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Overview

The Drawing Management System is a web-based application that allows the Product Engineering Group to define, maintain and track UGN Drawings for parts, of which can be finished goods, raw materials, or others. It provides the ability to update the drawings, send notifications to a pre-defined list of users of the completion of the drawings, and identify the bill of materials of parts before going into production. No sign-on is needed to connect to the Drawing Management Forms. The users are authenticated automatically behind the scenes based on who is logged into the computer with the network user name and password.

There are several sections:

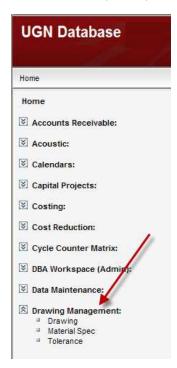
- 1) DMS Drawings UGN Drawings contained in a system for tracking and notification.
- 2) Material Specifications Specific notes and supporting documentation for raw materials purchased.

Who can use this application?

- 1) Anyone with a UGN Database account may have read only rights can access this module.
- 2) Team members from the Product Development department may create or change the information.
- 3) Costing, Packaging, and Quality Engineering team members may update the BPCS part numbers, customer information, vendor information, and/or packaging information.

UGN Database Menu

• How to connect: The pages are located under the "Drawing Management" folder of the UGN Database.





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Drawing Search/List

Team Members can search for drawing on the search/list page. As a default, only production drawings are shown. However, users can change the setting to find others. In the list of results, either the details of the drawing can be selected by clicking on the drawing number or the PDF-Preview can be selected by clicking on the preview icon to see a printer-friendly version. Product Development team members can click the "add" button at the top of the screen to create a new drawing.

Search for Drawing Review existing data or press Add to enter new data Partial Searches can be completed by placing % before or after text Customer Part No: Drawing No: BPCS Part No Part Name: Commodity Designation Type: ~ Various Text ~ Fields: Program: Year ~ V Drawing Release Type: Production Drawing Status: Customer (SOLDTO / ~ **Advanced Search** Keep advanced search open Construction: Drawing By Engineer: ~ Family-SubFamily: ~ Purchased Good ٧ Density Value: ~ Product Technology: v Last Updated On Last Updated On . . (Begin Range): (End Range): Search Reset Use the parameters above to filter the list below Page: 1 of 94 | < < 1 Go >> >| 0202-00002-1(00) Resin Base Level Drawing 0.0000 0.0000 0.0000 Production Issued 0303-00005-1(00) SHODDY - SYNTHETIC / COTTON BLEND 0.0000 0.0000 0.0000 FR SHODDY - SYNTHETIC / COTTON BLEND 0303-00007-1(00) 0.0000 Issued 5387 SHODDY - SYNTHETIC / COTTON BLEND 0.0000 0303-00008-1(00) 0.0000 0.0000 Issued O 0403-00002-1(01) TACA Fiber Base Level Drawing 0.0000 6343 0.0000 0.0000 Production Issued O 0403-00003-1(00) NCF Fiber Base Level Drawing 0.0000 0.0000 6344 0.0000 Production Issued



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Last Updated By: rcarlson

Last Updated On: 07/15/2011 Current Status: New

Drawing Details

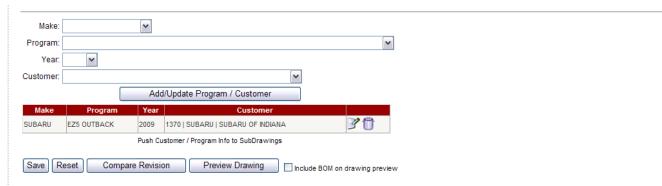
- Team Members with administrator rights can edit or make new versions of existing drawings on this page. There are several tabs.
- At the top of the page, the drawing number is shown. The drawing number is based on the "sub-family" of parts and the dimension of the part. It will increment sequentially as needed and also have revisions as needed. Product Development team members can copy an existing drawing as a brand new sequence of numbers, keep the same sequence but modify the step, or keep the sequence and step while updating a revision. Drawings that have NOT been issued can be voided. Drawings that have been completed can be "released." Upon release, team members assigned on the "principals" tab will be notified. If an ECI has been released referring to this drawing, it will be shown. The last person and date of when this drawing was edited is shown. The date of release and status is shown. A revision can only be made to the last revision of the drawing.
- At the **bottom** of the page are a few buttons:
 - Save update the drawing
 - Reset Refresh the page since the last time it was saved.
 - Compare Revisions highlights the difference between the current drawing and the previous drawing.
 - Preview shows the drawing in a PDF format.
 - Check box to include BOM shows a popup of all child and grand-child drawings. The user would select which drawings to include inside of the PDF file.
- Identification: how the drawing/part is categorized and what customer, if any, would use this. This can be updated after the drawing is issued. Some categories are commodity, program, sub-family, purchased good, and product technology. These lists are also fully shown in the "Data Maintenance" section of the UGN Database and are used in all UGN Database modules. Users can update the release type of the drawing on this tab or navigate with hyperlinks to the previous or next revision of the drawing.

