

# Spool-a-Matic

Enhancement Summary

Licensed Program 2A55SAM V2R8M0



Spooled File Conversion

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## **Edition**

### **Seventeenth Edition (January 2016)**

This edition applies to the licensed program Spool-a-Matic (Program 2A55SAM), Version 2 Release 8 Modification 0.

This summary is available through option 1 of the SPLAMATIC menu, in PDF format in directory /Gumbo/Proddata/2A55SAM/doc on your system, and on the web at [www.gumbo.com](http://www.gumbo.com)

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Cover image: Woman manufacturing spools for wire. 1910

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## Installation Instructions

Follow these instructions to install Spool-a-Matic V2R8M0 on IBM i using physical media or a virtual image:

### Prepare

If you are upgrading a previous release (if Spool-a-Matic is currently installed), perform these steps before installing the software:

1. Read the Enhancement Summary to determine if any changes affect your installation.
2. Insure that the product is not in use, as the installation process must clear the product's library. This will fail if objects such as menus are in use. If the installation fails, the previous release will be restored.

### Install

**Note:** If you are installing from a save file downloaded as a self extracting zip (.exe), use the save file specific "readme.htm" instructions included in the download.

1. Sign on to the system as the security officer (QSECOFR).
2. Verify that your machine is at IBM i V7R2M0 or later by running:

```
DSPDTAARA DTAARA(QGPL/QSS1MRI)
```

**Note:** If you are running a version of IBM i earlier than V7R2M0 you cannot install Spool-a-Matic V2R8M0 on your machine. You must install an earlier version of Spool-a-Matic or upgrade the operating system.

3. Verify that user domain objects are allowed in the libraries SPLAMATIC and QSRV, by running:

```
WRKSYSVAL SYSVAL(QALWUSRDMN)
```

Take option 5 to display the value. If the value is not \*ALL, use option 2 to add libraries SPLAMATIC and QSRV to the list of libraries where user domain objects are allowed.

**Note:** QSRV is required to correctly process PTFs when they are loaded and applied.

4. Insure that IBM i will be able to verify the signatures that we apply to our product's objects by installing our Signing Certificate and Root CA Certificate using Digital Certificate Manager. Alternately, insure that signature verification will not prevent the restore operation by running:

```
WRKSYSVAL SYSVAL(QVFYOBJRST)
```

Take option 5 to display the value. If the value is 3 or higher, use option 2 to temporarily change the value to 1.

5. Mount the physical media or virtual image on the appropriate device.
6. Submit the Restore Licensed Program (RSTLICPGM) command to batch:

```
RSTLICPGM LICPGM(2A55SAM) DEV(device-name) LNG(2924)
```

**Note:** Where "device-name" is the device where the media or image was mounted and is usually OPT01.

**Note:** During the restore operation, the system operator message queue may receive inquiry message CPA3DE4 "Directory not registered. (C G)". Unless you are using a directory naming convention similar to ours (that is the directory specified in the CPA3DE4's second level text is unrelated to our software), you can safely respond with a "G" to reestablish the relationship between the directory and the product. Typically the message will occur three or four times.

## Finish

When the RSTLICPGM command completes, library SPLAMATIC and directory '/Gumbo/ProdData/2A55SAM' contain the new software. To complete the installation:

1. If you have an Authorization or Instructions letter with your permanent authorization code, enter the code now.

**Note:** Spool-a-Matic automatically grants 30 days usage for new installs or 90 days usage for release upgrades.

2. Retrieve the current cumulative Spool-a-Matic PTF package by running the following command:

```
SPLAMATIC/RTVGSIPTF
```

**Note:** **GUMBO** recommends downloading the current cumulative PTF package after installing the software.

3. Visit our PTF page at [www.gumbo.com](http://www.gumbo.com) and check the **Additional IBM i PTF Information** section for IBM PTFs you may need to install.
4. You can access the Spool-a-Matic menu by running the following command:

```
GO MENU(SPLAMATIC/SPLAMATIC)
```

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## Enhancements For Spool-a-Matic V2R8M0

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### What's In This Section

This section provides information on Spool-a-Matic enhancements for release V2R8M0, notes any customer code implications by marking them with a **COMPATIBILITY WARNING**, and describes where to find more information when applicable.

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### SPLCONVERT SPLNBR(\*ANY)

SPLCONVERT command's SPLNBR() parameter special value \*ANY doesn't work and generates an error. The problem is corrected.

