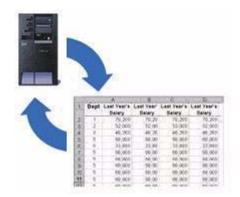
KemeTECH ConversionSuite



Programmer's Guide & Reference Manual

Version 2.7

Covers the following commands:

CVTDBFDB - Convert Database File To Dbase CVTDBFXLS - Convert Database File To Excel CVTDBDBF - Convert Dbase to Database File CVTXLSDBF - Convert Excel to Database File

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Edition Notice

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This edition applies to the KemeTECH ConversionSuite products version 2.7, and to all subsequent releases and modifications until otherwise indicated in new editions.

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CHAPTER 1 - Introduction

Chapter Overview

This chapter will introduce you to the **KemeTECH ConversionSuite** series of commands:

- CVTDBFXLS (Convert Database File To Excel)
- CVTDBFDB (Convert Database File To Dbase)
- CVTDBDBF (Convert Dbase To Database File)
- CVTXLSDBF (Convert Excel To Database File)

This chapter:

- Describes what the ConversionSuite can do
- Lists what is new with this release of the ConversionSuite commands
- Describes the features of the ConversionSuite commands

What The ConversionSuite Can Do

A breakthrough data integration tool, the **KemeTECH ConversionSuite(ConversionSuite)** converts data between the AS/400-iSeries and the personal computer(PC) world. In a market dominated by PC data conversion tools, the **ConversionSuite** offers AS/400-iSeries programmers exactly what they are looking for...AS/400-iSeries control of the data conversion process.

The **ConversionSuite** provides database level integration between the AS/400-iSeries and PC by providing the AS/400-iSeries with the ability to create and process Excel spreadsheets and Dbase database files.

With the **ConversionSuite** you can:

- · Generate a pre-formatted multi-sheet Excel spreadsheet from your company's reports.
- Build Dbase files of company information ready for processing by PC systems.
- Create fully functional Excel 2000 spreadsheets with formulas.
- Easily integrate Excel 2000 spreadsheet and Dbase data into your AS/400-iSeries environment.

Web Interface - Now with the explosive growth of the internet the AS/400-iSeries is taking on the additional role as a web-server. If you are utilizing the AS/400-iSeries as a web server, then the **ConversionSuite** is uniquely positioned to provide host based control of the PC data generation process.

CHAPTER 1 - Introduction

What The ConversionSuite Can Do (Cont'd)

Benefits:

- <u>AS/400-iSeries Control</u> Execute conversions in a batch or interactive environment under AS/400-iSeries control. No user intervention required.
- <u>Time Saver</u> Eliminates intermediate translation steps by transferring directly from the native PC format to the AS/400-iSeries DB2/400 database. Handles Excel & Dbase date and time formats.
- Cost Saver Eliminates need for PC software and hardware to perform data conversions and transfers.
- <u>Automatic & Self Documenting</u> Automatically creates the AS/400-iSeries DB2 file and generates complete
 documented data description specifications (DDS).
- <u>Easy To Implement</u> Easy to use command interface makes integration into your existing environment a simple task. Greatly simplifies conversions to and from the AS/400-iSeries.

What's New

The following additions/modifications have been added to the CVTDBFXLS command:

- Special Keywords Choose from a variety of keywords to dynamically create titles, sheet descriptions, title, footer, printer header/footer information. Keywords cover the source database file, source file text, multi-sheet field, source file library, source member, source member text, system date, system time. Also, a special *EDIT keyword can be used to produce additional date formats. For example: *EDIT(*DATE,"DDDD, MMMM DD, YYYY") will display the system date of 12/05/2003 as Friday, December 05, 2003
- Top & Bottom Margins Specify top and bottom margins for the Excel spreadsheet.
- Left & Right Margins Specify left and right margins for the Excel spreadsheet.
- TTL(Title) Expanded TTL(Title) parameter to 24 lines.
- FTR(Footer) Added FTR(Footer) parameter. Permits 24 lines of information to be displayed within the spreadsheet.
- PRINTGRID Supports the printing or non-printing of Excel grid lines.
- *PCT If field decimal places is >= 2 99.99% is printed else 99% is printed.
- *NUM Added *NUM formatting option. Will display numbers with decimals place and no commas.
- Numeric Alignment Numeric values are right aligned.
- Records Transferred Added records transferred message.
- *MBRTXT Not writing out the correct member description when *MBRTXT was specified
- Tab Grouping Was GROUPING all tabs, now selects on the first.
- 65,536 Rows Creates new sheets when row exceeds 65,536 rows
- New Error Message Must specify *SHTVAR if *MBR or Field name specified for SHT parameter.

CHAPTER 2 - Installation

Chapter Overview

This chapter will assist in installing the **ConversionSuite** product. This chapter:

- Provides instructions for downloading the latest version from the internet
- Lists instructions for installing the ConversionSuite product
- · Assists with setting up your library list
- · Provides guidelines for obtaining technical support

Downloading The Latest Version

The **ConversionSuite** can be downloaded from the internet address:

http://www.kemetech.com

Click DOWNLOADS and retrieve the CSUITE.ZIP file.

The CSUITE.ZIP file contains a compressed AS/400-iSeries save file with all the necessary executable objects.

How To Install The KemeTECH ConversionSuite

There are two methods you can use to install the **ConversionSuite** product on to your AS/400-iSeries, the FTP method or the IFS method. Detailed steps for each method are listed below.

FTP UPLOAD INSTRUCTIONS

- **1.** Click the "Communication" menu on your AS/400-iSeries PC session, select "Configure" and record your system name. e.g. system.appn.sna.ibm.com
- 2. On your PC use PKZIP to unzip the CSUITE.ZIP file to extract the CSUITE.SVF file.
- 3. Click Start on the Windows bar and select the "Run" option. Enter "FTP system.appn.sna.ibm.com" and click "OK".
- 4. Once your FTP server is active you will see the FTP input screen. Perform the following:

Enter your user name

How To Install CVTDBF (Cont'd)

