple Account Model File (F4316M)

This file allows the definition of pre-defined multiple account entries.

Multiple Accounts Flag (MACT)

This new data dictionary item should allow only a value of '1' if multiple account records in F4316 are attached to the purchase order line.

Manufacturing System Changes

This chapter describes changes made to the Manufacturing system.

Manufacturing Accounting

Work Order Over/Under Completion

This enhancement supplies an alternative method for calculating production variances based on the completed plus scrapped parent quantities. This eliminates variances caused by over/under completion.

Modifications were made to minimize interruptions to existing client implementations. The enhancement will let each customer choose either to maintain the current method of calculating "other variances" or to apply the new method.

The solution includes:

- Restating standard, current, and planned production costs based on the reported quantities completed and scrapped instead of the original work order quantity
- The option to allow customers to continue using the current calculation of "other variances"
- Adding a single field (FORQ) to file F3102 to indicate whether component cost is fixed or variable
- Incorporation into the existing Manufacturing Variance program (P31804)

Work-In-Process (WIP) Revaluation

WIP Revaluation will provide an automated method for recording cost-change effects on WIP and generating the corresponding journal entries. Modifications were made to minimize disruptions to existing client implementations. The enhancement lets customers choose either to maintain the current method of updating frozen costs or to adjust WIP balances automatically.

The solution includes the following functionality:

- Ability to revalue WIP when a cost update is performed by revaluing active work orders for items that have changed costs, including adjusting inventory values and generating journal entries.
- Allowing customers to maintain current procedures (optional based on a processing option).
- Modification of file F3102 to include the component and production order branch (MMCU). This allows interbranch costs to be handled appropriately.
- A new program (P30837) and work file (T03835) were created for revaluation.
- A new join file (F3102J) is used to select active production orders (F4801 WAPPFG = '1') that use items with new costs (T30835) for which work in process exists (F3102).
- Minor changes to the cost update program (P30835) were needed in order to create the work file (T30835) to be used by the new WIP Revaluation program.
- The work order routing file (F3112) was changed to include current hours by operation sequence. This file will be the basis for re-calculating labor, machine, and overhead costs by using the new work center rates. This file will not be converted because there is no certainty that the routing values will match those at the time the work order was created. Therefore, these fields will be zero for existing work orders. This will make the re-calculation of current Bx and Cx costs impossible. We recommend that open work orders be run through accounting variances and closed before the new release is implemented.

Repetitive Manufacturing

Several changes due to the Repetitive Manufacturing project will also affect work order cost accounting:

- The Manufacturing Variance program (P31842) will be obsoleted in release A8.1. Accounting for repetitive production will be handled by the work order programs P31802 and P31804 with minor adjustments.

- Program P31804 generated cumulative variances. Therefore, users were advised to run it once only. The variance flag in the work order header was used for selection purposes. Before this enhancement, only work orders with a variance flag of '1' were selected. These are the ones for which journal entries have already been created in final mode, and for which variances have not yet been calculated. After running this program in final mode, the variance flag was set to '2'. It is now possible to generate variances more than once for rates and work orders. For this reason, the program will be changed to store the previous variance calculated in the F3102 file. If the program is run more than once, it will calculate only the net change instead of cumulative amounts. P31804 will change the value of the flag (WAPPFG) from '2' to '3' when the production document status is greater than or equal to the status code in the SRS2 field in F3009.
- Program P4801AX was changed to update the variances flag from a value of '2' to '3' for existing work orders. This new value will indicate that the work order is closed and cannot have any move activity (new transactions). For related changes, see *Repetitive Manufacturing* later in this chapter.

Commitments Processing

This enhancement involved changing the Manufacturing applications to use the same basic concepts of Distribution commitment processing. Changes include the following:

- Allow soft commits to be processed against primary locations only.
- Force a hard-commit when a location other than the primary is introduced to a parts list line, whether the input is manual or programmatic.
- Change the order of the controlling factors in determining hard- or soft-commits (first, the existence of a non-primary location on the parts list line, and second, the commitment control and hard-commit/soft-commit fields in Manufacturing Constants).
- Accomplish line level commitments through a field in the Parts List file. If a hard-commit is performed on a parts list line item, this field will be set to 'H'. If a soft-commit is performed, the field will be set to 'S'.

Nature of Change

The solution for the problem described incorporates the Manufacturing current commitment processing by branch/plant with the Distribution concept of line level commitment processing. The manufacturing software will process as before, except in the following situations:

- A client manually inputs a non-primary location into a parts list. The line will be hard-committed regardless of the hard-commit/ soft-commit code in Manufacturing Constants.
- A non-primary location is input programmatically into a Parts List. Locations other than the primary are entered into part lists when interfacing with the Warehouse Management system, when using work center locations, and when using the Multi-Location Selection window. In these cases, the line will again be hard-committed.
- The line level commitment field in the Parts List file will be added or changed whenever commitments are processed.

Scope

The following programs were changed to initially look at the contents of the field WMCOMM when either changing or relieving a commitment. If WMCOMM is not filled, the programs will continue to use Manufacturing Constants as they do currently. Because the current logic for processing commitments is being left in place, no conversion programs are necessary.

Program	Program Description	Status
P31042	Component Item Substitution	Changed
P3111	Work Order Parts List Revisions	Changed
P3111P	Work Order Process Resource Revisions	Changed
P3111S	Substitute Availability Window	Changed
P31113	Work Order Inventory Issues	Changed
P31115	Co/By Product Completion Window	Changed
P31123	Super Backflush	Changed
P31410	Work Order Generation	Changed
P31415	Work Order Print Parts List	Changed
P31418	Work Order Parts Shortage Report	Changed
P31420	Work Order Automatic Batch Issue	Changed
P3190	Work Order Repost Commitments	Changed

Program	Program Description	Status
P3197	Batch Work Order Commitments	Changed
P4600	Request Inquiry	Changed
P4617	On-Line Confirmation	Changed
P4617W	Confirmation Overrides	Changed
P48013	Manufacturing Work Order Entry	Changed
X3294	Sales Order Detail Server	Changed
X4617	Confirmation Server	Changed

Quality Management

Quality Management is a new system (37) designed to help companies capture and manage data related to the quality of their products. The emphasis of Quality Management is on material quality; specifically, whether material conforms to specifications. The module lets users manage and report the inspection and testing of material at the points of receiving, manufacturing, and shipping.

Objectives

- Provide the ability to create and maintain tests. Test attributes should include allowed values, target measurements, and instructions related to a particular test.
- Develop a method of grouping a test into specifications. Also, create a means of linking tests and specifications to an item at a particular point in the production process.
- Support the use of preference profiles so that item/test specifications can be customized for a particular customer or customer group.
- Create a program that will allow the entry of test results at various stages of purchasing, sales, and the work order life cycle. This would include receipts, completions, any operations within the receipt-routing process, and ship and load confirmation.
- Allow the input of one-time tests during results entry and, conversely, be able to delete predefined tests for an item after the result display is loaded with item-specific tests.
- Display test results through reports and inquiry screens. Clients should be able to review the results by lot or by work order.
- Allow the ability to evaluate a lot for a particular customer at sales order entry.

- Generate a Certificate of Analysis (COA) for customers who require documented verification of product quality.
- Develop a lot-tracing capability for finding test results assigned to the components of an assembled good or an item that has been reclassed. Support this functionality through both inquiry screens and the Certificate of Analysis.
- Provide for the ability to track non-conforming products.
- Allow the entry of generic text during test revisions, specification revisions, item/test specifications, and results entry.

Scope

Quality Management required the following new programs as well as modifications to existing programs:

Program	Program Description	Status
P31114	Manufacturing Completion	Changed
P31115	Co/By Product Completion	Changed
P311221	Work Order Employee Time Entry	Changed
P31123	Super Backflush	Changed
P3119	Completions Workbench	Changed
P3701	Test Revisions	New
P3701W	Test/Specification Search Window	New
P3702	Specification Revisions	New
P3702W	Specification Revisions Selection Inquiry	New
P3703	Non-Conforming Product	New
P3711	Test Results Revisions	New
P37111	Test Results Edit	New
P37111W	Test Status Revisions	New
P37112W	Lot Search Window	New
P37113W	Test Results Inquiry	New
P37114W	Test Results Selection Window	New
P37200	Tested Lot Search	New
P37201	Trace Test Results	New

Program	Program Description	Status
P37202	Test/Specification Where Used	New
P37410	Test Definitions Report	New
P37415	Specifications Report	New
P37420	Item/Test/Operations Report	New
P37450	Product Test Report	New
P37460	Certificate of Analysis	New
P37800	Batch Test Results Entry	New
P37900	Certificate of Analysis Extract	New
P40ITM2	Item Search/Return	Changed
P40SEL	Selection Criteria Window	Changed
P4007	Preference Profiles	Changed
P40300	Preference Revisions	Changed
P40400	Preference Processing	Changed
P41001	Branch Plant Constants	Changed
P4205	Ship Confirm	Changed
P4211	Sales Order Entry Detail	Changed
P4312	Receipts by PO/Item/Account	Changed
P43250	Routing Movement/Status	Changed
P48013	Manufacturing Work Order Entry	Changed
P49510	Bulk Confirm	Changed
XF3711	Input/Output Server – F3711	New
XF40300	Input/Output Server – Preference Profiles	Changed
XF40303	Input/Output Server – Preference Profiles	New

Important Note for ECS Clients

Clients who are upgrading from either release A7.1 or A7.3 to A8.1, and who are using the Quality Preference available through Load and Delivery Management, will have to run a conversion program. The conversion program will read data from Product Specifications (F4988) and write data to the Quality Management Preference file (F40318) and Test Definitions (F3701). The historical data that resides in Vehicle Lab Results will not be converted. A7.1 and A7.3 Load and Delivery Management programs and files related to the ECS Quality Preference will be obsoleted.

Forecasting Enhancements

As part of the analysis in converting the existing Forecasting functionality to OneWorld, several areas for improvement in the World product were identified. Many of the concepts in question were consistent with client suggestions for improvements. Major areas identified included enhancing the forecast calculations, providing a new method of determining best fit, and creating a link between summary and detail records.

Objectives

- Enhance the forecast calculations according to standard statistical formulas, and allow users to input parameters to include in the calculations
- Provide an option to use MAD as an alternate method of determining best fit
- Create detail forecast records when calculating summary forecasts
- Write zero and negative quantities to the forecasting files, and change MRP logic accordingly
- Allow the forecast generation program to run in proof or final mode
- Provide a more accurate method of generating weekly forecasts
- Allow the Extract Sales Order History program to extract large customer forecast records by Ship To or Sold To address book number
- Link the amounts and quantities in both detail and summary forecasts so that a change in one would be reflected in the other by the original ratio between the two
- For large customer processing, allow best fit determination and forecast calculation by each customer
- Allow forecasts to be generated for more than one year
- Provide a method of creating different versions of a forecast for comparison

Description of Changes

Previously, the three most recent periods were used in calculating forecasts. The calculations did not allow the user to specify the number of periods to use in the calculations. To provide this flexibility, the user now is allowed to enter the number of periods to be used in the forecast calculation for several of the existing methods. This also includes allowing entry of alpha and beta factors in 'Exponential Smoothing' calculations.

Two new methods for forecasting are introduced. The first, 'Least Squares Regression', is similar to 'Linear Approximation', but utilizes a widely accepted statistical formula. The second, 'Exponential Smoothing with Trend', provides the ability to perform exponential smoothing when seasonality is not present.

Previously, the only basis for determining best fit was a method referred to as 'Percent of Accuracy' (POA). This approach is not regarded as a standard method for calculating the accuracy of a forecast. One method, known as 'Mean Absolute Deviation' (MAD) is based on a proven statistical formula for forecasting data points. MAD provides a much more consistent method for comparing alternate forecasting methods. To keep the existing functionality intact for current clients, a new processing option was added to let the user choose between POA or MAD for best fit analysis.

Previously, when Summary Forecast Generation was run, detail forecast records were not created. This left no connection between the summary and detail records. The Summary Forecast Generation program has been modified to create detail forecast records.

The previous forecasting process did not allow zero or negative quantities to be written to the Detail Forecast and Summary Forecast files. This caused confusion for clients when fewer records were created than the number specified. Writing a record for each period now provides a complete look at the resulting calculations.

The previous forecast generation did not give users a chance to analyze the forecast before updating the files. Both the Detail Forecast Generation and the Summary Forecast Generation programs now can be run several times in 'proof' mode until acceptable results are obtained. The program then can be run in 'final' mode to generate forecast records.

The way weekly forecasting had been calculated was too simplistic. Weekly forecasts were simply the result of dividing the monthly forecast by the number of weeks in the month. This did not truly represent weekly forecasting and tended to provide a very flat distribution of the forecast across the month.

To provide the ability to create multiple versions of forecasts, the Forecast Type field (TYPF) was expanded from two characters to eight. This will let users create types with more descriptive titles, such as 01JUN97. Eventually, the requirement is to provide the ability to compare two versions of a forecast side-by-side on the same screen and provide some means for version control. The Version field (FVER) was added to both the F3400 and F3460 in anticipation of a possible enhancement in OneWorld.

To solve the Year 2000 problem and to allow OneWorld programs to access data on the AS/400, the year field (MFYR) was taken out of F3460. As a result, F3460LC was obsoleted. All the programs in forecasting and planning that used F3460LC were modified accordingly. In addition, logic was modified to no longer write a 'year' record to F3460. This primarily affected P34201, which will now roll up the detail records as required.

Scope

Forecasting Enhancement required modification to the following existing programs:

Program	Program Description	Status
P3400	Summary Revisions	Changed
P34200	Forecast Summary Inquiry	Changed
V34200	Forecast Summary Inquiry	Changed
P3460	Detail Forecast Maintenance	Changed
P34640	Summary Forecast Generation	Changed
R34640	Summary Forecast Generation	Changed
P3465	Extract Sales Order History	Changed
P34650	Forecast Generation	Changed
R34650	Forecast Generation	Changed
R34651	Exponential Smoothing	Changed

Lot Trace/Track

The following enhancements to Lot Trace/Track logic were included in version A7.2 and above:

- Top, Bottom, and Inventory Issue transactions are indicated in the 2nd Description of the Trace/Track Inclusion Rules (UDC table 40/DC). The 2nd Description definitions previously were: Top = 'C', Bottom = 'B', and Issue = 'I'. Inclusion rules were changed to Top = 'C', Bottom = 'B', Completion = 'M', and Issue = 'I'.
- The Transaction Reference field of the Item Ledger record is no longer used to identify issue or completion transactions.
- The Parent Lot field of the Item Ledger record may or may not be filled in for inventory issue transactions. If it is populated for issue transactions, it will be used to perform trace and track logic for serial-numbered items only. If it is not populated, the document number and document type will be used for trace and track logic.
- Only two kinds of transactions populate the Parent Lot field in Item Ledger: Inventory Issues (sometimes) and Item Reclass.
- A 'level' is caused by an inventory issue, work order completion, or item reclass.
- Inventory issue transactions will be consolidated by lot number, document type, document number, item, branch, and parent lot.
- Inventory completion transactions will be consolidated by lot number, document type, document number, item, branch, and parent lot. For example, if lots A and B are the same issued part number and lot C and D are the same completed part number, then in release A7.1 no way exists to determine that lot A was used only to produce lot D. A track function on lot A will show lots C and D. A trace on lot D will show lots A and B. Release A7.3 can provide direct component to parent associations, but only for serialized items.
- Item reclass transactions are the only Item Ledger transactions to populate the from/to field. Reclass transactions involving lots will populate the parent lot field.
- The Lot Trace/Track program incorporates the use of two indexes. The first index will be used for issue and completion consolidation, and the second one will be used to define the bill of material-like tree structure for display purposes.

Process Blending

The integration of bulk requirements into the Manufacturing system included changes to the Shop Floor Control and Product Data Management modules. These enhancements make it possible for ECS clients to set up bills of materials and enter/process work orders that contain bulk products. Bulk products in the ECS industry require the entry, calculation, and tracking of various factors related to quantity measurements and blending specifications.

Objectives

- Bill of Materials: There is a requirement to be able to enter a percent-based formula that does not add up to 100% within a given tolerance due to items that would cause the result to exceed 100% (such as PPM additives). Additionally, there could be a need for a bill of materials to contain several process steps with ingredients that are outside of the percent formula. These requirements will be handled within the Ingredients List Revisions program (P3002P) and the Bill of Materials Entry (P3002), which allows the entry or change of the ingredients. These programs will allow a percent definition to be added to 100% and additional ingredients to include the PPM additives or other quantities that are not based on percent. The Percent Bill Validation field (IAPBVD) in the Manufacturing Constants controls whether this is allowable.
- A function key is provided from the Work Order Ingredients List program (P3111) that will call a program that is defined and created by the user to optimize the ingredients.
- Issues and Completion of work orders have been modified to allow the entry of ambient quantities, current temperature, and density information. The standard quantity and weight are calculated and stored accordingly.
- The Work Center Master allows the designation of the Blend/Fill Location (IWCOLO). This location is validated against the Tank Master if the work center is designated as a blending location.
- The Allowed Products Matrix is checked when the parts list is generated for a work order, and a warning message is printed or displayed if an incompatibility exists between the parts list and the blending tank.
- The Allowed Products Matrix is checked when inventory is issued to a blending/filling location. The allowed product from the blending tank is checked against the ingredients list at issue time and an error is printed or displayed if an incompatibility exists.
- The tank capacity is checked when work orders are entered and when the product is completed to a blending, holding, or storage tank. An error message is displayed if the transaction would cause the tank's capacity to be exceeded.

- The Engineering Change Management (ECO) menu contains approval routings by Branch/Plant and/or by specific ECO Work Order. A new menu has been created and some minor program modifications have been made to allow these programs to be used to handle the work order approval.

