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Preface

The Agile PLM documentation set includes Adobe® Acrobat PDF files. The Oracle Technology Network (OTN) Web site http://www.oracle.com/technology/documentation/agile.html contains the latest versions of the Agile PLM PDF files. You can view or download these manuals from the Web site, or you can ask your Agile administrator if there is an Agile PLM Documentation folder available on your network from which you can access the Agile PLM documentation (PDF) files.

Note To read the PDF files, you must use the free Adobe Acrobat Reader version 7.0 or later. This program can be downloaded from the Adobe Web site http://www.adobe.com.

The Oracle Technology Network (OTN) Web site http://www.oracle.com/technology/documentation/agile.html can be accessed through Help > Manuals in both Agile Web Client and Agile Java Client. If you need additional assistance or information, please contact My Oracle Support (https://support.oracle.com) for assistance.

Note Before calling Oracle Support about a problem with an Agile PLM manual, please have the full part number, which is located on the title page.

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Readme

Any last-minute information about Agile PLM can be found in the Readme file on the Oracle Technology Network (OTN) Web site http://www.oracle.com/technology/documentation/agile.html

Agile Training Aids

Go to the Oracle University Web page http://www.oracle.com/education/chooser/selectcountry_new.html for more information on Agile Training offerings.

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Screen readers may not always correctly read the code examples in this document. The conventions for writing code require that closing braces should appear on an otherwise empty line; however, some screen readers may not always read a line of text that consists solely of a bracket or brace.

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Product Collaboration Use Cases

This section provides links or information about where to find details about performing the following Product Collaboration tasks:

- **Search for Items**
  - Agile PLM provides a Quick Search, a Custom Search that a list of items attributes the Agile administrator configures and an Advanced Search, which allows you to define complex searches, including Where-used searches.
  - In the Web Client navigation pane toolbar, click the Help button ? and choose Quick Tours in order to view a short video about search features.
  - See Getting Started with Agile PLM, chapter "Finding Agile Data with Searches" for detailed information about defining, saving, and executing searches in Web Client and in Java Client.

- **Create Item**
  - Creating Items in Web Client on page 16
  - Creating Items in Java Client on page 18
  - Creating an Item Using Add on page 19
  - Creating an Item Using Save As on page 17

- **Add Item to Preliminary BOM**
  - Web Client, Adding Items to the BOM Table of a Preliminary Item on page 86
  - Java Client, Adding Items to the BOM Table of a Preliminary Item on page 92
  - Modifying the BOM Table of a Preliminary Item on page 97

- **Viewing expanded view of a BOM**
  - Expanding and Collapsing an Assembly on page 80
  - Expanded BOM Display Window, Web Client on page 83
  - Using BOM Go To on page 81

- **Create a Change against an item**
  - Expanding and Collapsing an Assembly on page 80
  - Expanded BOM Display Window, Web Client on page 83
  - Creating Changes on page 132

- **Route a Change Order**
  - See Getting Started with Agile PLM, chapter "Routing Objects with Workflows."

- **Release a Change Order**
  - Releasing an Agile Item to Production on page 22
  - See Getting Started with Agile PLM, chapter "Routing Objects with Workflows."

- **Add Affected Items to Changes**
  - Adding an Item to the Affected Items Tab on page 145
  - Web Client, Adding Items to the Affected Items Table on page 146
• Java Client, Using the Add Affected Items Wizard on page 149

• Add Manufacturer Parts to Preliminary Items
  • Adding a Manufacturer Part to the Manufacturers Tab on page 64

• Redline BOMs and AML
  • Redlining the BOM of a Released Item on page 108
  • Redline Manufacturers Tab on page 67

• Redline item attributes
  • Title Block Redline Tab of ECOs and MCOs on page 158
  • What are Change-Controlled Attributes? on page 226

• Checkout/Checkin Attachments against Items/Changes/Manufacturer Parts/Manufacturers
  • See Getting Started with Agile PLM, chapter "Working with Attachments."
Chapter 1

Items

This chapter includes the following:

- Item Objects................................................................. 1
- Working with Item Revisions.......................................................... 10
- Creating Agile Items ........................................................................... 16
- Editing Agile Items.............................................................................. 20
- Releasing an Agile Item to Production.................................................. 22
- Incorporating and Unincorporating Items.............................................. 23
- Attribute History Report ....................................................................... 26
- Where Used Tab.................................................................................. 27
- Deleting Items.................................................................................... 28
- Printing Item Tabs.............................................................................. 28

Item Objects

Items can be parts or documents. In general, if the document is shipped as part of a product, or it has costs associated with it, create it as a part object. If the document is an internal document, procedure, or reference, create it as a document object. (In some cases, you may want to create a document as a part. For examples, see Part or Document? on page 198)

This section includes the following topics:

- Lifecycle Phase on page 3
- Title Block Tab on page 3
- Changes Tab on page 5
- BOM Tab on page 5
- Manufacturers Tab on page 7
- Sites Tab on page 7
- Prices Tab on page 8
- Quality Tab on page 8
- Compliance Tab on page 8
- Suppliers Tab on page 8
- Relationships Tab on page 8
- Where Used Tab on page 27
- Attachments Tab on page 9
To locate and open an item, follow the instructions in *Getting Started with Agile PLM*.

When you view an item in Web Client, information about it is displayed on tabs in the right content pane.

When you view an item in Java Client, information about it is displayed on tabs in an item window.

The following table lists the items tabs.

The Agile administrator may have added additional tabs or sections, called Page Two and Page Three by default. These tabs or sections contain custom fields defined by the administrator.

<table>
<thead>
<tr>
<th>Item tab name</th>
<th>Tab information includes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Title Block Tab</td>
<td>General information about the item, unique class and subclass fields defined by the Agile administrator</td>
</tr>
<tr>
<td>Changes Tab</td>
<td>Any pending or released changes against the item</td>
</tr>
<tr>
<td>BOM Tab</td>
<td>The item's bill of material</td>
</tr>
<tr>
<td>Manufacturers Tab</td>
<td>Manufacturer and manufacturer parts information about sources for that part</td>
</tr>
<tr>
<td>Sites Tab</td>
<td>The manufacturing sites that use the item</td>
</tr>
<tr>
<td>Prices Tab</td>
<td>Prices associated with the item. For more information about Product Cost Management (PCM), see the <em>Product Cost Management User Guide</em>.</td>
</tr>
<tr>
<td>Quality Tab</td>
<td>Information about Product Quality Management (PQM) objects associated with this item. Product Service Requests (PSRs) are problem reports or non-conformance reports about this item. For more information about PQM, see the <em>Agile Product Quality Management User Guide</em>.</td>
</tr>
<tr>
<td>Compliance Tab</td>
<td>Information about the compliance to material regulations related to the item. For more information about Product Governance &amp; Compliance (PG&amp;C), see the <em>Agile Product Governance and Compliance User Guide</em>. Note: The Compliance tab is visible in Web Client only. Agile PG&amp;C is a Web Client-based solution.</td>
</tr>
<tr>
<td>Suppliers Tab</td>
<td>Information about the approved suppliers for the item. This tab is used in both the PG&amp;C and PCM solutions. For more information about PG&amp;C, see the <em>Agile Product Governance and Compliance User Guide</em>. For more information about PCM, see the <em>Product Cost Management User Guide</em>. Note: The Supplier tab is visible in Web Client only. Agile PG&amp;C and Agile PCM are Web Client-based solutions.</td>
</tr>
</tbody>
</table>
The Relationships tab allows you to create relationships with other Agile objects and to create dependencies between the current item object and other routable objects. For more information about relationships, see the chapter about working with business objects in *Getting Started with Agile PLM*.

Where the item is used

Attached drawings and files

Actions taken on the item, for example, when attachments were added and removed

A lifecycle phase name at the top right of the object window of an item indicates the production lifecycle phase of the item. (The names that you see may differ if the Agile administrator has customized the lifecycle names for your organization.)

The lifecycle phase name also appears in the Lifecycle Phase field on the item Title Block tab. See *Title Block Tab* on page 3.

The following table shows the default lifecycle phases.

<table>
<thead>
<tr>
<th>Lifecycle phase name</th>
<th>Lifecycle definition</th>
</tr>
</thead>
<tbody>
<tr>
<td>Preliminary</td>
<td>The item has never been released. It may have a pending change against it.</td>
</tr>
<tr>
<td>Prototype</td>
<td>The item has been released to be built in very limited quantities for testing.</td>
</tr>
<tr>
<td>Pilot</td>
<td>The item has been released to be built in limited initial quantities.</td>
</tr>
<tr>
<td>Production</td>
<td>The item has been released for regular production.</td>
</tr>
<tr>
<td>Inactive</td>
<td>The item is temporarily not in use but may be reactivated.</td>
</tr>
<tr>
<td>Obsolete</td>
<td>This item is no longer in use.</td>
</tr>
</tbody>
</table>

The Title Block tab has fields that contain the information found on a typical paper-based title block. Some fields are filled in automatically; you complete the rest. You may not be able to edit the contents of some fields. Your assigned roles and privileges determine which entries you are allowed to edit.

For more information about editing items, see *Editing an Unreleased Item* on page 20 and *Editing a Released Item* on page 21.
For more information about Title Block fields, see Fields on the Title Block Tab on page 4.

**Fields on the Title Block Tab**

By default, the item object **Title Block** tab contains the fields listed in the following table. Agile administrators determine which fields are enabled and visible on the **Title Block** tab.

In Web Client, the Title Block can contain two additional sections, called Page Two and Page Three by default. In Java Client, these are separate tabs. Agile administrators can add custom class fields to Page Two section and customer subclass fields to the Page Three section. The Agile administrator determines whether these sections are enabled, and what they are called.

<table>
<thead>
<tr>
<th>Field</th>
<th>Definition</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number</td>
<td>The item’s number. The item number is completed when the item is created. Depending on Agile system settings, the number may be automatically generated or the user may enter a number.</td>
</tr>
<tr>
<td>Description</td>
<td>Text that describes the item. By default, descriptions can be up to 240 characters, counting spaces and carriage returns (carriage returns count as two spaces).</td>
</tr>
<tr>
<td>Size</td>
<td>Drawing size; select from the list.</td>
</tr>
<tr>
<td>Product Line(s)</td>
<td>The product group or groups that include this item; select from the list.</td>
</tr>
<tr>
<td>Lifecycle Phase</td>
<td>The lifecycle phase of the item for the displayed revision, for example, Prototype or Production. See Lifecycle Phase on page 3 for more information.</td>
</tr>
<tr>
<td>Rev Incorp Date</td>
<td>The date an item is incorporated; automatically completed when the item is incorporated.</td>
</tr>
<tr>
<td>Rev Release Date</td>
<td>The date an item is released; automatically completed when the item is released.</td>
</tr>
<tr>
<td>Part Type</td>
<td>The subclass of this item; completed when the item is created. Depending on Agile system settings, the part type field may be automatically completed or the user may select a part type. See Changing an Item’s Subclass on page 22 for more information.</td>
</tr>
<tr>
<td>Part Category</td>
<td>The category that includes the item; select from the list.</td>
</tr>
<tr>
<td>Effectivity Date</td>
<td>Displays the date the revision becomes effective. This date is specified on the Affected Items tab of the change that released the revision. See also Site-Specific Effectivity and Obsolete Dates.</td>
</tr>
<tr>
<td>Item Group(s)</td>
<td>If this field has been enabled, it displays the item groups of which the current item is a member.</td>
</tr>
<tr>
<td>Shippable Item</td>
<td>These fields are associated with Agile PG&amp;C. For more information about Product Governance &amp; Compliance (PG&amp;C), see the Agile Product Governance and Compliance User Guide.</td>
</tr>
<tr>
<td>Exclude from Rollup</td>
<td></td>
</tr>
<tr>
<td>Compliance Calculated Date</td>
<td></td>
</tr>
<tr>
<td>Part Family</td>
<td>See also Agile Administrator Guide and Getting Started with Agile PLM.</td>
</tr>
<tr>
<td>Field</td>
<td>Definition</td>
</tr>
<tr>
<td>---------------</td>
<td>------------</td>
</tr>
<tr>
<td>Mass</td>
<td></td>
</tr>
<tr>
<td>Overall Compliance</td>
<td></td>
</tr>
</tbody>
</table>

### Changes Tab

The item object Changes tab displays a list of changes related to the item you are viewing, displayed in two tables. The information on this tab is filled in automatically. You can sort the tables by clicking the heading of the column by which you want to sort. For example, to sort by description, click the Description column heading.

**Note** If you do not have Discovery privilege for a change, it does not appear on the Changes tab. You may see a message telling you how many changes are not displayed. For more information, see Details about Discovery and Read Privileges on page 197. If you have questions about your Discovery or Read privileges, see the Agile administrator.

The upper table, Pending Changes, shows pending changes, including changes on hold. The lower table, Change History, shows released and canceled changes.

The Site column displays the site entered on the Affected Items tab of the change. If more than one site is listed on the Affected Items tab, then the change is listed once for each site.

**Note** Although its name is similar, the History tab shows actions made against an item, while the Change History table on the Changes tab lists released and canceled changes for the item.

**To open a change listed on the Changes tab:**

- In Web Client, click the change number.
- In Java Client, double-click the change row.

The change opens with the Cover Page tab on top.

### BOM Tab

The BOM tab lists all the items on an item’s bill of material (BOM). For details on the BOM tab, see Bills of Material on page 73.

**Note** If you do not have Discovery privilege for an item, it does not appear on the BOM tab. You may see a message telling you how many items are not displayed. For more information, see Details about Discovery and Read Privileges on page 197.

If there are site-specific items on the BOM, common items and site-specific items are grouped
The common section of the BOM lists items that are associated with all the sites where the parent item is associated. The common section of a BOM can be modified through a revision change only.

The site section of the BOM lists items specific to the selected site. The site section of the BOM can be modified through a revision change or an SCO (site change order). For a site to be listed in a section of the BOM, the site must also be associated with the parent item.

Note: By assigning a color to each site, you can color code the site section of the BOM tab.

If you want to view all the components for all sites, select ALL from the Site drop-down list.

To open an item listed on the BOM tab:
- In Web Client, click the item number. The item opens with the Title Block tab on top.
- In Java Client, double-click the item row. The item opens with the Title Block tab on top.
  Or, right-click the item row, choose Open, then choose a tab. The item opens with the selected tab on top.

Creating a Common BOM

You can directly edit the item object BOM table when an item is initially created and before it is added to the Affected Items table of a change.

For detailed instructions about adding items to the BOM tab, see:
- Web Client, Adding Items to the BOM table of a Preliminary Item on page 86
- Java Client, Adding Items to the BOM table of a Preliminary Item on page 92

When you add an item to the common portion of the BOM table, the Sites column is blank to indicate that the item is associated with all the sites assigned to the BOM.

Creating a Site-Specific BOM

You can directly edit the item object BOM table when an item is initially created and before it is added to the Affected Items table of a change.

Note: If the site for which you want to create a site-specific BOM is not on the Site list, you must associate the item with that site through the item’s Site tab.

For detailed instructions about adding items to the BOM tab, see:
- Web Client, Adding Items to the BOM table of a Preliminary Item on page 86
- Java Client, Adding Items to the BOM table of a Preliminary Item on page 92
When you add an item to a site-specific portion of the BOM table, the Site column is automatically completed with the site selected from the Site list as the associated site.

**Manufacturers Tab**

The Manufacturers tab displays the manufacturer parts used for the item, including site-specific manufacturer parts. The information on the tab is derived from associated manufacturing objects. If your company is using Agile AML features, and you have the appropriate privileges, you can use this tab to construct an approved manufacturers list (AML) for the item.

The Manufacturers tab displays, in a sortable table, information about:

- The manufacturers that produce the part
- The manufacturer parts that they supply, including:
  - Whether the manufacturer part is the preferred or an alternate part
  - Whether they are currently an active manufacturer of that part
  - The manufacturer’s part number corresponding to the part in Agile PLM.
- The manufacturing site to which the manufacturer part applies (manufacturer parts are listed once per applicable site). The AML Split column on the Manufacturers tab allows you to define the percent (%) allocated for the AML for the selected site.

**Note** If you do not have Discovery privilege for a manufacturer, it does not appear on the Manufacturers tab. You may see a message telling you how many manufacturers are not displayed. For more information, see Details about Discovery and Read Privileges on page 197.

**Viewing a Manufacturer Part from the Manufacturers Tab**

To open a manufacturer part from the item object Manufacturers tab:

- In Web Client, click the manufacturer part number.
- In Java Client, double-click the manufacturer part row.
  - Or, right-click the manufacturer part row, choose Open, then choose a tab. The manufacturer part opens with the selected tab on top.

**Sites Tab**

The Sites tab of an item lists all the manufacturing sites that use the item or that have site-specific information that pertains to the item.

To make an item available to site-specific BOMs and AMLs, you must add the appropriate sites to the item’s Sites tab. For example, if you want to enable users at the India site to add site-specific information for a part, add India to the part’s Sites tab. With the necessary privileges, you can add, edit, and remove information on the Sites tab.

For more information about manufacturing sites, including how to work with the Sites tab, see Associating a Site with an Item on page 40.
Prices Tab

The item object Prices tab shows information about the prices associated with the item.

For more information about pricing and the Prices tab, see Getting Started with Agile PLM or the Product Cost Management User Guide.

Quality Tab

The Quality tab of an item (part or document) lists the product service requests (PSRs) that reference the item. PSRs may include non-conformance reports (NCRs) and problem reports (PRs). The Agile administrator may have defined additional PSR types for your company. This tab is filled in automatically. For more information about the Quality tab and PQM features, see the Product Quality Management User Guide.