Drawing Detail Drawing No: X3401-00054-1(37) SUBARU LEGACY FINISHED CARPET - NEEDLE PUNCHED STUDY BPCS Part No: Revision ECI No: Date Issued/Released: Void Copy for New Part Create Revision Create new Step Release (Send Notification) | Identification | Specifications | Bill Of Materials | Principals | BPCS Assignments | *Packaging and Inspection | Drawing Name: SUBARU LEGACY FINISHED CARPET - NEEDLE PUNCHED STUD Drawing Release Type: Candidate Change Sub-Drawing Release Types Open Previous Drawing Revision * Initial Dimension and Density: 00 **Inserted into the Drawing No. * Process Step No.: 1 **Inserted into the Drawing No. Comments: EZ5 LEGACY NEEDLE PUNCHED CARPET ASSEMBLY PROPOSAL PER RFQ Designation Type: Family: Parts To Customer (34) Sub-Family: Parts To Customer - Trims (3401) Commodity: Carpet Product Technology: Carpet Purchased Good: ~ æ Customer Part No:

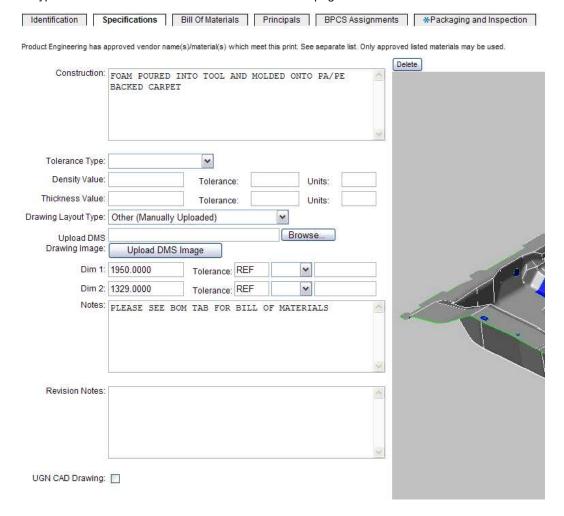
Save



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• **Specifications:** Fields describing the dimensions and construction of the part are entered on this tab. These fields are locked after the drawing is issued. For released drawings, an "edit" button will appear at the top of the screen to Product Development team members. This will allow them to fix clerical errors that occur but is NOT intended to make significant changes to the drawing. For important changes that would affect production, team members should create a new drawing or make a revision of the drawing. Depending on the type of drawing layout, either an image will be automatically assigned to the drawing or a manual image can be uploaded. Please preview the drawing in PDF format to make sure it would be easily viewable to other users before releasing the drawing. The tolerance type can be added or edited on the "Tolerance" web page on the UGNDB tree menu.



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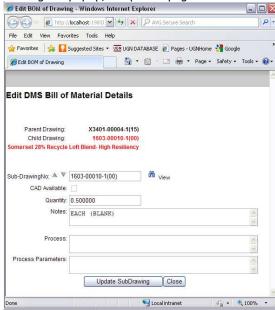
• **Bill of Materials** – The bill of materials tab will present child and grand-child drawings in a tree/grid view. New sub-drawings may be added from this tab. To edit or delete the child drawing information, popup windows will appear. Team members may click on the actual sub-drawing to see all details of the sub-drawing. Information about "grand-child" parts must be editing by opening the child itself and using its bill of materials tab. There is also a button called "Manage Parent Parts" which allows the Product Development team member to increment all parents to a new version and release types. Finally, there is a link that will show all parents that use the current drawing, sort of a reverse of the bill of materials.