Scope

Process Blending required the following new programs as well as modifications to existing programs:

Program	Program Description	Status
P3002	Enter/Change Bill	Changed
P3002P	Process Resource Revisions	Changed
P3006	Enter/Change Work Center	Changed
P3009	Manufacturing Constants	Changed
P3111	Ingredients List Revisions	Changed
P3111P	Ingredients List Revisions	Changed
P31113	WO Inventory Issues	Changed
P31114	Work Order Completion	Changed
P31115	Co/By Products Completion Window	Changed
P31123	Super Backflush	Changed
P31410	Work Order Generation	Changed
P31420	Batch WO Inventory Issues	Changed
P41513	Batch Write Bulk Item Ledger	New
P41513W	Bulk Product Information	New
P415104	Weighbridge	Changed
P41514	Bulk Manufacturing Gain/Loss and Exceptions	New
P41514E	Bulk Manufacturing Gain/Loss and Exceptions	New
P48013	Enter/Change Order	Changed
P4818	WO Approval	Changed
P48185	WO Approval/Audit Review	Changed
X41515	Product Compatibility Server	New

Program	Program Description	Status
X41516	Tank Capacity/Compatibility Server	New
XF41511	Bulk Cardex Server	Changed

Engineering Change Orders

The enhancements made to the ECO system include improved revision level control, a new inquiry to display future BOMs by including pending ECOs, and ability to process ECOs across multiple plants. Other enhancements include the ability to perform all Bill of Material (BOM) maintenance through the use of Engineering Change Orders (ECO) and improvements to the approval process.

Objectives

- Simplify revision level control
- Tighten security surrounding the approval process
- Send e-mail to the originator when an ECO is rejected or implemented
- Issue a warning when an order-specific approval list is being deleted
- Display revision levels consistently in screens and reports
- Add Item Revision Level to the Purchase Order Detail screen
- Allow ECOs to impact multiple branch/plants
- Provide for an inquiry to a BOM at a specified date in the future, incorporating all pending ECOs
- Expand the Drawing Revision Level field from two to three bytes throughout the system
- Allow maintenance of all BOM fields through the ECO Population program
- Provide an option to update the parent's Component Revision Level in all structures in which the parent is a subassembly when its Item Revision Level changes

Scope

The scope of the ECOs included the design, development, and documentation of the creation and modifications of related ECO programs, screens, and files. Functionality will require modifications within the Product Data Management (PDM), Procurements, and Inventory Management systems.

Program	Program Description	Status
P3002	Bill of Material Revisions	Changed
P3002W	BOM Selection Inquiry	Changed
P3013	ECO Parts List	Changed
P30131	ECO Related Items	Changed
P30200	Bill of Material Inquiry	Changed
P30201	Where-Used Inquiry	Changed
P30210	Future Bill Inquiry	New
P30410	Single-Level Bill of Material Report	Changed
P30415	Multi-Level Bill of Material Report	Changed
P30420	Where-Used Report (Single and Multi-Level)	Changed
P30510	Bill of Material Population Program	Changed
P34500	Purchase Order Print	Changed
P4101	Item Master Revisions	Changed
P41026	Item Branch Information Revisions	Changed
P430112	Purchase Order Detail Additional Information	Changed
P4818	ECO Approval	Changed
P48182	ECO Order Specific Routing	Changed
P48185	ECO Approval/Audit Review	Changed

Repetitive Manufacturing

Repetitive manufacturing is often characterized by entire production lines being dedicated to a family of products. Product families share similar components and routings. Similar components require less inventory movement to and from the line. Similar routings allow work center setup and changeover times between related products to be kept to a minimum. With constantly increasing competition, repetitive manufacturers are continually seeking tools to reduce non-value-added functions and lower inventory levels while improving product quality.

Many repetitive manufacturers use rate-based scheduling as a method to control production. However, as they become more sophisticated, the next step is to produce based on actual demand rather than forecast. The authorization to produce is derived from demand rather than the traditional use of work orders or rate schedules. Scheduling production lines requires tools to schedule, sequence, and balance production based on capacity for each production line. The fundamental paradigm shift is thinking in terms of production lines rather than traditional work orders or rates.

Material movement is also driven by demand and controlled by visual cues known as 'kanbans'. Kanbans are predetermined quantities of components at specified locations on the production line. They are designed to minimize work-in-process (WIP) inventories. Movement of kanbans is oriented around the production line itself instead of specific rates or work orders.

In addition to enhancing the product to support repetitive manufacturing, consideration must be given to manufacturers at all points on the discrete to repetitive continuum. Where possible, the gap between rate-based scheduling and the discrete work order functionality should be bridged to provide more consistency. This will result in not only a path to take the next step toward true repetitive manufacturing, but also an improved solution for manufacturers currently in mixed-mode environments.

Objectives

- Develop a workbench to schedule production in a repetitive environment. This should include the ability to classify products into families and use the classification as a basis for sequencing production. Scheduling should be able to balance production across multiple lines as well as within minimum and maximum rates defined for a specific line.
- Support production capacity and load in units per hour in addition to hours per unit.
- Implement the ability to define shop floor calendars by production line.
- Allow for the definition of multiple replenishment points for a production line.

- Provide tools to support electronic kanban control at the consuming and supplying locations. Incorporate enhancements to Procurements that allow control over the creation of purchase orders.
- Implement EDI transactions to enable sending supplier schedules and releases.
- Provide a method to delay payment for purchased items until consumption (Pay on Consumption).
- Combine functionality between work orders and rate schedules to provide a more seamless solution. This should include developing a comprehensive inquiry structure with 'drill down' capabilities.

Scope

Repetitive Manufacturing required the following new programs as well as modifications to existing programs:

Program	Program Description	Status
P00071	Shop Floor Calendar	Changed
P0007AX	F0007 File Conversion	Changed
P061181	Payroll Time Transactions	Changed
P3003	Enter/Change Routing	Changed
P3006	Work Center Revisions	Changed
P3007	Resource Units Revisions	Changed
P3007G	Resource Units Refresh	Changed
P3009	Manufacturing Constants	Changed
P3016	Kanban Master Revisions	New
P30450	Kanban Calculation	New
P3102AX	F3102 File Conversion	Changed
P3104	Enter/Change Rate Schedule	Obsolete
P3104AX	F3104 File Conversion	Obsolete
P3109	Enter/Change Rate Schedule	New
P31093	Line Item Relationships	New
P3111	Parts List	Changed
P31113	Inventory Issues	Changed
P3112	Work Order/Rate Routing	Changed

Program	Program Description	Status
P3112AX	F3112 File Conversion	Changed
P31121	Order Hours Status	Obsolete
P31122	Order Quantities Status	Obsolete
P311221	Hours and Quantities Trans.	Changed
P31123	Super Backflush	Changed
P31124	Line Balancing Review	Obsolete
P3114	Rate Schedule Workbench	Obsolete
P3119	Rate Schedule Workbench	New
P31220	Dispatch List	Changed
P31223	Production Status	Changed
P31224	Line Balancing Review	Obsolete
P31225	Shop Floor Workbench	Changed
P31410	Work Order Processing	Changed
P31422	Post Hours and Quantities	Changed
P31440	Kanban Cards	Obsolete
P3152	Line Balance Review	New
P3153	Rate Schedule Workbench	New
P3154W	Split Lines Window	New
P3155W	Alternate Line Window	New
P3156	Line Sequencing Workbench	New
P3157	Kanban Supply	New
P3158	Kanban Consumption	New
P3159	Line Dispatch List	New
P31802	Manufacturing Accounting	Changed
P31804	Variance Generation	Changed
P31842	Rate-Based Accounting	Obsolete
P3190	Work Order/Rate Repost	New
P3197	Production Order Commitments	Changed
P3411	Message Review	Changed

Program	Program Description	Status
P3482	Master Schedule Planning	Changed
P3483	Multi-Plant MPS	Changed
P4021	Supply and Demand Inquiry	Changed
P4051	Supply/Demand	Changed
P41013	Manufacturing Data	Changed
P41027	Manufacturing Data	Changed
P4312	Purchase Order Receipts	Changed
P43500	Purchase Order Print	Changed
P47152	EDI 862 Transaction	New
P470621	EDI 830 Transaction	New
P48013	Work Order/Rate Revisions	Changed
P48016	Work Order Cat Codes	Changed
XT310911	Quantity Detail Server	New

Notes

Shop Floor Calendar

The shop floor calendar has been modified to include Shift and Calendar Name as part of the key. These fields are used in conjunction with the Work Center Master to allow alternate calendars for work centers. Existing data in the Work Day Calendar file (F0007) will be converted with blanks in the new fields. When both Shift and Calendar Name are blank, it is considered to be the 'base' calendar.

Shift-specific and named calendars are overrides to the base calendar. Only those calendars that are set up for specific shifts are considered active. For example, if calendars are only set up for shifts 1 and 2, then shifts 3, 4, 5, and 6 are considered inactive.

Named calendars are referenced by work centers. If a named calendar is specified in the Work Center Master, the system will look only for calendars with the specified name for that work center. Therefore, there is no default back to the base calendar. To use a named calendar in Repetitive Manufacturing, a separate calendar for each shift is required (including the calendar name in each).

Manufacturing Constant Hours

The Manufacturing Constants field Work Hours Per Day has been expanded to six shift hours fields. The hours are used in conjunction with the shop floor calendar to generate the resource units. Additionally, the field is used in Lead-Time Calculation, Message File Revisions, Master Planning Schedule, Work Order Entry, SOE Work Order Processing server, and the Back/Forward Schedule copy subroutine. The work hours for a given day will be assumed to be the total of the first three shift hours fields: WRHR, WRH2, and WRH3. This total is not stored, but is displayed on the Manufacturing Constants video.

Replenishment Location

The new Replenishment Location field has been added to the Routing Master and Shop Routing files. Previously, when the parts list was built for a work order, the issue from location was determined by the Commitment Control field logic. This could have been superceded by entering a location value for the work center. The new field allows for multiple locations to be defined within a parent item's routing. Each component location on the Parts List is determined by the routing step referenced in its operations sequence field. This location will supercede the value in the Work Center Master field if one had been entered also.

Capacity in Units/Hour

The Work Center Master file has been modified to include standard, minimum, and maximum rates per hour and the related unit of measure (UOM) when defining production lines. These values, their calculated extension in the Resource Units file, and the new Line/Item Relations file are used to support the statement of capacity and its consumption in terms of units/hour. Work orders and rates entered on production lines represent load against the line in terms of units/hour as well. However, for purposes of minimizing impact on the cost roll-up and scheduling processes, the values stored in the Resource Units and Routing files is converted to hours/unit.

On-Line Receipts

Flags have been added to the Item Master/Item Branch and Kanban Master files. These flags, when turned on, cause the Issues and Kanban Check-In programs to invoke the On-Line Blind Receipts process. The quantities received equal the issue quantity and the kanban size respectively.

Rate Schedule Master Redesign

The Rate Schedule Master file (F3104) has been obsoleted. Rates now are stored in the Work Order Header file (F4801). A new file, Line/Item Relationship (F3109), has been added. The purpose of the file is to define the parameters for an item when built on a given line. Also, one record can be used to identify the default line information for use by planning. This is similar in nature to the Rate Generation Rules functionality.

Change to EDI 830

The existing Outbound 830 transaction was previously built by using the Forecast file (F3460). A processing option was added to use the Supplier Release Schedule file (F3430) instead. The same output files are used.

Work Center Master

Work centers now are associated with branch/plants. This required the addition of the existing MMCU field to the key. Therefore, the work center number by itself is no longer a unique value. This modification also required a new field, Issue Branch/Plant (LOMC), to be used with the Issue Location field (LOCN).

This change affects all programs that access the Work Center Master file (F30006).

To convert the existing files, the Routing Master file (F3003) is used to determine which branch/plants to create work center records for. Each unique occurrence of the work center within a branch/plant defined in the F3003 will result in a record in the converted F30006.

The Work Center Rates file (F30008) is converted to match the F30006. If the work center was used in multiple branch/plants, a copy of the rates will be created in each.

Human Resources and Payroll Systems

This section provides database changes for the Human Resources and Payroll systems. It also provides Human Resources system changes.

Database Changes

This chapter lists database changes for the Human Resources and Payroll systems (systems 05, 07, 77, and 08).

Human Resources and Payroll (System 05)

Added Fields

File	Field Description	Data Item	Explanation
F060116	Contract/Calendar Code	CNCL	
	Current Salary	CSAL	
	Country – Birth	CTBB	Future Use
	Nationality – First Citizenship	CTB1	Future Use
	Nationality – Second Citizenship	CTB2	Future Use
	Nationality – Third Citizenship	CTB3	Future Use
	Contract Salary	CTSL	
	Dock Pay Flag	DCPF	
	Data Protection Code	DPSC	
	Date Data Protection Code	DPSD	Future Use
	Daily Rate of Pay	DROP	
	External Job Code	JBCX	
	Marital Status – Actual	MSA	Future Use
	Salary Paid Before Change	SPBC	
F060118	Contract/Calendar Code	CNCL	
	Current Salary	CSAL	
	Contract Salary	CTSL	
	Dock Pay Flag	DCPF	
	Daily Rate of Pay	DROP	
	External Job Code	JBCX	
	Salary Paid Before Change	SPBC	
F060119	Contract/Calendar Code	CNCL	
	Current Salary	CSAL	
	Contract Salary	CTSL	
	Dock Pay Flag	DCPF	
	Daily Rate of Pay	DROP	
	External Job Code	JBCX	
	Salary Paid Before Change	SPBC	

File	Field Description	Data Item	Explanation
F06290	Batch Control Management	BCMA	
	Currency Code	CRCD	
	Currency Code – Origin	CRCF	
	Service/Tax Date	DSVJ	
	Document Company	KCO	
F06395	Currency Amount	ACR	
	Labor Costing Flag	ALTO	
	Service/Tax Date	DSVJ	
	Home Company	HMCO	

New Physical Files

File	File Description	Prefix	Explanation
F0628	Account Distribution History File	J8	Account Distribution History File

New Logical Files

File	File Description	Key Fields
F0618LB	Logical – Accrual Distribution History	AN8, HMCU, JBCD, JBST, POS, PPED

New Joined Logical Files

File	File Description	Prefix	Explanation
F06146JA	Join between F060116 and F06146 files – used for Canadian Year End processing (Pension Batch Update)	YA and YN	Used in the Pension Batch Update program (P077271)

Payroll (System 07)

New Physical Files

File	File Description	Prefix	Key Fields
F0628	Account Distribution History File	F8	Account Distribution History File

New Logical Files

File	File Description	Key Fields
F0628LA	Logical – Accrual Distribution History	AN8, HMCU, JBCD, JBST, POS, PPED
F06148LD	Logical – Tax Area Transaction History	AN8, TARA, DTEY, HMCO

Canadian Payroll (System 77)

Added Fields

File	Field Description	Data Item	Explanation
F07731	Future Use Field	R2O1	Future Use
and	Future Use Field	R2O2	Future Use
T07731	Future Use Field	R2O3	Future Use
	Future Use Field	R2O4	Future Use
	Future Use Field	R2O5	Future Use

Deleted Fields

File	Field Description	Data Item	Replaced By
F07727	Annuities	T4AN	Deleted
	Other Income	T4IN	Deleted
	Pension – Lump Sum	T4PL	Deleted
	Pension or Superannuation	T4PN	Deleted
	Past Services Pension	T4PS	Deleted
	Patronage Allocation	T4SC	Deleted
	Self Employed Commission	T4SC	Deleted
	Retiring Allowance	T4RA	Deleted
	Retiring Allowances not Eligible	T4R1	Deleted
F07730 and T07730	Footnote Code 01	CQ01	Moved to file F07750 and T07750
	Footnote Code 02–20	CQ02 – CQ20	Deleted
	Footnote Amount 01	CU01	Moved to file F07750 and T07750
	Footnote Amount 02–20	CU02 – CU20	Deleted
	T4A Control Number	PNCN	Deleted
	T4A Amended Control Number	PNC1	Deleted
	Date Last Printed	PNP1	Deleted
	Annuities	T4AN	Moved to file F07732 and T07732
	Other Income	T4IN	Moved to file F07732 and T07732
	Pension – Lump Sum	T4LS	Moved to file F07732 and T07732
	Pension Amount	T4PN	Moved to file F07732 and T07732
	Pension for Past Services	T4PS	Moved to file F07732 and T07732
	Pension Income Tax	T4PT	Moved to file F07732 and T07732
	Self Employed Commission	T4SC	Moved to file F07732 and T07732
F07731 and T07731	Footnote Code 01	CQ01	Moved to file F07750 and T07750
	Footnote Code 02–20	CQ02 – CQ20	Deleted
	Footnote Amount 01	CU01	Moved to file F07750 and T07750
	Footnote Amount 02–20	CU02 – CU20	Deleted

New Physical Files

File	File Description	Prefix	Explanation
F07732	T4A History File	YJ	T4A Archival History File
F07733	Releve2 History File	YL	Releve2 Archival History File
F07734	NR4 History File	YN	NR4 Archival History File
F07742	T4A Adjustment History File	YK	T4A Archival Adjustment File
F07743	Releve2 Adjustment	YM	Releve2 Archival Adjustment File
F07744	NR4 Adjustment History File	YQ	NR4 Archival History File

File	File Description	Prefix	Explanation
F07750	Footnote Code History File	YY	Footnote Code Archival File
T07732	T4A Work File	YJ	T4A Work File
T07733	Releve2 Work File	YL	Releve2 Work File
T07734	NR4 Work File	YN	NR4 Work File
T07742	T4A Adjustment Work File	YK	T4A Adjustment Work File
T07743	Releve2 Adjustment Work File	YM	Releve2 Adjustment Work File
T07744	NR4 Adjustment Work File	YQ	NR4 Adjustment Work File
T07750	Footnote Code Work File	YY	Footnote Code Work File