Compliance Tab

The item object Compliance tab relates to Agile PG&C and lists the compliance declarations associated with the item. For more information, see Agile Product Governance and Compliance User Guide.

Note: The Compliance tab is visible in Web Client only. Agile PG&C is a Web Client-based solution.

Suppliers Tab

This item object Suppliers tab relates to Agile PG&C and lets you associate suppliers with the item. For more information, see Agile Product Governance and Compliance User Guide.

Note: The Supplier tab is visible in Web Client only. Agile PG&C is a Web Client-based solution.

Relationships Tab

The item object Relationships tab allows you to create relationships between the item object and other business objects, both lifecycle objects and routable objects. You can create dependencies (rules) between the item object and routable objects.

Note: You can create a relationship between two lifecycle objects (for example, two items), however, you cannot add a rule to a relationship between two lifecycle objects. In any rule, at least one of the objects must be a routable object. For more information, see Getting Started with Agile PLM.

The Rule column displays the rule that defines how the lifecycle phase of a related lifecycle object affects the workflow progression of a routable object. In a relationship where both related objects are routable objects, the rule defines how the workflow progression of one routable object affects the workflow progression of the other routable object.
A relationship without a specified rule does not limit or affect the workflow progression or lifecycle status of either related object. You can use non-rule relationships to record objects that are somehow related to the current item object, but do not have any dependencies with the current item object.

For more information about relationships and how to use this tab, see the chapter about working with business objects in *Getting Started with Agile PLM*.

For information about all change object tabs, see Change Objects on page 117.

**Attachments Tab**

All objects have an Attachments tab. On the Attachments tab, you can attach files and URLs to the object by referencing those files and URLs in a file folder object. On the Attachments tab, you can view, copy (get), or print attached files if you have the appropriate privileges.

Individual attached files are stored in file folder objects and can be attached to multiple objects. The files in a file folder object can be drawings or scanned images, documents, non-viewable files, compressed files, and so on.

For detailed information about working with file folder objects and the Attachments tab, see *Getting Started with Agile PLM*.

You cannot make modifications to the Attachments tab of incorporated items. For more information about incorporated items, see Incorporating and Unincorporating Items on page 23.

Attachment tab operations (add, remove, edit) for items are revision-based. Attachments are added to or deleted from a specific ECO-created revision of the item, such as Rev A, Rev B, and so on. ECO-created item revisions have attachment capabilities. MCOs and SCOs are based on a particular item revision, but have no revision of their own, and therefore do not have attachment capabilities. For more information about item revisions and attachments, see Revisions and Attachment Capabilities on page 12.

**Note**  Attachments apply to all manufacturing sites of an item; there are no site-specific attachments.

Common Attachments tab operations in Web Client include:

- View file in AutoVue for Agile – click its filename link. If the attached file is not viewable with AutoVue for Agile, it opens in the native application, if it is installed on your computer.
- Get a local copy of a file – select one or more rows and click the Get button.

Common Attachments tab operations in Java Client include:

- View a file in AutoVue for Agile – select a row in the Attachments table and click the View Files button.
- View a file in its native application – select a row in the Attachments table and click the Open Files button.
- Get a local copy of a file – select a row in the Attachments table and click the Get Files button.
Working with Thumbnails on Item Objects

History Tab

The History tab shows a summary of actions taken against an object, including a description of the action, which user took the action, the date of the action, and other details.

Note If you do not have the appropriate Read privilege for an object, you cannot see the contents of the fields on the History tab. See Details about Discovery and Read Privileges on page 197.

The types of actions recorded for items are:

- Creation of the item
- Attachment actions: view, open, add, delete, get, check in, check out, cancel checkout, incorporate, unincorporate, and field modifications on the Attachments tab.
- Save As
- Send
- Print
- Modification of the subclass or any field of a released item
- Subscription modification and sharing

Field modifications for preliminary items that have not been released are recorded for modifications to the Relationships tab and Attachments tab only; other field modifications to preliminary items are not recorded.

For modifications to released items, the revision information is included in the history table row in the Rev column.

Working with Item Revisions

The Site and Rev fields above the item tabs let you display item information based on manufacturing site and revision.

When you open an item, the Rev field displays the latest released version.

Note When you open the item from the Affected Items tab of a change order, the revision associated with that change order is displayed.

This section includes the following topics

- Viewing a Different Revision on page 11
- Introductory Revisions on page 11
Viewing a Different Revision

To view a different revision:

1. If you want to see a revision that pertains to a specific manufacturing site, select that site from the Site drop-down list.

   **Note** When you select ALL from the Site drop-down list, the default value in the Rev list is the latest released change for that item.

2. Select a revision from the Rev drop-down list above the tabs. When you select a revision, the corresponding effectivity date is displayed.

   When you select a different revision, all the tabs display information from the selected revision. For example, if the BOM tab is displayed, and you switch from revision C to revision B, the other tabs also show revision B.

   **Note** Not all tabs are revision-specific; for example, the Where Used tab and the History tab are not revision-specific. When you view tabs that are not revision-specific, the Rev drop-down list is disabled.

Introductory Revisions

The initial revision of an item—that is, the revision of a newly created, unreleased item—is labeled Introductory. Introductory revisions have no changes against them, and they are not assigned a revision letter. When an item is in the Introductory stage, it is not under change control and can therefore be modified directly.

Introductory revisions are treated the same as released revisions; they are considered the base revision by Where Used and Object searches, the Where Used tab, changes, and the Save As feature.

Introductory appears in the Rev drop-down list at the bottom of the list because it is the earliest revision. It is the only revision on the list that is not associated with a change.

See also: How the Revision List Works on page 12

Blank Revisions

You may see revisions in the list that are not Introductory and that do not have an assigned revision letter. These are referred to as blank revisions.

Blank revisions occur when an MCO is released against an item before an ECO releases the item.
That releasing MCO creates a blank revision, as do any subsequent changes that occur before a new ECO revision is created. The Rev list displays the number of the MCO instead of a revision letter. The following is an example of a Rev list that includes a blank revision created by MCO M00001.

(A) C00004
M00001
Introductory

How the Revision List Works

As stated above, a revision labeled Introductory in the Rev list indicates the initial revision of the object, with no pending changes. Once the object is listed on a change, a letter sequence of revisions is started.

For released revisions, the number of the releasing ECO is displayed next to its corresponding revision. (Remember, an item can be revised only by an ECO.) For example, for a part, if ECO E54321 resulted in the release of revision C, then revision C in the Rev drop-down list reads

C E54321

A revision number or letter inside parentheses indicates that the revision is pending, not yet released:

(A) C00004

You may see revisions in the list that are not Introductory and that do not have an assigned revision letter. These are referred to as blank revisions.

Blank revisions occur when an MCO is released against an item before an ECO releases the item. That releasing MCO creates a blank revision, as do any subsequent changes that occur before a new ECO revision is created. The Rev list displays the number of the MCO instead of a revision letter:

M00001

MCOs and SCOs are based on item revisions, but neither can create a new revision of a part, and, therefore, neither has attachment capabilities. MCO and SCO modifications, which you can select in the Rev drop-down list, inherit the attachments of the ECO-created revision or the Introductory revision upon which they are based.

The MCO or SCO number is displayed next to the corresponding revision on the Rev drop-down list. For example, if there is a pending MCO M12345 against Rev B of a part, then on the Rev drop-down list, that revision is listed as “(B) M12345.”

Revisions and Attachment Capabilities

Item attachment operations (add, remove, edit) are revision-based. Attachments can be added to or deleted from only an ECO-created revision or an Introductory revision. MCOs and SCOs are based on an item revision, but have no revision of their own, and therefore do not have attachment capabilities. MCO and SCO modifications, which you can select in the Rev drop-down list, inherit the attachments of the ECO-created revision or the Introductory revision upon which they are based.
Note If the ECO-created revision or the Introductory revision is incorporated, you will not be able to add or remove attachments and you will not be able to edit the attachments table. For more information about item incorporation, see Incorporating and Unincorporating Items on page 23.

See also Attachments Tab on page 9. For detailed information about attachments and file folders, see the chapter about working with attachment files in Getting Started with Agile PLM. For information about ECO-redlining attachment files, see Agile Viewer Addendum.

The following tables illustrate attachment capabilities (add, remove, edit) for different entries on the item Rev drop-down list.

### Rev list entry | Attachment capabilities
---|---
(C) ECO-356 | Yes, has attachment capabilities, because it is a pending ECO-created Rev.
B SCO-444 | No attachment capabilities; it is based on Rev B and inherits Rev B’s attachments.
B ECO-233 | Yes, has attachment capabilities, because it is an ECO-created Rev.
A MCO-888 | No attachment capabilities; it is based on Rev A and inherits Rev A’s attachments.
A ECO-222 | Yes, has attachment capabilities, because it is an ECO-created Rev.
INTRODUCTORY | Yes, has attachment capabilities, because it is an introductory revision. Introductory revisions have the same features as an ECO-created revision. See Introductory Revisions on page 11.

### Rev list entry | Attachment capabilities
---|---
(B) MCO-934 | No attachment capabilities; pending MCO based on Rev B and inherits Rev B’s attachments.
B ECO-572 | Yes, has attachment capabilities, because it is an ECO-created Rev.
A SCO-444 | No attachment capabilities; it is based on Rev A and inherits Rev A’s attachments.
A MCO-788 | No attachment capabilities; it is based on Rev A and inherits Rev A’s attachments.
A ECO-333 | Yes, has attachment capabilities, because it is an ECO-created Rev.
MCO-766 | No attachment capabilities; it is based on the Introductory revision and inherits the Introductory revision’s attachments.
INTRODUCTORY | Yes, has attachment capabilities, because it is an introductory revision. Introductory revisions have the same features as an ECO-created revision. See Introductory Revisions on page 11.

### How Rev and Site Lists are Determined

All revisions are shown to all users regardless of their default site or site access. However, when you open an item, the Rev drop-down list is set to the last change for your default site.
An item’s default revision shown is based on your default site. Even if you select a different site from the Site drop-down list, the default revision still reflects what you see from your default site.

**Working with Pending Revisions**

You can create a pending revision of an item. When you create an ECO against an item, the ECO creates a pending revision of that item. Pending revisions let you modify the item under change control, including redline modifying its BOM table and Manufacturers table. You can also create pending revision attachment markups.

A pending revision can be identified by the parentheses around the revision number in the Rev field, for example, (A).

For information about incorporating pending revisions of items, see [Incorporating and Unincorporating Items](#) on page 23.

**Attachments on Pending Revisions**

By default, when a pending revision is created, it inherits the same list of attached files that are attached to the current default revision. If any files are then either added to or removed from the current default revision, those modifications are not reflected on the Attachments tab of the pending revision. For additional information about attachments and item revision levels, see [Getting Started with Agile PLM](#).

See also: [Removing an Item from the Affected Items Tab](#) on page 163.

**Effects of CopyFilesToRev SmartRule**

The CopyFilesToRev (Copy Files to Rev) SmartRule setting determines how pending revision item attachments are created or referenced. The Agile administrator sets the Agile PLM system to either copy, copy with warning, reference, reference with warning or disallow the list of attachments to be copied to a new pending revision.

When you add an item to the Affected Items table of a pending ECO, you create a pending revision of an item. Depending on the Agile PLM Copy Files to Rev SmartRule setting, pending revision attachments are processed as followed:

- **Copy** - For the item’s new pending revision, Agile PLM creates a new file folder and creates a new copy of the attachment file, which is placed in the new file folder.

- **Reference** - Agile PLM uses the existing file folder and creates a new reference to it on the item’s new pending revision Attachments tab.

- **Disallow** - The new item pending revision is created with no attachments.

- **Copy with Warning** - The same as the Copy setting, with the option of choosing no attachments for the new pending revision.

When you add items to the pending ECO, you are presented with a warning dialog that includes a row for each item you are adding.

- **To add the item and to copy the attachments**, check both the Add checkbox and the Attachments checkbox.
To add the item with no attachments, check only the Add checkbox.

Reference with Warning - The same as the Reference setting, with the option of choosing no attachments for the new pending revision.

When you add items to the pending ECO, you are presented with a warning dialog that includes a row for each item you are adding.

• To add the item and to reference the existing attachments, check both the Add checkbox and the Attachments checkbox.
• To add the item with no attachments, check only the Add checkbox.

When this SmartRule is set to Reference or Reference with Warning, if there are multiple versions of any attachment file, only the reference to the latest version is used for the new reference on the pending revision.

For example, if you create an ECO against Part 456, Rev C (thus creating a pending Rev D), all the attachment files that are attached to Rev C are also attached to pending Rev D. (The file and file folder references on the Attachments tab of released Rev C are duplicated on the Attachments tab of pending Rev D.) Any attachment files that are added to the Attachments tab of Rev C, or any other Rev C Attachments tab modifications (for example, modifying the file folder version numbers) after the creation of the ECO are not copied to pending Rev D.

Note Attachment files that are added to the Introductory revision after the object is associated with a change (that will result in released Rev A) will not be copied to subsequent revs. This SmartRule does not affect MCO or SCO revisions because MCOs and SCOs do not create separate new revisions.

Creating a Pending Revision

Writing a pending ECO against an item creates a pending revision of the item. A pending revision can be identified by the parentheses around the revision number in the Rev field, for example, (A).

To create a pending revision:
1. Create the item.
2. Create an ECO.
3. Place the item on the Affected Items tab of the change.
4. Give the affected item a revision number.

Note SCOs are for site-specific changes only; they do not affect common site information, and they do not roll the revision number. SCOs cannot be used to create a pending revision of a newly created item that has never been released.

For information about creating changes, see Changes on page 115.

Modifying Pending Revisions

You modify pending revisions the same way you modify other objects. Because modifying a pending revision could affect a released revision, you must have the appropriate privileges to modify the Title Block, Page Two, and Page Three fields. If you have privileges to modify preliminary
items, you can modify fields on the pending revisions of items. If you have privileges to modify released items only (and you do not have privileges to modify preliminary items), you cannot modify fields on the pending revisions of items. If you have questions about your assigned modify privileges, see the Agile administrator.

See also: Editing a Released Item on page 21.

Creating Agile Items

To create an Agile item, you must have the Create Item privilege.

In Web Client, you can create an item with the Create New > Items command or the Actions > Save As command.

In Java Client, you can create an item with the File > New > Item command, the New Object button, or the Save As command, on the More Actions menu (click the More button at the top of the object window) and on the right-click shortcut menu.

You can also create an item as you add it to the BOM tab of a parent item or the Affected Items tab of a change.

This section contains the following topics:
- Creating Items in Web Client on page 16
- Creating Items in Java Client on page 18
- Creating Items in Web Client on page 16
- Creating an Item Using Save As on page 17
- Creating an Item Using Add on page 19

The initial revision of an item—that is, the revision of a newly created, unreleased item—is labeled Introductory. For more information about Introductory revisions, see Introductory Revisions on page 11.

Once you create an item, that item exists until you delete it. If you create a new item, then decide you do not wish to keep it, be sure to delete the item; otherwise, the new item is still in the database, and the number cannot be reused. See Deleting Agile Objects on page 207.

Creating Items in Web Client

A wizard leads you through the process of creating an item and specifying the BOM, manufacturing sites, manufacturers, and attachments.

To create and complete an item in Web Client:

1. Using the Create New menu button, choose the object class you want to create. For example:
   - Create New > Items > Parts
   - Create New > Items > Documents
2. In the Create New dialog box, use the Type drop-down list to select the type (subclass) of item
you want to create.

3. Assign a number to the item. To do so, either accept the number that appears, click the AutoNumber button (123) to use the next autonumber, or type a number.

   When you click the AutoNumber button (123) to enter the item number, you might see a list of autonumber choices. The autonumber format and sequence are determined by the Agile administrator. The Agile administrator also determines whether using autonumbers is required or optional.

4. Complete any required fields.

5. Click Save.

   The item is displayed in the right content pane with the Title Page tab in edit mode.

6. Edit the title page fields as desired, and click Save.

   You do not enter information on the Changes, Where Used, or History tabs. Those tabs are completed automatically.

See also: Creating Items in Java Client on page 18, Creating an Item Using Save As on page 17, Creating an Item Using Add on page 19.

**Creating an Item Using Save As**

Using the Save As feature is a quick way to create an item that is similar to an existing item.

For site-specific items, the original item’s manufacturing sites are copied to the new item, as are all components and manufacturer parts on the common and site-specific portions of the BOM and Manufacturers tabs. (Sites for which you do not have privileges are not copied.) If you select a specific site in the Site drop-down list and Save As, only the selected site’s data will be copied to the newly created item.

**Caution** In general, you should not use Save As to create an object in a different class or subclass (type) from the original object. The different classes or subclasses may not have the same tabs or defined fields, and you may lose access to some data in the newly created object.

For example, parts generally have a BOM tab. By default, documents do not. When you save a part as a document, you cannot view the part’s BOM in the resulting document unless the Agile administrator has configured your system to permit documents to have BOMs.

**Note** If you do not have Discovery privilege for any of the items on the BOM list of the existing item, you can use Save As to create a new item, which includes the BOM list items that you cannot discover. You also will not be able to discover those BOM list items on the newly created item.

If the Agile administrator has set the appropriate attributes, fields in the optional Page Two and Page Three sections are copied to the new item. For information about the behavior of Page Two and Page Three fields in your Agile PLM system, see the Agile administrator.

If the item has one or more attachments, the attachments for the new item are created using the method specified by the Agile administrator in Agile system preferences:
Create new copy of file(s) — Agile creates a new file folder and creates a new copy of the attachment file, which is placed in the new file folder.