Enter your password

Enter the command binary

Enter the command quote rcmd crtsavf qgpl/csuite

Enter the command put (pc drive):(pc pathname)csuite.svf qgpl/csuite

Enter the command quit

5. Return to your AS/400-iSeries session.

```
RSTLIB SAVLIB(CSUITE) DEV(*SAVF) SAVF(QGPL/CSUITE)
```

IFS UPLOAD INSTRUCTIONS

1. On the AS/400-iSeries command line enter the following:

```
CRTFLR FLR(CSUITE) AUT(*ALL )
```

- 2. On your PC use PKZIP to unzip the CSUITE.ZIP file to extract the CSUITE.SVF file.
- 3. Using File Manager, copy the CSUITE.SVF file to the CSUITE folder on the AS/400-iSeries drive.
- **4.** Return to your AS/400-iSeries session and enter the following commands:

```
CRTPF FILE(QGPL/SAVF) RCDLEN(528) SIZE(*NOMAX)

CPYFRMSTMF FROMSTMF('/QDLS/CSUITE/CSUITE.SVF')
TOMBR('/QSYS.LIB/QGPL.LIB/SAVF.FILE/SAVF.MBR') MBROPT(*REPLACE) CVTDTA(*NONE)
ENDLINFMT(*FIXED) TABEXPN(*NO)

SNDNETF FILE(QGPL/SAVF) TOUSRID((QUSER QUSER))

CRTSAVF FILE(QGPL/CSUITE) AUT(*ALL)

RCVNETF FROMFILE(SAVF) TOFILE(CSUITE) USER(QUSER)

RSTLIB SAVLIB(CSUITE) DEV(*SAVF) SAVF(QGPL/CSUITE)
```

Activating The ConversionSuite Products

When initially installed the **ConversionSuite** products are limited to converting twenty-five(25) records. Please contact sales@kemetech.com or call 973.923.2328 to obtain an access code in order to unlock the full conversion capabilities of the **ConversionSuite** products. Please supply your AS/400-iSeries system serial number. You can display your system serial number by entering the following command:

```
DSPSYSVAL QSRLNBR
```

To activate the CVTDBF product enter the following on the AS/400-iSeries command line prompt:

```
CHGDTAARA DTAARA(CSUITE/CVTDBF) VALUE('ACCESS CODE')
```

To activate the CVTSPLF product enter the following on the AS/400-iSeries command line prompt:

```
CHGDTAARA DTAARA(CVTLIB/CVTSPLF) VALUE('ACCESS CODE')
```

To activate the CVTSTMF product enter the following on the AS/400-iSeries command line prompt:

```
CHGDTAARA DTAARA(CVTLIB/CVTSTMF) VALUE('ACCESS CODE')
```

Where ACCESS CODE is the twenty(20) digit access code that was supplied by our staff.

Setting Up Your Library List

Library CSUITE must be in the library list of jobs using the **ConversionSuite** commands, or the commands must be qualified with library CSUITE. The following choices are possible depending on your OS/400 environment:

• Qualify the commands on each use. For example:

```
CSUITE/CVTDBFXLS FRMFILE(QIWS/QCUSTCDT) STMF('/acctng/qcustcdt.xls')
TTL(*FILETXT/'A') PRTFTR('File:*FILE Member:*MBR'/L)
```

- Add library CSUITE to the system library list
- Add library CSUITE to the initial library list parameter of job descriptions that control jobs that will use the commands.
- Execute an "ADDLIBLE CSUITE" command in individual jobs requiring ConversionSuite commands.

CHAPTER 2 - Installation

Technical Support

If you encounter problems when running any of the **ConversionSuite** commands, i.e., terminates before a complete conversion or you receive different results than those you expected, perform these steps:

1. Check the messages in your job log.

Execute the DSPJOBLOG command.

Press F10 to display detailed messages.

Locate the messages related to the conversion.

Place the cursor on each message and press F1

Take any corrective actions suggested by the messages

2. Check to insure that the most current release of the **ConversionSuite** is in use. Execute the following commands to display the version information for the **ConversionSuite** products:

For the CVTDBF commands, enter:

CALL CSUITE/VERSION

For the CVTSPLF commands, enter:

DSPDTAARA CVTLIB/CVTSPLVER

For the CVTSTMF commands, enter:

DSPDTAARA CVTLIB/CVTSTMFVER

If the problem remains unresolved, please contact:

E-mail: techsupport@kemetech.com

Telephone: 973.923-2328

www: http://www.kemetech.com

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CHAPTER 3 - Using The CVTDBF Commands

Chapter Overview

This chapter describes how to use the CVTDBF commands in your AS/400-iSeries environment. This chapter:

- Gives an overview of usage choices
- Provides instructions for modifying programs to use the CVTDBF commands to convert AS/400-iSeries files
- Provides instructions for manually converting files using the CVTDBF commands
- · Provides instructions for creating PDM options to execute CVTDBF commands

Overview of Usage Choices

The main functionality of the CVTDBF commands is accessed by executing the Convert Database File To Excel(CVTDBFXLS) or Convert Database To Dbase (CVTDBFDB) commands.

The commands use an AS/400-iSeries database file and an Integrated File System object (PC file) or another AS/400-iSeries database file as inputs. The AS/400-iSeries database file's contents are converted to a Microsoft Excel or Dbase file, depending on whether or not you selected the CVTDBFXLS (Excel) or CVTDBFDB (Dbase) commands. There are two basic choices for using the CVTDBF commands in your AS/400-iSeries environment. They are:

- 1. Modify each program that to utilize the CVTDBF commands.
- 2. Manually execute the CVTDBF commands directly from a command line.

Modifying Programs

You can easily modify your Control Language (CL) programs to utilize the CVTDBF commands to convert AS/400-iSeries database files to PC files. A typical CL program that creates a file might contain the following CL statements:

```
OVRDBF FILE(GLMAST) TOFILE(ACCTLIB/GLMAST)
OVRDBF FILE(ACCTMAST) TOFILE(ACCTLIB/ACCTMAST)
OVRDBF FILE(INCSTMNT) TOFILE(ACCTLIB/INCSTMNT)
CALL PGM(ACCTLIB/ACCT0020)
```

In this example, program ACCT0020 generates income statement figures and stores them in file ACCTLIB/INCSTMNT. By including the following line after the call to program ACCT0020, this CL will now create an Excel file containing the income statement figures with a two (2) line heading and print header and footer.

```
CSUITE/CVTDBFXLS FILE(ACCTLIB/INCSTMNT) STMF('/acctng/incstmnt.xls') TTL('Income Statement For'/'A' '3rd Qtr Ending *EDIT(*DATE, "MMM, YY")'/A') PRTHDR('iSeries Data File *FILE'/L) PRTFTR('Page *PAGE of *PAGES'/L)
```

CHAPTER 3 - Using The CVTDBF Commands

Modifying Programs (Cont'd)

The qualification of the CVTDBFXLS command can be excluded if the CSUITE library has been previously entered as part of the library list for the current job. Please see *Chapter 2 - Installation, Setting Up Your Library List* for more information.