| | (00) PET STAPLE FIBER | | | 39.000000 | % Staple | | | | |
|--------------------------|---|---|------------------|-----------|----------|--------|-----------------------|--------|-----------------------|
| Sub-Drawing | Name | | BPC S Part No | QUANTITY | Notes | | l l | rocess | Process Parameters |
| 1603-00010-1(00) | Somerset 28% Recycle Loft Blend- High Resiliency | 0.5 | 600000 EACH | (BLANK) | | | | 3 | Ü |
| Sub-Drawing | Name | BPCS Part No QUAI | NTITY | | P | rocess | Process Parameters | Edit | Delete |
| _ | as the top (Printer Friendly Vie | | k TYPE B) | | | | | | |
| | Add SubDra | wing | | | | | | | |
| ess Parameters: | | | | | ^ ~ | | | | |
| | | | | | V | | | | |
| Process: | | | | | | | | | |
| Notes: | | | | | ^ | | | | |
| CAD Available: Quantity: | | | | | | | | | |
| Sub-DrawingNo: | | ana | | | | | | | |

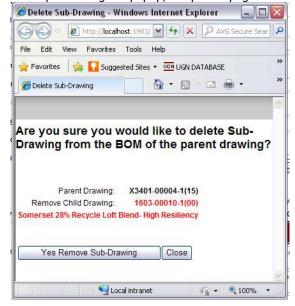


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• **Popup Window - Editing the Bill of Materials —** To edit an existing sub-drawing as it relates to the bill of materials of a drawing, the following popup will occur. If the drawing has already been released, it will require a comment to be entered. Upon closing the popup, the parent page will refresh.



• **Popup Window - Delete the Bill of Materials Popup -** To remove an existing sub-drawing as it relates to the bill of materials of a drawing, the following popup will occur. If the drawing has already been released, it will require a comment to be entered. Upon closing the popup, the parent page will refresh.





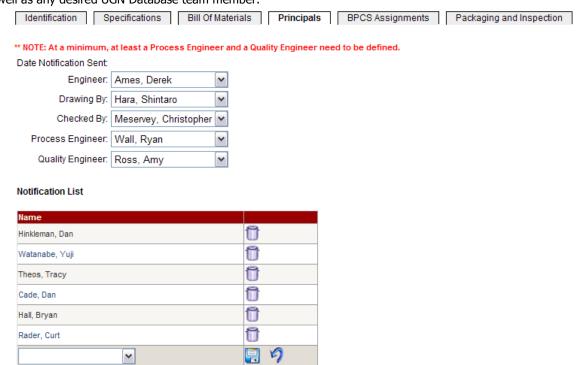
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Manage Parent Drawing – To create new revisions of all parent drawings and update their revision notes, the
following web page can be used. Either the new child revision can be selected or an alternative drawing can be
selected. This will create new revisions of all parents and insert the new drawing inside of its bill of materials.

Manage Parents of Child Drawing

| Current Child Revision | 0303-00007-1(00) | | | |
|--|--|---|--------------------------------|---------------|
| New Child Revision: | 0303-00007-1(00) | Alternative Drawing: | | âħi. |
| Release Type for the New Parent Drawings that will be generated: | Production 🕶 | | | |
| Add Revision Notes that will be added to each selected parent: | | | | |
| Add Revision Notes that will be added to each selected grandparent: | | | | |
| Check each box to select: | | | | |
| Below is a list of parent drawings that use the CURRENT Child Re | evision. | | | |
| ▼ 0303-00007-1(00) - FR SHODDY - SYNTHETIC / COTTON I ▼ 1603-00004-1(00) - Somerset 28% Recycle FR Loft ▼ 1603-06005-1(02) - FELT LOFT 600G/M2 ▷ ② 3416-18002-1(07) - REAR WHEELHOUSE RU ▷ ② 1603-00006-1(00) - Somerset 40% Recycle FR Loft ▷ ② 1603-00007-1(00) - Somerset 40% Recycle FR Loft ▷ ② 1603-00008-1(00) - Somerset 28% Recycle FR Loft | E Blend L TYPE Blend for Carpet Pads Blend for Carpet Pads Blend | e New Child Revision (or alternative drav | wing) will be entered into the | BOM of the ne |
| Select All Unselect All Create Revisions ar | nd undate BOMs | | | |
| Oriotty iii Orioticty iii Oreate (tevisions ai | ia apaate Dollis | | | |

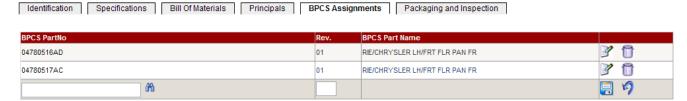
• **Principals** – When the Product Development team member releases a drawing all designated roles get notified as well as any desired UGN Database team member.