Reference existing file(s) — Agile uses the existing file folder and creates a new reference to it on the new item’s Attachments tab.

Do not copy file(s) — The new item is created with no attachments.

Prompt — You are prompted to select one of the above three methods. If the item has no attachments, no prompt appears.

Save As copies data from a field in the existing object to the same field in the new object. If a field or list value in the existing object is not available in the new object, then that field or list value is not copied to the new object.

For items using sites:

- The new item has only the default site associated with it (that is, the site selected in the Sites drop-down list when you performed the Save As action), even if the original item had multiple sites. If the new item needs additional sites, you must add sites to the new item manually.

- If you select All from the Site drop-down list of the original item and then perform a Save As action, all the sites from the original item are copied to the new item.

- If the original item does not have a default site, after the Save As action, the resulting new item also does not have a default site.

In Java Client, you can create an item using the File | Save As command or the Save As command on the More Actions menu (click the More button at the top of the object window) and on the right-click shortcut menu.

In Web Client, you can create an item using the Actions | Save As command.

For more information about creating items or other objects using Save As, see Getting Started with Agile PLM.

See also: Creating Items in Java Client on page 18, Creating Items in Web Client on page 16, Creating an Item Using Add on page 19.

Creating Items in Java Client

The process for creating new objects involves two main steps: creating an empty object, then filling in the object tabs with information specific to the object.

To create and complete an item in Java Client:

1. Using the File menu, choose the object class you want to create. For example:
   - File > New > Items > Parts
   - File > New > Items > Documents

2. In the New dialog box, use the Type drop-down list to select the type (subclass) of item you want to create.

3. Assign a number to the item. To do so, either accept the number that appears, click the Autonumber button to use the next autonumber, or type a number.
If more than one autonumber format can be used, the available autonumber formats appear in a list when you click the Autonumber button. Select the autonumber format you want.

The autonumber format and sequence are determined by the Agile administrator. The Agile administrator also determines whether using autonumbers is required or optional.

4. Complete any required fields.
5. Click OK.
   The new item appears with the Title Block tab showing.
6. Fill in information on the item tabs, as desired.
   You do not enter information on the Changes, Where Used, or History tabs. Those tabs are completed automatically.

See also: Creating Items in Web Client on page 16, Creating an Item Using Save As on page 17, Creating an Item Using Add on page 19.

Creating an Item Using Add

When you click the Add button on certain tabs of items and changes, such as the Affected Items or BOM tab, you can create a new item to add to the tab.

To add an item to the BOM table by creating a new item, see:

- Web Client, Create New to Add to the BOM Table on page 88.
- Java Client, Adding Nonexistent Items to the BOM Table on page 97.

See also: Creating Items in Java Client on page 18, Creating Items in Web Client on page 16, Creating an Item Using Save As on page 17.

Creating a Pending Revision

Writing a pending ECO against an item creates a pending revision of the item. A pending revision can be identified by the parentheses around the revision number in the Rev field, for example, (A).

To create a pending revision:
1. Create the item.
2. Create an ECO.
3. Place the item on the Affected Items tab of the change.
4. Give the affected item a revision number.

Note  
SCOs are for site-specific changes only; they do not affect common site information, and they do not roll the revision number. SCOs cannot be used to create a pending revision of a newly created item that has never been released.

For information about creating changes, see Changes on page 115.
Modifying Pending Revisions

You modify pending revisions the same way you modify other objects. Because modifying a pending revision could affect a released revision, you must have the appropriate privileges to modify the Title Block, Page Two, and Page Three fields. If you have privileges to modify preliminary items, you can modify fields on the pending revisions of items. If you have privileges to modify released items only (and you do not have privileges to modify preliminary items), you cannot modify fields on the pending revisions of items. If you have questions about your assigned modify privileges, see the Agile administrator.

See also: Editing a Released Item on page 21.

Editing Agile Items

You can edit preliminary and released items in different ways. Preliminary items can be edited directly, but released items must be edited with a change order.

This section contains the following topics:

- Editing an Unreleased Item on page 20
- Editing a Released Item on page 21
- Changing an Item’s Subclass on page 22

Editing an Unreleased Item

You can edit numbers and much of the other information about an item Title Block tab if the item has not been released. For additional information about editing an item that has not been released, see Working with Pending Revisions on page 14 and About Modifying the BOM Table on page 84.

**Note** When you renumber a part that is a child of another item, the connection between the parent and child is maintained. If the parent item has been released, you will see a warning asking you if you want to continue.

Whether the item is released or unreleased, you cannot edit item tabs that are completed automatically, such as the Where Used tab, the Changes tab and the History tab.

**For example, to renumber an unreleased item using Web Client:**

1. Open the item.
2. Click **Edit**.
3. Select the number in the Number field, and type a new number.
   
   Or click the 123 button to assign a new autonumber automatically.
4. When your modifications are complete, click **Save** to keep them, or click **Cancel** to close the Edit page without saving the changes.

Other fields can be modified in a similar way. For more information about editing object fields, see the chapter "Navigating in Agile Web Client" in *Getting Started with Agile PLM*. 
For example, to renumber an unreleased item using Java Client:

1. Open the item.
2. Select the number in the Number field, and type a new number.
   
   Or click to assign a new autonumber automatically.
3. When your modifications are complete, click Save to keep them, or click Close to close the object window without saving the changes.

Other fields can be modified in a similar way.

Other fields can be modified in a similar way. For more information about editing object fields, see the chapter "Navigating in Agile Java Client" in Getting Started with Agile PLM.

Editing a Released Item

If you have sufficient privileges, you can edit most fields on the item object Title Block tab even after an item is released, including:

- The Number field.
  
  See Editing an Unreleased Item on page 20.
- The Description field.
  
  See Editing a Released Item’s Description Field (on page 21).

For more information about editing a released item, see Redlining the BOM of a Released Item on page 108.

With sufficient privileges, you can also add or modify attachments (on the Attachments tab) after an item is released.

Note If you have questions about your privileges, ask the Agile administrator.

Editing a Released Item’s Description Field

Note The Agile administrator may have configured Agile PLM so that a released item’s Description field can be changed only by using the Affected Items tab of a change order.

If you have sufficient privileges, you can edit the Description field of the latest released revision of an item or of a pending ECO revision.

- When you edit a released item’s Description field, the new description appears only on the latest released revision of the item.
- If the Description field has been modified several times, only the most recent modification appears in the item’s Description field.
- If the item has pending revisions, a warning message appears and allows you to choose whether or not to copy the new description to the pending revisions as well.
Note

If the change order **Affected Items** tab of the pending revision displays both the Old Item Description (latest released revision) and the New Item Description (pending revision), the Old Item Description field on the Affected Items table will be updated to reflect the actual item description of the latest released revision. The Affected Items table New Item Description (pending revision) remains unchanged.

To modify the **Description** field of a pending revision, use one or both of the following methods. The methods available on your Agile system depend upon how the Agile administrator has configured the Agile system and which privileges you have.

- Open the item, and then select the pending revision in the **Revision** drop-down list. Then edit the **Description** field and save your edits. (Requires the appropriate privileges.)
- Use the **Affected Items** tab of the change order. Select the item’s row on the Affected Items table and click **Edit**. Edit the (new) item description field, and save your edits. (Requires the appropriate privileges.)

**Description** field modifications are recorded on the item’s **History** tab after the item is released.

**Important**

The item **Description** field cannot be modified through an MCO because an MCO does not create a new item revision. The MCO uses the **Description** field information from the ECO revision or Introductory revision on which it is based.

---

**Changing an Item’s Subclass**

If your administrator has created additional subclasses, and you have the appropriate privileges, you can change the subclass of an item. For example, you can change the subclass of a particular document from Specification to Data Sheet.

For information about how to change the subclass of an item, see [Changing an Item’s Subclass](#) on page 200.

**Releasing an Agile Item to Production**

Items are not released to production directly. Rather, a change (an ECO) is created against the item, and that change is released through the change control process, described in *Getting Started with Agile PLM*. For more information about ECOs and other Agile changes, see [Changes](#) on page 115.

To release an item to production:

1. Follow the steps in [Creating Changes](#) on page 132 to create an ECO that releases the item.
2. Route the ECO as described in [Changes](#) on page 115.
3. When the change has progressed through the required statuses, it is ready for release. Usually, this includes at least one Review status type, when users sign off the change.
   - If AutoPromote is set, the change is released automatically when the change has been signed off and all required values to enable release have been filled in.
   - If AutoPromote is not set, click the **Next Status** button (¶ in Java Client) to release the change.
Note If you have the appropriate privileges, you can use the Workflow tab to move the change directly to the Released status type in the workflow. When the change is released, the item is also released.

For more information about working with workflows, see Getting Started with Agile PLM.

Unreleasing an Item

If you have sufficient privileges, and the workflow allows it, you can unrelease a released item.

Caution! Do not unrelease items if you use Agile ChangeCAST or Agile Content Service (ACS).

To unrelease an item:

1. Open the item.
2. Click the Changes tab.
3. Open the change that released the item.
   (If there are subsequent changes to the item, you must first unrelease those changes in the reverse order from which they were made.)
4. On the Workflow tab, click the Pending status type in the status chart.

Note Switching a change to any status in the workflow that occurs before the first Released status type unreleases the change and, therefore, unreleases the item. If there is no such status displayed as an available status to select in the change status flowchart (Pending, Submit, Review, or Hold type), either you do not have the necessary privileges to select that status to unrelease the change, or the workflow assigned to the change does not allow unreleasing the change. (For information about how to view the sequential list of statuses in a workflow, see the chapter on workflows in Getting Started with Agile PLM.)

The Change Status dialog opens.

5. Fill in the Notify field.
6. Enter any comments in the Comments field.
7. Click Finish (Web Client) or OK (Java Client).

Incorporating and Unincorporating Items

If you have sufficient privileges, you can incorporate an item. When you incorporate an item, you lock its attachments so no unauthorized changes can be made. If you incorporate an item with no attachments, then none can be added to it.

This section includes the following topics:
- Overview of File Folders and Item Attachments on page 24
- Overview of Incorporation on page 24
- Pre-incorporating an Item on page 25
Overview of File Folders and Item Attachments

Note  For detailed information about attachments and file folder objects, see Getting Started with Agile PLM, Working with Attachments and Working with File Folders. See also Attachments Tab and Revisions and Attachment Capabilities on page 12.

All objects have an Attachments tab. On the Attachments tab, you can attach files and URLs to the item by referencing those files and URLs in a file folder object. Individual attached files are stored in file folder objects and can be attached to multiple objects. On an item’s Attachments tab, the file folder Version is listed in the attachments table. Each time you check out and check in an attachment from the item’s Attachments tab, the file folder Version is advanced by one number. If you have the appropriate privileges, you can also edit the attachments table and select a specific Version of the file folder.

Because multiple objects, including items, can reference the same file folder, it is possible for different items to reference different Versions of the same file folder. Item 123 can reference Version 3 of file folder FF444, and Item 987 can reference Version 6 of file folder FF444.

Overview of Incorporation

When you incorporate an item revision, you lock the item’s attachments to the specific file folder Version currently displayed on the item’s Attachments tab. Incorporation is an action that applies to item objects only. Non-item business objects, including file folder objects, cannot be incorporated.

Note  Only ECO-created revisions and Introductory revisions can be incorporated. For more information about attachments and item revisions, see Revisions and Attachment Capabilities on page 12.

For example, if the item’s attachment is file SPEC.doc, and it is stored in FF004, and the file folder Version on the item’s Attachments tab is Version 3, when you incorporate the item, the item’s attachments are now locked to Version 3 of FF004. In a similar manner, if the Version selected on the item’s Attachments tab is Latest-4, when you incorporate the item revision, the file folder Version reverts to Version 4, and is now locked on that Version for the incorporated item. If the item has multiple attachments in multiple file folders, all the file folder Versions are locked when you incorporate.

Important  Regardless of how many Versions a file folder has, once you incorporate an item revision, it always refers to the locked file folder Version.

Due to checkout and checkin actions that can be performed from the Attachments tabs of any objects that reference the same file folder, as well as checkout and checkin actions on the Files tab of the file folder object itself, it is possible for the file folder to be modified and additional file folder Versions to be created.

Once an item is incorporated, you can no longer check out its attachments from the item’s Attachments tab. Copies can be taken of attachments for the purpose of viewing and working with...
them, but the attachments cannot be amended on that revision of the item without unincorporating. (Amending an item’s attachments includes adding or deleting attachments and changing the file folder Version number shown in the attachments table.) Likewise, you cannot incorporate an item that has any files checked out.

Before you can add or edit the attachment files of an incorporated item or the file folder Versions referenced by an incorporated item, the item must first be unincorporated. Once the changes are made, the item can be incorporated again. Appropriate privileges are required to either incorporate or unincorporate items.

The Incorporated/Unincorporated status refers to all the attachments to the item for a specific revision. When you incorporate an item, only that revision with its attachments is incorporated. For example, if you have three unincorporated revisions of an item (revisions C, D, and E), when you incorporate revision D, revisions C and E remain unincorporated.

For information about working with attachments and file folder objects, see Getting Started with Agile PLM.

See also: Incorporating and Unincorporating Items on page 23.

**Pre-incorporating an Item**

An item with a pending change can be incorporated before it is released, in which case it is referred to as “pre-incorporated.” Pre-incorporating an item provides a way to mark a revision as tentatively complete, and to “freeze” attachments from checkout. (It is still possible to “get” a copy of an attachment, but the files attached to an incorporated item revision cannot be modified.)

Pre-incorporation is performed the same way as incorporation, except that it is performed on an unreleased item. For instructions, see Incorporating an Item on page 25.

See also: Incorporating and Unincorporating Items on page 23.

**Incorporating an Item**

You cannot incorporate an item that has any attachment files checked out.

**To incorporate an item using Web Client:**

1. Open the item.
2. Choose Actions->Incorporate.

**To incorporate an item using Java Client:**

1. Open the item.
2. Click the More button at the top of the object window to display the More Actions menu and choose Incorporate.

   Or, right-click in the window, and choose Incorporate from the shortcut menu.

If an item is incorporated before it is released, the incorporation process is performed the same way, but it is known as pre-incorporation. See Pre-incorporating an Item on page 25.

See also: Incorporating and Unincorporating Items on page 23.
Unincorporating an Item

When you unincorporate an item, just that particular revision is unincorporated.

**To unincorporate an item using Web Client:**
1. Open the item.
2. Choose Actions > Unincorporate.

**To unincorporate an item using Java Client:**
1. Open the item.
2. Click the More button at the top of the object window to display the More Actions menu and choose Unincorporate.
   Or, right-click in the window, and choose Unincorporate from the shortcut menu.

See also: Incorporating and Unincorporating Items on page 23.

Attribute History Report

In Web Client, you can use the Actions menu to execute the Item Attribute History report for the item you are viewing. For more information, see also:

- Item Attribute History Report on page 183.
- Compare Item Attributes Report on page 176.
- What are Change-Controlled Attributes? on page 226

**To execute the Item Attribute History report:**
1. In the Actions menu, choose Attribute History Report. The Run Item Attribute History Report wizard appears.
2. In the Select Layout and Configuration wizard step, select the layout you want from the drop-down list, or use the Edit button to edit an existing layout or use the Create button to create a new layout.
   For more detailed information about layouts, see the Working with Agile Reports chapter in Getting Started with Agile PLM.
3. Select a report output format: PDF, WORD, EXCEL, or HTML.
4. Click Next. The Select Item wizard step appears.
5. The currently viewed item is pre-selected for you.
   If you want, you can remove the pre-selected item and choose a different item Type in the text field or click to execute a quick search.
6. In the Change Type field, use the drop-down list to select the changes you want to include in the report: Changer Orders, Manufacturing Orders, or Both.
7. Click Finish to run and display the report.
You are prompted to download the report in the format you selected.

**Where Used Tab**

The item object *Where Used* tab lists all the assemblies that use the item. The information on this tab is filled in automatically.

The *Where Used* tab includes two tables:

- **Where Used** — displays the latest released revision of the assemblies where the item is used. If the assembly has never been released, the Introductory revision is displayed. For more information, see *Introductory Revisions* on page 11.

- **Pending Change Where Used** — displays the pending revisions of the assemblies where the item is used, including the associated change order number.

**To view or hide the Pending Where Used table in Web Client:**

On the Web Client *Where Used* tab, click the sub-tab you wish to view:

- Pending Changes Where Used
- Where Used

**To view an item from the Where Used tab using Web Client:**

Click the item number.

**To view or hide the Pending Change Where Used table in Java Client:**

Use the *View* drop-down list to select either *Show Pending* or *Hide Pending*.

**Note** When you first view the *Where Used* tab, the *Pending Change Where Used* table is hidden by default.

**To view an item from the Where Used tab using Java Client:**

Double-click the item’s row.

**Note** If you do not have Discovery privilege for an item, it does not appear on the *Where Used* tab. You may see a message telling you how many items are not displayed. For more information, see *Details about Discovery and Read Privileges* on page 197.

For information about site information displayed in the Where Used tables, see *Sites and the Where Used Tab* on page 27.

**Sites and the Where Used Tab**

The item object *Where Used* table displays all the assemblies where the item is used. Assemblies can be listed multiple times, once per site. The Sites column in the Where Used table shows common (blank) and site-specific portions of the BOM that include the item.

For more information about the where used tables, see *Where Used Tab* on page 27.
Deleting Items

For information about deleting items, see Deleting Agile Objects on page 207.

Printing Item Tabs

You can print object tabs and other data from your Agile PLM system. You can print the current tab or all tabs. Attachments are printed from their native applications or the AutoVue for Agile viewer.

In Web Client, with the object open, choose Actions > Print.