Manually Converting Files

CVTDBF commands are CL commands and therefore can be entered directly on the command entry line. The following command will convert a hypothetical chart of accounts file to an Excel spreadsheet.

```
CSUITE/CVTDBFXLS FILE(ACCTLIB/ACCTMAST) STMF('/acctng/acctmast.xls') TTL('Master Chart of Accounts') PRTHDR('iSeries Data File *FILE'/L) PRTFTR('Page *PAGE of *PAGES'/L)
```

The qualification of the CVTDBFXLS command can be excluded if the CSUITE library has been previously entered as part of the library list for the current job. Please see *Chapter 2 - Installation, Setting Up Your Library List* for more information.

Creating a PDM Option

IBM's Program Development Manager (PDM) permits the creation of user-defined options. The following steps will create a user-defined option named "DB" which will submit a job to run the CVTDBFDB (Convert Database File to Dbase) command within PDM when "DB" is entered next to a member name:

- 1. Start the Program Development Manager by typing the WRKMBRPDM command
- Press F16 to select Work With User Defined Options
- 3. Press F6 to create a new user defined option
- 4. Enter 'DB' for Option
- 5. For Command, enter: /* ConversionSuite CVTDBFDB Batch */ sbmjob job(&J) jobd(&d) cmd(csuite/cvtdbfdb frmfile(&l/&f) frmmbr(&m)) stmf('/Dbase/*mbr.dbf')
- 6. Press F3 to exit the Work With User-Defined Options display.
- 7. Enter DB in the option field next to a member to have that member converted to Dbase

To create an Excel option substitute 'XL' for 'DB' in step 4 and enter the following for Command in step 5:

```
/* ConversionSuite CVTDBFXLS Batch */ sbmjob job(&J) jobd(&d) cmd(csuite/cvtdbfxls
frmfile(&l/&f) frmmbr(&m) stmf('/Excel/*mbr.xls'))
```

CHAPTER 3 - Using The CVTDBF Commands

Loading The Converted File

The files created by the CVTDBF series of commands are ready to be accessed by your PC. If the file will be sent via FTP or downloaded by Client Access, do not translate if from EBCDIC to ASCII, the file is already in ASCII format.

Chapter Overview

This chapter will introduce you to the Convert Database To Excel (CVTDBFXLS) command. This chapter:

- Provides an overview of the conversion process
- · List conversion details
- List conversion limitations
- Provides a syntax diagram of the CVTDBFXLS command along with an explanation for all parameters and values

Overview of The Conversion Process

The Convert Database File To Excel(CVTDBFXLS) command converts the specified OS/400 database file to a Microsoft Excel spreadsheet. The resulting data can be placed in a PC file within the Integrated File System or in another OS/400 database file.

Depending upon options, the first row or rows of the spreadsheet may contain up to three(3) lines of headings and three(3) lines of custom column headings. Each record in the database file will create a row in the spreadsheet and each field in the record will create a cell in the row. Depending on additional options, new columns and rows can be created by specifying formula creation parameters.

Conversion Details

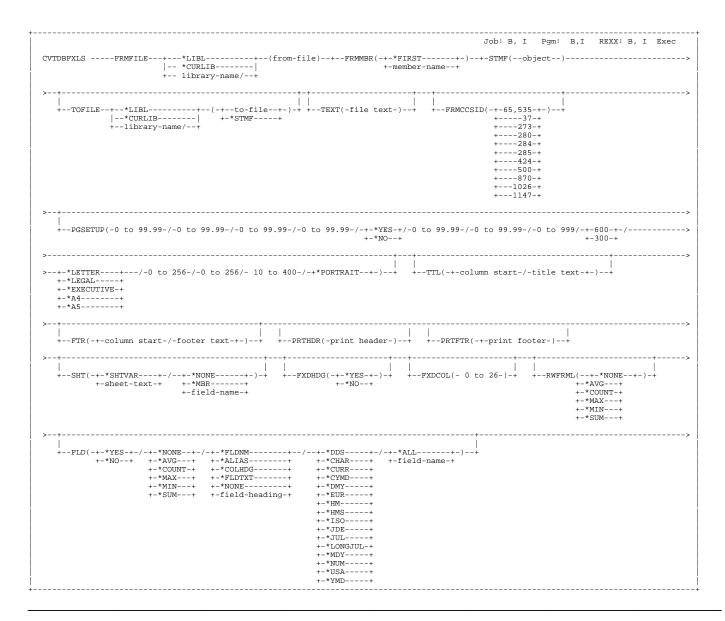
By default the column titles displayed in the Excel spreadsheet contain the field names within the file's record format (optional values can be specified to utilize the alias name, column heading text or a custom title can be created). The values specified as the column titles, along with other EBCDIC character data, will be converted from EBCDIC to ASCII based on the value specified by the From Coded Character Set ID (FRMCCSID) parameter. Each record within the OS/400 database file is converted to a row of cells in the spreadsheet with each field in a cell under its associated column title. The conversion of field information to cells is dependent upon the field's data type as shown below:

AS/400-iSeries Data Type	Resulting Excel Data
A - Character	Text cell, based on FRMCCSID value
B- Binary	Number cell
L - Date	Date cell
P - Packed	Number cell
S - Zoned	Number cell
T - Time	Time cell
Z - Timestamp	Date cell
All other types	Copied to a text cell without conversion

Conversion Limitations

The following limitations are in place for this version of the CVTDBFXLS command. Some limitations are based on the Microsoft Excel spreadsheet format others are design choices and may be removed in future versions.

- Character data is limited to the first 512 bytes.
- Numeric data is limited to 30 digits, 15 decimal places.
- Double byte character set data is not supported.
- F (Floating point), H (Hexadecimal), J (DBCS-Only), E (DBCS-Either), O (DBCS-Open), G (DBCS-graphic), 1 (Binary Large Object BLOB), 2 (Character Large Object CLOB), 3 (Graphic Data Large Object DBCLOB) and 4 (Datalink) data types are not currently supported.



Purpose

The Convert Database File (CVTDBFXLS) command converts an AS/400-iSeries database file to an Excel file in the IFS or to an AS/400-iSeries database file.

From File (FRMFILE)

Specifies the qualified name of the database file that contains the records to be converted.