New Logical Files

File	File Description	Key Fields
F07732LA	Logical – T4A File	PRID, T4CN
F07732LD	Logical – T4A File	YR, AN8
F07732LE	Logical – T4A File	PRID, AMND, YR, CO, AN8, TARA, TAXX
F07732LF	Logical – T4A File	PRID, AMND, T4CN
F07733LA	Logical – Releve2 File	AN8, TARA, YR, TAXX, HMCO
F07733LB	Logical – Releve2 File	YR, AN8, AMND, TARA, TAX, HMCO
F07733LC	Logical – Releve2 File	PRID, T4CN
F07733LD	Logical – Releve2 File	PRID, AMND, T4CN
F07733LE	Logical – Releve2 File	YR, AN8
F07733LG	Logical – Releve2 File	PRID, AMND, YR, CO, AN8, TARA, TAXX
F07734LA	Logical – NR4 File	YR, CO, AN8, TARA, TAXX, PRID, AMND
F07734LB	Logical – NR4 File	AN8, TARA, YR, TAXX, HMCO
F07734LC	Logical – NR4 File	AN8, PRID, AMND
F07734LD	Logical – NR4 File	PRID, AMND, YR, CO, AN8, TARA, TAXX
F07734LE	Logical – NR4 File	YR, AN8
F07734LF	Logical – NR4 File	PRID, AMND, T4CN
F07742LA	Logical – T4A File	PRID, YR, CO, AN8, TARA, TAXX
F07743LA	Logical – Releve2 Adjustment File	PRID, YR, CO, AN8, TARA, TAXX

File	File Description	Key Fields
F07743LB	Logical – Releve2 Adjustment File	YR, AN8, TARA, TAXX, HMCO
F07743LC	Logical – Releve2 Adjustment File	PRID, YR, CO, AN8, TARA, TAXX
F07744LA	Logical – NR4 Adjustment File	PRID, YR, CO, AN8, TARA, TAXX
F07750LA	Logical – Footnote Codes File	PRID, YR, FOT1, CO, AN8, TARA, TAXX, AMND
F07750LB	Logical – Footnote Codes File	PRID, AMND, YR, CO, AN8, TARA, TAXX
T07732LA	Logical – T4A Work File	AN8, TARA, YR, TAXX, HMCO
T07732LB	Logical – T4A Work File	YR, CO, AN8, TARA, TAXX, PRID, AMND
T07732LC	Logical – T4A Work File	PRID, T4CN
T07732LD	Logical – T4A Work File	YR, AN8
T07732LE	Logical – T4A Work File	PRID, AMND, YR, CO, AN8, TAXX, TARA
T07732LF	Logical – T4A Work File	PRID, AMND, T4CN
T07733LA	Logical – Releve2 Work File	AN8, TARA, YR, TAXX, HMCO
T07733LB	Logical – Releve2 Work File	YR, AN8, TARA, TAXX, HMCO
T07733LC	Logical – Releve2 Work File	PRID, T4CN
T07733LD	Logical – Releve2 Work File	PRID, AMND, T4CN
T07733LE	Logical – Releve2 Work File	YR, AN8
T07733LG	Logical – Releve2 Work File	PRID, AMND, YR, CO, AN8, TAXX
T07734LA	Logical – NR4 Work File	YR, CO, AN8, TARA, TAXX, PRID, AMND
T07734LB	Logical – NR4 Work File	AN8, TARA, YR, TAXX, HMCO
T07734LC	Logical – NR4 Work File	AN8, PRID, AMND
T07734LD	Logical – NR4 Work File	PRID, AMND, YR, CO, AN8, TARA, TAXX
T07734LE	Logical – NR4 Work File	YR, AN8
T07734LF	Logical – NR4 Work File	PRID, AMND, T4CN
T07742LA	Logical – T4A Work File	PRID, YR, CO, AN8, TARA, TAXX
T07743LA	Logical – Releve2 Adjustment Work File	PRID, YR, CO, AN8, TARA, TAXX
T07743LB	Logical – Releve2 Adjustment Work File	YR, AN8, TARA, TAXX, HMCO

File	File Description	Key Fields
T07743LC	Logical – Releve2 Adjustment Work File	PRID, YR, CO, AN8, TARA, TAXX
T07744LA	Logical – NR4 Adjustment Work File	PRID, YR, CO, AN8, TARA, TAXX

New Joined Logical Files

File	File Description	Prefix	Explanation
F06146JA	Join between F060116 and F06146 files		Used in the Pension Batch Update program (P077271)

Obsolete Files

File	File Description	Explanation
F07730LC	T4/T4A Archival File	No longer needed (was used to print T4A forms)
F07730LG	T4/T4A Archival File	No longer needed (was used to print T4A forms)
T07730LC	T4/T4A Work File	No longer needed (was used to print T4A forms)
T07730LG	T4/T4A Work File	No longer needed (was used to print T4A forms)

Human Resources (System 08)

Added Fields

File	Field Description	Data Item	Explanation
F08101	Contract/Calendar Code	CNCL	
F08111	Contract/Calendar Code Contract Salary Daily Rate of Pay	CNCL CTSL DROP	
F08201	Contract/Calendar Code	CNCL	

New Physical Files

File	File Description	Prefix	Explanation
F08930	Contract/Calendar Master File	H0	
F08931	Contract/Calendar Day	H1	
F08932	Contract/Calendar Salary Work File	H2	

New Logical Files

File	File Description	Key Fields
F060118F	Multiple Job File	CNCL
F08201LG	Salary Review Work File	AN8, HMCU, JBCD, JBST

Changed Logical Files

File	File Description	Key Fields (New Fields Underlined)
F08201LD	Salary Review Work File	AN8 (changed to accept non-unique requests)
F08JT	Pay Grade/Step Work File	Added fields CNCL and CTSL and non-key fields

Human Resources and Payroll System Changes

This chapter describes changes made to the Human Resources and Payroll systems.

Server Changes

X08100 – Position Control Monitor (Changed)

This server records position activity in the Position Activity File (F08111). This server was modified to receive the Contract/Calendar Code (CNCL), the Daily Rate of Pay (DROP), and the Contract/Calendar Salary (CTSL) from the programs that call it, and to include them when updating the Position Activity File (F08111).

X08101 – Projected at Year End Values Server (Changed)

This server calculates the impact of position activity on a position budget at year end. It has been modified for employees with a contract/calendar to calculate percentage of days worked in the contract/calendar for the fiscal year and the projected salary for those same days.

X08102 – Position Budget Edit Server (Changed)

This server performs the budget check when the position budget edit constant is set to 'Y' in the HR Constants File (F08040). It has been changed to base edits on a contract/calendar when employees are attached to one.

X060116 – Update Employee Master Server (Changed)

This server updates the appropriate record in the F060116 file to match any changes that were made to the primary job in the F060118 file. It has been changed to update the F060116 fields that do not exist in F060118. The use of the F060118 file was removed so that the calling program can use the F060118 file in any key order.

X089321 – Contract/Calendar Salary Server (New)

This server provides all of the salary calculations and synchronization necessary when the contract salary, calendar, or pay stop date is changed for a contract/calendar employee.

X089302 – 'Synch' Server (New)

This server has been modified to only change the keys on the F08932 file for secondary jobs. Secondary jobs should not affect the Accrual file.

X089303 – Salary Paid Server (New)

This server has been modified to use the start and stop dates from the Contract Salary Work File (F08932) instead of the Contract/Calendar File (F08930) when determining the earliest start date and latest stop date for calendar records attached to an employee job.

X08932 – Update F08932 Server (New)

This server has been modified to use the new PENDING member in the Contract Salary Work File (F08932) rather than a user space to update F08932.

Service Billing and Contract Billing Systems

This section provides database and system changes for the Service Billing and Contract Billing systems.

Database Changes

This chapter lists database changes for the Service Billing and Contract Billing systems.

Service Billing

Added Fields

File	Field Description	Data Item	Explanation
F48011	Date – Bill From	BTFR	Bill From Date
F48091	Currency Mode	CRRM	Currency Mode – This field determines the default currency mode to be used: Contract Billing (when setting up a contract) or Service Billing (the currency that the billable item should be marked up in)
F48096	Billing Basis Flag	BBF	Used to control whether the billing markup is based on the original cost or price
	Customer Grouping Key	CPGP	Customer Price Group
	Item Grouping Key	PRGR	Item Price Group

File	Field Description	Data Item	Explanation
F4812, F4812H	Billing Basis Flag	BBF	Used to control whether the billing markup is based on the original cost or price
	Customer Grouping Key	CPGP	Customer Price Group
	Invoice Fee Basis	FBAS	Identifies whether this fee was based on cost or invoice amount
	Amount – Revenue – Historical	HBTL	Stores the original revenue amount prior to invoice generation
	Amount – Invoiced – Historical	HITL	Stores the original invoice amount prior to invoice generation
	Amount – Invoice Tax – Historical	HITX	Stores the original taxable amount prior to invoice generation
	Amount – Invoice Tax – Historical	HTAM	Stores the original tax amount prior to invoice generation
	Fee Markup Percent	MKRP	Markup percent used to calculate this fee
	Not-To-Exceed Control Flag	NCTL	This flag identifies whether this billable transaction is controlled by an NTE rule (improves performance)
	Parent WO Number	PARS	Parent WO Number
	Item Grouping Key	PRGR	Item Price Group
	Unit Price – Foreign	PRIF	The unit price represented in the foreign currency of the billable transaction
	Revenue Fee Basis	RFBS	Identifies whether this fee was based on cost or revenue amount
	Key Type – Acct Derivation Table Type 1	TKA1	Identifies the key used to retrieve account derivation table 1
	Key Type – Acct Derivation Table Type 2	TKA2	Identifies the key used to retrieve account derivation table 2
	Key Type – Acct Derivation Table Type 3	TKA3	Identifies the key used to retrieve account derivation table 3
	Key Type – G/L Offset Table	TKG1	Identifies the key used to retrieve Service Billing G/L Offset/ Retainage information
	Key Type – Markup Table Type 1	TKM1	Identifies the key used to retrieve markup table 1
	Key Type – Markup Table Type 2	TKM2	Identifies the key used to retrieve markup table 2
	Key Type – Markup Table Type 3	TKM3	Identifies the key used to retrieve markup table 3
	Key Type – Tax Derivation Table	TKT1	Identifies the key used to retrieve Service Billing Tax Information

File	Field Description	Data Item	Explanation
F48128	Currency Mode	CRRM	Identifies the controlling currency of the transaction
	Retainage Control Flag	RCTL	This flag controls the calculation of retainage with regard to VAT tax assignment
F4822	Date – Bill Through	BTDT	Bill Through Date
	Date – Bill From	BTFR	Bill From Date
	Currency Mode	CRRM	Identifies the controlling currency of the transaction
	Deferred Tax – Domestic	DDTR	The deferred tax associated with retaining stored in the domestic currency of the transaction
	Deferred Tax – Foreign	FDTR	The deferred tax associated with retainage stored in the foreign currency of the transaction
	Retainage Control Flag	RCTL	This flag controls the calculation of retainage with regard to VAT tax assignment
F48221	Deferred Tax – Domestic	DDTR	The deferred tax associated with retainage stored in the domestic currency of the transaction
	Deferred Tax – Foreign	FDTR	The deferred tax associated with retainage stored in the foreign currency of the transaction
F48910, F48910W	Change Order Number	COCH	The change order number of the contract being journaled
	Eligibility Code	ELGC	This field represents the eligibility code of the billable transaction being journaled
	Key Company	KCOO	The key company of the journal
	Line Number	LNID	The line number of the contract being journaled

Changed Logical Files

File	File Description	Key Fields (New Fields Underlined)
F48910LD	Detail Journal Work File	DOCO, DCTO, KCOI, COCH, LNID, CTRY, FY, PN
F48910LC	Detail Journal Work File	AN8, PRTO, SLNK, CLNK, CCOD

Obsolete Files and Programs

The old Service Billing product has been replaced by the new Service Billing product. The following files and programs have been identified as obsolete. No conversion programs exist for this migration because the two products do not share any files.

Files

File	File Description	Explanation
F48097	Valid Taxable Accounts	Old Service Billing product is obsolete
F48097LA	Valid Taxable Accounts	Old Service Billing product is obsolete
F48098	Labor Rates File	Old Service Billing product is obsolete
F48098LA	Labor Rates File	Old Service Billing product is obsolete
F48098LB	Labor Rates File	Old Service Billing product is obsolete
F48098LC	Labor Rates File	Old Service Billing product is obsolete
F48099	Expense Markups	Old Service Billing product is obsolete
F48099LA	Expense Markups	Old Service Billing product is obsolete
F48099LB	Expense Markups	Old Service Billing product is obsolete
F48099LC	Expense Markups	Old Service Billing product is obsolete
F4810	Improvised Billing Master	Old Service Billing product is obsolete
F4810LA	Improvised Billing Master	Old Service Billing product is obsolete
F4810LB	Improvised Billing Master	Old Service Billing product is obsolete
F4810LC	Improvised Billing Master	Old Service Billing product is obsolete
F4810LD	Improvised Billing Master	Old Service Billing product is obsolete
F4811	Improvised Billing Transaction File	Old Service Billing product is obsolete
F4811LA	Improvised Billing Transaction File	Old Service Billing product is obsolete

Programs

File	File Description	Explanation
J48097	Valid Taxable Account	Old Service Billing product is obsolete
J48098	Labor Rates	Old Service Billing product is obsolete
J48099	Expense Markups	Old Service Billing product is obsolete

File	File Description	Explanation
J48101	WO Transaction Change	Old Service Billing product is obsolete
J48102	WO Transaction Change	Old Service Billing product is obsolete
J48102P	WO Draft Invoice – On Demand	Old Service Billing product is obsolete
J4811	Improvised Billing Entry	Old Service Billing product is obsolete
J48215	Improvised Billing Inquiry	Old Service Billing product is obsolete
J48500	Invoice/Stmt Print	Old Service Billing product is obsolete
J48501	Invoice/Stmt Print	Old Service Billing product is obsolete
J48510	Update to A/R	Old Service Billing product is obsolete
J48511	Update to A/R	Old Service Billing product is obsolete
J48525	Billing Analysis Report	Old Service Billing product is obsolete
J48598	Print Labor Billing Rates	Old Service Billing product is obsolete
J48599	Print Expense Markup Rates	Old Service Billing product is obsolete
P4551W	Document Inquiry	Old Service Billing product is obsolete
P48IMP	Create Improvised Billing Header	Old Service Billing product is obsolete
P48097	Valid Taxable Account	Old Service Billing product is obsolete
P48098	Labor Rates	Old Service Billing product is obsolete
P48099	Expense Markups	Old Service Billing product is obsolete
P48101	WO Transaction Change	Old Service Billing product is obsolete
P48102	WO Transaction Change	Old Service Billing product is obsolete
P48102P	WO Draft Invoice – On Demand	Old Service Billing product is obsolete
P4811	Improvised Billing Entry	Old Service Billing product is obsolete
P48215	Improvised Billing Inquiry	Old Service Billing product is obsolete
P48500	Invoice/Stmt Print	Old Service Billing product is obsolete
P48501	Invoice/Stmt Print	Old Service Billing product is obsolete
P48510	Update to A/R	Old Service Billing product is obsolete
P48511	Update to A/R	Old Service Billing product is obsolete
P48525	Billing Analysis Report	Old Service Billing product is obsolete
P48598	Print Labor Billing Rates	Old Service Billing product is obsolete
P48599	Print Expense Markup Rates	Old Service Billing product is obsolete

Contract Billing

Added Fields

File	Field Description	Data Item	Explanation
F5201	Revenue Batch Number	ICUJ	Stores the Revenue Batch Number in which the contract is currently being journaled
F5202	Currency Mode	CRRM	Identifies the controlling currency of the billing line
F5212	Billing Basis Flag	BBF	
	Customer Price Group	CPGP	
	Item Number	ITM	
	Item Pricing Group	PRGR	
F5280, F5280W	Amount – Cumulative Foreign	CMFA	The cumulative amount of the journaled revenue stored in the foreign currency
	Currency Code – Domestic	CRCD	The domestic currency of the transaction
	Currency Code – Foreign	CRCF	The foreign currency of the transaction
	Amount – Current Foreign	CRFA	The current amount of the journaled revenue stored in the foreign currency

New Physical Files

File	File Description	Prefix	Explanation
F5280W	Contract Revenue Summary Work File	GY	

New Logical Files

File	File Description	Key Fields
F5212LB	T&M Cross-Reference	MCU, JBCD, JBST, PDBA, AN8, HMCU, RP12, SUB, OBJ, SBL, SBLT

Service Billing/Contract Billing System Changes

This chapter describes changes made to the Service Billing and Contract Billing systems.

Architecture Changes

The Contract Billing Transaction Identifier program (X48120) was renamed to X52120 because this program is part of the Contract Billing product. The two programs affected by this change are the Workfile Generation program (P48120) and the Workfile Transaction Re-Extension program (P481202).

Changes to I/O Server (X48096) Functionality

For release A8.1, the Cost Plus Markup Table Server (X48096) is used to retrieve billable information from the Cost Plus Markup Table (F48096). This server is designed to recognize existing hierarchical search methodology to access the correct markup table.

Cost Plus Markup Table Server (X48096)

The server follows the conventions of the Cost Plus Markup Table rules. The primary search sequence is as follows:

Level	Search Criteria
1	Work Order
2	Work Order Class (UDC 00/W7)
3	Contract Number
4	Parent Contract Number
5	Customer Number (MCAN8O, WAAN8, or G4AN8)
6	Job/Cost Center
7	Job Class (RP11)

Level	Search Criteria
8	Not Used
9	System Default

In each level, the record is checked for Effectivity Date. If a payroll transaction is being checked, the following sub-search is handled.