In Java Client, with the object open, use the Print button 📄.

For additional information about printing objects, see Getting Started with Agile PLM.
Chapter 2
Sites and Distributed Manufacturing

This chapter includes the following:

- What is Agile Distributed Manufacturing?..........................................................29
- What Are Sites?........................................................................................................31
- How Sites Can Be Used.........................................................................................32
- How Sites Work.......................................................................................................33
- Where Sites Are Documented...............................................................................35
- Site Objects............................................................................................................35
- Creating Sites.........................................................................................................39
- Associating a Site with an Item.............................................................................40
- Deleting Site Objects.............................................................................................43
- Editing Sites............................................................................................................43
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What is Agile Distributed Manufacturing?

Note  For information about implementing and configuring Agile multi-site manufacturing, see Administrator Guide.

When the Agile administrator enables the Agile PLM Sites license, the Agile Site object is available and Agile PLM multi-site manufacturing functions become available. Agile multi-site manufacturing capabilities are used to assist a company that builds its products in multiple locations (distributed manufacturing). Before taking this step, you must determine and plan how Agile PLM multi-site manufacturing will be integrated with your ERP system.

Warning  Agile PLM multi-site manufacturing functionality is built differently than ERP sites or organizations. Agile Site objects and ERP sites or organizations are similar, but they are not identical. You should work with an Oracle Consulting - Agile practice representative to plan your Agile PLM to ERP integration before you enable the Agile Sites license. The type of information that you want to track in Agile PLM and how you choose record that information in Agile PLM may depend on how product information is stored in your ERP system.

Agile multi-site manufacturing helps a company that builds its products in multiple locations to do so by enabling parts and documents in those locations that are specific to the manufacturing process. In Agile PLM, revisions are global item attributes. If a part is used in two manufacturing sites, it must share the revision level, although the effectivity dates and disposition settings can be different.

The Agile multi-site manufacturing features allow you to annotate product data with three types of site relationships:

- Item object-to-Site relationship
An item can be associated with one or more sites by adding the site object to the sites table on the item Sites tab. Item-site relationships are similar, but not identical to ERP item-site relationships. You can see if an Agile part is enabled in any sites by viewing its Sites tab.

- Parts that are not released in any site have only global item effectivity dates and dispositions.
- Parts released in sites can have both site-specific item effectivity dates and dispositions and global item effectivity dates and dispositions.

**BOM row-to-Site relationship**

BOM row-site relationships are unique to Agile PLM. A child part can relate to its parent with no site relationship or through one or more specific sites. Each BOM row has either no site relationship or one site relationship. Use multiple rows, one for each site, to represent more than one site relationship for the same child part.

- A child part that reports to its parent without a specific BOM row-site relationship is considered a common part, that is, a part common to all manufacturing sites.
- A child part that reports to its parent with a BOM row-site relationship is a site-specific part, that is, a part that is specific to the related manufacturing site.

**AML table row-to-Site relationship**

On a part's Manufacturers tab, you can specify site-specific AMLs (Approved Manufacturer List). Rows on the part manufacturer table can be common (specify no site) or a site-specific (associated with a site listed on the part's Sites tab). BOM row-site relationships and AML row-site relationships are independent of one another.

- A manufacturer part without a specific AML row-to-site relationship is a common manufacturer part and can be used at any manufacturing site.
- A manufacturer part with an AML row-to-site relationship is a site-specific manufacturer part, which allows the manufacturer part to be used at the specified manufacturing site.

Other important Agile PLM sites and ERP sites differences to keep in mind:

- In many ERP systems, a part can appear in different sites and have independent revisions. Agile PLM considers the revision to be a global attribute of the part; therefore, site-based revisions are not supported in Agile PLM. To accommodate this need, simply prefix or suffix the part number with a unique string, for example SJC-P1000 and NYC-P100. These are unique parts which have global revision, but because these parts aren't used in other sites their revisions appear to be site-specific.

- The item-site relationship and the BOM row-site relationship are independent of one another in that you can add a part to a BOM as a site-specific BOM row without first adding the site to the part. Unlike typical ERP systems, Agile does not require that a part must first be released in a site before it can be added to a site-specific BOM row.

- When adding a row to a BOM where the parent has sites that are not on the child, Agile PLM prompts the user to add the sites to the child. This occurs only on the initial add of the BOM row - either in authoring mode (direct editing of a part) or in redlining mode (modifying a part through change redline). The user can choose only to Copy the sites onto the child in order to add the row to the BOM; choosing Close will not add the BOM row. If additional sites are subsequently added to the parent, the newly added sites are not automatically copied to the child. If sites are removed from the child, no check is made on whether there is inconsistency between sites on the parent and the child.
The SmartRule Child Released First is enforced by the Release Audit when a part is released. When a parent part is released, this rule checks the BOM components for site association and whether the BOM components are also released. The Release Audit verifies whether or not the item has been released by a Change or Manufacturer Change after a site was added. In order to correctly pass this SmartRule, the item must be released after adding a site.

What Are Sites?

In Agile PLM, site objects represent manufacturing sites. Companies that practice distributed manufacturing use several different manufacturing sites for their products. For example, Widget Corporation manufactures its products at the corporate location in Austin, Texas, but also at manufacturing plants in Taiwan, Singapore, Mexico City, and Milpitas, California.

Site objects ensure that each ERP has only the relevant information for its production needs. For example, companies can manage what is sent to each internal ERP site or contractor in a Make vs. Buy site association.

Site objects help ease the production transfer from one manufacturing site to another. For example, the Widget Corporation can transfer an entire product from their Taiwan prototype site to their Mexico City production site by adding the production site association to all the parts in the Taiwan BOM that are not in the Mexico City BOM, then send the BOM to Mexico City through an engineering change order (ECO) or a site change order (SCO).

Site objects also help to formalize the site effectivity process by allowing a user to create a proposed effectivity date change (SCO) against a part revision. For example, if a site production date has to be changed to a later date, an SCO against the part provides a simple record of approvals and reasons for changing the effective date.

The following diagram illustrates how sites can be used in Agile PLM. The three sites in this diagram vary in ERP system, effectivity date, and manufacturer. Also, Site 3 has added site-specific build instructions.
How Sites Can Be Used

You can use sites to record and manage site-specific AMLs, BOMs, and effectivity dates.

This section includes the topics:
- Different AMLs at Each Site on page 32.
- Different BOMs at Each Site on page 32.
- Different Effectivity Dates and Dispositions at Each Site on page 33.

Different AMLs at Each Site

Often, different sites use different manufacturers and manufacturer parts to build the same products. Reasons for the differences could be cost (for example, it may be more cost-effective for a site to use a nearby manufacturer) or status of a manufacturer, to name two examples. The AML for an assembly can include different manufacturer parts for the various manufacturing sites.

See also: How Sites Work on page 33.

Different BOMs at Each Site

The BOM of an assembly can include items that pertain only to specific sites. The common BOM
lists all items that make up the core assembly, and that BOM is the same for all sites; but the appropriate users assigned to each manufacturing site can add site-specific items to the BOM (thus creating a site-specific portion of the BOM). Often, these additional items are documents, such as assembly instructions specific to how something is built at a site.

See also: How Sites Work on page 33.

**Different Effectivity Dates and Dispositions at Each Site**

Items may have different effectivity dates and dispositions at each site. This enables, for example, the Austin site to begin using revision B of an item while Singapore continues to use revision A until stock has run out.

Effectivity dates and dispositions are specified on the **Affected Items** tab of an ECO or an SCO. If you want to create a new revision when you assign the new effectivity date or disposition, use an ECO. To assign site-specific effectivity dates and dispositions without incrementing the revision, use an SCO.

See also: How Sites Work on page 33.

**How Sites Work**

Site objects, similar to manufacturer objects, hold information about each site. Users with appropriate privileges can create additional sites.

This section includes the topics:

- Site Information on BOMs and AMLs on page 33.
- Sites Tab of Items on page 33.
- Changes and Sites on page 34.
- Controlling Access to Sites on page 34.
- Common BOM/AML Sections on page 34.

**Site Information on BOMs and AMLs**

When you view an item’s BOM or AML (**Manufacturers** tab), you can choose to view it for all sites or for a specific site. When you view the BOM or AML for a specific site, the common BOM or AML is included in the list.

See also: How Sites Work on page 33, Viewing BOMs by Site on page 79, Viewing AML Information by Site on page 63.

**Sites Tab of Items**

Each item includes a **Sites** tab. The **Sites** tab lists the sites where that item can be used. If a site is not listed on an item’s **Sites** tab, then that item cannot be included in the portion of a BOM specific to that site. If all the sites of the parent BOM are not listed on an item’s **Sites** tab, then that item cannot be included in the common portion of a BOM. For a detailed explanation, see Common BOM/AML.
Sections on page 34.

See also: How Sites Work on page 33, How Sites Can Be Used on page 32.

Changes and Sites

Changes can affect all sites of an item or a specific site. The Affected Items tab lets you select sites to affect as you add affected items. Use site change orders (SCOs) to create site-specific changes to an item without changing the revision.

See also: How Sites Work on page 33, Changes and Manufacturing Sites on page 129, Site Change Orders on page 131.

Controlling Access to Sites

The use of sites is controlled by:

- Your organization's licenses
- Your assigned roles and privileges
- Your assigned Sites property in your user profile
- Your assigned Default Site property in your user profile determines which site you see by default

You can create as many sites as you want.

Your organization may have implemented sites in such a way that users can access only the information pertaining to certain sites.

Your user profile Sites list controls which site objects you can discover in the Agile database and which item site-related rows (BOM tab, Manufacturers tab) you can discover. The ability to read site object attributes is controlled by your Read privileges.

Users with Administrator privilege have the ability to assign all sites when modifying a user's User Profile attributes. However, when searching for sites in Web Client or Java Client, the Administrator user can discover only the sites listed in the Sites list of his own User Profile.

See also: How Sites Can Be Used on page 32, How Sites Work on page 33.

Common BOM/AML Sections

The common section of the BOM distinguishes information that is shared between all the sites listed on the Sites tab of the item. All the parts in the common section of the BOM of an assembly must have listed on their Sites tabs all the sites that are listed on the Sites tab of the assembly. That is, they have those sites in common.

For example, if part 300 is to appear on the Milpitas-specific portion of the BOM of assembly 234, then part 300 and assembly 234 must both have the Milpitas site listed on their Sites tabs. If assembly 234 has three sites (Milpitas, India, and San Jose) on its Sites tab, for part 300 to appear on the common portion of the BOM of assembly 234, part 300 must also have at least those three sites (Milpitas, India, and San Jose) included on its Sites tab. That is, they must have those sites in common. (Part 300's Sites tab may also include additional sites that do not relate to assembly 234.)
A SmartRule (Items Released First) controls whether Agile checks an item’s BOM components for the appropriate site association at release. Compliance with the SmartRule is checked when an ECO, SCO, or MCO releases the assembly. You can also use the change Audit Release feature to check for compliance before release.

See also: Creating a Common BOM on page 6, Creating a Site-Specific BOM on page 6.

Where Sites Are Documented

You can find information about sites in the following sections:

<table>
<thead>
<tr>
<th>Topic</th>
<th>Section or chapter</th>
</tr>
</thead>
<tbody>
<tr>
<td>Site objects</td>
<td>The rest of this chapter</td>
</tr>
<tr>
<td>Sites tab of items</td>
<td>This chapter and Chapter 1, Items on page 1</td>
</tr>
<tr>
<td>Viewing site-specific information</td>
<td>The following chapters:</td>
</tr>
<tr>
<td></td>
<td>Chapter 1, Items on page 1</td>
</tr>
<tr>
<td></td>
<td>Chapter 4, Bills of Material on page 73</td>
</tr>
<tr>
<td></td>
<td>Chapter 6, Affected Items of Changes on page 137</td>
</tr>
<tr>
<td></td>
<td>Chapter 3, Manufacturing Objects on page 45</td>
</tr>
<tr>
<td>Site-specific BOMs</td>
<td>Chapter 4, Bills of Material on page 73</td>
</tr>
<tr>
<td>Site-specific AMLs</td>
<td>Chapter 3, Manufacturing Objects on page 45</td>
</tr>
<tr>
<td>SCOs</td>
<td>Chapter 5, Changes on page 115, and Chapter 6, Affected Items of Changes on page 137</td>
</tr>
<tr>
<td>Effects of changes on sites</td>
<td>Chapter 5, Changes on page 115, and Chapter 6, Affected Items of Changes on page 137</td>
</tr>
<tr>
<td>Redlining site-specific information</td>
<td>Chapter 6, Affected Items of Changes on page 137</td>
</tr>
<tr>
<td>Site-specific effectivity dates and dispositions</td>
<td>Chapter 6, Affected Items of Changes on page 137</td>
</tr>
</tbody>
</table>

Site Objects

A site object contains general information about a site. Unlike items, sites do not need to go through a release process.

This section includes the following topics:

- General Info Tab - Sites on page 36
- Attachments Tab on page 39
- History Tab on page 39

To locate and open an item, follow the instructions in Getting Started with Agile PLM.

The following table lists the tabs for sites.
The Agile administrator may have added additional sections to the Title Block or General Information tab, called Page Two and Page Three by default (Web Client). In Java Client, these are separate tabs. These sections or tabs contain custom fields defined by the administrator.

<table>
<thead>
<tr>
<th>Site tab name</th>
<th>Tab information includes</th>
</tr>
</thead>
<tbody>
<tr>
<td>General Info</td>
<td>General information about the site</td>
</tr>
<tr>
<td>Attachments</td>
<td>Attached drawings, files, and URLs pertaining to the site</td>
</tr>
<tr>
<td>History</td>
<td>Actions taken on the site, for example, when attachments were added and removed</td>
</tr>
</tbody>
</table>

**General Info Tab - Sites**

The General Info tab has fields that contain basic information about a site. Some fields are filled in automatically; you complete the rest. You may not be able to edit the content of some fields.

This section includes the following topics:
- General Info Tab Fields - Sites on page 36
- Site Lifecycle Phase on page 37
- AML Required on Buy Field on page 37
- Site AML Allowed Field (on page 38)

**General Info Tab Fields - Sites**

By default, the site object General Info tab contains the fields listed in the following table.

<table>
<thead>
<tr>
<th>Field</th>
<th>Definition</th>
</tr>
</thead>
<tbody>
<tr>
<td>Name</td>
<td>The name of the site. This field must be filled in with a unique value.</td>
</tr>
<tr>
<td>Type</td>
<td>The subclass (type) of the site object.</td>
</tr>
<tr>
<td>Lifecycle Phase</td>
<td>The current state of the site: Enabled or Disabled.</td>
</tr>
<tr>
<td>Site ERP Code</td>
<td>The ERP system in use at the site, if applicable.</td>
</tr>
<tr>
<td>Address, Geography, Province/Region/State, Country/Area, City, Postal Code, Phone, URL, Fax,</td>
<td>Contact information for the site.</td>
</tr>
<tr>
<td>Contact</td>
<td>The name of the contact person for the site.</td>
</tr>
<tr>
<td>Email</td>
<td>The email address of the contact person.</td>
</tr>
<tr>
<td>Buyer</td>
<td>The buyer code for the item at this site. Select one from a list of codes that have been assigned for sites.</td>
</tr>
</tbody>
</table>
### Field Definitions

<table>
<thead>
<tr>
<th>Field</th>
<th>Definition</th>
</tr>
</thead>
<tbody>
<tr>
<td>Planner</td>
<td>The planner code for the item at this site. Select one from a list of codes that have been assigned for sites.</td>
</tr>
<tr>
<td>Color</td>
<td>The color associated with this site. Choose from a list of colors. This color will be used on the BOM, Manufacturers, and Affected Items tabs to distinguish common items from site-specific items. The same color can be used for more than one site.</td>
</tr>
<tr>
<td>Site AML Allowed</td>
<td>For items specified as Buy, indicates whether a site-specific manufacturer value is required, allowed, or disallowed.</td>
</tr>
<tr>
<td>AML Required on Buy</td>
<td>Indicates whether a manufacturer value is required for an item when the item is specified as a Buy (as opposed to a Make) for this site. Whether an item is Buy or Make is shown by the Make/Buy field on the Sites tab of the item.</td>
</tr>
</tbody>
</table>

See also: [Site Objects on page 35](#), [Site Lifecycle Phase on page 37](#), [AML Required on Buy Field on page 37](#), [Site AML Allowed Field](#), (on page 38)

### Site Lifecycle Phase

- A site can be in one of the following states, as indicated in the Lifecycle Phase field on the site’s General Info tab:
  - **Enabled** – When a site is enabled, users can define all site properties of the site itself. Also, users can associate the site with an item, define item-site properties, create site-specific BOMs and AMLs, and create changes for site-specific items.
  - **Disabled** – All sites are disabled when they are first created. When a site is disabled, users cannot create site-specific BOMs, AMLs, or changes. However, disabled sites do show up in searches and reports. Any in-process changes that involve a site that’s been disabled are allowed to continue through release, but users will not be able to edit the disabled site’s site-specific Affected Item table rows, and users cannot make any redline add or redline edit modifications to in-process changes when the site has been disabled.

To change a site’s lifecycle phase, select a lifecycle phase from the drop-down list.

See also: [General Info Tab Fields - Sites on page 36](#).

### AML Required on Buy Field

The AML Required on Buy field of a site determines whether an AML is required for an item when the item is specified as a Buy for a given site.

**Note** Whether an item is specified as a Buy is determined by the value in the Make/Buy field on the item’s Sites tab.

When an item is released, the system checks to see which sites the item is being released for, as indicated on the Affected Items tab of the releasing change. The system then checks the Make/Buy field on the item’s Sites tab to determine if any of the sites are specified as Buy. If an item is specified as a Make for all sites, this rule is ignored.