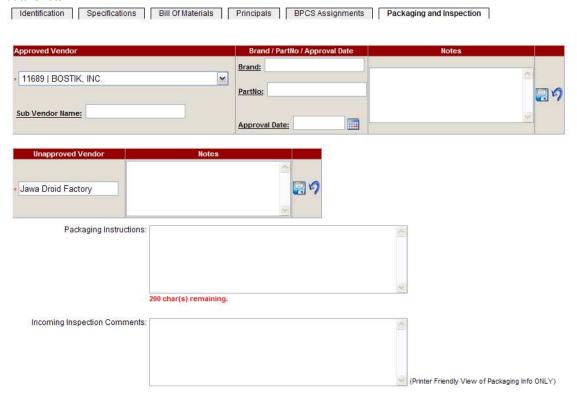


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• **BPCS Assignments** – One or many BPCS Part numbers can be assigned to the DMS Drawing. This can be updated at any time by the Product Development, Costing, Packaging, or Quality Engineer.



Packaging and Inspection — Vendor and instructions for packaging may be entered here by the same users who
can update the BPCS assignments. Again, this can be edited any time. An asterisk will appear next to this tab's title
if data exists.

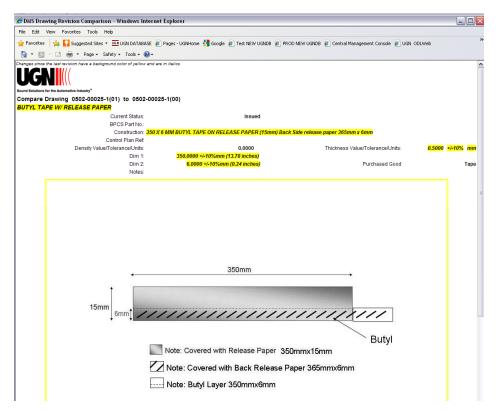




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Compare Drawing Revisions:

• Team Members can compare DMS Drawings by clicking the "compare revisions" button on the lower portion of the drawing detail page. Items that are highlighted in yellow have changed since the previous drawing's revision.

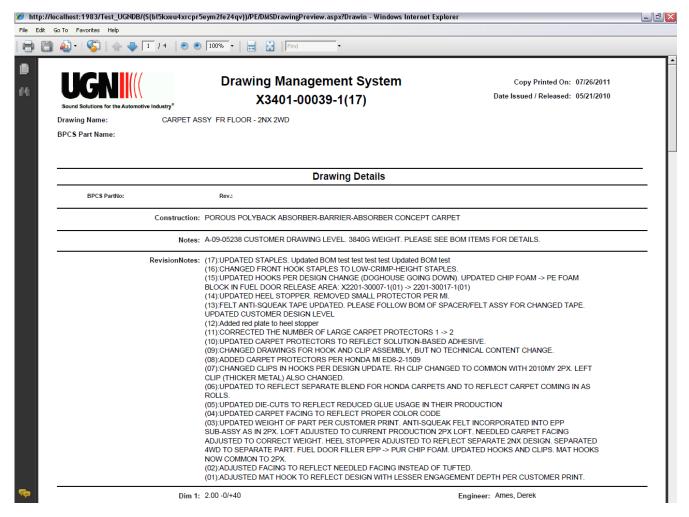




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Drawing Preview:

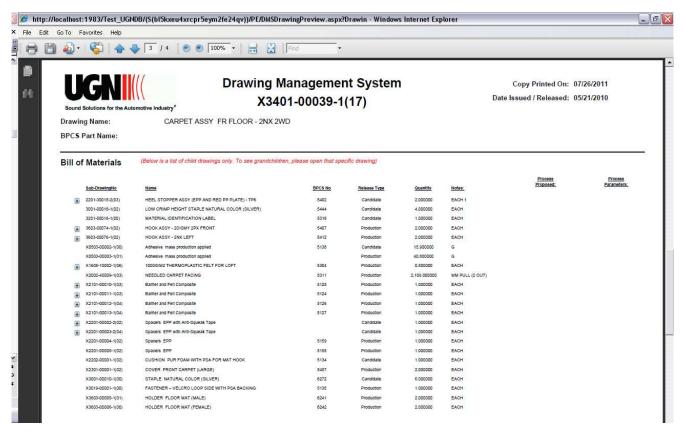
- Several pages may appear in the PDF file of the drawing preview.
 - The first page shows part identification, dimensions, construction, revision notes, and the engineers involved. Depending upon the amount of data, this information may spill over to a next page.