Possible values are:

from-file

Specify the name of the file that contains the records to convert.

The from-file name can be qualified by one of the following library values:

From File (FRMFILE)(Cont'd)

*LIBL

All libraries in the job's library list are searched until the first match is found.

*CURLIE

The current library for the job is searched. If no library is specified as the current library for the job, the QGPL library is used.

library-name

Specify the name of the library to be searched.

From Member(FRMMBR)

Specifies the database file member name. To create a multiple sheet spreadsheet based on member names, specify *FIRST for this parameter and *MBR for the SHT parameter.

Possible values are:

*FIRST

The first member in the database from-file is processed.

member-name

Specify the name of the database from-file member.

Stream File(STMF)

Specifies the path name of the stream file. To create an excel file named test.xls in a folder named folder1, specify '/qdls/folder1/test.xls'

stream-file

Specify up to 256 characters for the stream file name.

- *FILE The file name is used.
- *FILETXT The file text is used.
- *LIB The library name is used.
- *MBR The member name is used.
- *MBRTXT The member text is used.
- *TAB -A tab character(8 spaces) will be used.

In addition, date & time specific keywords can also be used:

- *DMY The current system date in dd-mm-yy format is used.
- *EUR- The current system date in dd-mm-yyyy format is used.
- *ISO The current system date in yyyy-mm-dd format is used.
- *JUL The current system date in yy-ddd format is used.
- *MDY The current system date in mm-dd-yy format is used.
- *USA The current system date in mm-dd-yyyy format is used.
- *YMD The current system date in yy-mm-dd format is used.
- *HM The current system time in hh.mm format is used.
- *HMS The current system time in hh.mm.ss format is used.

Stream File(STMF)Cont'd

Finally, a special *EDIT keyword can be used to produce additional date formats:

*EDIT(*DATE," format-codes") - The following format codes, enclosed in double quotes(") may also be used. Several special values can be used to construct dynamic PC file names. Utilize the following table of special values to create dynamic PC file names.

Use this code	To Display
D	Days as 1-31
DD	Days as 01-31
DDD	Days as Sun-Sat
DDDD	Days as Sunday-Saturday
M	Months as 1-12
MM	Months as 01-12
MMM	Months as Jan-Dec
MMMM	Months as January-December
YY	Years as 00-99
YYYY	Years as 1900-9999

To File (TOFILE)

Specifies the name of the AS/400-iSeries file that will receive the converted records. This is a required parameter.

Possible values are:

to-file

Specify the name of the file that receives the converted records.

*STMF

Specify *STMF to indicate that an IFS file will receive the converted records.

The to-file name can be qualified by one of the following library values:

*LIBL

All libraries in the job's library list are searched until the first match is found.

*CURLIB

The current library for the job is searched. If no library is specified as the current library for the job, the QGPL Library is used.

library-name

Specify the name of the library to be searched.

AS/400 File Text(TEXT)

Specifies the text that briefly describes the file.

From Coded Character Set Identifier(FRMCCSID)

Specify the coded character set identifier that was used to create the FRMFILE.

Possible values are:

65535

The value specified by the QCHRID system value will be used.

37 USA

273 German - Austria

278 Finland

280 Italy

284 Spanish

285 UK English

424 Hebrew

500 Multilingual

870 Romania

871 Iceland

1026 Turkish

1147 French

Page Setup(PGSETUP)

Specifies print options for the Excel spreadsheet.

orientation

Specify a value to indicate how the Excel spreadsheet is positioned on the printed page.

Possible values are:

*PORTRAIT

Select to print an Excel spreadsheet that is taller than it is wide when you view the text right-side up.

*LANDSCAPE

Select to print an Excel spreadsheet that is wider than it is tall when you view the text right-side up

adjust-to-%

Specify a value to indicate the percentage by which the printed size of the Excel spreadsheet will be adjusted. Enter a value between 10 and 400. This parameter can be overriden by specifying entries in both the **pages-tall** and **pages-wide** parameters.

pages-wide

Specify the number of pages wide on which you want to print the Excel spreadsheet. Enter a value between 1 and 256. Entering a value here and in the **pages-tall** parameter will override the **adjust-to-%** parameter.

pages-tall

Specify the number of pages tall on which you want to print the Excel spreadsheet. Enter a value between 1 and 256. Entering a value here and in the **pages-wide** parameter will override the **adjust-to-%** parameter.

Page Setup(PGSETUP) Cont'd

paper-size

Specify a value to indicate the size of paper to print the Excel spreadsheet on.

Possible values are:

*LETTER

Indicates a paper size of 8.5" by 11".

*LEGAL

Indicates a paper size of 8.5" by 14"

*EXECUTIVE

Indicates a paper size of 7.25" by 10.5"

***Δ**Δ

Indicates a paper size of 8.27" by 11.69"

*A5

Indicates a paper size of 5.83" by 8.27"

print-quality

Specifies the desired print quality as a measurement of dots per inch(DPI).

Possible values are:

600

The Excel spreadsheet will print at 600 DPI

300

The Excel spreadsheet will print at 300 DPI

first-page-number

Specifies the first page number to appear on the first page of the printed Excel spreadsheet. To have the pages automatically numbered specify a value of 0. Enter a value from 0 to 999.

header-margin

Specify the header margin for the Excel spreadsheet. Enter a value from 0 to 99.99.

footer-margin

Specify the footer margin for the Excel spreadsheet. Enter a value from 0 to 99.99.

print-grid

Specify *YES to print grid lines or *NO not to print grid lines.

top-margin

Specify the topr margin for the Excel spreadsheet. Enter a value from 0 to 99.99.

bottom-margin

Specify the bottom margin for the Excel spreadsheet. Enter a value from 0 to 99.99.

left-margin

Specify the left margin for the Excel spreadsheet. Enter a value from 0 to 99.99.

right-margin

Specify the rightr margin for the Excel spreadsheet. Enter a value from 0 to 99.99.

Sheet(SHT)

Specifies how multiple sheets will be created and what text description will be used for the sheet tab. A maximum of 256 sheets can be created. The sheet-description has a maximum length of 31 characters.

sheet-variable

Specify a value to indicate how multiple sheets will be created.

Possible values are:

*NONE

Multiple sheets will not be created. All data will reside in one sheet.

*MBR

Indicates that one sheet will be created for each member in the file specified by the **FRMFILE** parameter.

field-name

Indicates that sheets will be created based on a field in the **FRMFILE**. The field specified does not have to be one of the fields defined in one of the FLD parameters.