Possible AML Required on Buy values are Yes or No (the default).
No – Default value. At time of release, the Agile PLM system does not check for whether or not the item has an AML for the site. The item can still be released. However, the Agile PLM system does perform additional checking on the setting of Site AML Allowed property.

Yes – The item being released must have either a common AML or an AML that is specific to the sites that are specified as Buy sites for the item.

When AML Required on Buy is set to Yes, if an autopromotion attempts to release the item (via a change), but the item does not have a site-specific AML for the appropriate sites, the promotion fails, and the appropriate person is notified.

See also: General Info Tab Fields - Sites on page 36.

Site AML Allowed Field

This field, used when the item is specified as a Buy for a given site, governs whether an AML for an item:

- Must be specific for the site
- Can be modified for a specific site
- Can use only the common site AML

Note

Whether an item is specified as a Buy for a given site is determined by the value in the Make/Buy field on the item’s Sites tab.

When an item is released, the system checks to see which sites the item is being released for, as indicated on the Affected Items table of the releasing change. The site’s Site AML Allowed field is then checked to determine if any of these sites are required or allowed to have a site-specific AML.

Possible Site AML Allowed values are Allowed (the default), Required, and Disallowed:

- Allowed – The item being released is allowed to have a site-specific AML for the site, but it is not required. The item can be released.

- Required – The item being released must have a site-specific AML for the sites specified as Buy sites for the item. The item cannot be released until this condition is satisfied.

  If an auto-promotion attempts to release the item (through a change), but the item does not have a site-specific AML for the appropriate sites, the promotion fails, and the appropriate person is notified.

- Disallowed – The item being released cannot have a site-specific AML for the site. If the item has a site-specific AML, it cannot be released.

  If an autopromotion attempts to release the item (via a change), and the item includes a site-specific AML, the promotion fails, and the appropriate person is notified.

If a site-specific AML is created for an item (through modification to the AML or redline of the AML), when the item is released, the system checks the Site AML Allowed field of the sites to determine if any of the sites have Site AML Allowed set to Disallowed. If a site is disallowed, you cannot release a site-specific AML for that site.

See also: General Info Tab Fields - Sites on page 36.
Attachments Tab

All objects have an Attachments tab. On the Attachments tab, you can attach files and URLs to the object by referencing those files and URLs in a file folder object. On the Attachments tab, you can view, copy (get), or print attached files if you have the appropriate privileges.

Individual attached files are stored in file folder objects and can be attached to multiple objects. The files in a file folder object can be drawings or scanned images, documents, non-viewable files, compressed files, and so on.

For detailed information about working with file folder objects and the Attachments tab, see Getting Started with Agile PLM.

See also: Site Objects on page 35.

History Tab

The History tab shows a summary of actions taken against an object, including a description of the action, which user took the action, the date of the action, and other details.

Note  If you do not have the appropriate Read privilege for an object, you cannot see the contents of the fields on the History tab. See Details about Discovery and Read Privileges on page 197.

The types of actions recorded for sites are:

- Creating the site
- Attachment actions: view, open, add, delete, and get
- Save As
- Send
- Print
- Change subclass
- Modification of any field of a site

See also: Site Objects on page 35.

Creating Sites

The process for creating new objects involves two main steps: creating an empty object, and then filling in the object tabs with information specific to the object.

To create a site, you must have the Create Site privilege.

In Web Client, you can create a site with the Create New > Sites command or the Actions > Save As command.
In Java Client, you can create a site with the File > New > Sites command or the New Object button, or the Save As command, on the More Actions menu (click the More button at the top of the object window) and on the right-click shortcut menu.

**Note**  
The site name must be unique to a site, just as an item number must be unique to an item.

Choose a color to make it easier to distinguish common items from site-specific items on the BOM, Manufacturers, Changes and Affected Items tabs. In Java Client, the site colors also appear on the item Where Used tab. For more information about site colors, see General Info Tab Fields - Sites on page 36.

When you create a site, you automatically have access to information specific to that site. The new site is included in the Sites field in your user profile.

### Creating a Site Using the Save As Feature

Using the Save As feature is a quick way to create a site that is similar to an existing site.

All General Information and Page Two field values and Page Three (depending on Agile system settings) field values are copied to the new site. The new site’s lifecycle phase is Disabled. The Attachments are created using the preferred method selected by the Agile administrator (Create New, Reference Existing, Do Not Copy Files, or by prompting; see also Creating an Item Using Save As on page 17). The History tab of the original site reflects that the new site was copied from it.

For more information about creating a site using Save As, see Getting Started with Agile PLM.

See also: Creating Sites on page 39.

### Associating a Site with an Item

This section includes the following topics:
- Fields on the Sites Tab on page 40
- Adding Sites to the Sites Tab on page 41
- Removing Sites from the Sites Tab on page 42

To make an item available to site-specific BOMs, you must add the sites to the item’s Sites tab. If a site is not listed on an item’s Sites tab, you cannot define a site-specific BOM or AML for the item. A site can be listed only once on the Sites tab.

The Sites tab is not under change control, so you don’t need to create a change to modify the information on this table.

### Fields on the Sites Tab

The following table lists default fields on the Sites tab of items.
### Field Definitions

<table>
<thead>
<tr>
<th>Field</th>
<th>Definition</th>
</tr>
</thead>
<tbody>
<tr>
<td>Site Name</td>
<td>The name of the site. Not editable from the <em>Sites</em> tab.</td>
</tr>
<tr>
<td>Buyer</td>
<td>The buyer code for the item at this site. Select one from a list of codes that have been assigned for sites.</td>
</tr>
<tr>
<td>Planner</td>
<td>The planner code for the item at this site. Select one from a list of codes that have been assigned for sites.</td>
</tr>
<tr>
<td>Make/Buy</td>
<td>Indicates whether this site makes or buys the item.</td>
</tr>
<tr>
<td>Cost</td>
<td>Yes or No. Indicates, for this site, whether there is a cost associated with the item.</td>
</tr>
<tr>
<td>Quote As</td>
<td>Select from list. Indicates, for this site, how the item is to be quoted, for example, assembly or component.</td>
</tr>
<tr>
<td>Currency</td>
<td>Default currency for this site.</td>
</tr>
<tr>
<td>Standard Cost</td>
<td>This site’s standard cost for the item.</td>
</tr>
<tr>
<td>Target Cost</td>
<td>This site’s target cost set for the item.</td>
</tr>
<tr>
<td>First Released Change</td>
<td>The change that first released the item to this site. This is automatically filled in when the item is released. Not editable from the <em>Sites</em> tab.</td>
</tr>
<tr>
<td>Site Lifecycle Phase</td>
<td>The current state of the site: Enabled or Disabled. Not editable from the <em>Sites</em> tab.</td>
</tr>
<tr>
<td>Site Type</td>
<td>The subclass of the site. Not editable from the <em>Sites</em> tab.</td>
</tr>
</tbody>
</table>

See also: Adding Sites to the Sites Tab on page 41, Removing Sites from the Sites Tab on page 42.

### Modifying the Make/Buy Field on the Item Sites Tab

If you have the appropriate modify privileges, you can modify the Make/Buy field in an item’s Sites table, even if the item has been released. However, the Make/Buy setting is not revision-specific. When you modify the Make/Buy setting on any item revision, it is also modified for all revisions. The following restrictions apply when modifying the Make/Buy setting:

- When the item is included on the affected items table of a change order, the release audit validates the Site AML Allowed and AML Required on Buy settings of the site with the item Sites tab Make/Buy setting for that revision. Past revisions are not audited. (A release audit is performed automatically when the change order is released.)
- Because the Make/Buy setting is not revision-specific and can be changed without using a change order, any validation violations caused by a modification to Make/Buy remain on the latest released revision of the item and may not be detected until the next time the item is added to a change order and the change order is release audited.

For more information, see AML Required on Buy Field on page 37 and Site AML Allowed Field (on page 38).

### Adding Sites to the Sites Tab

When you add sites to the Sites tab of an item, you select the sites from a list. That list includes all
enabled sites that you have access to—sites with a lifecycle phase of Enabled that are included in the Sites field of your user profile. Disabled sites do not appear in the list because disabled sites cannot be added to the Sites tab of an item.

After you add a site to the Sites tab of an item, you can edit the table to enter values for the other fields in the Sites table. You cannot change the Site Name value in the Sites table; to change which site is listed, remove the site and add a new one.

See also: Removing Sites from the Sites Tab on page 42.

To add a site to the Sites tab in Web Client:

1. Click the Add button or press Ctrl-I to open the search pop-up.
2. To select Sites to add you can type the Site names:
   a. If you know the names of the Sites you want, in the pop-up field, type the names separated by semicolons.
   b. Begin typing a Site name in the pop-up field and Agile PLM displays a list of Sites that match the typed characters.
   c. Use the up arrow and down arrow keys to highlight the Site you want.
   d. Press the Tab key to add the Site to the pop-up field.
   e. Repeat to add additional sites.
   f. Press the Enter key to add the objects to the table.
   To cancel, press the Escape key to close the search pop-up.
3. You can also search for Sites to add:
   a. Click the pop-up Search button to open the Sites Search palette.
   b. Type the search criteria.
   c. Press the Enter key or click the Search button to run the search.
   d. Double-click a search result row to add the Site to the table.
   e. Type new search criteria to run a different search.
   f. When you are finished, press Enter to close the Sites Search palette.

After you add a site to the Sites tab of an item, you can double-click a cell on the Sites table to begin editing and enter values for the other fields in the Sites table.

To add a site to the Sites tab in Java Client:

1. On the Sites tab of an item, you can use the Add button in two ways:
   - Click the Add button to display dialog box that allows you to select multiple sites. When you have made your selections, click OK.
   - Click the drop-down arrow portion of the add button to select the site name you want in the drop-down list.

After you add a site, you can select the site row on the Sites table and edit it to enter values for the other fields in the Sites table.

Removing Sites from the Sites Tab

You can remove a site from an item’s Sites tab, as long as the item has not been released to that
site and you have the appropriate privileges. When an item has been released to a site, the site
cannot be removed from the item’s Sites tab. Deleting a site from the Sites tab does not delete the
site object from the database.

If you try to remove a site that is referenced by a site-specific BOM or AML, the system displays a
warning; removing such a site also removes the corresponding site-specific BOMs and AMLs and
site-specific Affected Item table rows and site-specific redlines on changes.

When a site is released on an item, the site is not allowed to be removed.

To remove a site from an item’s Sites tab in Web Client:
1. Select the site that you want to remove.
2. Click the Remove button on the Sites tab.

To remove a site from an item’s Sites tab in Java Client:
1. Select the site that you want to remove.
2. Click the Remove button on the Sites tab.

See also: Adding Sites to the Sites Tab on page 41.

Deleting Site Objects

For important details about deleting site objects, see Deleting Agile Objects on page 207.

Editing Sites

Any user with the necessary privileges can modify values entered for a site. Sites are not required
to go through the change control process; all modifications go into effect immediately.

To edit a site in Web Client:
1. Display the site’s General Info tab.
2. Click Edit.
3. Make the changes you want.
4. Click Save.

To edit a site in Java Client:
1. Display the site’s General Info tab.
2. Make the changes you want.
3. Click Save.

Keep the following in mind regarding some of the fields on the General Info tab:

- **Name** – If you change a site name, the change is made to the Sites tab of the items where the
  site is listed and to any other tabs where the site is listed, such as the BOM tab. You cannot
  change the site name to the same name as another site.
Buyer or Planner – A buyer or planner cannot be removed if listed on the Site table of an item.

AML Required on Buy and Site AML Allowed – If you edit AML Required on Buy or Site AML Allowed, released items are not affected. The new values are enforced with any new items and newly released changes.

See also: Creating Sites on page 39.

Printing Sites

You can print object tabs and other data from your Agile PLM system. You can print the current tab or all tabs. Attachments are printed from their native applications or the AutoVue for Agile viewer.

In Web Client, with the object open, choose Actions > Print.

In Java Client, with the object open, use the Print button 📄.

For additional information about printing objects, see Getting Started with Agile PLM.
What Is Agile AML?

This section covers the following topics:

- What Does Agile AML Do? on page 45
- About Manufacturing Objects on page 51
- Many-to-One Relationships in Agile AML on page 46

The Agile Approved Manufacturers List (AML) solution enables an organization to manage information related to manufacturers and the parts they produce.

What Does Agile AML Do?

Agile PLM provides a way to track the relationships between items and their manufacturers and to create an approved manufacturers list (AML). This means you can quickly find, for instance, which manufacturers are producing a particular part, their identification information for that part, where that part is used, and contact information for the manufacturer.

An item’s AML is represented by the rows of information on the Manufacturers tab of the item. Each row represents a manufacturer part. See Manufacturers Tab of an Item on page 61.

Additionally, you can use manufacturer change orders (MCOs) to change manufacturing data.

Note You can also use a site change order (SCO) to change site-specific manufacturing data.
About Manufacturing Objects

The AML features let you work with the following manufacturing objects:

- **The manufacturer** – this object holds data about product manufacturers, including contact information and where their parts are used in your assemblies.

- **The manufacturer part** – this object describes product parts from the manufacturers’ point of view, with information such as their part numbers and their names for that part, as well as information about where this part is used in your assemblies and which manufacturing sites use this manufacturer part.

For more information about manufacturing objects, see [Manufacturing Objects: Manufacturers and Manufacturer Parts](#) on page 48.

Many-to-One Relationships in Agile AML

AML capabilities allow you to track complex, many-to-one relationships. The following figure shows an example of a more complex situation such as those commonly found in real-life manufacturing.

![Diagram showing many-to-one relationships in Agile AML](image)

In this example, one part has more than one manufacturer part, and some manufacturers provide more than one manufacturer part.

**Note** Depending on the Agile Administrator setting for the **Multiple Items Per Manuf Part** SmartRule, your Agile PLM system may be configured so that a manufacturer part can be added to the Manufacturers tab of only one item. Contact the Agile administrator if you have questions about manufacturer parts associated with multiple items.
Sites and AML Data

A manufacturer part can apply to all manufacturing sites where the product is built, some sites, or just one site. The common portion of the AML lists AML information that is shared between all the sites assigned to the item. Each site can add other manufacturing information to the AML table that is site-specific—for example, manufacturers that are used by the site because they're located nearby. Also, a manufacturer part may be Preferred at one site and Alternate at another site. Manufacturer parts used by multiple sites are listed multiple times on the AML tab, once for each site.

The AML Required on Buy field of a site determines whether a manufacturer part is required for an item when the item is specified as a Buy for a given site. For more information about AML Required on Buy, see AML Required on Buy Field on page 37.

Note Whether an item is specified as a Buy is determined by the value in the Make/Buy field on the item’s Sites tab.

Setting Up Manufacturing Data

To track manufacturing data in Agile PLM, you must first set up the manufacturers in your database and then create the manufacturer parts that they produce for use in your assemblies.

Order is important. You cannot create a manufacturer part until you have created the corresponding manufacturer.

The process is performed in the following sequence:
1. Create the manufacturer.
   For example, create a manufacturer named Acme.
2. Create the manufacturer part.
   Create manufacturer part number AM230PS, specifying Acme as the manufacturer.
3. Add the manufacturer part to the internal part’s Manufacturers tab.
   For example, on part P001232, go to the Manufacturers tab and add Acme AM230PS.

Once the relationships have been established, it is easy to track manufacturing data activity.

From this point on, manufacturing data can be managed through the redlining process. This is discussed in Redlining through ECOs, MCOs, and SCO on page 134.

Note Manufacturing objects are not subject to the change control process and can be created, edited, and deleted by any user granted the necessary privileges. Those changes go into effect immediately.

To set up manufacturer data in the database:
1. Create the manufacturer. This represents the manufacturer of the purchased part.
   See Creating and Managing Manufacturing Objects on page 52.
2. Create the manufacturer part. This represents the part that the manufacturer produces. See [Creating and Managing Manufacturing Objects](#) on page 52.

3. Match the manufacturer part to the corresponding item by adding it to the item’s Manufacturers tab. See [Adding a Manufacturer Part to the Manufacturers Tab](#) on page 64.

## Manufacturing Objects: Manufacturers and Manufacturer Parts

This section covers the following topics:

- [Manufacturing Object Tabs](#) on page 48
- [About Manufacturers](#) on page 51
- [About Manufacturer Parts](#) on page 51

### Manufacturing Object Tabs

Manufacturing objects have several of the same tabs as items (Where Used, Attachments, Relationships, and History), but they also have differences. For example, they have a General Info tab in place of the Title Block tab, and they do not have a Changes tab or BOM tab.

The table below lists the default fields on the tabs of these two manufacturing objects.

The Agile administrator may have added additional sections (Web Client) or tabs (Java Client), called Page Two and Page Three by default. These sections or tabs contain custom fields defined by the administrator.

