

Shop Documentation Enhancements for Template Customization

These notes step you through the process of customizing templates and generating shop documentation output. They will familiarize you with the NX8 shop documentation enhancements and will assist you in getting started with testing.

Output Shop Docs

1. Create a folder named **Shop Doc Output** on your desktop.
2. In NX, open **housing_cover_setup.prt**.
3. In the Program Order View of the Operation Navigator, select **1234**.
4. Click the **Shop Documentation** icon in the toolbar.
5. Select **Operation List Select (HTML/Excel)** in the Report Format list.
6. Click the **Browse for an Output File** folder.
7. Click the **Desktop** icon.
8. Double-click the **Shop Doc Output** folder.
9. Click **OK**.
10. Click **OK** in the Shop Documentation dialog to begin processing.

Processing will take a few seconds.

11. Click **Yes** in the Microsoft Office Excel dialog.
12. Close the Information window.

Shop Docs creates an HTML output displayed in Excel. Notice that the title block has been populated with data and a part image. The operation table has cycled for each operation in the selected program.

Note: Other platforms (MacOS, Linux) will not display the output automatically.

13. Click one of the images in the Path Image column.

The image is enlarged and displayed in your default graphic viewer.

14. **Close** the output window.

Note: You must always close the current output window before generating the next output or you will receive an error.

15. Repeat the above steps to output a single operation or a group in the Machining Method View. Also, try using other templates in the Report Format list.

Edit an Existing Template

Here's what you will do:

- Make a local copy of the shop_doc folder on your desktop
- Add an Environment Variable that points to it
- Edit the Excel file
- Update the template
- Generate output using the updated template

Copy the shop_doc folder to your desktop

1. Open the /resource/ folder located here:

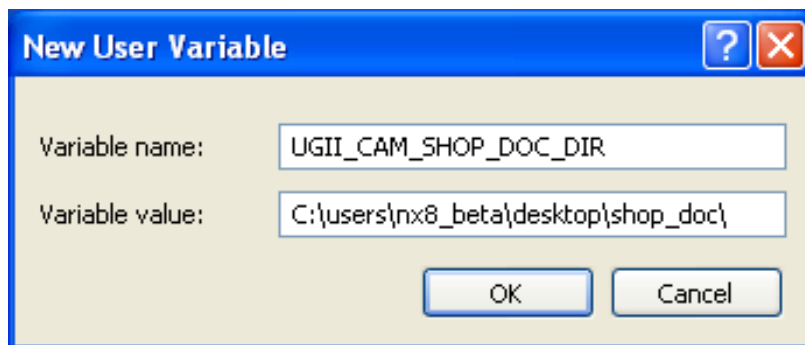
Local Disc (C:)/Program files/Siemens/NX8.0/MACH/resource/

2. Copy the **shop_doc** folder onto your desktop.

This will allow you to edit and save your own templates.

Add an Environment Variable that points to the shop_doc folder

3. Add an Environment Variable that tells Shop Docs where to find these files:
 - **Start→Control Panel→System and Security→system→Advanced System Settings→Advanced→Environment Variables→New**
 - Fill in the following Variable name and Variable value:



- Click **OK** twice.
- Restart NX so the new environment variable will be applied.

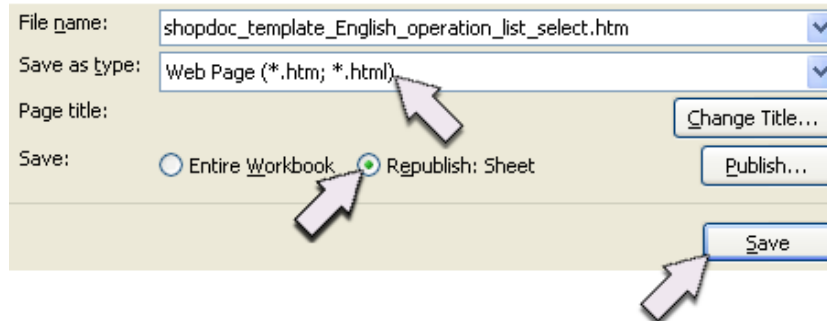
Edit the Excel file

First, you will make a simple text edit to the template and then generate the output to see the edit. Then, you will edit a MOM variable and change the page formatting.