NOTE - The From File must be sorted on this field.

sheet-description

Specify text for the sheet tab description for the Excel spreadsheet. The maximum length is 31 characters Possible values can include:

- *SHTVAR The value specified in the sheet-variable is used.
- *FILE The file name is used.
- *FILETXT The file text is used.
- *FLD The value of the field specified in the SHT sheet-variable sub-parameter is used.
- *LIB The library name is used.
- *MBR The member name is used.
- *MBRTXT The member text is used.
- *TAB -A tab character(8 spaces) will be used.

In addition, date specific keywords can also be used:

- *DMY The current system date in dd-mm-yy format is used.
- *EUR- The current system date in dd-mm-yyyy format is used.
- *ISO The current system date in yyyy-mm-dd format is used.
- *JUL The current system date in yy-ddd format is used.
- *MDY The current system date in mm-dd-yy format is used.
- *USA The current system date in mm-dd-yyyy format is used.
- *YMD The current system date in yy-mm-dd format is used.

Also, time specific keywords can be used:

- *HM The current system time in hh.mm format is used.
- *HMS The current system time in hh.mm.ss format is used.

Sheet(SHT)Cont'd

Finally, a special *EDIT keyword can be used to produce additional date formats:

*EDIT(*DATE," format-codes") - The following format codes, enclosed in double quotes(") may also be used.

Use this code	To Display
D	Days as 1-31
DD	Days as 01-31
DDD	Days as Sun-Sat
DDDD	Days as Sunday-Saturday
M	Months as 1-12
MM	Months as 01-12
MMM	Months as Jan-Dec
MMMM	Months as January-December
YY	Years as 00-99
YYYY	Years as 1900-9999

Title(TTL)

Specifies the heading placed in the file and the starting column. Twenty-four(24) lines can be specified.

column-start

Enter the starting column for the title text.

title-text

Enter the text to use as the title. Optional keywords can be included with the title-text.

- *NONE No title is created in the spreadsheet.
- *FILE The file name is used.
- *FILETXT The file text is used.
- *FLD The value of the field specified in the SHT sheet-variable sub-parameter is used.
- *LIB The library name is used.
- *MBR The member name is used.
- *MBRTXT The member text is used.
- *TAB A tab character(8 spaces) will be used.

In addition, date specific keywords can also be used:

- ***DMY -** The current system date in dd-mm-yy format is used.
- *EUR- The current system date in dd-mm-yyyy format is used.
- *ISO The current system date in yyyy-mm-dd format is used.
- *JUL The current system date in vy-ddd format is used.
- *MDY The current system date in mm-dd-yy format is used.
- *USA The current system date in mm-dd-yyyy format is used.
- *YMD The current system date in yy-mm-dd format is used.

Also, time specific keywords can be used:

- *HM The current system time in hh.mm format is used.
- *HMS The current system time in hh.mm.ss format is used

CHAPTER 4 - CVTDBFXLS Command Description

Title(TTL)Cont'd

Finally, a special *EDIT keyword can be used to produce additional date formats:

*EDIT(*DATE," format-codes") - The following format codes, enclosed in double quotes(") may also be used.

Use this code	To Display
D	Days as 1-31
DD	Days as 01-31
DDD	Days as Sun-Sat
DDDD	Days as Sunday-Saturday
M	Months as 1-12
MM	Months as 01-12
MMM	Months as Jan-Dec
MMMM	Months as January-December
YY	Years as 00-99
YYYY	Years as 1900-9999

Footer(FTR)

Specifies the footer placed in the file and the starting column. Twenty-four(24) lines can be specified.

column-start

Enter the starting column for the footer text.

footer-text

Enter the text to use as the footer. Optional keywords can be included with the footer-text.

- *NONE No title is created in the spreadsheet.
- *FILE The file name is used.
- *FILETXT The file text is used.
- *FLD The value of the field specified in the SHT sheet-variable sub-parameter is used.
- *LIB The library name is used.
- *MBR The member name is used.
- *MBRTXT The member text is used.
- *TAB A tab character(8 spaces) will be used.

In addition, date specific keywords can also be used:

- *DMY The current system date in dd-mm-yy format is used.
- *EUR- The current system date in dd-mm-yyyy format is used.
- *ISO The current system date in yyyy-mm-dd format is used.
- *JUL The current system date in yy-ddd format is used.
- *MDY The current system date in mm-dd-yy format is used.
- *USA The current system date in mm-dd-yyyy format is used.
- *YMD The current system date in yy-mm-dd format is used.

Also, time specific keywords can be used:

- *HM The current system time in hh.mm format is used.
- *HMS The current system time in hh.mm.ss format is used

Title(TTL)Cont'd

Finally, a special *EDIT keyword can be used to produce additional date formats:

*EDIT(*DATE," format-codes") - The following format codes, enclosed in double quotes(") may also be used.

Use this code	To Display
D	Days as 1-31
DD	Days as 01-31
DDD	Days as Sun-Sat
DDDD	Days as Sunday-Saturday
M	Months as 1-12
MM	Months as 01-12
MMM	Months as Jan-Dec
MMMM	Months as January-December
YY	Years as 00-99
YYYY	Years as 1900-9999

Print Header(PRTHDR)

Specifies the print header and print header alignment. Three(3) lines can be specified.

print-header-alignment

Specifies the alignment for the print header. Possible values are:

- **L** The print header will be left aligned.
- C The print header will be center aligned.
- R The print header will be right aligned.

print-header

Enter the text to use as the print header. Optional values can include:

- *NONE No print-header is created in the spreadsheet.
- *FLD The value of the field specified in the SHT sheet-variable sub-parameter is used.
- *FILE The file name is used.
- *FILETXT The file text is used.
- *LIB The library name is used.
- *MBR The member name is used.
- *MBRTXT The member text is used.
- ***TAB** A tab character(8 spaces) will be used.

In addition, date specific keywords can also be used:

- *DMY The current system date in dd-mm-yy format is used.
- *EUR- The current system date in dd-mm-yyyy format is used.
- *ISO The current system date in yyyy-mm-dd format is used.
- *JUL The current system date in yy-ddd format is used.
- *MDY The current system date in mm-dd-yy format is used.
- *USA The current system date in mm-dd-yyyy format is used.
- *YMD The current system date in yy-mm-dd format is used.