<table>
<thead>
<tr>
<th>Tab</th>
<th>Fields include</th>
</tr>
</thead>
<tbody>
<tr>
<td>General Info tab</td>
<td>Name, Lifecycle Phase, Mfr. Type, Contact, URL, D-U-N-S Number, contact info</td>
</tr>
<tr>
<td>Where Used tab on page 49</td>
<td>Item Number, Item Description, Mfr. Part Number, Mfr. Part Lifecycle Phase</td>
</tr>
<tr>
<td>Attachments tab</td>
<td>Attachment Number, Attachment Description, File Name, File Version, File Size, File Type, Modified Date, Last View Date, Checkout User, Checkout Date, Checkout Folder</td>
</tr>
<tr>
<td></td>
<td>For information about working with attachments see <a href="#">Getting Started with Agile PLM</a>.</td>
</tr>
<tr>
<td>History tab</td>
<td>Action, User, Local Client Time, User Action Time (optional), Comments, Details</td>
</tr>
</tbody>
</table>

### Manufacturer Part object tabs:
<table>
<thead>
<tr>
<th>Tab name</th>
<th>Fields include</th>
</tr>
</thead>
<tbody>
<tr>
<td>General Info tab</td>
<td>Manufacturer Name, Manufacturer Part Number, Description, Mfr. Part Type, Lifecycle Phase</td>
</tr>
<tr>
<td></td>
<td>Item Group(s) — If this field has been enabled, it displays the item group of which the current manufacturer part is a member</td>
</tr>
<tr>
<td></td>
<td>PG &amp; C fields – The following fields are related to Agile PG&amp;C. For more information, see the <em>Agile Product Governance and Compliance User Guide</em>.</td>
</tr>
<tr>
<td></td>
<td>Compliance Calculated Date, Part Family, Mass, Overall Compliance</td>
</tr>
<tr>
<td>Where Used tab on page 49</td>
<td>Where Used table includes:</td>
</tr>
<tr>
<td></td>
<td>Item Sites, Item Number, Item Description, Mfr. Tab Preferred Status, Mfr. Tab Reference Notes</td>
</tr>
<tr>
<td></td>
<td>Pending Change Where Used table includes the same fields as above, with one additional field:</td>
</tr>
<tr>
<td></td>
<td>Pending Change</td>
</tr>
<tr>
<td>Attachments tab</td>
<td>Attachment Number, Attachment Description, File Name, File Version, File Size, File Type, Modified Date, Last View Date, Checkout User, Checkout Date, Checkout Folder</td>
</tr>
<tr>
<td></td>
<td>For information about working with attachments see <em>Getting Started with Agile PLM</em>.</td>
</tr>
<tr>
<td>History tab</td>
<td>Action, User, Local Client Time, User Action Time (optional), Comments, Details</td>
</tr>
<tr>
<td>Prices tab</td>
<td>This tab relates to Agile PCM.</td>
</tr>
<tr>
<td></td>
<td>For more information, see the <em>Product Cost Management User Guide</em>.</td>
</tr>
<tr>
<td>Compliance tab</td>
<td>These tabs relate to Agile PG&amp;C.</td>
</tr>
<tr>
<td>Suppliers tab</td>
<td>For more information, see <em>Agile Product Governance and Compliance User Guide</em>.</td>
</tr>
</tbody>
</table>

**Where Used Tab**

The manufacturer *Where Used* tab lists all the manufacturer part numbers for the manufacturer and the items that use the manufacturer parts. The information on this tab is filled in automatically.

The manufacturer part *Where Used* tab lists all the items that use the manufacturer part. The information on this tab is filled in automatically.

The *Where Used* tab includes two tables:

- **Where Used** — displays the latest revision of the items where the manufacturer part is used. Latest revision can be either an Introductory revision or the latest released revision.
- **Pending Change Where Used** — displays the pending revisions of the items where the manufacturer part is used, including the pending change order number.
**Note** When you first view the Where Used tab, the Pending Change Where Used table is hidden by default.

To view or hide the Pending Change Where Used table in Web Client:

On the Where Used tab, click the Pending Changes Where Used sub-tab.

To view an item from the Where Used tab using Web Client:

Click the item number.

To view or hide the Pending Change Where Used table in Java Client:

Use the View drop-down list to select either Show Pending or Hide Pending.

To view an item from the Where Used tab using Java Client:

Double-click the item’s row.

**Sites and the Manufacturer Part Where Used Tab**

When you view the Where Used tab of a manufacturer part, the table displays where-used information according to item number and manufacturing site.

See also: [How Sites Work](#) on page 33.

**Manufacturer Part Prices Tab**

**Note** If your company has the necessary licenses, and you have been granted the necessary privileges, you can perform the Prices tab processes described here.

The Prices tab displays the price information for this manufacturer part. The information on this tab is filled in automatically. Click the price object number (in the Number column) to open that price object. For more information see the [Product Cost Management User Guide](#).

**Where Used Tab and the Discovery Privilege**

If you do not have Discovery privilege for an item, site, or manufacturing object, it does not appear on the Where Used tab. The Agile administrator can specify whether or not to display a warning message telling you how many objects are not displayed. (For sites, this applies only to the Where Used tab of manufacturer parts. The Where Used tab of manufacturers does not include a column for site information.) For more information, see [Details about Discovery and Read Privileges](#) on page 197.

**Read Privilege**

Your Read privileges and Enforce Field Level Read privileges determine which fields you are able to view. For more information, see [Details about Discovery and Read Privileges](#) on page 197.
About Manufacturers

Manufacturer objects contain information about manufacturers with which your organization collaborates.

Creating a manufacturer is the first step in adding a new manufacturer part to the Agile PLM database. After you create the manufacturer, create the manufacturer part in association with that manufacturer. When you then associate the manufacturer part with an item, the manufacturer part is referenced on the manufacturer's Where Used tab.

You can modify a manufacturer object directly at any time, if you have the necessary privileges. Manufacturers are not under change control.

To find manufacturers in your Agile PLM database, use the same search process as you use for any other object. For more information about searches, see Getting Started with Agile PLM.

See also: Lifecycle Phase of a Manufacturer on page 51, D-U-N-S Number on page 51.

Lifecycle Phase of a Manufacturer

The lifecycle phase field on the General Info tab of the manufacturer object indicates its lifecycle phase. The following table lists the default manufacturer lifecycle phases. The Agile administrator may define a customized list of lifecycles for your Agile PLM system.

<table>
<thead>
<tr>
<th>Lifecycle name</th>
<th>Lifecycle definition</th>
</tr>
</thead>
<tbody>
<tr>
<td>Approved</td>
<td>This is an approved manufacturer.</td>
</tr>
<tr>
<td>Disqualified</td>
<td>This manufacturer is no longer qualified for use.</td>
</tr>
<tr>
<td>Obsolete</td>
<td>This manufacturer is no longer available for use.</td>
</tr>
</tbody>
</table>

See also: Lifecycle Phase of a Manufacturer Part on page 52.

D-U-N-S Number

The D-U-N-S Number field allows companies to list the DUNS of their suppliers in the system.

D-U-N-S stands for Data Universal Numbering System. A D-U-N-S number is a unique nine-digit sequence that identifies an organization.

See also: Manufacturing Object Tabs on page 48.

About Manufacturer Parts

The manufacturer part object displays information about a part produced by a specific manufacturer, including the manufacturer's part number, lifecycle phase, where it is used, and a history of actions affecting that manufacturer part.

The combination of the manufacturer name and manufacturer part number must be unique to that manufacturer part. In other words, you cannot create another manufacturer part for the same manufacturer using the same manufacturer part number. Agile PLM does support the situation in which different manufacturers are using an identical part number, however.
You can modify a manufacturer part object directly at any time, if you have the necessary privileges. Manufacturer parts are not under change control.

To find manufacturer parts in your Agile PLM database, use the same search process as you use for any other object. For more information about searches, see *Getting Started with Agile PLM*.

After you create a manufacturer part, you can add it to the Manufacturers tab of the Agile part to which it corresponds. For more information about working with manufacturer parts, see *Creating and Managing Manufacturing Objects* on page 52.

**Lifecycle Phase of a Manufacturer Part**

The lifecycle phase field on the General Info tab of the manufacturer part object indicates its lifecycle phase. The following table lists the default manufacturer part lifecycle phases. The Agile administrator may define a customized list of lifecycles for your Agile PLM system.

<table>
<thead>
<tr>
<th>Lifecycle name</th>
<th>Lifecycle definition</th>
</tr>
</thead>
<tbody>
<tr>
<td>Active</td>
<td>This manufacturer part is available for use.</td>
</tr>
<tr>
<td>Obsolete</td>
<td>This manufacturer part should no longer be used.</td>
</tr>
</tbody>
</table>

See also: *Lifecycle Phase of a Manufacturer* on page 51.

**Creating and Managing Manufacturing Objects**

This section covers the following topics:

- Creating Manufacturers on page 52
- Creating Manufacturer Parts on page 55
- Modifying Manufacturing Objects on page 60

**Creating Manufacturers**

In Web Client, you can create a manufacturer with the Create New > Manufacturers command or the Actions > Save As command.

In Java Client, you can create a manufacturer with the File > New > Manufacturers command or with the New Object button $\text{New}$, or the Save As command, on the More Actions menu (click the More button $\text{More}$ at the top of the object window) and on the right-click shortcut menu.

Unlike items, manufacturers do not need to go through the release process. They are immediately available for use.

**Note** The manufacturer name must be unique to one manufacturer, just as an item number must be unique to an item.

Although different manufacturers can use the same manufacturer part number, the combination of manufacturer plus manufacturer part number must be unique to one manufacturer part.
The process for creating new objects involves two main steps: creating an empty object, then filling in the object tabs with information specific to the object.

To create a manufacturer using Web Client:

1. Choose Create New > Manufacturers.
2. In the Create New dialog box, use the Type drop-down list to select the type (subclass) of manufacturer you want to create.
3. Type a unique name for the manufacturer.
4. Complete any required fields.
5. Click Save.
   - The new manufacturer appears in the content pane with the General Info tab displayed in edit mode.
6. Fill in information on the General Info tab and click Save.
7. Fill in information on the remaining manufacturer tabs, as desired.
   - You do not enter information on the Where Used and History tabs. Those tabs are completed automatically.

To create and complete a manufacturer using Java Client:

1. Choose File > New > Manufacturers.
2. In the New dialog box, use the Type drop-down list to select the type (subclass) of manufacturer you want to create.
3. Type a unique name for the manufacturer.
4. Complete any required fields.
5. Click OK.
   - The new manufacturer appears with the General Info tab showing.
6. Fill in information on the manufacturer tabs, as desired.
   - You do not enter information on the Where Used and History tabs. Those tabs are completed automatically.

See also: Modifying Manufacturing Objects on page 60.

Creating a Manufacturer Using the Save As Feature

Using the Save As feature is a quick way to create a manufacturer that is similar to an existing manufacturer.

In Web Client, you can create a manufacturer using the Actions > Save As command.

In Java Client, you can create a manufacturer using the File > Save As command, the Save As command on the More Actions menu (click the More button at the top of the object window) or the Save As command on the right-click shortcut menu.
Caution  In general, you should not use Save As to create an object in a different class or subclass (type) from the original object. The different classes or subclasses may not have the same tabs or defined fields, and you may lose access to some data in the newly created object.

To create a manufacturer using the Save As command in Web Client:
1. Select and open an existing manufacturer.
2. Choose Actions > Save As.
3. If appropriate, select a different manufacturer type (subclass) from the list.
4. Enter the new manufacturer’s name.
5. Complete any required fields.
6. Click Save.
   The new manufacturer appears in the content pane with the General Info tab displayed in edit mode.
7. Edit information on the General Info tab as required and click Save.

To create a manufacturer using the Save As command in Java Client:
1. Select and open an existing manufacturer.
2. Choose File > Save As.
3. If appropriate, select a different manufacturer type (subclass) from the list.
4. Enter the new manufacturer’s name.
5. Complete any required fields.
6. Click OK.
   The new manufacturer opens with the General Info tab on top.

To create a manufacturer using the Save As command in Web Client:
1. Select and open an existing manufacturer.
2. Choose Actions > Save As.
3. If appropriate, select a different manufacturer type (subclass) from the list.
4. Enter the new manufacturer’s name.
5. Complete any required fields.
6. Click Save.
   The new manufacturer appears in the content pane with the General Info tab displayed in edit mode.
7. Edit information on the General Info tab as required and click Save.

See also: Modifying Manufacturing Objects on page 60.
Creating Manufacturer Parts

To create manufacturer parts, you must have the Create Manufacturer Parts privilege.

In Web Client, you can create a manufacturer part with the Create New > Manufacturer Parts command. From an open manufacturer object, you can create a manufacturer part with the Actions > Create Manufacturer Parts command. You can also use the Actions > Save As command from an open manufacturer part.

In Java Client, you can create a manufacturer part with the File > New > Manufacturer Parts command or with the New Object button. You can also use the File > Save As command when open manufacturer part is open.

You can also create a manufacturer part on-the-fly as you add information to the Manufacturers tab of an item.

Unlike items, manufacturer parts do not need to go through the release process. They are immediately available for use.

Note: Different manufacturers can use the same manufacturer part number; however, the combination of manufacturer plus manufacturer part number must be unique to one manufacturer part.

See also:
- Creating a Manufacturer Part in Web Client on page 55
- Creating a Manufacturer Part in Java Client on page 56
- Creating a Manufacturer Part Using the Save As Feature on page 53
- Modifying Manufacturing Objects on page 60

Creating a Manufacturer Part in Web Client

To create a manufacturer part using Web Client:

1. Choose Create New > Manufacturer Part. (You can also choose Actions > Create Manufacturer Part from within a manufacturer.)

2. In the Create New dialog box, use the Type drop-down list to select the type (subclass) of manufacturer part you want to create.

3. Select the manufacturer of the new manufacturer part by using one of the following methods:
   - Type-ahead search:
     - In the Manufacturer field, begin typing the name of the manufacturer. Agile PLM searches for manufacturer names that begin with the characters you type.
     - As you type, Agile PLM displays a list of the matching values alphabetically and automatically displays the first matching value in the Manufacturer field.
     - Use the up arrow and down arrow keys to highlight a specific value in the list. Press the Return key to select the highlighted value.
     - Or, click a value in the list to select it.
Quick Search:

- Click the "Launch the Palette" button.
- Enter the search criteria and click "Search." Agile PLM searches for manufacturer names that contain the specified text.
- In the search results table, double-click the name of the manufacturer you want.
- Press the "Escape" key to close the search palette.

Create to Add:

- Click the "Create to Add" button.
- In the Create New dialog, use the Type drop-down list to choose a manufacturer subclass.
- Enter the name of the new manufacturer.
- Click "Save."

4. Type a number for the manufacturer part.
5. Complete any required fields.
6. Click "Save."

The manufacturer part is displayed in the right content pane with the "General Info" tab in edit mode.
7. Edit the "General Info" fields as desired, and click "Save.

You do not enter information on the "Where Used" and "History" tabs. Those tabs are completed automatically.

Creating a Manufacturer Part in Java Client

To create and complete a manufacturer part using Java Client:

1. Choose File > New > Manufacturer Parts.
2. In the New dialog box, use the Type drop-down list to select the type (subclass) of manufacturer part you want to create.
3. Select the manufacturer of the new manufacturer part.
4. In the Manufacturer Name field, type the manufacturer name or a portion of the manufacturer name. Press the Tab key or click the Validate checkmark:

   - If you enter a valid and unique manufacturer name, Agile selects that manufacturer name and the Validate checkmark is disabled. Press the Tab key to continue with the next step.
   - If you did not enter a valid and unique manufacturer name, the resolution dialog appears.

   In the resolution dialog, select the manufacturer you want and click "OK.

If the manufacturer you want does not appear in the search results, you can perform another search or you can create a new manufacturer:

- Search – In the resolution dialog box, select a search method. If you choose to perform a simple search, enter the value to search for and click "Search." You can also define an advanced search, run a saved search, or select a bookmarked or recently visited manufacturer (Shortcuts). (For more information about searches, see Getting Started with Agile PLM.) In the search results, select the manufacturer you want, and click "OK."
- **Create** – If you need to create a new manufacturer for the manufacturer part, click the **Create** button in the resolution dialog box. A dialog box opens that allows you to select the manufacturer type (subclass) in the **Type** drop-down list and enter the manufacturer name. Click **OK**. The resolution dialog box closes and the newly created manufacturer is selected.

For further details, see **How to Use Manufacturer Name Automatic Validation** on page 57.

5. Type a number for the manufacturer part.
6. Complete any required fields.
7. Click **OK**.
   
The new manufacturer part appears with the **General Info** tab showing.
8. Fill in information on the manufacturer part tabs, as desired.
   
   You do not enter information on the **Where Used** and **History** tabs. Those tabs are completed automatically.

### Java Client Manufacturer Name Automatic Validation

Whenever you create a manufacturer part, or add to or edit the table of an item’s **Manufacturers** tab, Agile PLM provides an automatic search and validation process to quickly search for and select the manufacturer you want to specify.

This section includes the topics:

- [Where is Java Client Manufacturer Name Automatic Validation Used?](#) on page 57
- [How to Use Java Client Manufacturer Name Automatic Validation](#) on page 57

#### Where is Java Client Manufacturer Name Automatic Validation Used?

Agile PLM Java Client uses automatic manufacturer name validation whenever you create a manufacturer part or you edit manufacturer part information.

With the appropriate privileges, you can create a manufacturer part by using the following Agile PLM features:

- Object creation: **File > New** or **Create New** button.
- Item object **Manufacturers** tab, add manufacturer part by create.
- Change object **Affected Items** tab, **Redline Manufacturers** tab, add by create.
- Change object **Affected Items** tab, manufacturer part bulk change process.

With the appropriate privileges, you can edit manufacturer part information on the following tabs:

- Item object **Manufacturers** tab.
- Change object **Affected Items** tab, **Redline Manufacturers** tab.
- Change object **Affected Items** tab, manufacturer part bulk change process.

#### How to Use Java Client Manufacturer Name Automatic Validation

Whenever manufacturer name automatic validation is used, follow these steps:

1. In the **Manufacturer Name** field of the create or edit dialog, type the name of the manufacturer or
a portion of the name for which you want to search.