The first time through, the lookup is performed by using Job Class, Job Step, Pay Type, and Employee Number.

Search Criteria	Search Level								Data Item Name
	1	2	3	4	5	6	7	8	
Job Type	X	X	X	X	–	–	–	–	(JBCD)
Job Step	X	X	–	–	X	X	–	–	(JBST)
Pay Type	X	–	X	–	X	–	X	–	(PDBA)
Employee	X	X	X	X	X	X	X	X	(AN8)
Home CC	–	–	–	–	–	–	–	–	(HMCU)
Cost Pool	–	–	–	–	–	–	–	–	(RP12)

The second time through, the sub-search is performed by using Job Class, Job Step, Pay Type, and either Home Cost Center or Cost Pool. AN8, HMCU, and RP12 are mutually exclusive, so the sub-search looks for a record with Home Cost Center or Cost Pool, or it looks for a record in which all three are blank.

Search Criteria	Search Level											
	1	2	3	4	5	6	7	8	9	10	11	12
Job Type	X	X	X	X	X	X	X	X	X	X	X	–
Job Step	X	X	X	X	X	X	–	–	–	–	–	–
Pay Type	X	X	X	–	–	–	X	X	X	–	–	–
Employee	–	–	–	–	–	–	–	–	–	–	–	–
Home CC	X	–	–	X	–	–	X	–	–	X	–	–
Cost Pool	–	X	–	–	X	–	–	X	–	–	X	–

Search Criteria	Search Level											
	13	14	15	16	17	18	19	20	21	22	23	24
Job Type	–	–	–	–	–	–	–	–	–	–	–	–
Job Step	X	X	X	X	X	X	–	–	–	–	–	–
Pay Type	X	X	X	–	–	–	X	X	X	–	–	–
Employee	–	–	–	–	–	–	–	–	–	–	–	–
Home CC	X	–	–	X	–	–	X	–	–	X	–	–
Cost Pool	–	X	–	–	X	–	–	X	–	–	X	–

Equipment is processed as follows:

Search Criteria	Search Level										Data Item Name
	1	2	3	4	5	6	7	8	9	10	
Rate Group	–	X	X	–	X	X	–	–	–	–	(ACL0)
Equip #	X	–	–	–	–	–	–	–	–	–	(NUMB)
Rate Code	–	X	–	X	X	–	X	–	–	–	(ERC)
Employee	–	–	–	–	–	–	–	–	–	–	(AN8)
Home CC	–	–	–	–	–	–	–	X	–	–	(HMCU)
Cost Pool	–	X	X	X	–	–	–	–	X	–	(RP12)

All other transactions are processed as follows:

Search Criteria	Search Level									Data Item Name
	1	2	3	4	5	6	7	8	9	
Employee	X	X	X	X	X	–	–	–	–	(AN8)
Home CC	X	–	X	–	–	X	–	–	–	(HMCU)
Cost Pool	–	X	–	X	–	–	X	–	–	(RP12)
Job Step	X	X	–	–	–	–	–	X	–	(JBST)

X48096 Server Implementation

Many parameters need to be passed to the server to ensure correct implementation. In addition, several calculations need to occur to adjust the billing rate to make it exactly as the Cost Plus Markup Table directs it. For this purpose, two copy modules (I48096 and C48096) have been created to perform the calculations. To use them, include these modules as normal copy modules. Populate the following fields with all information known, and leave the other fields blank.

Field	Description	Value
STMENT	Time Entry Flag	Set to 1 if flag comes from time entry
#CGTYP	Generation Type	Set to 1 for Invoice Rates, 2 for Independent Revenue Rates, and 3 for component markup (users external to Contract Billing should use 1)
#CDCT	Document Type	The type of document being examined (for example, T2, T4, and so forth)
#CTBDT	Work Date	This is in Julian format
#CAN8O	Not Used	Do not fill
#CMCU	Business Unit	Database format
#CRP11	Job Class	Do not fill – defaulted from Business Unit
#CJBCD	Job Code	Fill from JBCD
#CJBST	Job Step	Fill from JBST
#CPDBA	Pay Type	Fill from PDBA
#CAN8	Employee Number	
#CHMCU	Home Business Unit	
#CRP12	Cost Pool	Do not fill – defaulted from Business Unit
#CACL0	Rate Group	Do not fill – defaulted from Equipment Master
#CNUMB	Equipment Number	
#CERC	Equipment Rate Code	
#COBJ	Object Account	Used to derive category codes
#CSUB	Subsidiary Account	Used to derive category codes
#CSBL	Subledger	Used to derive category codes

Field	Description	Value
#CSBLT	Subledger Type	Used to derive category codes
#CCRCD	Currency Code	The currency code must match exactly for a rate to be derived

When these fields have been filled, place the cost amount into variable $#AA (29 9) in actual amount. The program will return $#AA exactly as entered, and will return the value $RATE with the billing rate to be used. $RATE will be set to 0 if any errors were encountered.

Example Code

Include modules:

```
F*********************************************************
F*
F*    Copy Composite Member for Common Subroutine – C0030
F*
F/COPY JDECPY,C48096
F*********************************************************
I/COPY JDECPY,I48096

CSR                 MOVE '1'       $TMENT            Time Entry On
CSR                 MOVE 'T4'      #CBDCT            Doc Type
CSR                 MOVE '1'       #CBTYP            Gen Type
CSR                 MOVE YTDWK     #CBDWK            Work Date
CSR                 MOVE YTMCU     #CBMCU            Bus. Unit
CSR                 MOVE SFJBCD    #CBJCD            Job Code
CSR                 MOVE SFJBST    #CBJST            Job Step
CSR                 Z-ADDYTPDBA    #CBPDB            Pay Type
CSR                 MOVE YTAN8     #CBEMP            Emp #
CSR                 MOVE YAHMCU    #CBHMC            Home Bus Unt
CSR                 MOVE YTGOBJ    #CBOBJ            Recharge Obj
CSR                 MOVE YTGSUB    #CBSUB            Recharge Sub
CSR                 MOVE YTSBL     #CBSBL            Subledger
CSR                 MOVE YTSBLT    #CBSBT            Subledger Ty
CSR                 Z-ADD*ZEROS    #CBNMB            Equipment
CSR                 Z-ADD*ZEROS    $#AA             No Cost Markup
C*
C*    Call X48096 Service Billing Cost Plus Markup Table
C*    Functional Server.
C*
CSR                  EXSR C48096
C*                   ---- ------
C*
C*    If no billing rate was retrieved from the call to X48096
C*    Functional Server, then issue an error message.
C*
CSR         $RATE    IFEQ *ZEROS
CSR                  MOVE '1'       @MK,26
CSR                  SETON                      5393
CSR                  ELSE
CSR         $RATE    MULT #@PBRT    YTPBRT
CSR                  ENDIF                          YKBCMA = '2'
```

Add C0030 copy module for subroutine:

```
C**************************************************************
C*
C*    Copy Common Subroutine – Cost/Markup Table Interface
C*
C/COPY JDECPY,C48096
C**********************************************
C*
C*    Copy Common Subroutine – Cost/Markup Table Interface
C*
C/COPY JDECPY,C0030
C**********************************************
```

Copy Module Naming Conventions

Many of the copy module names have changed in A8.1. We changed the copy modules to no longer use the version suffix.

Example

Before:

```
I/COPY JDECPY,I4809671
```

After:

```
I/COPY JDECPY,I48096
```

Changed Module Listing

Obsolete Member	New Member	Description
I4809671	I48096	Cost Plus Markup Table

Architecture/Engineering/Construction Systems

This section provides database changes for the following systems:

- Property Management
- Homebuilder Management
- Scale Ticket

Database Changes

This chapter lists database changes for the Property Management, Homebuilder Management, and Scale Ticket systems.

Property Management

Added Fields

File	Field Description	Data Item	Explanation
F1501	Collector	CORG	Collector Name or ID
	Original End Date	OLED	Original Lease Ending Date
F1501E	Collector	CORG	Collector Name or ID
	Original End Date	OLED	Original Lease Ending Date

New Physical Files

File	File Description	Prefix	Explanation
F1509	Collection Activity Rules	N8	Activity Rules for Collection Module
F1515	Tenant Receivable Cash	M9	Tenant Receivable Cash Management
F1515W	WF – Tenant Receivable Cash	N9	WF – Tenant Receivable Cash Management
F1526	Collection Transaction Log	N6	Collections Log File
F1526W	WF – Collection Trans. Log	N6	WF – Collections Log File
F1527	Collection Log – Add'l Text	N7	Additional Text File for Collections

New Logical Files

File	File Description	Key Fields
F0311LMA	A/R Ledger	RPPO, RPMCU, RPUNIT, RPDDJ
F1501LH	Tenant/Lease Master	NEDOCO, NEMCU, NEUNIT
F1509LA	Collection Activity Rules	N8MCU, N8CSCU
F1515LA	Tenant Recv. Cash Mgmt.	N9CO, N9MCU, N9UNIT
F1515LB	Tenant Recv. Cash Mgmt.	N9COMG, N9MCU, N9UNIT
F1515LC	Tenant Recv. Cash Mgmt.	N9AN8, N9MCU, N9UNIT
F1515LD	Tenant Recv. Cash Mgmt.	N9DOCO, N9MCU, N9UNIT
F1515LE	Tenant Recv. Cash Mgmt.	N9AN8, N9CO, N9DOCO, N9MCU, N9UNIT
F1515LF	Tenant Recv. Cash Mgmt.	N9PA8, N9CO
F1515WLE	Tenant Recv. Cash Mgmt.	N9AN8, N9CO, N9DOCO, N9MCU, N9UNIT
F1526LA	Collection Transaction Log	N6CO, N6MCU, N6UNIT
F1526LB	Collection Transaction Log	N6ANA, N6DOCO, N6MCU, N6UNIT, N6CSQ
F1526LC	Collection Transaction Log	N6COMG, N6MCU, N6UNIT
F1526LD	Collection Transaction Log	N6AN8, N6MCU, N6UNIT
F1526LE	Collection Transaction Log	N6DOCO, N6MCU, N6UNIT
F1526LF	Collection Transaction Log	N6UPMJ

New Joined Logical Files

File	File Description	Prefix	Explanation
F1515JA	A/R Statements Only	N9, AB, A5	Join of F1515, F0101, and F0301
F1515WJA	Tenant Statements Only	N9, AB, A5	Join of F1515W, F0101, and F0301

Homebuilder Management

Added Fields

File	Field Description	Data Item	Explanation
F4461	Categories – Option Master 5	OP05	Category codes on Option Master (P446100)
	Categories – Option Master 6	OP06	Category codes on Option Master (P446100)
	Categories – Option Master 7	OP07	Category codes on Option Master (P446100)
	Categories – Option Master 8	OP08	Category codes on Option Master (P446100)

New Physical Files

File	File Description	Prefix	Explanation
F4464	Paypoint Master File	JQ	File for paypoint contract items for parent and child cost codes

New Logical Files

File	File Description	Key Fields
F4464LA	Paypoint Master	JQCO, JQMCUS, JQSUBP, JQOBJ, JQSFXO

Scale Ticket

Added Fields

File	Field Description	Data Item	Explanation
F4231	User Reserved Number	STURAB	User Reserved Number
	User Reserved Amount	STURAT	User Reserved Amount
	User Reserved Code	STURCD	User Reserved Code
	User Reserved Date	STURDT	User Reserved Date
	User Reserved Reference	STURRF	User Reserved Reference

Utility Customer Information System

This section provides database and system changes for the Utility Customer Information System.

Database Changes

This chapter lists database changes for the Utility Customer Information System.

Utility Customer Information

Added Fields

File	Alias	Field Description	Data Item	Explanation
F1902	I1902	Duplicate Bill Flag	DUPB	Controls the mailing of duplicate bills and collection notices. Valid values are: 0 Do not send duplicate bills/notices 1 Send duplicate bills/ notices 2 Send duplicate bills only 3 Send duplicate notices only
		Amount – Non-aged	NAGE	Designates the amount of non-aged receivables outstanding for a service agreement.
F1903		Deductive Consumption	DDCT	Indicates whether the service address/meter position on the connection should be billed as a deductive meter group. 1 or Y indicates that deductive meter records are associated with the service address/meter position. Blank, 0, or N indicates that no deductive meter records are associated.
F1904		Description – Compressed	DC	Stores the compressed description of the city to allow for searching (see *Utility Customer Information System Changes*).

File	Alias	Field Description	Data Item	Explanation
F1905	I1905	Method of Calculation	ESTM	The calculation method to use when creating estimates. The value indicates whether weather conditions should play a role in calculations for the meter position or not. Blank indicates that base load and heat factor will be used in the calculation. 1 indicates that only base load will be used in the calculation.
		Prevent Shut-off	SHAL	Indicates whether a meter position can be shut off for non-payment. Blank, N, or 0 indicates that shut-off for the meter position is not allowed. Y or 1 indicates that shut-off for the meter position is allowed.
F1911		Unit of Measure – Billed	BUM	The unit of measure associated with the Billable Units field on the bill.
		Unit of Measure – Consumption	CUM	The unit of measure associated with the Consumption field on the bill.
		Deductive Consumption	DDCT	Indicates whether the service address/meter position on the connection should be billed as a deductive meter group. 1 or Y indicates that deductive meter records are associated with the service address/meter position. Blank, 0, or N indicates that no deductive meter records are associated.
		Meter Reading Source	MRSR	Source of the meter reading (for example, Customer Read, Phone Read, ITRON Read).
		Estimated	MTES	Indicates whether the reading was estimated or not. Y or 1 indicates Yes. N or 0 indicates No. Future use.
		Meter Read Type	MTTY	Indicates the type of meter reading (for example, Set Read, Remove Read, ITRON Read). Future use.

File	Alias	Field Description	Data Item	Explanation
F1913		Unit of Measure – Billed	BUM	The unit of measure associated with the Billable Units field on the bill.
		Unit of Measure – Consumption	CUM	The unit of measure associated with the Consumption field on the bill.
		Deductive Consumption	DDCT	Indicates whether the service address/meter position on the connection should be billed as a deductive meter group. 1 or Y indicates that deductive meter records are associated with the service address/meter position. Blank, 0, or N indicates that no deductive meter records are associated.
		Meter Reading Source	MRSR	Source of the meter reading (for example, Customer Read, Phone Read, ITRON Read).
		Estimated	MTES	Indicates whether the reading was estimated or not. Y or 1 indicates Yes. N or 0 indicates No. Future use.
		Meter Read Type	MTTY	Indicates the type of meter reading (for example, Set Read, Remove Read, ITRON Read). Future use.
F1920	I1920	Unit of Measure – Billed	BUM	The unit of measure that should be used for billing purposes. This value will initiate the conversion of the consumption if the unit of measure on the bill item does not match the unit of measure of the consumption.
		Payment Priority	PAYP	The priority that a bill item carries for payment matching.
F1923		Meter Size	MTSZ	Allows the user to define all the different meter sizes and rates that are associated with any given “meter size” bill item.

File	Alias	Field Description	Data Item	Explanation
F1924		Exclude from Aging	EXAG	Designates whether an A/R Offset value is excluded from UCIS aging and escalation. Y or 1 indicates exclusion. N or 0 indicates inclusion.
F1926		Estimated Read	MTES	Indicates whether the reading was estimated or not. Y or 1 indicates Yes. N or 0 indicates No. Future use.
F1930		Unit of Measure – Consumption	CUM	The unit of measure associated with the meter read consumption.
		Demand	DMND	Future use field for electric utilities.
		Estimated	MTES	Indicates whether the reading was estimated or not. Y or 1 indicates Yes. N or 0 indicates No. Future use.
		Meter Read Type	MTTY	Indicates the type of meter reading (for example, Set Read, Remove Read, ITRON Read). Future use.
F1933		Demand	DMND	Future use field for electric utilities.
F1980		Bill Print Header	DUPB	Controls the mailing of duplicate bills and collection notices. Valid values are: 0 Do not send duplicate bills/notices 1 Send duplicate bills/ notices 2 Send duplicate bills only 3 Send duplicate notices only
		Meter Reading Source	MRSR	Source of the meter reading (for example, Customer Read, Phone Read, ITRON Read).
		Estimated	MTES	Indicates whether the reading was estimated or not. Y or 1 indicates Yes. N or 0 indicates No. Future use.
		Meter Read Type	MTTY	Indicates the type of meter reading (for example, Set Read, Remove Read, ITRON Read). Future use.

File	Alias	Field Description	Data Item	Explanation
F1981		Deductive Consumption	DDCT	Indicates whether the service address/meter position on the connection should be billed as a deductive meter group. 1 or Y indicates that deductive meter records are associated with the service address/meter position. Blank, 0, or N indicates that no deductive meter records are associated.
		Meter Reading Source	MRSR	Source of the meter reading (for example, Customer Read, Phone Read, ITRON Read).
		Estimated	MTES	Indicates whether the reading was estimated or not. Y or 1 indicates Yes. N or 0 indicates No. Future use.
		Meter Read Type	MTTY	Indicates the type of meter reading (for example, Set Read, Remove Read, ITRON Read). Future use.
F1990		Autocash Algorithm	ACA	Designates the autocash algorithm to be used. B indicates Balance Forward. T indicates Statement.
		Aging Days 1	AGR1	Allows for aging days separate from the A/R system, which lets utility service agreement receivables be aged according to separate number-of-days boundaries than those specified in the company constants and used by the A/R system.
		Aging Days 2	AGR2	Same as AGR1 above.
		Aging Days 3	AGR3	Same as AGR1 above.
		Aging Days 4	AGR4	Same as AGR1 above.
		Aging Days 5	AGR5	Same as AGR1 above.
		Aging Days 7	AGR7	Same as AGR1 above.
		Category Code Designator	CDDC	Designates which category code on the Meter Master will contain the valid meter sizes.
		Current Aging Days	CRDY	Same as AGR1 above.
F1994		Document	DOCO	Model work order number to use when generating shut-off work orders during collections.