Print Header(PRTHDR)(Cont'd)

Also, time specific keywords can be used:

- ***HM** The current system time in hh.mm format is used.
- *HMS The current system time in hh.mm.ss format is used

Finally, a special *EDIT keyword can be used to produce additional date formats:

*EDIT(*DATE," format-codes") - The following format codes, enclosed in double quotes(") may also be used.

Use this code	To Display
D	Days as 1-31
DD	Days as 01-31
DDD	Days as Sun-Sat
DDDD	Days as Sunday-Saturday
M	Months as 1-12
MM	Months as 01-12
MMM	Months as Jan-Dec
MMMM	Months as January-December
YY	Years as 00-99
YYYY	Years as 1900-9999

Print Footer(PRTFTR)

Specifies the print footer and print footer alignment. Three(3) lines can be specified.

print-footer-alignment

Specifies the alignment for the print footer. Possible values are:

- **L** The print footer will be left aligned.
- C The print footer will be center aligned.
- R The print footer will be right aligned

print-footer

Enter the text to use as the print header. Optional values can include:

- *NONE No print-footer is created in the spreadsheet.
- *FLD The value of the field specified in the SHT sheet-variable sub-parameter is used.
- *FILE The file name is used.
- *FILETXT The file text is used.
- *LIB The library name is used.
- *MBR The member name is used.
- *MBRTXT The member text is used.
- *TAB A tab character(8 spaces) will be used.

Print Footer(PRTFTR)(Cont'd)

In addition, date specific keywords can also be used:

- *DMY The current system date in dd-mm-yy format is used.
- *EUR- The current system date in dd-mm-yyyy format is used.
- *ISO The current system date in yyyy-mm-dd format is used.
- *JUL The current system date in yy-ddd format is used.
- *MDY The current system date in mm-dd-yy format is used.
- *USA The current system date in mm-dd-yyyy format is used.
- *YMD The current system date in yy-mm-dd format is used.

Also, time specific keywords can be used:

- *HM The current system date in hh.mm format is used.
- *HMS The current system time in hh.mm.ss format is used

Finally, a special *EDIT keyword can be used to produce additional date formats:

*EDIT(*DATE," format-codes") - The following format codes, enclosed in double quotes(") may also be used

Use this code	To Display
D	Days as 1-31
DD	Days as 01-31
DDD	Days as Sun-Sat
DDDD	Days as Sunday-Saturday
M	Months as 1-12
MM	Months as 01-12
MMM	Months as Jan-Dec
MMMM	Months as January-December
YY	Years as 00-99
YYYY	Years as 1900-9999

Fixed Headings (FXDHDG)

Specifies fixed headings for the spreadsheet.

Possible values are:

*YES

The column heading will be fixed in place and will not scroll vertically.

*NO

The column heading will not be fixed in place and will scroll vertically.

Fixed Columns(FXDCOL)

Specifies the number of fixed columns. Fixed columns are fixed counting from the left most column. Enter a value between 0 and 26 to indicate the number of columns to fix in place.

Row Formula(RWFRML)

Specifies the formula to be placed as the last column of each row. The "Include in row formula" sub-parameter of each Field Information (FLD##) parameter indicates if the field should be included in the row-formula.

Possible values are:

*NONE

No row formula will be placed in the last column of each row.

*AVG

A formula to calculate the average of the columns with *YES in the "Include in row formula" sub-parameter of the Field Information(FLD##) parameter will be placed in the last column of each row.

*COUNT

A formula to calculate the count of the columns with *YES in the "Include in row formula" sub-parameter of the Field Information(FLD##) parameter which contain numeric data will be placed in the last column of each row.

*MAX

A formula to calculate the largest value within the columns with *YES in the "Include in row formula" sub-parameter of the Field Information(FLD##) parameter will be placed in the last column of each row.

*MIN

A formula to calculate the smallest value within the columns with *YES in the "Include in row formula" sub-parameter of the Field Information(FLD##) parameter will be placed in the last column of each row.

*SUM

A formula to calculate the numeric total of the columns with *YES in the "Include in row formula sub-parameter of the Field Information(FLD##) parameter will be placed in the last column of each row

Field Information

Specifies the field name, desired field format, heading, formula and inclusion in row formula for a field. Up to 265 fields may be selected.

field-name

Specify the desired field name

Possible values are:

*ALL

All fields in the file will be selected, maximum of 256 fields.

field-name

Enter the desired field name.

Field Information(Cont'd)

field-format

Specify the target data format for the field. The fields data description specification indicates the source data format.

User Defined Format

Numeric data stored in a user defined date format requires *MDY, *DMY etc. to indicate the user defined date format. The system value QDATFMT will indicate the target Excel date format. The system value QDATSEP will indicate the date separator. Numeric data stored in a user defined time format requires *HMS or *HM to indicate the user defined time format. The system value QTIMSEP will indicate the time separator.

Possible values are:

*DDS

The data format specified by the files data description specification will be the target data format. If the data type is Date(L), Time(T) or Timestamp(Z) the WHFMT (Date/Time Format) specified by the DDS will determine the Excel date format. The WHSEP(Date/Time separator) will be used as the separator. If nothing is specified for WHFMT & WHSEP, the system values QDATFMT, QDATSEP and QTIMSEP values will be used.

*CHAR

The field data will be converted to character format.

*COMMA

The numeric field data will include commas and a decimal point (if necessary).

*CURR

The numeric data will be converted to currency format.

*CYMD

The numeric data is in CYYMMDD format.

*DMY

The numeric data is in DDMMYY format.

*EUR

The numeric data is in DDMMYYYY format.

*HN

The numeric data is in HHMM format.

*HMS

The numeric data is in HHMMSS format

*ISO

The numeric data is in YYYYMMDD format.

*JDE

The numeric data is in CYYDDD format.

Field Information(Cont'd)

*JUL

The numeric data is in YYDDD date format.

*LONGJUL

The numeric data is in YYYYDDD format.

*MDY

The numeric data is in MMDDYY format.

*PCT

The numeric field data will be multiplied by 100 and displayed with a leading percent (%) sign.

*USA

The numeric data is in MMDDYYYY date format.

*YMD

The field data is in YYMMDD date format.

field-heading

Specify the field heading to be used for the field.

Possible values are:

*FLDNM

The field name will be used as the field heading

*COLHDG

The data description column headings will be used as the field heading.

*FLDTXT

The data description field text will be used as the field heading

*NONE

No headings will be generated for the field.