4. On your desktop, open the /shop_doc/excel_templates/ folder.
5. Double-click to open **shopdoc_template_English_operation_list_select.xlsx**
6. In the Excel file, change **XXXXXX** in the title to **Die**.
7. Do not save the changes.

Update the template

8. In Excel, **Save As**→**Save as type: .htm**→**shopdoc_template_english_operation_list_select.htm**→**Republish: Sheet**→**Save** to the /shop_doc/excel_templates/ folder on your desktop.



Generate output using the updated template




9. In NX, Select **1234**→**Shop Documentation**→**Operation List Select (HTML/Excel)**→**OK**

Notice the output reflects the change you made (XXXX→Die) to the Excel file.

10. **Close** the output window.

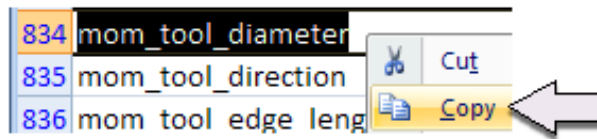
Edit the Excel file

Next, you will edit a MOM variable. Sheet 2 contains over 1000 MOM variables with descriptions that are available to customize the template. Filtering by Class, Sorting alphabetically, and Finding key words are useful in navigating this list. For example:

11. Click the **mom_vars** tab at the bottom of the spreadsheet.
12. Pick **Class** at the top of column B and select **Filter**  in the toolbar.
13. At the top of column B, pick the  button next to **Class** and uncheck ☐ **Select All**.
14. Scroll down and check ☒ **Tool**.
15. Click **OK**.
16. Pick the **"A"** at the top of column A and select **Find**  in the toolbar.
17. Type **Die** in the **Find what** field and click **Find All**.
18. In the Find and Replace window, pick **mom_tool_diameter** in the **Value** column.

Book	Sheet	Name	Cell	Value
shopdoc_template_english_operation_list_select.xlsx	mom_vars		\$A\$825	mom_tool_button_diameter
shopdoc_template_english_operation_list_select.xlsx	mom_vars		\$A\$834	mom_tool_diameter
shopdoc_template_english_operation_list_select.xlsx	mom_vars		\$A\$842	mom_tool_holder_diameter

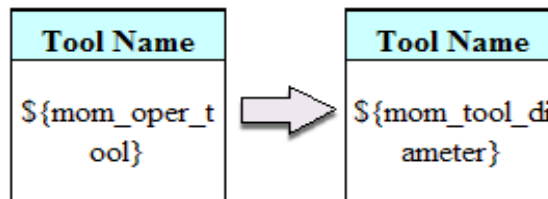
19. Copy the text from column A.



20. Close the Find and Replace window.

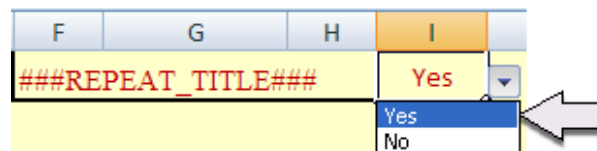
21. Click the **shopdoc_template_English** tab at the bottom of the spreadsheet.

22. Paste **mom_tool_diameter** in place of **mom_oper_tool** (be sure to retain the brackets).



23. Change **Tool Name** in the column heading to **Tool Dia.**

24. Change **### REPEAT TITLE###** to **Yes**.



REPEAT TITLE allows you to repeat the title block (defined between **###BODY START###** and the **###TABLE START###** markers) on each page.