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### CRTDEVGLP Template Updated

When you create a new Gumbo Logical Printer with the CRTDEVGLP command, a template containing a model SPLCONVERT command is copied to the new device. The template has been changed to specify PAGERANGE(\*SPLF) to more closely emulate the default behavior of physical printers. This change affects only newly created Gumbo Logical Printers, existing devices are unaffected. You can modify existing Gumbo Logical Printers using the CHGDEVGLP command.

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### Page select criteria PAGSLT() Parameter Added

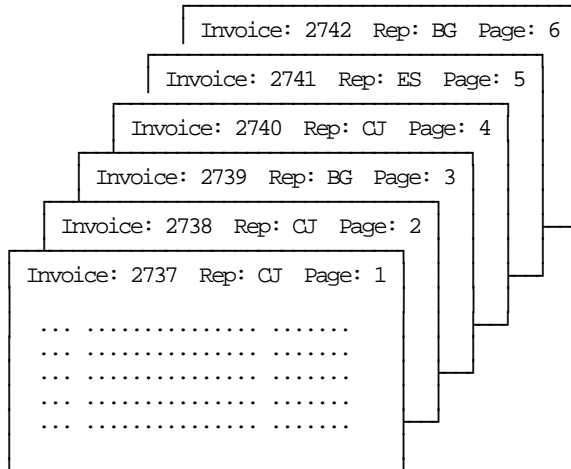
A new parameter, Page select criteria (PAGSLT), has been added to Spool-a-Matic. The parameter specifies criteria used to select pages from the spooled file for processing. Pages not meeting the criteria do not appear in the output. The criteria are made up of line INT(2), position INT(2), compare test CHAR(1), and compare value CHAR(256).

When processing a spooled file the PAGSLT(), PAGERANGE() and PAGDTA() affect which pages are processed and the number of outputs generated. When none of these parameters are specified, all pages in the spooled file are processed as a unit and a single output is generated. Specifying selection criteria on the PAGSLT() parameter reduces the number of pages processed to those that meet the criteria. Specifying range values on the PAGERANGE() parameter reduces the number of pages processed to those in the range. If both PAGSLT() and PAGERANGE() are specified, only those pages that meet the criteria and fall within the range are processed. The result is a single output and unprocessed pages are ignored.

The PAGDTA() parameter splits a spooled file into multiple outputs with each output consisting of all pages with identical PAGDTA() values. PAGDTA() is applied to pages that remain after PAGSLT() and PAGERANGE() are applied and have selected pages from the spooled file. PAGERANGE() having its usual meaning is dropped from the discussion.

Consider the following example spooled file:

Figure: Example Spooled File



Specifying `PAGSLT(1 17 *EQ 'Rep: CJ')` will select pages 1, 2, and 4 for processing, and pages 3, 5, and 6 will be ignored. In other words: process only the invoices for representative "CJ". Adding `PAGDTA(1 11 4)` will split pages 1, 2, and 4 into three separate outputs, one for each invoice number.

Specifying `PAGSLT(1 17 *NE 'Rep: CJ')` will select pages 3, 5, and 6 for processing, and pages 1, 2, and 4 will be ignored. In other words: process all invoices except those for representative "CJ". Adding `PAGDTA(1 17 7)` will split pages 3, 5 and 6 into 2 outputs. The first containing pages 3 and 6 for representative "BG" while the second contains page 5 for representative "ES".

For more details on specifying `PAGSLT()` and `PAGDTA()` see the command parameter descriptions in the Commands chapter of the manual.

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## AFP Processor Changes

- `SPLNBR(*ANY)` processing corrected for `EXTAFPRSC` command. Previously specifying `*ANY` generated an error and processing stopped.

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## AFP Print File Generator Changes

- Uninitialized pointer can cause MCH3601 during error clean up under some failure scenarios. Clean up is left incomplete.

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## Final Form Text Generator Changes

- Uninitialized pointer can cause MCH3601 during error clean up under some failure scenarios. Clean up is left incomplete.

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## Font Processor Changes

- New export key Font Unique ID(FSUID), compliments the existing Font Stack Handle(FSH). The existing FSH is the key to information of a font that is currently on the stack. The new FSUID is the key to the same information about any font that is/was ever on the stack. The FSUID are valid for the duration of the Font Stack. The FSUID grants easy access to exported information of all the fonts used.