*ALIAS

The fields alias will be used as the field heading.

field-heading

Specify the field heading. To create multiple lines(3 max), enclose each line of text within double quotes.

Formula

Specifies the formula to be placed on the last row of this column.

Possible values are:

*NONE

No formula will be placed in the last row for this field.

Field Information(Cont'd)

*AVG

A formula to calculate the average of this fields values will be placed in the last row.

*COUNT

A formula to calculate the count of this fields values will be placed in the last row.

*MAX

A formula to calculate the largest value for this field will be placed in the last row.

*MIN

A formula to calculate the smallest value for this field will be placed in the last row.

*SUM

A formula to calculate the numeric total for this field will be placed in the last row.

Chapter Overview

This chapter will introduce you to the Convert Database To Dbase (CVTDBFDB) command. This chapter:

- Provides an overview of the conversion process
- · List conversion details
- · List conversion limitations
- Provides a syntax diagram of the CVTDBFDB command along with an explanation for all parameters and values

Overview of The Conversion Process

The Convert Database File To Dbase(CVTDBFDB) command converts the specified OS/400 database file to a Dbase file. The resulting data can be placed in a PC file within the Integrated File System or in another OS/400 database file.

Each record in the database file will create a record in the Dbase file and each field will create a field in the Dbase file.

Conversion Details

All character data will be converted from EBCDIC to ASCII based on the value specified by the From Coded Character Set ID (FRMCCSID) parameter. Each record in the database file will create a record in the Dbase file and each field will create a field in the Dbase file. The conversion of field information to cells is dependent upon the field's data type as shown below:

AS/400-iSeries Data Type	Resulting Dbase Data
A - Character	C - Character field
B - Binary	N - Number field
L - Date	D - Date field
P - Packed	N - Number field
S - Zoned	N - Number field
Z - Timestamp	D - Date field
All other types	Copied to a text cell without conversion

Conversion Limitations

The following limitations are in place for this version of the CVTDBFDB command. Some limitations are based on the Dbase file format others are design choices and may be removed in future versions.

- · Character data is limited to the first 512 bytes.
- Numeric data is limited to 30 digits, 15 decimal places.
- Double byte character set data is not supported.
- T- (Time), F (Floating point), H (Hexadecimal), J (DBCS-Only), E (DBCS-Either), O (DBCS-Open), G (DBCS-graphic), 1 (Binary Large Object BLOB), 2 (Character Large Object CLOB), 3 (Graphic Data Large Object DBCLOB) and 4 (Datalink) data types are not currently supported.

```
Job: B, I Pgm: B,I REXX: B, I Exec
-- *CURLIB-----
                                            +-member-name-+
   +---273-+
                                                                 +----280-+
                                                                +----284-+
                                                                 +---285-+
                                                                 +----424-+
                                                                 +----870-+
                                                                 +---1026-+
                                                                 +---1147-+
  |
+--FLD(-+-*DDS----+-/-+-*ALL-----+-)--+
      +-*CYMD----+ +-field-name-+
+-*DMY----+
       +-*EUR----+
+-*ISO----+
       +-*JDE----+
       +-*JUL----+
       +-*I.ONG.TIII.-+
       +-*MDY----
       +-*USA----+
```

Purpose

The Convert Database File (CVTDBFDB) command converts an AS/400-iSeries database file to a Dbase file in the IFS or to an AS/400-iSeries database file.

From File (FRMFILE)

Specifies the qualified name of the database file that contains the records to be converted.

Possible values are:

from-file

Specify the name of the file that contains the records to convert.

The from-file name can be qualified by one of the following library values:

<u>*LIBL</u>

All libraries in the job's library list are searched until the first match is found.

*CURLIB

The current library for the job is searched. If no library is specified as the current library for the job, the QGPL library is used.

library-name

Specify the name of the library to be searched.

From Member(FRMMBR)

Specifies the database file member name.

Possible values are:

*FIRST

The first member in the database from-file is processed.

member-name

Specify the name of the database from-file member.

Stream File(STMF)

Specifies the path name of the stream file.

To File (TOFILE)

Specifies the name of the AS/400-iSeries file that will receive the converted records. This is a required parameter.

Possible values are:

to-file

Specify the name of the file that receives the converted records.

*STMF

Specify *STMF to indicate that an IFS file will receive the converted records.

The to-file name can be qualified by one of the following library values:

*LIBL

All libraries in the job's library list are searched until the first match is found.

*CURLIB

The current library for the job is searched. If no library is specified as the current library for the job, the QGPL Library is used.

library-name

Specify the name of the library to be searched.

AS/400 File Text(TEXT)

Specifies the text that briefly describes the file.

From Coded Character Set Identifier(FRMCCSID)

Specify the coded character set identifier that was used to create the FRMFILE.

Possible values are:

65535

The value specified by the QCHRID system value will be used.

37 USA

273 German - Austria

From Coded Character Set Identifier(FRMCCSID)

278 Finland -Sweden

280 Italy

284 Spanish

285 UK English

424 Hebrew

500 Multilingual

870 Romania

871 Iceland

1026 Turkish

1147 French

Field Information

Specifies the field name and field format for a field. Up to 256 fields may be selected. Dbase expects all numeric fields to contain a place for the sign of the number and a place for the decimal point if there are decimal places. For example a 6,2 numeric field on the AS/400-iSeries is 6 positions long with an implied decimal place. In Dbase however this field will be 8 physical places long, six for the numeric data, one for the sign and one for the decimal point. The version of Dbase created by the CVTDBFDB command can handle a maximum numeric field of 20 physical places, therefore the maximum AS/400-iSeries field capable of being converted is an 18 digit field.

field-name

Specify the desired field name

Possible values are:

<u>*ALL</u>

All fields in the file will be selected, maximum of 256 fields.

field-name

Enter the desired field name.

field-format

Specify the data format of the field.

Possible values are:

*DDS

The data format specified by the files data description specification will be the target data format. Date(L) and TimeStamp(Z) data types will be converted to Dbase YYYYMMDD date format. Time(T) data types will be converted to Dbase character data.

*CYMD

The field is numeric and in CYYMMDD format and will be converted to Dbase YYYYMMDD date format.

*DMY

The field is numeric and in DDMMYY format and will be converted to Dbase YYYYMMDD date format.

*EUR

The field is numeric and in DDMMYYYY format and will be converted to Dbase

Field Information(Cont'd)

YYYYMMDD date format.