25. Do not save changes.

Update the template

26. **Save As**→**Save as type: .htm**→**shopdoc_template_english_operation_list_select.htm**→**Republish: Sheet**→**Save** to the **/shop_doc/excel_templates/** folder on your desktop.

Generate output using the updated template

27. In NX, Select **1234→Shop Documentation→Operation List Select (HTML/Excel)→OK**

Notice the title block is repeated on page one and two and that the Tool Dia column now reflects the diameter of each tool.

28. **Close** the output window.

Here is an overview of the types of edits you can make to the template:

The screenshot shows an Excel spreadsheet template for NX Shop Documentation. Red arrows point to various elements with labels indicating where edits can be made:

- Paste Images:** Points to a placeholder box labeled "Image" in the Pictures section.
- Edit Text:** Points to the "XXXXX Program Sheet" title.
- Edit Page Content Length:** Points to the "10" value in the "PAGE_CONTENT_LENGTH" cell.
- Repeat Title Y/N:** Points to the "No" value in the "REPEAT_TITLE" cell.
- Add/Edit Attributes:** Points to the "Drawing name" field in the title block.
- Add Text:** Points to the "Description" field in the title block.
- Edit Headings & Columns:** Points to the "Path Image" column header in the table.
- Add/Edit MOM Variables:** Points to the "\${mom_attr_PART_DRWNAME}" variable in the "Drawing name" field.

Index	Operation Name	Type	Program	Machine Mode	Tool Name	Path Image
\${my_index}	\${mom_operation_name}	\${mom_operation_type}	\${mom_operation_program}	\${mom_machine_mode}	\${mom_operation_tool}	PATH Image

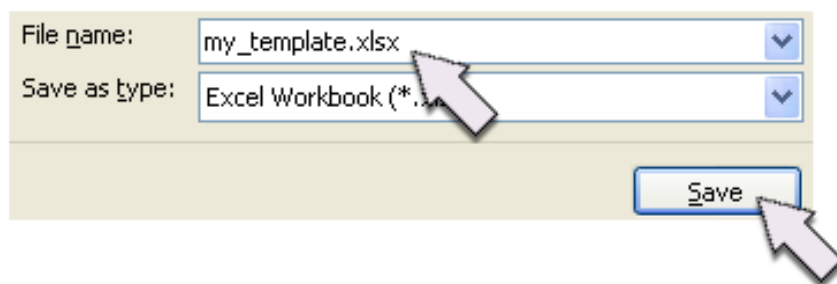
Create a New Template

Here's what you will do:

- Save the edited Excel file under a new name
- Create a new template
- Create a new .tcl file. This determines which template to process when you select an option in the UI
- Edit the .dat file to determine what you see in the user interface and which .tcl file to use
- Generate output using the new template

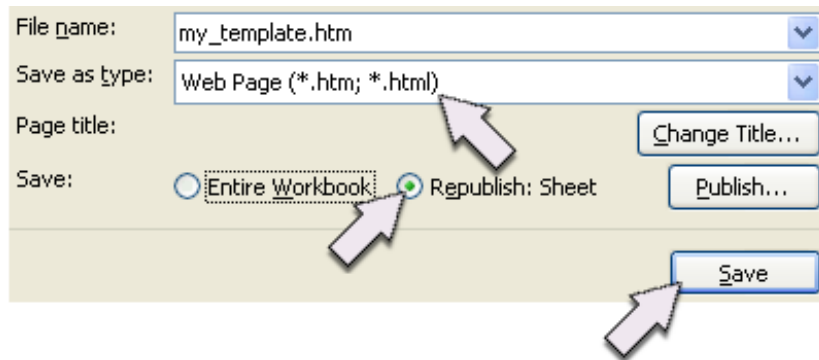
Save the edited Excel file

1. In Excel, **Save As**→ **File name: my_template.xlsx**→**Save** in the excel_templates folder.

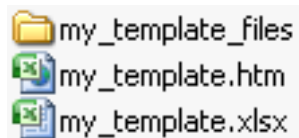


Create the template

2. In Excel, **Save As**→ **my_template.htm**→**Republish: Sheet**→**Save**



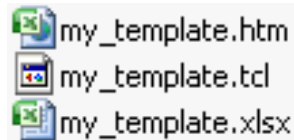
You have created two files and the system has created a folder to support the .htm file:



Create a new .tcl file

A new .tcl file must be created that uses the same name as the template.