Changed Fields

File	Aliases	Field Description	Data Item	Changed: From	To
Collection Level	I1994	Collection Level – Complete	UCLC	1 Alpha	2 Alpha
		Collection Level – De-escalation	UCLD	1 Alpha	2 Alpha
		Collection Level – Initial	UCLI	1 Alpha	2 Alpha
		Collection Level	UCLL	1 Alpha	2 Alpha
		Next Collection Level	UNCL	1 Alpha	2 Alpha
Bill Item	I19800, I19750	Billed Item – Based On	BBLC	3 Alpha	5 Alpha
		Bill Item – Deposit Charge	BIDC	3 Alpha	5 Alpha
		Bill Item – Interest Calculation	BIIC	3 Alpha	5 Alpha
		Bill Item	BITM	3 Alpha	5 Alpha
		Bill Item – Flat Materials	FMBI	3 Alpha	5 Alpha
		Bill Item – Other	FOBI	3 Alpha	5 Alpha
		Bill Item – Labor Overtime	LOBI	3 Alpha	5 Alpha

Deleted Fields

File	Field Description	Data Item	Replaced By
F1905	Unit of Measure	UM	Deleted
F1926	Meter Reading Source	ESTD	MTES

Obsolete Fields

These fields were obsoleted, but not removed from the files. They are available for future use.

File	Field Description	Data Item	Replaced By
F1911	Meter Reading Source	ESTD	MRSR, MTTY, and MTES (divided into 3 separate fields)
F1913	Meter Reading Source	ESTD	MRSR, MTTY, and MTES (divided into 3 separate fields)
F1981	Meter Reading Source	ESTD	MRSR, MTTY, and MTES (divided into 3 separate fields)

New Physical Files

File	File Description	Prefix	Explanation
F4870	Work Center/Branch Associations	O8	Identifies and stores the association between work centers and branch/plants utilized within the work order portion of the Utility CIS system. For more information, see *Utility Customer Information System Changes.*

New Joined Logical Files

File	File Description	Prefix	Explanation
F1902JB	Service Agreement/Connections/ Bill Item	NC	Replaces F1903JA. This is more of a cleanup issue than a new file because the first file in the join is F1902. It should have been a join over the F1902.

Obsolete Files

File	File Description	Explanation
F1903JA	Service Agreement/Connections/ Bill Item	Replaced by F1902JB. This is more of a cleanup issue than a new file because the first file in the join is F1902. It should have been a join over the F1902.
T1911	Billing Detail Work File	This file was used during the creation of billing detail, but it was abandoned. It is no longer used.

Utility Customer Information System Changes

This chapter describes changes made to the Utility Customer Information System.

Work Center Cross Reference Server (XT4872)

The Work Center Cross Reference Server (XT4872) was changed to add an additional parameter that contains the branch from the Work Center/Branch Associations file (F4870).

Affected Programs

Any program that calls the Work Center Cross Reference Server (XT4872).

XT4872 Implementation

The server should now be called as follows:

```
C*
C*  Call Work center cross reference server (XT4872) to
C*  determine the work center and branch.
C*
CSR               MOVE WATYPS    PSTYPS
CSR               MOVE WAWOSG    PSWOSG
CSR               MOVE WATWNC    PSTWNC
CSR               MOVE NDMRTE    PSMRTE
CSR               CLEARPSMCU
CSR               CLEARPSMMCU
CSR               CLEAR#PERR
CSR               CALL 'XT4872'           81
C*                ---- --------
CSR               PARM           PSTYPS   1   Job Type
CSR               PARM           PSWOSG   3   Schedule Group
CSR               PARM           PSTWNC   5   Area of Town
CSR               PARM           PSMRTE   4   Meter Route
CSR               PARM           PSMCU   12   Work Center
CSR               PARM           PSMMCU  12   Branch
CSR               PARM           #PERR    4   Error Flag
CSR     *IN81     IFEQ '0'
CSR     #PERR     ANDEQ*BLANKS
CSR               MOVE PSMCU     WASWKC
CSR               MOVE PSMMCU    WAMMCU
CSR               ELSE
CSR               MOVE '1'       @MK,04
CSR               SETON                   5393
CSR               END
```

Work Center/Branch Associations (F4870)

A new file was created to identify and store the associations between work centers and branch/plants. This change replaces the process of accessing the Work Center Master File (F30006) in order to derive a branch/plant for a work center.

Affected Programs

Any program in the Utility CIS system that tries to derive a branch from the Work Center Master File (F30006).

Custom programs must be checked for the use of the Work Center Master File (F30006). If the file exists for the purpose of deriving a branch/plant (retrieving the value in MMCU), the user must abandon this method and use the Work Center/Branch Associations file (F4870) instead. In many cases, the program may be deriving the work center already by using the XT4872 server. In this case, the user can use the branch/plant value returned from this server call.

If the work center is not known and needs to be derived, the user needs to implement this server. If the work center is known and the user only needs to derive the branch/plant, the user may use the Work Center/Branch Associations file to retrieve the branch/plant.

After installing A8.1, the user needs to use the Work Center/Branch Associations program (P4870) to enter all work centers being used as well as each work center's associated branch/plant. If you do not have more than one branch/plant set up for inventory parts, enter the same branch for all work centers.

A new edit rule (BRANCH) requires the work center and its associated branch/plant to reside in this file.

To access the Work Center/Branch Association program, select Work Center/Branch Assoc. (option 3) from the Work Order Scheduling Setup menu (G19431).

```
4870                       Work Center/Branch Association

 Action Code. . . . . . B
 Skip to Work Center. . BBBBBBBBBBBB 000000000000000000000000000000

 O     Work
 P    Center           Description             Branch          Description
 B BBBBBBBBBBBB 0000000000000000000000000 BBBBBBBBBBBB 000000000000000000000000
 B BBBBBBBBBBBB 0000000000000000000000000 BBBBBBBBBBBB 000000000000000000000000
 B BBBBBBBBBBBB 0000000000000000000000000 BBBBBBBBBBBB 000000000000000000000000
 B BBBBBBBBBBBB 0000000000000000000000000 BBBBBBBBBBBB 000000000000000000000000
 B BBBBBBBBBBBB 0000000000000000000000000 BBBBBBBBBBBB 000000000000000000000000
 B BBBBBBBBBBBB 0000000000000000000000000 BBBBBBBBBBBB 000000000000000000000000
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 B BBBBBBBBBBBB 0000000000000000000000000 BBBBBBBBBBBB 000000000000000000000000
 B BBBBBBBBBBBB 0000000000000000000000000 BBBBBBBBBBBB 000000000000000000000000
 B BBBBBBBBBBBB 0000000000000000000000000 BBBBBBBBBBBB 000000000000000000000000

        Opt:  9=Delete     F5=Update     F9=Reinquire     F24=More Keys
```

DC – Description – Compressed

The Description – Compressed field was added to the Town Codes Cross Reference file (F1904) in the A7.3 release. This field stores the compressed description for the city to allow searches by city.

Affected Programs

Any program that writes Town Codes Cross Reference records.

Code to Populate the Description – Compressed Field

The code to populate the Description – Compressed field follows:

```
C*
C*  Compress the City.
C*
CSR            CLEAR@AL
CSR            MOVE ' '           ####D2
CSR            MOVEAN5CTY1        @AL
CSR            EXSR C0040
C*             ---- -----
CSR            MOVEA@RL           N5DC
```

Copy Module Naming Conventions

The names of many of the copy modules have changed in A8.1. We changed the copy modules to no longer use the version suffix.

Example

Before:

```
I/COPY JDECPY,I190171
```

After:

```
I/COPY JDECPY,I1901
```

Changed Module Listing

Obsolete Member	New Member	Description
I190171	I1901	Service Address Master
I190271	I1902	Service Agreement Master
I190571	I1905	Meter Positions
I191071	I1910	Billing Batch Control
I191771	I1917	Budget Billing Terms
I192071	I1920	Bill Item Master
I195571	I1955	Account/Document Repository File
I196571	I1965	Document Merge File
G190171	Deleted	Obsolete
E196571	Deleted	Obsolete

Technical Foundation

This section provides database and system changes for Technical Foundation.

Database Changes

This chapter lists database changes for Technical Foundation.

Technical Foundation

Added Fields

File	Field Description	Data Item	Explanation
F0082	Display Style	DSST	
	Work Station ID	JOBM	
	Level of Display	LOD	
	Menu Identification	MNI	
	Menu Classification	MNUT	
	Authorization Mask	MSKA	
	Department Mask	MSKD	
	Future Use Mask	MSKF	
	Job Mask	MSKJ	
	Knowledge Mask	MSKK	
	Setup Menu	OCMN	
	Program ID	PID	
	System Code	SY	
	Text/Icon Display	TXIC	
	Date Updated	UPMJ	
	Time Last Updated	UPMT	
	User ID	USER	
	Advanced & Technical Operations	XMN	
F0082H	Execution Date	DXJ	
	Execution Time (HH/MM/SS)	EXT	
	Job Number	JOB	
	Job to Execute	JTOE	
	Menu Identification	MNI	
	Menu to Execute	MTOE	
	Selection Number	SELN	
	User ID	USER	
	Work Station Name	WKST	

File	Field Description	Data Item	Explanation
F00821	Application Identifier	APPI	
	Form Identifier	FMID	
	Form Name	FMNM	
	Help Start Key	HSKY	
	Icon Identifier	ICNI	
	Work Station ID	JOBN	
	Job to Execute	JTOE	
	Country/Region Codes	MCTR	
	Menu Identification	MNI	
	Authorization Mask	MSKA	
	Department Mask	MSKD	
	Future Use Mask	MSKF	
	Job Mask	MSKJ	
	Knowledge Mask	MSKK	
	Menu to Execute	MTOE	
	Object Name	OBNM	
	Option Code	OPCD	
	Option Key	OPKY	
	Processing Option Group Identifier	POID	
	Run Minimized	RNMF	
	Batch Designation	SBTD	
	Selection Number	SELN	
	Selection Consequences	SLCS	
	Selection Type	SLTY	
	Jargon	SYAO	
	Date Updated	UPMJ	
	Time Last Updated	UPMT	
	User ID	USER	
	Version	VER	
	Highlight	XHL	
F82101	Query Join Type	JTP	
F9207	Data Dictionary Identifier	DDID	
	Data Structure Name	DSON	
	Data Item	DTAI	
	Error Level	ERLV	
	Program Name	PGM	
	Data Structure Template ID	TMID	

File	Field Description	Data Item	Explanation
F9210	Allow Blank Entry (Y/N)	ALBK	
	Auto Include (Y/N)	AUIN	
	Display Business Function	BFDN	
	Edit Business Function	BFEN	
	Business View ID	BVID	
	Control Type	CNTT	
	Display Business Function	DBID	
	Data Dictionary Identifier	DDID	
	Edit Business Function	EBID	
	Data Display Rules	ODR1	
	Data Edit Rules Spec	OER1	
	Data Edit Rules Spec	OER2	
	Data Item (OneWorld)	OWDI	
	Data Display Rules (OneWorld)	OWDR	
	Data Edit Rules (OneWorld)	OWER	
	Data Type (OneWorld)	OWTP	
	Platform Flag (OneWorld)	PLFG	
	Row Security (Y/N)	SCFG	
	Search Form ID	SFID	
	Search Form Name	SFMN	
	Upper Case Only (Y/N)	UPER	
F96012	Country	CTR	
	Description	DL01	
	Field Name	FLDN	
	Language	LNGP	
	Screen Name	FMID	
	Parameter 1	PFL1	
	Parameter 2	PFL2	
	Parameter 3	PFL3	
	Parameter 4	PFL4	
	Parameter 5	PFL5	
	Parameter 6	PFL6	
	Parameter 7	PFL7	
	Parameter 8	PFL8	
	Parameter 9	PFL9	
	Parameter 10	PFL0	
	Calling Program	PGM	
	Program to Call	PGMG	
	DREAM Writer Form ID	PID	
	DREAM Writer Version	VER	
F9620	Indicator 4	IND4	
	Indicator 5	IND5	
	Indicator 6	IND6	
	Indicator 7	IND7	
	Indicator 8	IND8	
	Indicator 9	IND9	

File	Field Description	Data Item	Explanation
F98312	DBCS Font Library Name	DBFL	
	Double-Byte Coded Font	DBFT	
	Font Code Page Library Name	FCDL	
	Font Character ID Library Name	FCHL	
	Font Code Page	FNCD	
	Font Character Identification	FNCH	
	Font Point Size	FNSZ	
	Open Scope	OSCP	
	Override Scope	OVCP	
	Secure from Overrides (Y/N)	SCOV	
	Share Open Data Path (Y/N)	SHR	
F00HELP1	Task Title	HFTTLE	Formerly HFDTA
F98HELP	Task Title	HFTTLE	Formerly HFDTA

Changed Fields

File	Field Description	Data Item	Explanation
F00821	Application ID	APPI	Changed field from 8 binary, 0 decimals, to 11 packed, 0 decimals
	Form ID	FMID	Changed field from 8 binary, 0 decimals, to 11 packed, 0 decimals
	Icon ID	ICNI	Changed field from 8 binary, 0 decimals, to 11 packed, 0 decimals
	Processing Option Group ID	POID	Changed field from 8 binary, 0 decimals, to 11 packed, 0 decimals

New Physical Files

File	File Description	Prefix	Explanation
F9207	Error Message Program to Call	FR	Replaces F9205
F9210	Data Field Specifications	FR	Replaces F9201 and F9206
F96012	Generic Function Key Master	XF	

The following files were new for the A7.3 release, but were left out of the *A7.3 Programmer's Guide* inadvertently:

File	File Description	Prefix	Explanation
F0082	Menu Master	MN	This file, along with F00821, replaces F0090 (because of normalization in A7.3)
F0082H	Menu Selection History	MH	This file replaces F0090H (new for A7.3)
F00821	Menu Selections	MZ	This file, along with F0082, replaces F0090 (because of normalization in A7.3)
F0083	Menu Text Overrides	MT	New for A7.3
F0084	Client Menu Selection Paths	MP	New for A7.3

Obsolete Files

File	File Description	Explanation
F0090	Menu Master	Replaced by F0082 and F00821 (new for A7.3)
F0090H	Menu Selection History	Replaced by F0082H (new for A7.3)
F9201	Data Field Specifications	Replaced by F9210
F9205	Error Message Program ID	Replaced by F9207
F9206	Alternate User Defined Codes – Tag File	Replaced by F9210

Technical Foundation System Changes

This chapter describes changes made to Technical Foundation.

Special Instructions for Fields

FROWDI – OneWorld Data Item Name (F9210)

This field is the 'C' alias name. It has been removed from the F9204 file and placed into the F9210 file. The COBOL alias name remains in the F9204 file.

XFFLDN – Field Name for Generic Exit (F96012)

This field must contain #G01 through #G30. It is used to determine the order in which the generic exits are displayed to the user. It is also used to implement security through Function Key Security (P9611).

XFPFL1 – Zero Parameters 1 through 10 for Generic Exit (F96012)

These fields are optional. If needed, they should be filled left to right (that is, do not fill PFL2 if you have not filled PFL1). The fields can contain a variable name from the calling program (for example, VDAN8), or constants (*BLANK or *ZERO), or a literal value (for example, DL). You need to know the parameters the called program expects in order to specify these correctly. The calling program must be observable in order for the software to get the value from the variable you specify and supply it as a parameter. If the calling program has had observability removed, the user gets the following error message when the user selects a generic exit that has been defined with parameters.

020S Error Opening Source File Template

Cause ..... System Error.

Resolution .. Contact your technical support person. For more information, view JDE.LOG and JDEDEBUG.LOG.

Conversion and Update Programs

COBOL Alias Field Names

OneWorld does not update the F9204 file with COBOL alias field names. An update program is available to create COBOL alias field names for the associated data dictionary items. Run program P92041 to verify COBOL alias field names for each data dictionary item and create names for those that do not have names.

Available Function Keys (F24) and Cursor Sensitive Help (F1) Window

The Generic Exit implementation has made it necessary to call J96012 rather than P9601H. This change has been made in the A8.1 source code, but if the customer has custom modifications, or if a programmer copies source into A8.1 from another environment, the conversion program must be run against that source code. DREAM Writer drives this program. The form ID is P96012CVT. The conversion replaces calls to P9601H with calls to J96012.

Copy Books

You need to recompile programs that use the following copy book. Make sure that you do not make copy book changes that conflict with A8.1 changes.

I00SC – Soft Coding Server

The I00SCG field has been redefined as a 30-byte field with 30 one-byte subfields named #G01 through #G30. These are the flags used for Generic Function Key Exit security. The ##RVAL field has been further defined with two new subfields (##RV1 and ##RV2), which are used to support the long date (MM/DD/CCYY or DD/MM/CCYY) and century for cursor-sensitive help. ##RV1 contains the long date returned from P00CAL. ##RV2 contains the century returned from P00CAL.

Function Key Help (P9601H)

We have added generic exit capability to A8.1 software. This lets a customer add an exit to another program from an existing program without changing the code in the existing program. The new exits are defined in file F96012 from menu G90 (option 17) or G92 (option 9). The Generic Exit file is keyed on Country, Language, and Video Name. The customer can define different exits for the same video for users in different countries. The user can press F24 to display the generic exits. This lists any generic exits defined for this video for the user's country/language, followed by the available function keys and selections. The user executes the generic exit by entering '4' next to the desired exit.