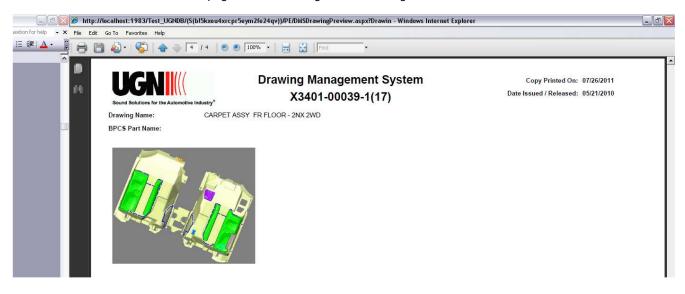


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The second page will show the immediate child list of sub drawings, if they exist. If a sub-drawing contains sub-drawings, then a "plus" sign will be shown as an indicator. Sub-drawings will be hyperlinks to navigate.



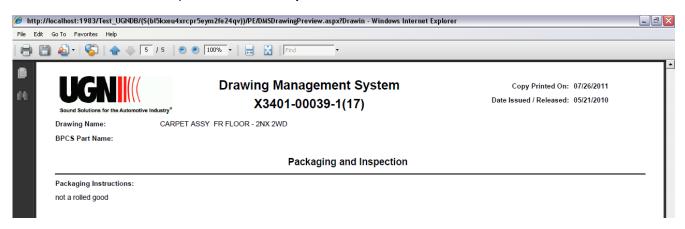
The third page shows the image of the drawing.





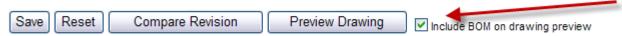
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 The final page will show packaging information if it exists. The list of vendors is NOT shown on this preview due to security reasons.

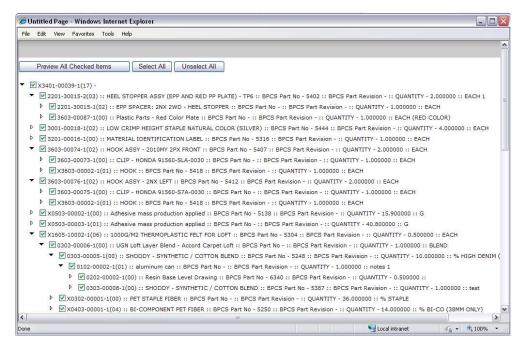


Include BOM in PDF

Team Members may include sub-drawings in the PDF as they preview it by going to the drawing details
page and clicking the check box that says "Include BOM on drawing preview."



• The following popup will be presented. Users can check and uncheck any and all sub-drawings.



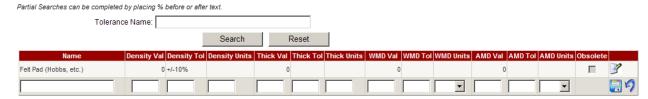


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Drawing Tolerance

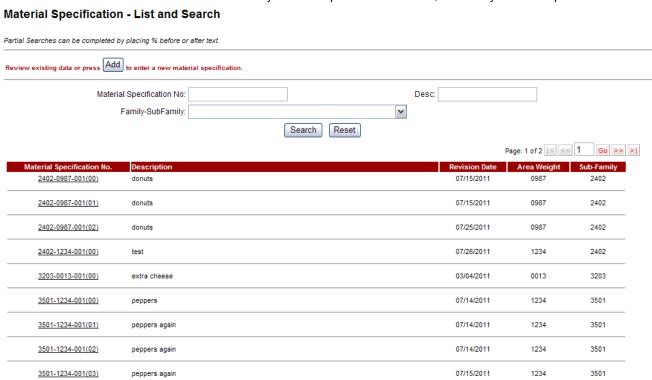
The Drawing Tolerance screen allows engineers with "administrative" rights to automate some of the
settings on a drawing. Multiple drawings could have similar numbers. The engineer can select the
tolerance name of the drawing detail screen, on the specifications tab, and the measurement fields will be
populated with the settings defined below.

Drawing Management Tolerance Dropdown Maintenance



Material Specification Search/List

- In order to identify specifications for some materials associated with DMS drawings, a screen has been created to create revisions of specifications and allow supporting documents.
- Below is the search/list screen to search by Material Specification number, sub-family and description.





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Material Specification Detail

- Each specification will be identified uniquely by the Sub-Family and Area Weight. From there, it will be incremented
 by sequence and revision. The sub-family and area weight will be locked once it is initially created.
- A dropdown box will contain all revisions of the same base Materials Specification number. The user can switch between revisions to compare.
- Supporting documents can be uploaded. These documents can be PDF, DOC, XSL, JPEF, or TIF and NO LARGER THAN 3.5MB.
- Associated drawings can be assigned to the material specification.