If you enter a valid and unique manufacturer name, Agile selects that manufacturer name and the Validate checkmark is disabled. Press the Tab key to move to the next field in the dialog.

**Note** You may leave the Manufacturer Name field blank. When the resolution dialog appears, use the search options to search for the manufacturer you want or create a new manufacturer.

For example, if you want to find the manufacturer name Motorola, you can type any of the following text strings to begin your search. Agile performs a Starts With search for any manufacturer name that starts with the letters you typed.

mot
motorla
mo

**Note** Agile automatically adds an asterisk character * to the end of the text string.

2. When you move the cursor out of the Manufacturer Name field, the validation process begins and the validation dialog appears. You can move the cursor out of the name field using any of the following methods:
   - Press the Tab key.
   - Click the Validate checkmark in the Manufacturer Name field.
   - Click another field in the dialog.
   - Attempt to exit the edit dialog by clicking Save (Web Client) or OK (Java Client).
   - Attempt to exit the create dialog by clicking Continue or Finish (Web Client) or OK (Java Client).

3. In the resolution dialog, select a manufacturer name in the search results and click OK. The resolution dialog closes and the selected manufacturer name appears in the Manufacturer Name field of the create or edit dialog.

   If the manufacturer name you want does not appear in the search results, you can:
   - Run another search.
   - Select a search method. If you choose to perform a simple search, enter the value to search for and click Search. You can also define an advanced search, run a saved search, or select a bookmarked or recently visited item (Shortcuts). (For more information about searches, see Getting Started with Agile PLM.)
   - Create a new manufacturer object.
     - Click the Create button in the resolution dialog to create a manufacturer object; see Creating Manufacturers on page 52.

See also: Where is Manufacturer Name Automatic Validation Used? on page 57

**Creating a Manufacturer Part Using the Save As Feature**

Using the Save As feature is a quick way to create a manufacturer part that is similar to an existing manufacturer part.
Caution  In general, you should not use Save As to create an object in a different class or subclass (type) from the original object. The different classes or subclasses may not have the same tabs or defined fields, and you may lose access to some data in the newly created object.

To create a manufacturer part using the Save As command in Web Client:

1. Select and open an existing manufacturer part.
2. Choose Actions > Save As. The Save As dialog appears.
3. If appropriate, select a different manufacturer part type (subclass) from the list.
4. Select the manufacturer of the new manufacturer part, if desired.
   
   Note  If you want to use the same manufacturer, you do not need to modify the Manufacturer Name field.

   a. To select a different manufacturer for the new manufacturer part by use one of the following methods:

   Type-ahead search:
   - In the Manufacturer field, begin typing the name of the manufacturer. Agile PLM searches for manufacturer names that begin with the characters you type.
   - As you type, Agile PLM displays a list of the matching values alphabetically and automatically displays the first matching value in the Manufacturer field.
   - Use the up arrow and down arrow keys to highlight a specific value in the list. Press the Return key to select the highlighted value.
   - Or, click a value in the list to select it.

   Quick Search:
   - Click the Launch the Palette button.
   - Enter the search criteria and click Search. Agile PLM searches for manufacturer names that contain the specified text.
   - In the search results table, double-click the name of the manufacturer you want.
   - Press the Escape key to close the search palette.

   Quick New:
   - Click the  button.
   - In the Create New dialog, use the Type drop-down list to choose a manufacturer subclass.
   - Enter the name of the new manufacturer.

   b. Click Save.

5. Enter the new manufacturer part number.
6. Complete any required fields.
7. Click Save.
   
   The new manufacturer part opens with the General Info tab on top.

8. Make any necessary modifications to the other tabs.
To create a manufacturer part using the Save As command in Java Client:

1. Select and open an existing manufacturer part.
2. Choose File > Save As.
3. If appropriate, select a different manufacturer part type (subclass) from the list.
4. Select the manufacturer of the new manufacturer part.

   **Note** If you want to use the same manufacturer, you do not need to modify the Manufacturer Name field.

   In the Manufacturer Name field, type the manufacturer name or a portion of the manufacturer name. Press the Tab key or click the Validate checkmark.
   - If you enter a valid and unique manufacturer name, Agile selects that manufacturer name and the Validate checkmark is disabled. Press the Tab key to continue with the next step.
   - If you did not enter a valid and unique manufacturer name, the resolution dialog appears.
     In the resolution dialog, select the manufacturer you want and click OK.
     If the manufacturer you want does not appear in the search results, you can perform another search or you can create a new manufacturer:
     - **Search** – In the resolution dialog box, select a search method. If you choose to perform a simple search, enter the value to search for and click Search. You can also define an advanced search, run a saved search, or select a bookmarked or recently visited manufacturer (Shortcuts). (For more information about searches, see Getting Started with Agile PLM.) In the search results, select the manufacturer you want, and click OK.
     - **Create** – If you need to create a new manufacturer for the manufacturer part, click the Create link in the Select Objects dialog box. A dialog box opens that allows you to select the manufacturer type (subclass) in the Type drop-down list and enter the manufacturer name. Click OK. The resolution dialog box closes and the newly created manufacturer is selected.

   For further details, see How to Use Manufacturer Name Automatic Validation on page 57.

See also: Creating a Manufacturer Part in Java Client on page 56, Creating a Manufacturer Part in Web Client on page 55.

Modifying Manufacturing Objects

Any user with the necessary privileges and licenses can modify information about a manufacturing object. Manufacturing objects are not required to go through the change control process; all modifications go into effect immediately.

   **Caution** If you change a manufacturer part number or manufacturer name, these changes are automatically made to the Manufacturers tab of the items where the manufacturer or manufacturer part is listed and to any other tabs where the manufacturer is listed, such as the Where Used tab.

See also: Creating Manufacturers on page 52, Creating Manufacturer Parts on page 55.
Deleting Manufacturing Objects

For important details about deleting manufacturing objects, see Deleting Agile Objects on page 207.

Manufacturers Tab of an Item

This section includes the following topics:
- Manufacturers Tab Buttons on page 61
- Manufacturers Tab Fields on page 62

The Manufacturers tab displays information taken from related manufacturing objects. For more information, see Manufacturers Tab on page 7.

See also: Working with Manufacturing Data on Preliminary Items on page 64, Modifying Manufacturing Data from the Redlines Tab on page 67.

Manufacturers Tab Buttons

The following table lists the buttons on the Manufacturers tab of an item.

<table>
<thead>
<tr>
<th>Button or Action, Web Client</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Edit mode – Enter edit mode by double-clicking any editable table cell. Save Cancel</td>
<td>Lets you edit the AML table using Web Client table editing features. The editable fields are in the form of text boxes, list boxes, and so on. Use the Save and Cancel buttons to either save or cancel your edits.</td>
</tr>
<tr>
<td>Remove</td>
<td>Removes the selected rows from the table.</td>
</tr>
<tr>
<td>Add</td>
<td>Displays the Web Client table addition tool, which allows you to select manufacturer parts to add to the AML table by type-ahead searching, quick searching, or by creating a new manufacturer part. You can use this button if there is no ECO or MCO created against the item.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Button, Java Client</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Edit (Java Client)</td>
<td>Lets you edit the AML row by displaying the selected rows in edit mode. The editable fields are in the form of text boxes, list boxes, and so on.</td>
</tr>
</tbody>
</table>
### Agile Product Lifecycle Management

#### Button, Java Client

<table>
<thead>
<tr>
<th>Button</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><img src="image" alt="Remove" /> <strong>Remove</strong> (Java Client)</td>
<td>Removes the selected rows from the table.</td>
</tr>
<tr>
<td><img src="image" alt="Add &gt; Create" /> <strong>Add &gt; Create</strong> (Java Client)</td>
<td>Adds a manufacturer part at the end of the table. It can be an existing manufacturer part or one you create while adding it. (Use the button drop-down list to choose either the Search or Create add method.) You can use this button if there is no ECO or MCO created against the item.</td>
</tr>
<tr>
<td><img src="image" alt="Add &gt; Search" /> <strong>Add &gt; Search</strong> (Java Client)</td>
<td></td>
</tr>
<tr>
<td><img src="image" alt="View Redline" /> <strong>View Redline</strong> (Java Client)</td>
<td>For the selected row, opens the associated change object with the Redline Manufacturers tab displayed.</td>
</tr>
</tbody>
</table>

See also: [Working with Manufacturing Data on Preliminary Items](#) on page 64.

### Manufacturers Tab Fields

The following table lists the default fields on the Manufacturers tab of an item. The Agile administrator may have created additional fields.

<table>
<thead>
<tr>
<th>Field name</th>
<th>Description</th>
</tr>
</thead>
</table>
| ![Has Attachment](image) | Has Attachment  
The appearance of this icon indicates that the manufacturer part has an attachment.  
Click this icon to open the manufacturer part with its Attachments tab displayed. |
| Mfr.Name | The name of the manufacturer. |
| Mfr. Part Number | The number assigned to the manufacturer part by the part’s manufacturer. |
| Mfr. Part Description | The description assigned to the manufacturer part by the part’s manufacturer. |
| Mfr. Part Lifecycle Phase | Indicates whether the manufacturer is an active manufacturer of the part. |
| Preferred Status | Indicates whether the manufacturer is preferred or an alternate for this part. |
| Sites | Lists the sites that use the manufacturer part. |
| Reference Notes | Notes about the manufacturer. |
| Summary Compliance | Compliance information. For more information, see *Product Governance & Compliance User Guide*. |
| AML Split | Lets you define the percentage allocated for the manufacturer part at the selected site. For more information, see *Product Cost Management User Guide*. |

(Visible only if the Agile administrator has enabled it)
See also: Working with Manufacturing Data on Preliminary Items on page 64, Modifying Manufacturing Data from the Redlines Tab on page 67, Viewing AML Information by Site on page 63.

**Viewing AML Information by Site**

You can view the AML for a specific site by selecting a site from the Site drop-down list above the tabs. Sites included in the list are the ones specified on the item’s Sites tab that are also listed in the Sites field of your user profile.

When you select a site, the Manufacturers tab displays the common AML plus the AML of the site you selected. To view the AML for all sites at once, select ALL in the Site list.

You can perform actions only on the items associated with the selected site. For example, if you select San Francisco in the Site drop-down list, you see all manufacturer parts that are part of the common and San Francisco portions of the AML.

The Rev and Site drop-down lists work independently. For more details, see Working with Item Revisions on page 10.

**Associating a Manufacturer Part with Its Corresponding Item**

After you have created a manufacturer and a manufacturer part, you associate them with a part in the Agile PLM system. You do this by adding the manufacturer part to the Manufacturers tab of the Agile part only for preliminary items. Otherwise, this requires a change through an MCO, ECO, or SCO. This establishes the link between “your” part and “their” part, which makes it possible to track their part’s use throughout the system.

You can list more than one manufacturer part from the same manufacturer, or from more than one manufacturer. For example, if a manufacturer makes two parts that you sometimes use for that assembly, you can mark one as Preferred and the other as Alternate. (You can do the same thing if two different manufacturers supply a part.)

**Note**

If you want a manufacturer part to apply to a specific site, before adding the manufacturer part to the Manufacturers tab, select that site from the Site drop-down list above the tabs.

Depending on the state of an item (and your licenses and privileges), you can modify Manufacturers tab data by one of these methods:

- Add or modify directly on the Manufacturers tab of items. This method is for preliminary items with no pending or released ECOs or MCOs. See Adding a Manufacturer Part to the Manufacturers Tab on page 64.

- Use an ECO, MCO, or SCO to modify manufacturing data on the redlines tab. This method is for released items or items with pending ECOs or MCOs. See Adding a Manufacturer Part on the Redline Manufacturers Tab on page 69.
Important Considerations When Working with Manufacturing Objects

Once a manufacturing object has been used on an item’s Manufacturers tab, any alterations you make to the manufacturing object are also made on that item’s Manufacturers tab. Because manufacturing objects are not required to go through the change control process, all modifications that are made go into effect immediately. Because these alterations are not made by means of a change, they won’t be passed to the ERP system by ChangeCAST or Agile Content Service. To avoid potential problems between the Agile PLM and ERP systems, it is important to bear this in mind when making changes to any manufacturing object that is in use on an item’s Manufacturers tab.

See also: Modifying Manufacturing Data from the Redlines Tab on page 67.

Working with Manufacturing Data on Preliminary Items

The following sections describe how to modify data directly on the Manufacturers tab of an item has not been released and does not have a pending revision:

- Adding a Manufacturer Part to the Manufacturers Tab on page 64
- Deleting a Manufacturer Part from the Manufacturers Tab on page 66
- Modifying a Manufacturer Part on the Manufacturers Tab on page 66

Adding a Manufacturer Part to the Manufacturers Tab

You can add manufacturer parts to the Manufacturers tab of an item.

**To add a manufacturer part to the Manufacturers tab in Web Client:**

1. On the Manufacturers tab, select the site for which you want to add the manufacturer part from the Site drop-down list.
2. Click the Add button. The table addition palette appears adjacent to the Mfr. Part Number column.
3. Select the manufacturer part by using one of the following methods:
   - **Type-ahead search:**
     - If you did not select a site in the object Site drop-down list, you can select a site now in the palette drop-down list.
     - In the Mfr. Part Number field, begin typing the number of the manufacturer part. Agile PLM searches for manufacturer part numbers that begin with the characters you type.
     - As you type, Agile PLM displays a list of the matching values alphabetically and automatically displays the first matching value in the Mfr. Part Number field.
     - Use the up arrow and down arrow keys to highlight a specific value in the list. Press the Return key to select the highlighted value.
     - Or, click a value in the list to select it.
Quick Search:

• Click the Launch the Palette button.
• If you did not select a site in the object Site drop-down list, you can select a site now in the palette drop-down list.
• Enter the search criteria and click Search. Agile PLM searches for manufacturer part numbers that contain the specified text.
• In the search results table, double-click the name of the manufacturer part you want. Or, highlight a search result row and press Enter.
• Press the Escape key to close the search palette.

Create New:

• Click the Create to Add button.
• In the Create New dialog, use the Type drop-down list to choose a manufacturer subclass.
• Select the name of the new manufacturer.
• Enter the manufacturer part number.
• If you did not select a site in the object Site drop-down list, you can select a site now in the palette drop-down list.
• Click Add.

To add a manufacturer part to the Manufacturers tab in Java Client:

1. On the Manufacturers tab, select the site for which you want to add the manufacturer part from the Site drop-down list.

2. In the Add button drop-down list, choose either Add > Create or Add > Search.

3. If you chose Add > Create:
   a. Fill in the required information in the New dialog box. See Creating Manufacturers on page 52.
      If you enter information for a manufacturer part that already exists, Agile displays a prompt asking if you want to use the existing manufacturer part when you click OK in step c.
   b. If you have not already done so, select the site to which you want to associate the manufacturer part for this item. Select Common if you want to associate the manufacturer part with this item for all sites assigned to this item.
   c. Click OK.

4. If you chose Add > Search:
   a. In the Select Objects dialog box, select a search method to search for an existing manufacturer part, or select a bookmarked or recently visited manufacturer part (Shortcuts). If you choose to perform a simple search, enter the value to search for. (For more information about searches, see Getting Started with Agile PLM.)
   b. If you have not already done so, select the site to which you want to associate the manufacturer part for this item. Select Common if you want to associate the manufacturer part with this item for all sites assigned to this item.
   c. Click OK.
Deleting a Manufacturer Part from the Manufacturers Tab

To delete a manufacturer part from the Manufacturers tab of an item still in the Preliminary state in Web Client:
1. On the Manufacturers tab, select the manufacturer part row to be deleted.
2. Click the Remove button on the Manufacturers tab.

To delete a manufacturer part from the Manufacturers tab of an item still in the Preliminary state in Java Client:
1. On the Manufacturers tab, select the manufacturer part row to be deleted.
2. Click the Remove button on the Manufacturers tab.

See also: Modifying Manufacturing Data from the Redlines Tab on page 67.

Modifying a Manufacturer Part on the Manufacturers Tab

You can directly edit manufacturer part information from the Manufacturers tab of an item if the item is in the preliminary state, has never been released, and has no pending ECOs or MCOs against it.

To edit values for a manufacturer part in Web Client:
1. Open the item to be edited.
2. On the Manufacturers tab, Double-click any editable cell in the redline Manufacturers table to edit the field. The table is now in edit mode.
3. Press the Tab key or the arrow keys to move the focus to the next editable cell.
4. Use the tab toolbar buttons (Add, Remove, More) and table editing features to make the modifications you want.
5. Click Save to save your modifications.

To edit values for a manufacturer part in Java Client:
1. Open the item to be edited.
2. On the Manufacturers tab, select the rows that you want to edit.
3. Click the Edit button, and change the data as necessary in the Edit dialog box.
   You can use the navigation buttons in the open Edit dialog box to select other rows to edit.
4. Click OK.

See also: Modifying Manufacturing Data from the Redlines Tab on page 67.
Modifying Manufacturing Data from the Redlines Tab

If you have the appropriate privileges and Agile system SmartRule settings allow it, you can modify AML information through the Redline Manufacturers tab of an ECO, MCO, or SCO.

This section contains the following topics:
- Overview of Redlining Manufacturing Data on page 67
- Redline Manufacturers Tab on page 67
- Adding a Manufacturer Part on the Redline Manufacturers Tab on page 69
- Adding Nonexistent Manufacturer Parts on the Redlines Tab on page 69
- Deleting a Manufacturer Part from the Redlines Tab on page 70
- Editing Manufacturer Part Information on the Redline Manufacturers Tab
- Undoing Changes to the Redline Manufacturers Tab on page 71

Overview of Redlining Manufacturing Data

On some Agile PLM systems, depending on how the Agile administrator has configured settings, you can make manufacturer part redline changes from ECOs, SCOs, and MCOs. MCOs can redline only manufacturer parts data; ECOs can redline manufacturer parts data, BOMs, and attachments; SCOs can redline manufacturer parts data and BOMs for specific sites only.