The Function Key Help program (P9601H) has been replaced by J96012. S00EX calls this program. To use the new function, you should scan your source code for P9601H and replace it with J96012. We have supplied program J96012CVT to convert your source to J96012. To run this program, select Replace P9601H with J96012 from the A8 Conversion Utilities menu (BA6).

The generic exit function supports up to ten parameters in addition to a DREAM Writer for ID and Version. Each parameter can be up to 2000 bytes long. Parameters must be character or zoned decimal, or, if packed, you must get the value from a packed variable in the calling program. You will need to write a small "stub" program to convert the zoned decimal data to packed data and call the target program if one of the following situations is true.

- You need to call a program and pass in a packed decimal parameter where the calling program variable is zoned
- The calling program variable is packed and the called program variable is zoned
- You need to pass zeroes into a packed parameter

We have supplied sample programs to do this (J96GFK/P96GFK). In this case, the program specified in F96012 would be J96GFK, not the name of the eventual target program. RPG does not allow the same RPG program to be called repeatedly at different levels in one job (recursively). Therefore, we have supplied in J96GFK a way to call different versions of the same program. The supplied precompiler commands P96GFKR and J96GFKR create the different versions. They create multiple versions of P96GFK, and J96GFK determines which version to call at any one time. The sample code accepts ten parameters. CL does not accept a variable number of parameters (you must always call a CL program with the number of parameters it is coded to accept), so all generic exits that use the sample stub program (J96GFK) are defined to pass ten parameters, even though less parameters are actually needed for the eventual target program that will be called.

The generic exits can be secured just like function key exits by using Function Key Security (P9612) on the security menu (G94, option 10). Specify the field name (#G01 through #G30) that you defined in the generic exit file.

When defining a generic exit program, you can default the DREAM Writer version to the version used by the calling program by typing &##VERS in the version column. For example, if the generic exit is being defined for V4211, and some users execute P4211 with a version of BRAZIL while others use version ZJDE0001, if you specify $##VERS for the called program, it will get passed BRAZIL or ZJDE0001 as the version, depending on which user executes it.

Date Conversion (X0028)

X0028 has been enhanced to make turn-of-century processing easier. It now accepts two additional parameters.

The first new parameter (#EDAT2) is a ten-alpha edited output date including century. The second new parameter (#SIDT2) is an eight-alpha unedited input Gregorian date field including century. If you don't know whether your user has entered the date as MM/DD/YY or MM/DD/CCYY, scrub the date into an eight-byte field and put it into #SIDT2. X0028 determines whether a long or short date has been entered. The new parameter list appears below:

```
C       *ENTRY  PLIST
C               PARM           #SIDAT  6
C               PARM           #EDAT   8
C               PARM           #FFMT   7
C               PARM           #TFMT   7
C               PARM           #SEP    7
C               PARM           $ERTST  1
C               PARM           $CTRY   2
C               PARM           #FJPN   1
C               PARM           #TJPN   1
C               PARM           #EDAT2 10
C               PARM           #SIDT2  8
```

To use the new function, the programmer needs to specify the optional $CTRY, #FJPN, and #TJPN parameters. Initialize #FJPN and #TJPN to blanks before calling X0028.

If the programmer specifies #EDAT2 without #SIDT2, X0028 uses the $CTRY field if not blank. If $CTRY is blank, and the input date is Gregorian, X0028 calculates the century. It looks at the default value for data item #CYR (currently set to 10). If the year is more than this value, it sets the century to 19. If the year is less than or equal to this value, it sets the century to 20. This logic remains unchanged. For example:

#SIDAT = 010108, $CTRY = blanks
Input format = *MDY
MM = 01, DD = 01, YY = 08
Default value for #CYR = 10, 08 is less than 10
X0028 returns **20** in $CTRY, and in year portion of $EDAT2 if supplied

#SIDAT = 123166, $CTRY = blanks
Input format = *MDY
MM = 12, DD = 31, YY = 66
Default value for #CYR = 10, 66 is greater than 10
X0028 returns **19** in $CTRY, and in year portion of $EDAT2 if supplied

If the input date is Julian, X0028 looks at the first byte of the date to determine the century. For example:

#SIDAT = 086234, $CTRY = blanks
Input format = *JUL
Century = 0, year = 86, Julian days = 234
0 + 19 = 20
X0028 returns **19** in $CTRY, and in year portion of $EDAT2 if supplied

#SIDAT = 186234, $CTRY = blanks
Input format = *JUL
Century = 1, year = 86, Julian days = 234
1 + 19 = 20
X0028 returns **20** in $CTRY, and in year portion of $EDAT2 if supplied

If $CTRY is provided, X0028 uses that for the century. X0028 returns the date in the new format in #SIDAT, and an edited date in #EDAT2.

If the programmer specifies #SIDT2 and the format is Gregorian, X0028 uses the century portion of the date specified in #SIDT2. It ignores anything specified in $CTRY, and returns the century from #SIDT2 in $CTRY. It puts the converted date into #SIDAT, #EDAT, #SIDT2, and #EDAT2. The screen field into which the user entered the date must be scrubbed through C0012 before moving it into #SIDT2. If #SIDT2 is specified on the parameter list, and it contains blanks or zeroes, X0028 returns with an error.

Code Examples

Example 1

Passing long input date into X0028:

```
CSR             MOVEL '12312001'     #SIDT2  8
CSR             MOVE  *BLANK         #EDAT2 10
CSR             CALL  'X0028'                        81
CSR             PARM                 #SIDAT
CSR             PARM                 #EDAT
CSR             PARM  '*MDY'         #FFMT
CSR             PARM  '*YMD'         #TFMT
CSR             PARM                 #SEP
CSR             PARM                 $ERTST
CSR             PARM  '19'           $CTRY   2
CSR             PARM  *BLANK         #FJPN   1
CSR             PARM  *BLANK         #TJPN   1
CSR             PARM                 #EDAT2 10
CSR             PARM                 #SIDT2  8
```

The program returns:

#SIDAT = 011231
#EDAT = 01/12/31
$CTRY = 20
$EDAT2 = 2001/12/31
$SIDT2 = 20011231

Example 2

Passing in short date and century, getting long date back:

```
CSR             MOVEL '123101'      #SIDAT  6
CSR             MOVE  *BLANK        #EDAT2 10
CSR             CALL  'X0028'                          81
CSR             PARM                #SIDAT
CSR             PARM                #EDAT
CSR             PARM  '*MDY'        #FFMT
CSR             PARM  '*YMD'        #TFMT
CSR             PARM                #SEP
CSR             PARM                $ERTST
CSR             PARM  '19'          $CTRY   2
CSR             PARM  *BLANK        #FJPN   1
CSR             PARM  *BLANK        #TJPN   1
CSR             PARM                #EDAT2
```

The program returns:

#SIDAT = 011231
#EDAT = 01/12/31
$CTRY = 19
$EDAT2 = 1901/12/31

Example 3

Passing in long/short date, getting long date back (user types 123101 into VDDATE):

```
CSR             MOVEA VDDATE        @NM
CSR             EXSR  C0012
CSR             Z-ADD #NUMR         $DT    80
CSR             MOVE  $DT           #SIDT2  8
CSR             MOVE  *BLANK        #EDAT2 10
CSR             CALL  'X0028'                          81
CSR             PARM                #SIDAT
CSR             PARM                #EDAT
CSR             PARM  '*MDY'        #FFMT
CSR             PARM  '*YMD'        #TFMT
CSR             PARM                #SEP
CSR             PARM                $ERTST
CSR             PARM  ' '           $CTRY   2
CSR             PARM  *BLANK        #FJPN   1
CSR             PARM  *BLANK        #TJPN   1
CSR             PARM                #EDAT2
CSR             PARM                #SIDT2  8   (SIDT2 contains '00123101')
```

The program returns:

#SIDAT = 011231
#EDAT = 01/12/31
$CTRY = 19
$EDAT2 = 1901/12/31
$SIDT2 = 19011231

Example 4

Passing in Julian date, getting long date back:

```
CSR             MOVEL '101365'      #SIDAT  6
CSR             MOVE  *BLANK        #EDAT2 10
CSR             CALL  'X0028'                        81
CSR             PARM                #SIDAT
CSR             PARM                #EDAT
CSR             PARM  '*JUL'        #FFMT
CSR             PARM  '*YMD'        #TFMT
CSR             PARM                #SEP
CSR             PARM                $ERTST
CSR             PARM  *BLANK        $CTRY   2
CSR             PARM  *BLANK        #FJPN   1
CSR             PARM  *BLANK        #TJPN   1
CSR             PARM                #EDAT2
```

The program returns:

#SIDAT = 011231
#EDAT = 01/12/31
$CTRY = 20
$EDAT2 = 2001/12/31

Example 5

Passing Julian date into #SIDT2, getting long date back (database field contains 101365):

```
CSR             MOVE  GLDGJ         #SIDT2  8
CSR             MOVE  *BLANK        #EDAT2 10
CSR             CALL  'X0028'                        81
CSR             PARM                #SIDAT
CSR             PARM                #EDAT
CSR             PARM  '*JUL'        #FFMT
CSR             PARM  '*MDY'        #TFMT
CSR             PARM                #SEP
CSR             PARM                $ERTST
CSR             PARM  *BLANK        $CTRY   2
CSR             PARM  *BLANK        #FJPN   1
CSR             PARM  *BLANK        #TJPN   1
CSR             PARM                #EDAT2
CSR             PARM                #SIDT2  8   (SIDT2 contains '00101365')
```

The program returns:

#SIDAT = 123101
#EDAT = 12/31/01
$CTRY = 20
$EDAT2 = 12/31/2001
$SIDT2 = 12312001

Calendar Window (P00CAL)

Very few programs call P00CAL directly. Most programs call it through cursor-sensitive help (X96CCX). Currently, P00CAL returns the date as an eight-alpha edited value. The parameters are shown below:

```
CSR     *ENTRY  PLIST
CSR             PARM           PSFLDN  4
CSR             PARM           PSDATE  8
```

X96CCX returns the selected date left-justified in ##RVAL, and the programmer moves the first eight bytes into the date field in the program within subroutine S00VL. For example:

```
CSR     ##FLDN  WHEQ  'VDDGJ '
CSR             MOVEL ##RVAL     VDDGJ
```

The new function in P00CAL returns 30 bytes of information instead of eight. The existing programs that call P00CAL directly will be changed for the new length. The "short" edited date will be in the first eight bytes as before. The "long" edited date will be in the last ten bytes of the parameter. The century will be in positions 11 and 12 of the parameter. The softcoding copy member (I00SC) has been changed in A8.1 so that the programmer can access these subfields within ##RVAL directly.

```
I*  Returned value
I                       11  40 ##RVAL
I*  Returned value - edited date incl. century line MM/DD/YYYY
I                       31  40 ##RV1
I*  Returned value - century for date
I                       21  22 ##RV2
```

We cannot change the copy member for A7.3 or A7.1, but the programmer can access these portions of ##RVAL (or the longer parm from P00CAL) by using a MOVE instead of MOVEL to get the last ten bytes ("long" date), or two MOVEs to get the century as shown below:

```
CSR             MOVE ##RVAL     VDDATE 10
CSR             MOVEL##RVAL     $TEMP  12
CSR             MOVE $TEMP      $CTRY   2
```

Those programs calling P00CAL directly should be changed as follows:

```
CSR     *ENTRY  PLIST
CSR             PARM           PSFLDN  4
CSR             PARM           PSDATE 30
CSR             MOVELPSDATE    VDDATE
```

Programmer's Tools and Considerations

This section provides the following:

- Performance considerations for programmers
- National language support
- Double-byte enablement
- Scanning tool for year-2000 date fields

Performance Considerations for Programmers

What Makes an Application Run Slowly

The way programs use computer resources profoundly affects response time (or batch run time). If a program does many expensive instructions for each transaction, it uses a large part of the CPU and the response time is poor. If a program does many input/output (I/O) operations, it spends a large amount of time waiting for data to be transferred between the disk and the CPU, and response time is slow.

Sometimes it is hard to judge what will turn out to be "a lot of I/O" when the program runs at a customer site. Customers run our software against thousands or millions as many records as we have in our test data files. Customers set up their operation such that they incur many expensive instructions for each transaction record processed. They often run our software on computers much slower than our development machine.

We need to be aware of how we can make programs run faster and minimize the use of expensive resources. Because our software architecture is very modular (this is a popular concept in the software industry under the buzzword "object-oriented"), we can cause a lot of work to be done inadvertently that should be fairly simple processing.

Program Calls/Initialization

We use program calls extensively in our software. Some heavily-used programs are:

X0028	Date Conversion
X0005	UDC Server
XF0901	Account Master File Server
X09031	Compute Period Number

Some common subroutines perform program calls (for example C00161 and C0000). On the AS/400, calling a program is relatively expensive. If the program being called is a CL program, it is even more expensive. The best way to minimize this expense is to check whether we really need to call the program (again). For example, if the transaction date hasn't changed, don't convert it again. Just use the results of the previous conversion. This is called "conditioning" the calls.

If you are writing a file server or application server, make it as inexpensive as possible. A call to RPG is less expensive than a call to CL. Within the RPG program, end it by setting on RT instead of LR. If you set on LR, next time the program is called, it will go through program initialization again. If you set on RT, the program stays in an initialized state.

NOTE: The variables within the program do not clear automatically. For example, if Indicator 83 was on, it will still be on. You may need to add code to initialize some fields that the code currently assumes will contain zeroes and blanks the first time around. Any files that were open when the program last ended will still be open.

Common Subroutines

Some of the common subroutines can be expensive as well. The following subroutines show up in many measurements as “hot spots”, which are areas of code in the programs that use up more CPU time.

Subroutine	Name	Explanation
C0012	Right Justify Numeric Fields	This is a general-purpose subroutine, that does scrubbing for many different situations. It moves your input field to a 22-entry array and scrubs that array. It looks for decimal points and date separators. Obviously, these functions are unnecessary and expensive if what you are scrubbing is a two-byte subfile option field. Even more unnecessary is to scrub an input parameter coming from another program where the other program is reading a numeric field from the data base and passing it to this program. The subroutine formats the field in three different ways: as a 29P9 field (#NUMR); as a 15P9 field (#NUMR9); and as a 15P2 field (#NUMR2). Look at the definition of your output field to decide which of the formatted fields you should use. If your output field is 11P2, for example, and you move #NUMR9 into it, you will lose three significant digits. #NUMR9 only has six significant digits. Use #NUMR instead. If the field does not originate from a user typing it on a screen, it probably doesn’t need to be put through C0012.
C9822/3	Double-Byte Truncation	This subroutine moves your alpha input field into an 80-entry array and scrubs it. The subroutine should only do the scrubbing if the program is running on a double-byte system, but sometimes it executes unnecessarily. It tests a flag field #DBL, which is loaded from the QJDF data area. If the option in the data area is set to ‘0’, the subroutine will do the scrubbing. (It tests for ‘ ‘). This subroutine has been changed in A7.3 to test for ‘0’ or ‘ ‘.

Subroutine	Name	Explanation
C0042/3	Right Adjust Alpha Field	This subroutine moves your input field to an 80-entry array, and painstakingly right-adjusts it. It is used every time a business unit field is typed in on a screen. (The business unit field is 12 characters.) Make sure you 'condition' the execution of this subroutine so that it executes only if the business unit field changes.
C00161	Format Numeric Fields for Output	This subroutine calls an Assembler program that will examine and edit your output (inserting decimal points). There are programs that execute this subroutine for alpha fields. It will not harm the alpha fields, but it is an unnecessary expense. We also recommend that if a field is unlikely to change during a batch run (for example, check date), check whether it has changed before formatting it again.

Double-Byte Scrubbing

All J.D. Edwards programs include a routine (C9822) to scrub alpha fields as needed to accommodate double-byte character data. J.D. Edwards programmers analyze any new or changed RPG code for potential double-byte problems. The Double-Byte Analysis program flags lines of code where an alpha field is moved to a shorter alpha field. Because imbedded control characters exist in double-byte fields, problems will occur if an alpha field in a double-byte system is truncated.

The analysis program examines the fields involved to determine whether they could contain double-byte data. If the field is defined in the data dictionary as type 'A' (contains an alpha code, such as MSA [Marital Status Actual]), or if the field is two bytes long or less, it will not contain double-byte characters and should not be scrubbed. If the field is defined in the data dictionary as type 'O' (Open), it can contain double-byte characters and may need to be scrubbed. An example of an open field is ALPH (Alpha Description).

At times, the analysis program cannot determine what the field is. Perhaps the programmer moved the field into a work field earlier in the program (for example, moving several code fields into a data structure, then later moving the data structure into a work field). If, for example, the program moves $WK22 to $KY20 (a 22-byte work field to a 20-byte work field), the analysis program will flag that statement with DBX20 in the left margin. The 'X' indicates that programmer must investigate further. In this case, the programmer would find that $WK22 is made up of several smaller code fields that would not contain double-byte characters.

If an open field (or work field) is moved to an array, or an array is moved to an open field, the analysis program will flag it with DBA*nn* in the margin. The analysis program cannot determine whether truncation will occur. The programmer should analyze the code again to determine whether truncation could occur. For example, moving a 40-byte open field to an array with 30 one-byte entries would cause truncation.

If the programmer determines that there will be no truncation, the programmer should change the DBX*nn* or DBA*nn* flag to DBN*nn*. No extra code should be added to handle truncation.

If the programmer determines that there will be truncation, the programmer should change the DBX*nn* or DBA*nn* to DBY*nn*. The 'Y' indicates that double-byte scrubbing is needed. The programmer should make sure that the *nn* portion of the flag reflects the correct output length for the field after the move. This is usually needed for moves to an array for which the analyzer cannot determine the correct output length. The programmer, then, runs the source code through the double-byte conversion process. This changes the moves, which causes truncation as follows:

Original code (ABALPH is an open field 40-bytes long, and RRALPH is a report field 30-bytes long):

```
MOVE    ABALPH          RRALPH
```

New code after converting the program:

```
/COPY   JDECPY,E9822
.
.
/COPY   JDECPY,C9822
.
.
.
            CLEAR   @UA
            MOVEA   ABALPH          @UA
            Z-ADD   30              #OUTLG
            EXSR    C9822
            ----    -----
            MOVEA   @UB             RRALPH
```

@UA and @UB are 80-byte alpha arrays.