*ISO

The field is numeric and in YYYYMMDD format and will be converted to Dbase YYYYMMDD date format.

*JDE

The field is numeric and in CYYDDD format and will be converted to Dbase YYYYMMDD date format.

*JUL

The field is numeric and in YYDDD format and will be converted to Dbase YYYYMMDD date format.

*LONGJUL

The field is numeric and in YYYYDDD format and will be converted to Dbase YYYYMMDD date format.

*MDY

The field is numeric and in MMDDYY format and will be converted to Dbase YYYYMMDD date format.

*USA

The field is numeric and in MMDDYYYY format and will be converted to Dbase YYYYMMDD date format.

*YMD

The field is numeric and in YYMMDD format and will be converted to Dbase YYYYMMDD date format.

CHAPTER 6 - CVTDBFXLS Examples

Chapter Overview

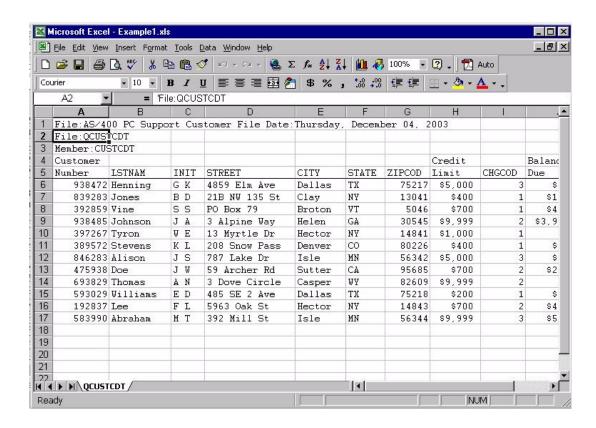
This chapter will provide several examples of the CVTDBFXLS command. Each example will begin with a description of the desired spreadsheet, followed by the CVTDBFXLS command necessary to produce the spreadsheet, and finally an image of the finished spreadsheet.

DESCRIPTION: Generate an Excel spreadsheet with:

- Three(3) title lines using keyword substitution
- Custom sheet description
- · Custom multi-line column headings

COMMAND:

```
CVTDBFXLS FRMFILE(QIWS/QCUSTCDT) STMF('/acctng/Example1.xls') TTL('File:*FILETXT Date:*EDIT(*DATE,"DDDD, MMMM DD, YYYY")'/'A' 'File:*FILE'/'A' 'Mem ber:*MBR'/'A') SHT(*FILE/*NONE) FLD(*ALL '"Customer" "Number"'/*DDS/CUSNUM '"Credit" "Limit"'/*CURR/CDTLMT '"Balance" "Due"'/*CURR/BALDUE '"Credit" "Due"'/*CURR/CDTDUE)
```



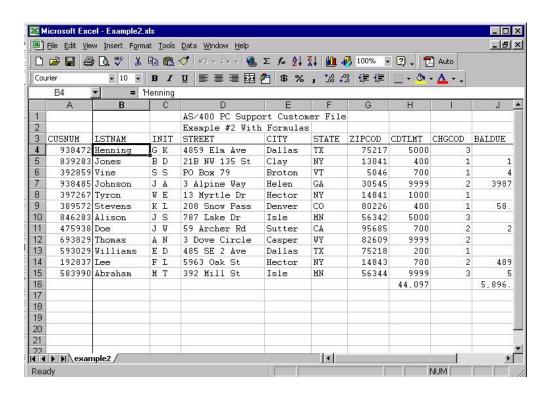
CHAPTER 6 - CVTDBFXLS Examples

DESCRIPTION: Generate an Excel spreadsheet with:

- Two (2) title lines starting in column D
- · One fixed column
- The @SUM formula specified for specific columns
- A new column using the @SUM formula to total specific columns to create a row ending formula

COMMAND:

CVTDBFXLS FRMFILE(QIWS/QCUSTCDT) STMF('/acctng/example2.xls') TTL(*FILETXT/D 'Example #2 With Formulas'/D) FXDCOL(1) RWFRML(*SUM) FLD(*NO/*NONE/*FLDNM/*DDS/*ALL *YES/*SUM/*FLDNM/*DDS/BALDUE *YES/*SUM/*FLDNM/*DDS/CDTLMT *YES/*SUM/*FLDNM/*DDS/CDTDUE)



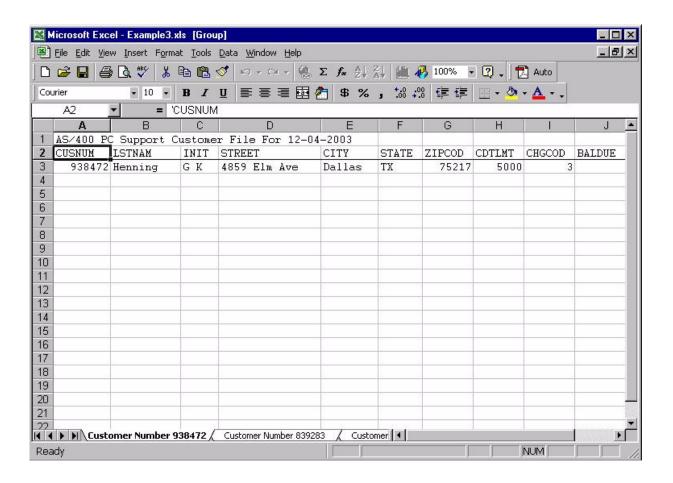
CHAPTER 6 - CVTDBFXLS Examples

DESCRIPTION: Generate an Excel spreadsheet with:

- One (1) title line using the *USA keyword
- · Multiple sheets based on a field
- Dynamic sheet description using the *SHTVAR keyword

COMMAND:

CVTDBFXLS FRMFILE(QIWS/QCUSTCDT) STMF('/acctng/example3.xls') TTL('*FILETXT For *USA'/'A') SHT('Customer Number *SHTVAR'/CUSNUM) FLD(*COLHDG/*DDS/*ALL



CHAPTER 7 - CVTDBFDB Examples

Chapter Overview

This chapter will provide an example of the CVTDBFDB command. The example will begin with a description of the desired Dbase file, followed by the CVTDBFDB command necessary to produce the Dbase file, and finally an image of the finished Dbase file.

DESCRIPTION: Generate a Dbase file from the QIWS/QCUSTCDT database

COMMAND:

CVTDBFDB FRMFILE(QIWS/QCUSTCDT) STMF('/acctng/Example1.dbf')