3. In the excel_templates folder, copy and paste **shopdoc_template_English_operation_list_select.tcl**
4. Rename it **my_template.tcl**
5. You have created three files:



.xlsx: The Excel file containing your edits on sheet 1 and all available mom variables on sheet 2. This is your working file.

.htm: The template the system uses to create the shop doc output.

.tcl: The .tcl file determines which .htm file to process when you select an option in the UI.

Edit the .dat file

The shop_doc.dat file determines what appears in the NX user interface and specifies which .tcl file to use.

6. Go back one level to the SHOP_DOC folder.
7. Find **shop_doc.dat** and remove RO if necessary.
8. Open **shop_doc.dat** in a text editor.

Each line corresponds to an existing template. “#” indicates templates that are commented out and do not appear in the UI.

9. Copy all the text in line 1 and paste it as a new line at the bottom of the list.
10. Replace the existing UI text with what you wish to appear in the UI for your new template, e.g. **My Operation List Select (HTML/Excel)**

```
28 My Operation List Select (HTML/Excel), ${UGII_CAM_SHOP_DOC_DIR}excel_templates
```



11. Replace the name of the existing .tcl file with the one you just created: **my_template.tcl**.

```
${UGII_CAM_SHOP_DOC_DIR}excel_templates\my_template.tcl,
```



12. Save and close **shop_doc.dat**.

Generate output using the new template

13. In NX, Select **1234→Shop Documentation→My Operation List Select (HTML/Excel)→OK**

Printing and Page Formatting

The Excel template provides minimal configurable options to help you specify the content length of each page.

1	###PAGE_CONTENT_LENGTH###	10	IN	###REPEAT_TITLE###	No
2	###BODY_START###		MM IN		Yes No
3	Page : \${cur_page} of \${total_pages}				
4	SIEMENS				
5	XXXXX Program Sheet				
6	XXX-XXX-XX				
7	###TITLE_START###				
8	Part name:	\${mom_part_name}		Drawing name:	\${mom_attr_PART_DRWNAME}
9	Material:	\${mom_attr_PART_MATERIAL}		Part number:	\${mom_attr_PART_PARTNUM}
10	Machine:	\${mom_attr_PART_MACHINE}		Program type:	\${mom_attr_PART_PROGTYPE}

The numeric input field next to PAGE CONTENT LENGTH determines the distance between the Page : \${cur_page} of \${total_pages} markers in the .html output. The value must be a positive real number.

If the value is "0" or empty, the content will be output without pagination. That is, "Page: 1 of 1" will appear at the top of the output and no other markers will follow it.