Customers who modify J.D. Edwards code should keep the double-byte scrubbing routine in mind. It can be expensive, and should be used only where needed. If a customer is not on a double-byte system, they probably should not add double-byte scrubbing to any custom code they write.

Database Read/Write

Database requests usually show up as the most expensive thing our programs do. The most effective way to reduce cost is to reduce the number of requests.

For batch, use sequential I/O where possible. Add record blocking for sequential I/O. We changed one batch program that did a lot of writes to use sequential-blocked writes. It reduced the run time by two thirds. See *Sequential I/O* for further discussion.

Don't Read Records Again

For example, if company number has not changed since the last transaction, there is no need to re-read the company file. See *Caching Control Files* for further discussion.

In a subfile program from which a user may select a particular record to see more detail, store the extra fields for the detail as hidden fields in the subfile. In this way, the detail code does not have to re-read the record. If necessary, the information can be passed to another program in a data structure.

Don't Read Records Unnecessarily

Don't "scan" the database. If we allow users to type record selection criteria in a subfile program, we should have supporting logical files so that we can read only the records they are interested in. We should not read 200 records, discarding 185 of them to present 15 records to the user. The problem with adding additional logical files is that the system has to maintain them. This puts an extra load on the system.

If there are multiple subfiles defined for a program, and the user can pick and choose the ones to look at (this is usually controlled by a processing option), don't fill all the subfiles ahead of time. Fill the subfile only if the user asks for it. Customer/Vendor Ledger Inquiry programs now have this logic in place.

Where a file has been normalized (for example, the F0101 Address Book file was split into eight files in A7.1), don't assume that all the new file information is needed. Don't just replace CHAIN I0101 with CHAIN I0101, CHAIN I0112, CHAIN I0113, CHAIN 10114, CHAIN I0115, CHAIN I0116, CHAIN I0301, CHAIN I0401. Look at the fields that are needed, and only CHAIN to the formats that contain those fields. This is especially important for file server programs.

Avoid Setting On the 'Fail' Indicator

If you normally expect a record not to be there, don't CHAIN every time to find it. An example is when you use next numbers to allocate a key for your file. Next numbers usually should come up with a key that does not exist in your file. If your file is defined as having a unique key, it is much less expensive to WRITE the new record with an error indicator on the WRITE (usually the write will succeed) than to CHAIN with the new key first (usually the CHAIN will fail).

Even more expensive is using SETLL where the SETLL positions past the end of the file. This forces an FEOD (RPG-abbreviated CLOSE and OPEN of the file).

For example, a control file has company as the major key. The customer has set up their control data for company 00000. The transaction records are for company 12345. For every transaction record, we do a SETLL to the control file with a key of company 12345. This causes an FEOD because no records exist with a key higher than 00000. We don't find an eligible record, so we do the SETLL again with company 00000.

Because we encourage customers to do generic set up with company 00000, we could check the control file at the beginning of the program to see if there are ANY records with a key greater than company 00000. See *Caching Control Files* for further discussion.

Sequential I/O

If the program reads through a file that has the record selection and sequencing done through DREAM Writer, you should be able to use sequential processing with that file. RPG allows the file to be opened for sequential-only processing if one of the following statements is true:

- The only OPCODE against that file in the program is a READ
- The only OPCODE against that file is a WRITE **

If the program does a SETLL, CHAIN, READE, UPDAT, or DELET against that file, it will not be opened for sequential-only processing. Check your RPG compile listing for the message "RPG will block/unblock file *xxxxx*" to see whether you have achieved sequential-only processing for that file. Sequential-only processing saves substantially on both CPU and I/O.

If you are reading through a file, and only every tenth or twentieth record is updated (or deleted), it would be best to open the file twice. (For example, open the physical for the READ, and open the logical for the update). Read through the physical. When you get to the record that needs updating, retrieve and update it through the logical.

To get the record-blocking, you must add an override in the CL program:

OVRDBF F*nnnnnn* SEQONLY(*YES *xxxx*)

Where *xxxx* is the number of records to block. To calculate this number, divide the record length into 32767 (32K) and round down. The AS/400 defaults to a block size of 4096 (4K) for sequential.

NOTE: If there already is an override for that file in the CL, you must *change* the existing override by adding the extra parameters to it.

If you can't achieve true sequential processing for a file, you still can get some benefit from blocking the file with a different override:

OVRDBF F*nnnnn* NBRRCDS(*xxxx*)

NOTE: Even if the only OPCODE against a file is WRITE, the operating system database will not allow sequential-only processing if there is a unique key against that file.

For example, you read through a master file, and for each master record you do SETLL and READE in a transaction file. You will not get sequential-only processing on the transaction file, but you can still block it. If you read through the master file in employee sequence, and access the transaction file by employee number (that is, you process both files in a similar key sequence), calculate the blocking factor as above.

If the key sequence of the two files is different, block the transaction file with something closer to the average number of records per master file record.

NOTE: If you use a much-larger blocking factor than the number of records you are reading sequentially at a time, the job will run slower than a job with no blocking added.

Expert Cache

The customer can do something to provide record-blocking without changing any code. If the customer separates the batch jobs into their own shared pool (for example, by changing the QBATCH subsystem description to use *SHRPOOL1), they can turn on "expert cache" in that pool. This is an operating system function that dynamically looks at the way jobs are reading or writing data, and does its own blocking where appropriate. This can have the same effect on batch run times as adding the OVRDBF .. NBRRCDS(*nn*) CL statement. It does not reduce CPU usage like SEQONLY processing.

To change to "expert cache", do a WRKSHRPOOL and change the paging option column to *CALC.

The operating system will ignore this paging option if it determines that there aren't enough memory or CPU cycles to use it.

Caching Control Files

Programs often access multiple control files for each transaction record processed. In order to cut down on reads to the control files, many programs have caching logic for them. Most of the file servers also have caching logic. This usually consists of an array of 100 or more entries in which valid codes are stored. For example, to validate a deduction type in Payroll, the program first will do a LOKUP in the deduction-type array. If it doesn't find the deduction type there, it will CHAIN to the deduction-type file. If it finds the deduction type in the file, it will add it to the array.

Caching can be the single most-significant improvement to a program to reduce database reads and speed up the program. It also can go spectacularly wrong. In the worst case, for every transaction record, a program may search a 250-entry array (3 x 250 machine instructions), and then still have to CHAIN to the control file.

We have customers who stripped the caching logic out of a program and see significant improvement. We also have customers who added their own caching logic to a program that had none, and see significant improvement.

What Goes Wrong?

The biggest problem we face is that customers set up and use a variable number of control records. If we knew that every customer set up no more than 100 pay types, for example, the caching would work fine. Customers who set up more than 100 types may get no benefit from a cache with 100 entries. If we increase the size of the array to more than 100, it is no longer efficient. If we start trying to use "smart" logic to keep the 100 types most recently used in the cache, we end up spending more time managing the cache than we would have by just CHAINing to the control file each time.

The second problem is that customers tend to set up control files as generically as possible. For example, if they can get away with setting up a sales tax rate for company 00000 for the USA, they will. If not, they will set it up by state for company 00000. If that isn't specific enough, they will set it up by county for company 00000. Only as a last resort, they will set it up for each company separately. Because we don't know how granular their definition is, our programs look for the most specific value first, then gradually work down to the most general value as each CHAIN or SETLL fails.

A program may do more than ten failed CHAINs or failed SETLLs to find the applicable control code for one field in a transaction record. If the program has caching for this file, and it stores the answer as it found it in the database (that is, the sales tax rate for company 00000 for Jefferson County is .034), we will go through a cache search followed by all the failed CHAINs all over again for each transaction record. We need to store the answer in the cache the way the question was asked. We started out looking for the sales tax rate for company 12345 for Jefferson County. We found the answer as company 00000 for Jefferson County. Put Company 12345/Jefferson County/3.4% in the cache.

Also try to set flags as you go along that tell you what to look for. For example, test the sales tax rate file in S999 to see if there are ANY records for companies greater than 00000.

User Indexes

Some programs use user indexes instead of arrays to cache control records. These have the advantage of being able to grow as needed (unlike arrays). If we can populate the array correctly (for example, if we store the answers in the array the way the question gets asked), a user index READ performs about the same as a successful LOKUP on a 1000-entry array. If we have a higher failure rate on the array LOKUP, the user index starts looking attractive for a smaller number of codes (about 250).

Pre-Loading Arrays

We can tell the number of records in a control file by looking in the file information data structure when we open the file. (See copy book I00INFDS – field FIRCNT). If we are using a 100-entry array cache, and there are 100 records or less in the control file, we can load all entries in S999 into a sorted array. This will speed up every LOKUP to the array. The downside to this technique is that we will have to define two arrays: one sorted and one not sorted. If you define the array as a sorted array, but the contents are not in the correct sequence, the LOKUP will fail.

```
  * SORTED ARRAY
E                    A         100  3  A
  * UNSORTED ARRAY
E                    B         100  3
```

Expensive Instructions

There are some instructions in RPG which are surprisingly expensive. You need to be cautious when you use these instructions in the subroutines that are executed repetitively. For example, be particularly careful with subroutines S004 and S005, which execute the body of instructions for each transaction record.

Array Handling

Anything to do with array processing can be expensive because the machine executes instructions over and over again for each array entry. If you are keeping running totals in arrays, and you initialize the arrays each time you read a new master record, pay attention to how you initialize the arrays.

Using MOVE or Z-ADD is the most expensive way to initialize an array. MOVEA is better than MOVE/Z-ADD. RESET is most efficient for a numeric array. CLEAR is most efficient for an alpha array.

Searching large arrays is expensive. If the array has to be larger than 250 entries, consider a user index instead. Whenever possible, define arrays as sorted. This speeds up the search greatly. Although LOKUP can be expensive, doing it yourself is even more expensive. For example:

```
              Z-ADD   1       #A
#A            DOWLE   100
SRCH          IFEQ    ARR,#A
              GOTO            T66
              ELSE
              ADD     1       #A
              ENDIF
              ENDDO
T66           TAG
```

The following code runs much faster than the above:

```
              Z-ADD   1       #A
SRCH          LOKUPARR,#A
```

Try to make your search argument the same length and type as the array element definition. If the array is defined as packed, define your search field for the LOKUP as packed, not zoned. Otherwise, the computer has to convert the field for each comparison it does.

When you need to refer to a particular entry in an array multiple times, it is more efficient to move that element into a work field and refer to the work field multiple times. Each time you refer to an element of an array, the system calculates the actual offset of the beginning of that field in the array. For example:

```
SRCH        LOKUP       ARR,#A                      30
*IN30       IFEQ        '1'
            ADD         ARR,#A      TOT
ARR,#A      MULT        PCT         RATE
ARR,#A      DIV         FACT        TAX
```

will perform poorly compared to:

```
SRCH        LOKUP       ARR,#A                      30
*IN30       IFEQ        '1'
            Z–ADD       ARR,#A      WRK
            ADD         WRK         TOT
WRK         MULT        PCT         RATE
WRK         DIV         FACT        TAX
```

The XFOOT opcode sums all the entries in an array. If you have sized your array for many more entries than it usually contains, any arithmetic operation that runs against the whole array will run slower than necessary. For example, you have given two arrays 250 entries. Most customers only use 50 entries. You add the arrays together. The system will do 250 ADDs, even though 200 of the entries in each array contain zero.

```
E               A           250 150
E               B           250 150
E               C           250 150
C     A           ADD             B             C
```

It is important to size your arrays carefully.

String Handling

When you are searching for one character, it is faster to scan a field than to perform an array LOKUP. When you are searching for a three-byte code in a list of 50 possible three-byte codes, LOKUP is faster than SCAN. In this case, it is even better to define the array as a sorted array, and either load it in ascending sequence, or sort it once loaded (SORTA opcode). If the array is defined as a sorted array, make sure the contents are sorted to avoid unpredictable results. Sometimes it isn't possible to do an array lookup, such as when you search for three characters in a 40-byte field that could start anywhere in the field.

Data Structures

If you are initializing data structures repetitively, pay attention to using the most efficient method. For a large data structure with many subfields, the CLEAR opcode will generate individual instructions to move blanks to the entire data structure, then move BLANKS and ZEROES to each individual field. RESET is a less expensive instruction to use, because it overlays the data structure with a saved copy of the initialized version (only executing one instruction). If the data structure has only a few numeric fields, consider moving BLANKS to the data structure name followed by individual Z-ADD *ZERO instructions for the numeric sub-fields.

```
IEXAMP      IDS
I                                        1  100NUM1
I                                       11  40 ALPH1
I                                     P 41  430PKD1
I                                       44  73 ALPH2
I                                       74  810NUM2
C                     CLEAREXAMP
```

vs

```
C                     RESETEXAMP
```

NOTE: If you will be using RESET, and the data structure contains numeric fields, you must initialize the data structure with 'I' on the DS statement.

Multiple-occurrence data structures are more efficient than storing related fields in multiple arrays. For example, if you are caching the UDC codes and descriptions in four arrays:

```
E                     KEY       150 16              Current Values
E                     D1        150 30              Current Descr.
E                     D2        150 30              Current Descr2
E                     SP        150 10              Special Hand.
E*
I*************************************************************
I*    PROGRAM INPUT SPECIFICATIONS AND DATA STRUCTURES
I*    ------------------------------------------------
I*
IDRDS        DS
I                                       1   4 DRSY
I                                       5   6 DRRT
I                                       7  16 DRKY
I*
C           DRDS      LOKUPKEY,#B                           66
C           *IN66     IFEQ '1'
C                     MOVELD1,#A     SFDL01
C                     MOVELD2,#A     SFDL02
C                     MOVELSP,#A     SFSPHD
```

In handling the relevant entries for each of the arrays, the system has to calculate where the entry is in each array. If we use a multiple-occurrence data structure instead, the system finds the start of the relevant entry once. The more related arrays there are, the more significant this becomes.

```
E                    KEY       150 16              Current Values
I*
IDRDS        DS
I                                          1   4 DRSY
I                                          5   6 DRRT
I                                          7  16 DRKY
I*
IDRDESC      DS                          150
I                                          1  30 DRDL01
I                                         31  60 DRDL02
I                                         61  70 DRSPHD
 *
C           DRDS      LOKUPKEY,#A                    66
C           *IN66     IFEQ '1'
C           #A        OCUR DSDESC
C                     MOVE DRDL01    SFDL01
C                     MOVE DRDL02    SFDL02
C                     MOVELDRSPHD    SFSPHD
```

Arithmetic

Multiplication and division are more expensive than addition and subtraction. You can make these even more expensive by causing an overflow condition. This provokes system error handling. Error handling is always expensive. Older versions of X0028 (date conversion) had a deliberate overflow as part of the code that determines whether the year was a leap year:

```
C           $FMTYR     DIV  4         $NBRV9  99
C           $NBRV9     IFEQ .000000000
C                      MOVE '1'       $LEAP
```

The division operation stored the result in a field with no integers defined. For example, 1985 divided by 4 equals 496.3, but this would be stored in the program as .3 because $NBRV9 was defined with no leading numbers. This is an overflow condition. The result field is too small to hold the calculated result.

Removing the overflow improved the performance of X0028 by 46%. Replacing the division operation with other operation codes resulted in an additional 10% improvement in performance. Removing the TESTN opcode (also expensive) resulted in yet another 10% improvement.

An example of using multiplication operation excessively is in the CLONE-generated code for S998:

```
CSR                   MOVE F@AD      #A
CSR                   DO   #A
CSR                   MULT 10        #@AD
CSR                   END
```

It would be more efficient to do the following:

```
CSR                     MOVE F@AD       #A
C                       SELEC
C             #A        WHEQ 1
CSR                     Z-ADD10         #@AD
C             #A        WHEQ 2
CSR                     Z-ADD100        #@AD
C             #A        WHEQ 3
                         :
                         :
C             #A        WHEQ 9
CSR                     Z-ADD1000000000#@AD
C                       ENDSL
```

Luckily, S998 is only executed once, but be aware of how you do your arithmetic in the code which is executed over and over again.

Error Handling

We need to have error-handling logic in our programs. We must be careful not to make the error-handling logic "main stream". For example, a CL program creates a work environment for a batch job. It checks to see if the work library is there. If not, it creates it. It checks to see if the work versions of 20 files are in the library. If not, it creates them.

```
CHKOBJ ABC *LIB
MONMSG CPF9801 EXEC(DO)
CRTLIB         ABC
ENDDO

CHKOBJ ABC/DEF *FILE
MONMSG CPF9801 EXEC(DO)
CRTDUPOBJ DEF PRODLIB *FILE ABC
ENDDO
```

If the normal course of events is that the batch program creates the environment and then uses it, the above logic is back to front. It is provoking error-handling logic every time it runs instead of provoking it only when there is an error. The program instead should go ahead and create the new library and objects, checking for errors if they exist already.

```
CRTLIB         ABC
MONMSG CPF2111
CRTDUPOBJ DEF PRODLIB *FILE ABC
MONMSG CPF5813
```

Printing

If your application requires much printing throughout the day (for example, printing pick slips), printing can be expensive. Our Order Entry application offers customers their choice of whether they want to print picking slips interactively (by pressing a function key), print in batch by submitting a job for each picking slip, or print in a subsystem. The third option is the best for performance.

The problem with printing interactively is that your program ties up precious resources while it prints.