- Unicode value is now the communication method for Glyph names. A Unicode equivalent array is available for each font used. A new export, FntGlyphGetForUnicode, returns the Unicode Glyph name for the Unicode value.
- Corrected font size in cases where the same font was referenced multiple times, with different 'height's.
- Enabled accurate Text Length for TrueType fonts.
- Improved handling of TrueType fonts given with data as Unicode, and no corresponding codepage.
- Resolving TrueType fonts failed to check for existing resolved reference resulting in a stack overflow and failed processing.
- Retrieving font file names using QGSLRSC failed when processing a spooled file that has a duplicate on the system. QGSLRSC is now called using the system's internal IDs for the job and spooled file and the problem avoided.
- The font size derived from \*SCS spooled file which specifies a scalable font was incorrect.
- Missing code page font resource no longer causes the process to fail, a substitute is used instead. This restores the previous behavior.
- Default code page selection enhanced to be sensitive to the spooled file's encoding.

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## HTML Generator Changes

- Uninitialized pointer can cause MCH3601 during error clean up under some failure scenarios. Clean up is left incomplete.

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## PDF Generator Changes

- Font Imbedding \*AUTO now allows the loading of text data as Adobe Built-In, either WinAnsi or Symbol, or both, until an unprintable character is encountered. An unprintable character is one that cannot be presented as either of the Built-ins. At that time, another PDF font is introduced as the Imbedded version for the same data stream font. Note that up to three PDF fonts may be present in the PDF document for a single font from the data stream. (1) for the WinAnsi Built-in, (2) for the Symbol Built-in, and (3) for the Imbedded version of the same font. With \*AUTO, the Adobe font Built-ins will no longer be missing the unprintable characters. Instead, convert over to imbedding when, and only when, needed.
- PDF/A uses the same logic. Type1-IFS fonts are used until a character is found that is not in the Type1-IFS file, and then the actual font is imbedded.
- There is no longer a one-to-one relationship between the data stream font and the current PDF font. GetCurrentFont() from the data stream can no longer be mapped directly to the current font being loaded as PDF. Since each data stream font may correspond with up to three PDF fonts, PDF must keep track of which font is current. The FLEIDX is the internal PDF mechanism used to indicate which font is in use, and is represented as /Fxx in the PDF file where xx is the FLEIDX value.
- Corrected errors in text processing for presenting BarCode HRI.
- Portrait 90 and Landscape 90 orientation values on medium descriptors gave wrong results for \*AFPDS spooled files. Orientation now derived from medium descriptor extents.
- Uninitialized pointer caused clean up failure with MCH3601 under some error scenarios.

- Two locations in environment create error handling destroy a local copy of a pointer instead of the passed copy leading to a suspected error on a customer system when the passed copy is also destroyed.
- Some PDF/A validators complain that "The XMP property 'xmp:CreateDate' is not synchronized with the document information entry 'CreationDate'." Code was changed to avoid the less liberal interpretation.
- Imbedded \*TRUETYPE fonts used with DBCS data displays correctly in Adobe Reader but does not display in other context such as handheld due to malformed CIDFont declaration.
- Imbedded \*TRUETYPE fonts used with SBCS data displays correctly in Adobe Reader but does not display in other context such as handheld due to malformed encoding cmap.
- Multiple copies of a single TrueType font, with different subsets, were generated when the font was specified in different ways. Now the subsets are combined into single copy and overall file size is reduced.
- Horizontal scaling of the underscore character was performed incorrectly when rendering PTOCA underscored text.
- When a TrueType font was specified with a code page font resource, the generated PDF contained incorrect data, unicode mapping and font subset.

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### **RTF Generator Changes**

- Uninitialized pointer can cause MCH3601 during error clean up under some failure scenarios. Clean up is left incomplete.

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### **Spool Indexing Changes**

- New types, functions and exports supporting larger page key data specification were added. Previous limit of 16 was raised to 256.
- SPLNBR(\*ANY) processing corrected for DMPPIP, DSPPAGDTA, and RTVPAGDTA commands. Previously specifying \*ANY generated an error and processing stopped.

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### **Spool Management Changes**

- Generating a resource list using QGSLRSC failed when processing a spooled file that has a duplicate on the system. QGSLRSC is now called using the system's internal IDs for the job and spooled file and the problem avoided.

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### **Text Generation Changes**

- Uninitialized pointer can cause MCH3601 during error clean up under some failure scenarios. Clean up is left incomplete.