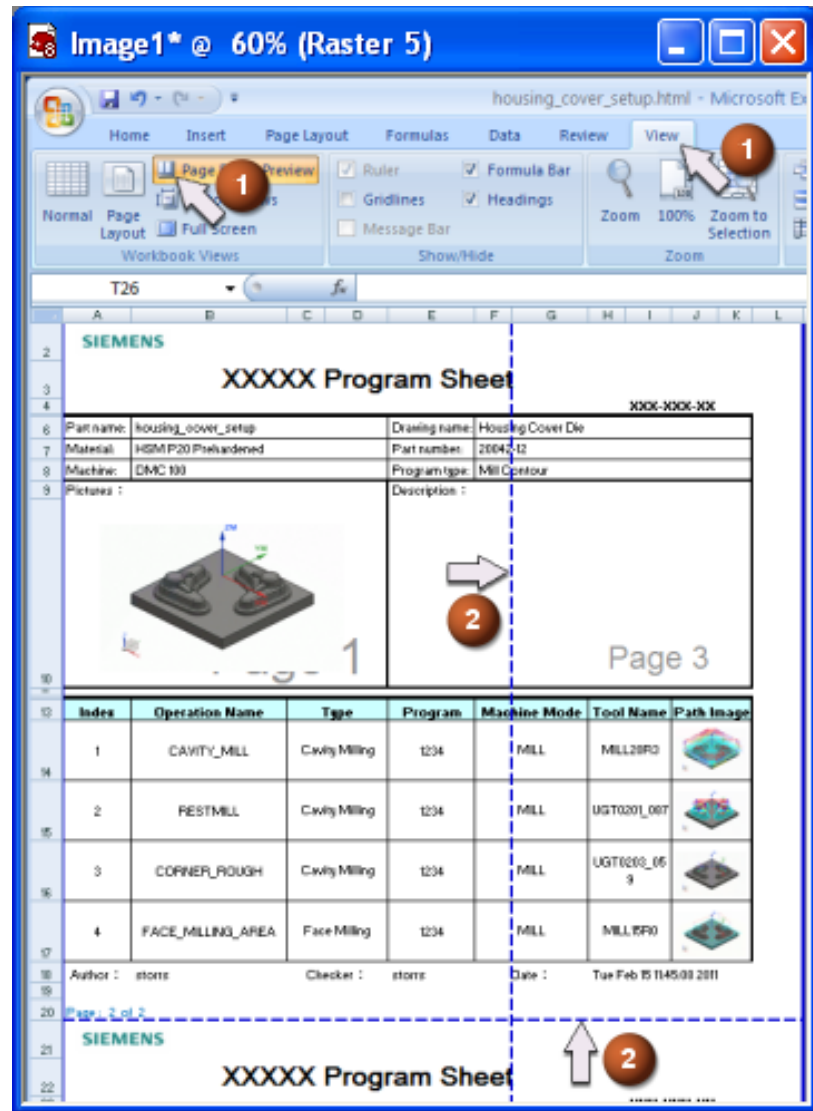
If the value you enter is greater than 0 but less than the title block length (distance between ###TITLE START### and the first ###TABLE START### markers) and REPEAT TITLE is set to **Yes**, then minimum length between markers is the title block + 1 table row. This assures that the title block plus 1 successive table row will appear on each page.

If the value is greater than 0 but less than the title block length (distance between ###TITLE START### and the first ###TABLE START### markers), and REPEAT TITLE is set to **No**, then the minimum length between markers is the title block. This assures that the title block will appear on the first page followed by a continuous table on subsequent pages.

Print the output (.html) file:

When printing the output file in Excel, the Page Break Preview area determines the content of each sheet of paper. The Page Break Preview area should be specified to coincide with the page break markers.

1. In the output file, click **View→Page Break Preview** (Click **OK** in the Welcome to Page Break Preview dialog if it appears).
2. Drag the dashed blue lines to define the contents of page 1. In this case, drag the horizontal line so it is just above the “Page:2 of 2” page marker and the vertical line all the way to the right.



3. Click **Print→OK**.
4. Click **View→Normal**.

Notes:

1. File definitions:

- **.xlsx** is the Excel file containing your edits and all mom variables on sheet 2. This is the authoring file.
- **.htm** is the template the system uses to create the shop doc output.
- **shop_doc.dat** determines what you see in the user interface and specifies which .tcl and .tpl files to use.
- **.tcl** Determines which .htm file to process. It must have the same name as the .htm file so that the system knows which .htm file to process. When a new template has been created, the .tcl file of an existing template can be copied and renamed.
- **.tpl** determines whether the template processes “select”ed objects (new templates) or “all” objects (old templates).
- **shopdoc_excel.tcl** and **shopdoc_excel.tpl** are used in all Excel-html templates.