Printing in batch is very expensive if the customer has a large volume of print requests. Job initiation is expensive. If we see a print job being submitted every five minutes, we know the job initiation is using a significant amount of CPU resources.

Printing in a subsystem allows one job to run all day. The job usually starts when the dedicated subsystem starts. The online program communicates with the subsystem job by way of a data queue. It puts print requests onto the data queue. The subsystem job waits on the data queue. It "sleeps" between print requests. It wakes up when a request arrives on the data queue, and produces the picking slip.

Display Files (Videos)

Many of our customers have remote locations. Subtle changes in the way we define display files can have a big impact on response time.

Display files created before A5.2 all had the PUTOVR/OVRDTA keywords as a standard. This requires the use of the RSTDSP(*YES) option when creating the display file. The old-style windows that we used in A5.2 required the use of RSTDSP(*YES) as well. RSTDSP(*YES) can slow down response time for remote users. It also impacts local users when there are remote users on the same system. With RSTDSP(*YES), the system saves a copy of everything on the screen before it puts out a new display file on that screen.

For example, the user is looking at a sales order. P4211 writes the V4211 display file to the screen. The user positions the cursor in the customer number field, and presses HELP. Our program calls the Customer Name Search program (P01NS), which writes V01NS to the screen.

If these display files are defined with RSTDSP(*YES), the system places the contents of the V4211 screen (data and constants) into a save area on the CPU before sending the V01NS image to the screen. Then when the user selects a customer and returns to P4211, the system places the contents of the screen into another save area before re-displaying ("restoring") the V4211 image that it saved previously.

If this is a remote user, the save action creates a lot of extra traffic on the communications line. A larger problem for everyone is that while the save and restore actions are going on, the user's job stays in memory, using an activity level. This means that other users potentially cannot get memory to do their work. Now this user's wait for the save/restore action to complete could get added to other users' response time, because they have to wait for it to complete before they get a shot at the CPU. If the user is on a 9600-baud line, the save/restore could take a relatively long time to complete.

This scenario shows up in performance tool reports as high Short Wait/Short Wait Extended time.

It appears that many of our display files are defined with RSTDSP(*YES) unnecessarily. The only time we need RSTDSP(*YES) is if we have PUTOVR/OVRDTA keywords in the display file DDS, or if we have an old-style window (does not use WINDOW keyword). Unfortunately, RSTDSP(*YES) is the default on the SVR record. If we don't type anything in the MAINT/RSTDSP field, it will compile the display file with RSTDSP(*YES).

Changing the RSTDSP attribute during testing is very easy. Use the CHGDSPF command with the RSTDSP(*NO) parameter. If you need the RSTDSP(*YES) attribute, the screen gets corrupted when you take a subfile option or press a function key that displays a different screen. It is easy to fix the problem by changing the display file back (CHGDSPF ... RSTDSP(*YES)). You must set this attribute correctly in the SVR record, because it can be very expensive for our customers if we specify RSTDSP(*YES) unnecessarily.

General Batch Considerations

All of the preceding techniques for speeding up your application (except for display file considerations) also apply to batch jobs. There are some additional techniques that are unique to batch.

Batch Window

The batch window is usually the off-shift time when most of the employees are home. The customer wants to get all batch jobs done before business opens for the day. This could be 6p.m. to 7a.m., or a shorter time. One of the ways we can help the customer get through the batch work is to design for multi-threading. We should try to design our batch jobs so that the customer can run two or more of them at once. Removing unnecessary dependencies allows multi-threading. (For example, we may need to have a copy of a data area in QTEMP instead of JDFOBJ if changes to that data area only affect this job.)

Consider using SORT to speed up batch processing. The discussion on *Sequential I/O* describes how to use blocking. To see a benefit from blocking sequential input, we need the data physically on the disk in the sequence in which we are reading it. SORT would be appropriate for a work file that is, for example, created by this batch job, and that does not have many logical files over it.

If you are creating and updating summary records in a database file as part of the batch run, consider processing the input file in the correct sequence to do "level break" logic. For example, you want to create a summary record by salesman in a territory. If you read the input records in that same sequence, you can accumulate totals for the salesman until the salesman changes. Then you would write out the summary record for that salesman, and so on. If you process the data in a different sequence, you will have to repetitively retrieve and update the summary record for the salesman. This is expensive. See *Database Read/Write*.

Look for opportunities to combine job steps to reduce passes through the data. If there are two reports that read the data in the same sequence, you could combine them into one program. Read through the data once to produce both reports.

Logical Files

In general, you should not set up a logical file solely to accommodate batch requirements. Use DREAM Writer or OPNQRYF to sequence and select the data for your program (or use SORT or RGZPFM).

Sort

The CL command to run a sort is:

```
FMTDTA INFILE((F0311))
OUTFILE(F0311WRK)
SRCFILE(QFMTSRC)
SRCMBR(GENMBR)
```

Sort can both select and sequence data for you. You need SORT control statements in a source member before you run the SORT. If these statements will not change, type them into a source member. You can prompt to get the format when you are editing the source member by using prompt types RH, RR, RF, or RC (for example, type IPRH in the sequence number field). If the selection/sequence varies, your program can write out the correct SORT statements. SORT can sort in place (the INFILE and OUTFILE can have the same name).

The following are some of the SORT control statements created by P062904. The first line is the header (prompt type RH). It defines the total length of sort fields, whether the sort is ascending or descending, and whether the sort fields should be included in the output record (an X means leave them out).

```
HFILE     88A         X
```

The next group of statements defines the sort fields (prompt type RF). The N in the second position means that it is a sort control field. It must be sorted according to the Header statement. An O would specify a sort control field to be sorted OPPOSITE to the Header statement. This way you can have some fields that sort in an ascending way and some that sort in a descending way. The third position defines the field type (character, packed, or zoned). The start and end positions are the start and end positions of this field in the input record.

```
FNC   3   7                    CO
FNC  10  21                    MCU
FNC  22  27                    OBJ
FNC  28  35                    SUB
FNU  61  62                    FY
FNU  63  64                    PN
FNU  65  70                    DGJ
FNP 128 130                    PDBA
FNU  71  78                    AN8
```

The last statement also is a field definition (prompt type RF). It redefines the entire input record as one character field and specifies it must be written to the output file (the D in position two means that it is a data field).

```
FDC   1 164                          * * OUTPUT COMPLETE RECORD * *
```

Reorganize

The CL command to reorganize a file is:

```
RGZPFM FILE(F0311)
KEYFILE(*LIBL/F0311LA F0311LA)
```

Reorganizing requires an existing access path over the data in the sequence you require. Reorganizing will not select data for you.

Be wary of using MAINT(*REBLD) or MAINT(*DLY). With MAINT(*REBLD), the entire access path will be rebuilt every time. It can slow down your testing. With MAINT(*DLY), the system monitors the percentage of records changed and dynamically changes the file to MAINT(*REBLD) if you change more than 20%. Consider removing the logical file member instead of MAINT(*REBLD). It is more efficient.

```
RMVM FILE(F0101LA) MBR(F0101LA)
CALL  UPDPGM
ADDLFM FILE(F0101LA) MBR(F0101LA)
```

National Language Support

As of release A7.3, J.D. Edwards complied with IBM's V3R1 National Language Support features. A8.1 users can take advantage of IBM's Character Data Representation Architecture (CDRA), which is not supported by J.D. Edwards releases prior to A7.3. This chapter discusses the aspects of CDRA that are relevant to J.D. Edwards software, the J.D. Edwards approach to compliance, and guidelines for programmers. For a thorough introduction to CDRA, refer to IBM's *AS/400 National Language Support* for V3R1.

CDRA Overview

CDRA is IBM's method of achieving "consistent representation, processing, and interchange of coded characters (data) in AS/400 business computing systems and across IBM systems" (*AS/400 National Language Support*, section 2.2). This is accomplished by tagging all character data with a coded character-set identifier (CCSID). Because character data is represented internally by hexadecimal code points, the data's CCSID tells the system how to interpret the hex values to arrive at its correct character representation. Therefore, if data coded to one CCSID is read by a job coded with a different CCSID, the integrity of the character data is preserved as CDRA handles the conversions of hex code points under the covers.

The *invariant character set* (see *Invariant Character Set* in this chapter) is a special set of characters that are mapped to the same code points in virtually all code pages. Therefore, their hex values never change even if they are transmitted across different CCSIDs. We refer to characters outside of this set as *chameleons* because their hex code points will change to adapt to different CCSIDs in order to retain the same graphic character representation. Chameleons common to the US code page are '$', '#', '@', '!', and '¢'.

J.D. Edwards Implementation

The J.D. Edwards approach to tagging file data is to distinguish between textual data and non-textual data at the field level. Those fields that contain text (marked with an open data type in the data dictionary) are tagged with CCSID 00037, which is the CCSID of our development AS/400. This CCSID is generally used by North American AS/400s. Those character fields that are not used to store descriptive text (marked with an alpha data type in the data dictionary) are tagged with CCSID 65535. This CCSID indicates that the data is to be treated as hexadecimal data rather than coded graphic character data. In this way, we preserve the graphic character integrity of our textual data while also preserving the hexadecimal integrity of our non-textual character data.

Initially, we are inserting CCSID keywords in the DDS for all non-numeric fields in physical files. The File Design Aid has been enhanced to automatically insert these keywords when exiting so that the programmer does not need to be concerned about it. When IBM incorporates the CCSID parameter into the field reference file, we will delete the keywords from the file DDS and insert them into the field reference files instead.

In addition, we changed the create option (14) in the software versions repository to submit the creation with a job CCSID of 00037. This will cause all source data for non-ILE programs, and constant data for display and printer files, to be interpreted through a 00037 lens. ILE program source data will be interpreted according to the CCSID of the source file. Our source files are tagged as 00037. Incidentally, the IBM compilers for non-ILE programs interpret data in source files through a 00037 lens. "Most compilers expect syntactical operators and the naming convention for the source code to be in code page 00037; therefore, undesired mapping will occur if the source is compiled with a CCSID other than 00037 or 65535"(*AS/400 National Language Support Planning Guide* section 3.4.10).

We also changed the display and printer file create commands to include the *JOBCCSID value for the CHRID parameter (default is *DEVD). This will preserve character data integrity for display and printer files where the user's job CCSID is different from the user's device description CHRID.

Programming Guidelines

Follow these guidelines when you modify J.D. Edwards objects, or when you create objects by using the J.D. Edwards FDA, RDA, SDA, or CASE tool.

- Do not change any file CCSIDs either at the file or the field level.
- If you create a source file to use for J.D. Edwards programs or with J.D. Edwards programming utilities, be sure to tag it with a CCSID of 00037. A source file CCSID defaults to the CCSID of the job that created it.

- If you modify a source member through PDM:
  - For physical file DDS, do not change the CCSID keyword values. Otherwise, you can easily destroy data integrity. If you want to add a field, use File Design Aid, which will automatically insert the appropriate CCSID attribute for you.
  - When you create an object through PDM, be sure your job CCSID is 00037. A user's job CCSID defaults to the user profile CCSID. To change it, enter CHGJOB CCSID(00037).
  - When you create a display file or printer file through PDM, be sure the CHRID keyword has value *JOBCCSID. This is *not* the default value.
- When you create interactive programs, never require the user to enter a chameleon character in order to perform a particular function. Because the program looks for a specific hex value, the graphic character to enter will vary according to the user's job CCSID. Therefore, this feature cannot be documented. Hints as to the location of any existing cases can be found in vocabulary overrides and processing options. (Example to avoid: "Enter '@' to view all types".)
- Do not embed data dictionary item names in text (for example, glossary and processing option text) if they contain chameleon characters. (Example to avoid: "Default value from #CYR in data dictionary".)
- Do not assign chameleon characters to data dictionary default or allowed values, or to processing options default values.
- Do not use chameleons as or within literals in source code. (Example to avoid: FLDA IFEQ '$AB'.)

Invariant Character Set

The following characters are included in the invariant character set:

- 26 unaccented uppercase letters 'A' through 'Z'
- 26 unaccented lowercase letters 'a' through 'z'
- Ten digits '0' through '9'
- Plus sign
- Less-than sign
- Equal sign
- Greater-than sign
- Percent sign
- Ampersand

- Asterisk
- Straight double quote
- Straight single quote
- Left parenthesis
- Right parenthesis
- Comma
- Underscore
- Hyphen
- Period
- Slash right
- Colon
- Semicolon
- Question mark

A	**B**	**C**	**D**	**E**	**F**	**G**	**H**	**I**
J	**K**	**L**	**M**	**N**	**O**	**P**	**Q**	**R**
S	**T**	**U**	**V**	**W**	**X**	**Y**	**Z**	**a**
b	**c**	**d**	**e**	**f**	**g**	**h**	**i**	**j**
k	**l**	**m**	**n**	**o**	**p**	**q**	**r**	**s**
t	**u**	**v**	**w**	**x**	**y**	**z**	**0**	**1**
2	**3**	**4**	**5**	**6**	**7**	**8**	**9**	+
<	=	>	**%**	**&**	*****	"	'	**(**
)	**,**	**_**	**-**	**.**	/	**:**	**;**	**?**

DREAM Writer Printer Overrides

Be sure to run the Convert CL *LDA Lengths program (P98LDACVT) to include the double-byte parameters when overriding print files in DREAM Writer. For more information, see *DREAM Writer Printer Overrides* in the *Double-Byte Enablement* chapter.

Double-Byte Enablement

For A6 and later releases, all fields that can contain text material were redefined as “open” fields by changing the field-type attribute to “O” in the data dictionary. Technically, a field defined as “open” allows the entry of single-byte data, double-byte data, or a combination of both. Whenever a string of double-byte characters is entered into a text field, the double-byte character string must be bracketed with special characters. These special characters, called shift-out and shift-in characters, indicate where the double-byte character string begins and ends. Without these delimiting characters, the system cannot resolve the correct meaning of the bits and bytes contained in a character string. An AS/400 system error results. Program modifications must be made to process all field truncations of “open” fields through a special subroutine (C9822).

C9822 Subroutine

The C9822 subroutine oversees the process of truncating a field that contains double-byte data, making sure that a double-byte character is not divided in half or that one of the special shift-out or shift-in characters is not cut off. If the subroutine detects such a condition, the truncated character string is adjusted to contain the last whole double-byte character, and to insert a shift-in character.

Affected Programs

You must run the C9822 subroutine. You must check all programs for any truncated open fields. If field truncations occur, you must edit them by using C9822.

Procedure

1. Insert copy module for E9822.

```
E*************************************************************
E*
E*     Copy Composite Member for Common Subroutine – C9822
E*
E/COPY JDECPY,E9822
E*************************************************************
```

2. Insert copy module for C9822.

```
C*************************************************************
C*
C*   Copy Common Subroutine – Double Byte Truncation Routine.
C*
C/COPY JDECPY,C9822
C*************************************************************
```

3. Modify field MOVEs for all fields being truncated as shown below:

```
H/TITLE PMODELDBCS – MODEL – Execute Text Truncation
H*-----------------------------------------------------------
C*
C*    Move Field xxx to Field zzz for Output. Execute C9822
C*
CSR                   CLEAR@UA
CSR                   MOVEA xxx       @UA
CSR                   Z–ADD yyy       #OUTLG
CSR                   EXSR C9822
C*                    ---- -----
CSR                   MOVEA@UB        zzz C*
C*-----------------------------------------------------------
```

Explanation of variables:

@UA	=	Input processing array
@UB	=	Output processing array
xxx	=	Field name that contains text to be truncated
yyy	=	Length of output field. (numeric value)
zzz	=	Display field

DREAM Writer Printer Overrides

Additional fields were added to DREAM Writer printer overrides for double-byte support. You will use them only when you operate the software on a double-byte machine.

Implementation

The command string for printer overrides, which is built by DREAM Writer, is returned to CL programs by way of the local data area (*LDA) starting at position 257. The CL program retrieves the command string, then calls the command processor to run it. The additional double-byte parameters are returned in the last 256 bytes of the local data area, which increases the length of the printer file override string from 512 bytes to 768 bytes. To include them, the CL programs must be modified to retrieve the full length of the command string. Program P98LDACVT is provided to modify the CL programs that retrieve the local data area for printer overrides. It changes the size of the CL variable &PRTOVR from 512 bytes to 768 bytes, and retrieves the full length of the command string.

Modified declaration statements:

```
DCL     VAR(&PRTOVR) TYPE(*CHAR) LEN(768)
DCL     VAR(&OVRCLNG) TYPE(*DEC) LEN(15 5) VALUE(768.00000)
```

Modified statement to retrieve the full length of the command from the local data area:

```
CHGVAR    VAR(&PRTOVR) VALUE(%SST(*LDA 257 768))
```

Run this conversion only if your DREAM Writers require the additional printer overrides for double-byte capability.

Running the Program

To run the program, select Convert CL *LDA Lengths from the A8 Conversion Utilities menu (BA6).

Scanning Tool for Year-2000 Date Fields

This program (P98DATES) searches for year-2000 date fields in the source code. It generates a report that lists all source code lines that refer to data dictionary fields associated with dates.

What the Scanning Tool Does

The scanning tool builds a list of data items from the data dictionary based on the following:

- All fields that have an item class of DATEW or DATEG
- All data dictionary items that are children of DATEG-type fields
- All fields that contain "Year" or "Century" in the alpha description

It also lists any code lines that contain the literals '19' or '20', and references to UDATE, UMONTH, UDAY, UYEAR, and TIME operations.

The scan is driven by DREAM Writer over the software versions repository, which allows you to specify through data selections the source you want to scan. You can scan source code for RPG, CL, and COPY members.

From the report, you can examine the source code to determine if you must modify the programs.

What the Scanning Tool Doesn't Do

The scanning tool does not modify source code.

Running the Program

To run the program, select Year 2K Source Scan from the A8 Conversion Utilities menu (BA6).