MCOs and SCOs do not advance, or roll, the revisions of the affected items; ECOs do.

Redlining manufacturing data from an ECO or SCO is the same as the process from an MCO. However, because you can use ECOs to redline manufacturing data, BOMs, or attachments, the ECO redlines include a Redline BOM tab, a Redline Manufacturers tab, and a Redline Attachments tab. The SCO redlines include a Redline BOM tab and a Redline Manufacturers tab.

Note If a change includes conflicting redlines made from multiple manufacturing sites, those conflicting redlines are removed from the BOM and Manufacturers table for all associated sites.

For more information about changes, see the chapter Changes on page 115.

Redline Manufacturers Tab

You display the Redline Manufacturers tab from the Affected Items tab of an ECO, MCO, or SCO.

To open the redlines for an item's AML in Web Client:
1. Open the change through which you want to redline an item's AML.
2. On the Affected Items table, select the item you want to redline.
   
   When you choose a view in the Views list that excludes Sites information (for example, Hide Site Rows), the items are listed once on the Affected Items table. When you choose a view in
the Views list that includes Sites information (for example, Base View), the items are listed multiple times, once for each site. Simply select one row in the table; if needed, you can select a different site setting on the Redline Manufacturers tab.

3. In the redlines pane at the bottom of the Affected Items tab, display the Manufacturers tab.
   If you selected a site-specific row in the Affected Items table, only that row appears in the redline Manufacturers tab. If you selected the common site row in the Affected Items table, both the common manufacturer part row and the site-specific manufacturer part rows are displayed in the redline Manufacturers tab.

4. Double-click any editable cell in the redline Manufacturers table to edit the field. The table is now in edit mode.

5. Use the tab toolbar buttons (Add, Remove, Undo Redlines, More) and table editing features to make the modifications you want.

6. Click Save to save your modifications. See the following table for details.

<table>
<thead>
<tr>
<th>Web Client button</th>
<th>Action</th>
</tr>
</thead>
<tbody>
<tr>
<td>Double-click an editable cell to enter table edit mode.</td>
<td>Use the Web Client edit features to edit table cells. Press Tab or arrow keys to move the focus to the next editable cell.</td>
</tr>
<tr>
<td>More menu</td>
<td>In table edit mode, choose Copy, Paste, Fill-down, Fill-down (selected cells), Fill-up, Fill-up (selected cells)</td>
</tr>
<tr>
<td>Save</td>
<td>Saves modifications made in table edit mode.</td>
</tr>
<tr>
<td>Remove</td>
<td>Redline-deletes the selected rows from the redline Manufacturers table.</td>
</tr>
<tr>
<td>Undo Redlines</td>
<td>Clears the redlines from the selected rows. See Undoing Changes to the Redline Manufacturers Tab on page 71.</td>
</tr>
<tr>
<td>Add</td>
<td>Lets you redline-add a manufacturer part to the item.</td>
</tr>
</tbody>
</table>

To open the redlines for an item’s AML in Java Client:

1. Open the change through which you want to redline an item’s AML.

2. In the Affected Items table, select the item you want to redline.
   The View drop-down list has two settings: Hide Sites and Show Sites. When you select Hide Sites, the items are listed once on the Affected Items table. When you select Show Sites, the items are listed multiple times, once for each site. Simply select one row in the table; if needed, you can select a different site setting on the Redline Manufacturers tab.

3. In the bottom pane of the Affected Items tab, display the Redline Manufacturers tab.

4. In the Site drop-down list, select the site for which you want to redline manufacturer part information. Select ALL to redline manufacturer part information for all the item’s sites.

5. Select a row in the Redline Manufacturers table and use the buttons to make the modifications you want. See the following table for details.
If a row in the table has a red line through every cell, it means that manufacturer part was deleted from the Manufacturers table. If just a few of the cells have a short red line through them, it means Manufacturer table attributes were modified. Any cell that was modified has a red line through the old value; the new value appears in red.

See also: Changes on page 115, Affected Items of Changes on page 137.

### Adding a Manufacturer Part on the Redline Manufacturers Tab

**To add a manufacturer part to the Redline Manufacturers tab in Web Client:**

1. Follow the instructions in Redline Manufacturers Tab on page 67.
2. When the redline Manufacturers tab is displayed, click the Add button and use the Web Client object selection palette features to search for and select the manufacturer parts you want.
3. Continue as described in Adding a Manufacturer Part to the Manufacturers Tab on page 64.

**To add a manufacturer part to the Redline Manufacturers tab in Java Client:**

1. Follow the instructions in Redline Manufacturers Tab on page 67.
2. When the Redline Manufacturers tab is displayed, use the Add button drop-down list to choose Add > Search to search for a manufacturer part.
3. Continue as described in Adding a Manufacturer Part to the Manufacturers Tab on page 64.

### Adding Nonexistent Manufacturer Parts on the Redlines Tab

To create a new manufacturer part to add to the Manufacturers tab:

- In Web Client, use the Add button, then click the Create to Add button in the search palette.
- In Java Client, use the Add button drop-down list to choose Add > Create.

If you use this option, you must also select a manufacturer from a list of existing manufacturers or, if needed, create a new manufacturer. See Adding a Manufacturer Part to the Manufacturers Tab on
Deleting a Manufacturer Part from the Redlines Tab

Redline-deleting a manufacturer part has these behaviors:

- If the selected row is red, redline-deleting it removes the row.
- If the selected row is black, redline-deleting it puts a red line through the row.

To delete a manufacturer part in Web Client:
1. Select the row to delete.
2. Click the Remove button on the redline Manufacturers tab.

To delete a manufacturer part in Java Client:
1. Select the row to delete.
2. Click the Remove button on the Redline Manufacturers tab.

See also: Overview of Redlining Manufacturing Data on page 67.

Editing Manufacturer Part Information on the Redline Manufacturers Tab

An item’s AML (approved manufacturers list) is represented by the rows of information on the item object Manufacturers tab. Each row in the AML table represents a manufacturer part. If the item has not yet been released, you can edit this table on the item Manufacturers tab, for example, add or remove manufacturer parts, modify editable fields, including any editable custom fields that the Agile administrator has enabled. Your assigned roles and privileges determine which AML table fields you are allowed to edit. See Modifying a Manufacturer Part on the Manufacturers Tab on page 66.

If the item has been released or has a pending revision, you must use the Redline Manufacturers tab to modify the item’s AML (Manufacturers tab). You display the Redline Manufacturers tab from the Affected Items tab of an ECO or MCO.

On the Redline Manufacturers tab you can make the same modifications that you are allowed to make on an unreleased item’s Manufacturers tab, including modifying any editable custom fields that the Agile administrator has enabled.

If the Agile administrator has enabled them, the item Manufacturers tab may also include read-through fields that display additional information derived from the manufacturer object or the manufacturer part object, for example, the manufacturer address fields or the manufacturer part Page Two fields. On both the item Manufacturers tab and the Redline Manufacturers tab, a read-through field contains a read-only copy of attribute data from a manufacturer or manufacturer part.

Note: You cannot use the item Manufacturers tab or Redline Manufacturers tab to modify the read-through fields nor to modify the attributes of the manufacturer part objects. The Manufacturers tab and Redline Manufacturers tab are used only for defining the item’s AML—the relationship between the item and the manufacturer parts.

To modify the attributes of a manufacturer or manufacturer part, you must open the manufacturer or
manufacturer part and then modify it with the edit feature. See Modifying Manufacturing Objects on page 60.

For more information about read-through fields and about which fields are editable on the item Manufacturers tab, see the Administrator Guide.

| Note | Your assigned roles and privileges also determine which attributes you are allowed to edit. |

To edit a field on the redlines tab in Web Client:
1. Double-click any editable cell in the redline Manufacturers table to edit the field. The table is now in edit mode.
2. Use the tab toolbar buttons (Add, Remove, Undo Redlines, More) and table editing features to make the modifications you want.
3. Click Save to save your modifications.

To edit a field on the redlines tab in Java Client:
1. Select one or more rows to edit, and click the Redline Manufacturer button.
2. In the Redline Manufacturers dialog box, make the required changes in the fields. Use the buttons in the upper left corner to display and edit other rows in the table.
3. When you are finished, click OK.

Agile PLM draws a red line through the old information and enters the new information, in red, below the old information.

See also: Changes on page 115, Affected Items of Changes on page 137.

Undoing Changes to the Redline Manufacturers Tab

The Undo Redlines button lets you undo modifications to the redlines tab. The Undo Redlines button removes the red elements from the selected rows.

To undo a deletion (where Agile PLM has drawn a red line through the entire row):
1. Select a deleted row.
2. Click the Undo Redlines button.
   Web Client: Undo Redlines button.
   Java Client: button.
3. Respond to the confirmation dialog.
   Web Client: Click Undo.
   Java Client: Click Yes.

To undo a modification (where Agile PLM has drawn a short red line through the modified value):
1. Select the modified row.
2. Click the Undo Redlines button.
Web Client: Undo Redlines button.
Java Client: button.

3. Respond to the confirmation dialog.
   Web Client: Click Undo.
   Java Client: Click Yes.

See also: Modifying Manufacturing Data from the Redlines Tab on page 67.

Printing Manufacturing Objects and AMLs

You can print object tabs and other data from your Agile PLM system. You can print the current tab or all tabs. Attachments are printed from their native applications or the AutoVue for Agile viewer.

In Web Client, with the object open, choose Actions > Print.

In Java Client, with the object open, use the Print button.

For additional information about printing objects, see Getting Started with Agile PLM.
Chapter 4

Bills of Material

This chapter includes the following:

- About Bills of Material ................................................................. 73
- BOM Tab .................................................................................... 73
- Opening Items on a BOM ............................................................. 80
- Revisions Listed on BOMs ........................................................... 84
- About Modifying the BOM Table ................................................ 84
- Working with Reference Designators ......................................... 99
- Redlining the BOM of a Released Item ....................................... 108
- Printing BOM Data ..................................................................... 114

About Bills of Material

A bill of material (BOM) is a listing of all the subassemblies, parts, and raw materials that go into a parent assembly. It shows the quantity of each part required to make an assembly. Items on a BOM can be single items or assemblies of several items.

Documents may or may not have BOMs, depending on your system settings.

BOM items can apply to all manufacturing sites where the product is built, some sites, or just one site. The common portion of the BOM lists all the parts that the assembly shares between sites. Each site can add other objects to the BOM table that are site-specific—for example, documents containing assembly instructions that are specific to how something is built at that site. When you select Show Sites on the BOM tab, BOM items used by multiple sites are listed multiple times on the BOM tab, once for each site.

See also: Sites and Distributed Manufacturing on page 29.

BOM Tab

This section includes the following topics:

- How the Agile Administrator Controls What You See on page 74
- BOM Tab Buttons on page 74
- BOM Table Fields on page 76

The BOM tab lists all the items on a BOM.

The BOM table displays the items on the BOM in a graphical hierarchy, using icons to indicate whether an item number represents:

- A part
How the Agile Administrator Controls What You See

The Agile administrator may assign to you:

- **Discovery privileges**, which determine and limit which Agile objects you can find, or discover, in the Agile PLM database.
- **Read privileges**, which determine and limit which discovered Agile objects you can open and read and which specific fields you can view on the Agile objects that you can open and read.
- **Sites**, which determine and limit the site-specific information you can see and modify on BOMs and AMLs.

If you do not have the Discovery privilege for an item, that item may not be displayed on the BOM table, depending on which SmartRule setting the Agile administrator has selected. For the BOM table only, the SmartRule setting is also applied to the fields for which you do not have Read privilege.

The items on the BOM for which you do not have Discovery privilege and the fields on the BOM table for which you do not have Read privilege are indicated by one of the following methods:

- Only the item number and rev are displayed on the BOM table. You cannot open the item if you do not have Discovery privilege.
- Only the item description is displayed on the BOM table. You cannot open the item if you do not have Discovery privilege.
- The item is not displayed on the BOM table. A message at the top of the BOM table tells you how many items have not been displayed.

There is no indicator for inaccessible site information.

If you have questions about your Discovery or Read privileges or the sites assigned to you, see the Agile administrator.

See also: Opening Items on a BOM on page 80.

**BOM Tab Buttons**

This section includes the topics:

- Web Client BOM Tab Buttons on page 75
- Java Client BOM Tab Buttons on page 76

See also: BOM Table Fields on page 76.
Web Client BOM Tab Buttons

The following table explains the BOM tab buttons that appear in Web Client.

**Note** The Actions menu lets you print, email, export, and perform other activities from the BOM tab.

<table>
<thead>
<tr>
<th>Button or mode</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Double-click an editable cell to enter table edit mode.</td>
<td>Use the Web Client edit features to edit table cells. Press Tab or arrow keys to move the focus to the next editable cell.</td>
</tr>
<tr>
<td>Remove</td>
<td>Removes the selected rows from the BOM table.</td>
</tr>
</tbody>
</table>
| Add                          | **Add** — Adds an item or an empty row to the BOM table. Depending on which option you choose, you can:  
  Begin typing the number of an existing item and select from the displayed type-ahead search list.  
  Execute a Quick Search to find an existing item.  
  Type in Known Number(s) of one or more existing items.  
  Create an item while adding it.  
  Add a temporary item — adds a row to the BOM table that can be filled in later.  
  By default, the new item or row has a find number of zero (0) and a quantity of one (1). |
| Expanded Display             | Allows you to select how many BOM levels to display, and then displays the expanded BOM in the separate Expanded BOM Display window.  
  The Expanded BOM Display window includes Go To and Display Level controls and Print and Copy commands. |
| Go To                        | Takes you to a specific BOM item based on the criteria you enter in the Go To dialog box.  
  The Go To search can be limited to a particular BOM column and to the specified number of levels. For example, specifying level 3 searches through levels 1, 2, and 3. |
| ?                            | Double-click this cell to enter cell edit mode in order to fill in the temporary item placeholder row. |
| ⌂ Navigator                  | Displays the BOM tree in the navigation pane to the left of the object page. You can expand and collapse subassemblies and click any item number to open that item. This button appears above the item tabs and is always visible, regardless of which tab is displayed.  
  The BOM tree view does not automatically refreshed to match the BOM table. For example, if you expand the BOM table, the BOM tree in the navigation pane remains collapsed until you use the BOM tree controls. |

See also: [BOM Table Fields](#) on page 76, [Java Client BOM Tab Buttons](#) on page 76.
Java Client BOM Tab Buttons

You can print, send, export, and perform other activities from the BOM tab. Use the buttons on the top of the object window, including the More Actions menu (click the More button ...). Or, right-click in the item window to open the shortcut menu, and choose the command you want.

The following table explains the BOM tab buttons that appear in Java Client.

<table>
<thead>
<tr>
<th>Button</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><img src="image" alt="Go To " /></td>
<td>Go To — Finds and highlights a specific BOM item based on the criteria you enter in the Go To dialog box. The Go To search can be limited to a particular BOM column and to the specified number of levels. For example, specifying level 3 searches through levels 1, 2, and 3.</td>
</tr>
<tr>
<td><img src="image" alt="Expand Tree or Collapse All " /></td>
<td>Expand Tree or Collapse All — Select from menu. Expands or collapses all the subassemblies in the BOM. When expanded, all levels of the BOM are displayed.</td>
</tr>
<tr>
<td><img src="image" alt="Edit " /></td>
<td>Edit — Allows you to edit the selected rows in the BOM. You can edit the find number, quantity, reference designator and BOM notes. This button is available for introductory items that are not yet released, and have no changes pending against them.</td>
</tr>
<tr>
<td><img src="image" alt="Add " /></td>
<td>Add — Adds an item or an empty row to the BOM table. Depending on which option you choose, you can: Create an item while adding it. Search for an existing item. Type in Known Number(s) of one or more existing items. Add Blank Row — adds a blank row to the BOM table that can be filled in later. By default, the new item or row has a find number of zero (0) and a quantity of one (1).</td>
</tr>
<tr>
<td><img src="image" alt="Remove " /></td>
<td>Remove — Removes the selected rows from the BOM table.</td>
</tr>
<tr>
<td><img src="image" alt="View Redline " /></td>
<td>View Redline — Opens the change that released this revision of the Item, and displays the Affected Items tab and redline tabs. This button is disabled on pending revisions.</td>
</tr>
<tr>
<td><img src="image" alt="Select a BOM Item " /></td>
<td>Select a BOM Item — double-click in a blank row with this symbol to select or create an item number to fill in the blank row.</td>
</tr>
</tbody>
</table>

See also: BOM Table Fields on page 76, Web Client BOM Tab Buttons on page 75.

BOM Table Fields

The BOM table displays BOM item fields in columns. The Agile administrator configures the BOM table fields to meet the needs of your company. The columns that you see in your Agile PLM system may differ from the list of BOM table fields presented here. If you have questions about the BOM table fields, contact the Agile administrator.
# Web Client BOM Table Fields

Web Client BOM table fields and icons appear as listed in the following table.

<table>
<thead>
<tr>
<th>Web Client BOM column name or icon</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><img src="attachment.png" alt="Has Attachment" /></td>
<td>Has Attachment</td>
</tr>
<tr>
<td><img src="approved.png" alt="Has Approved Manufacturers" /></td>
<td>Has Approved Manufacturers</td>
</tr>
<tr>
<td><img src="pending.png" alt="Has Pending Changes" /></td>
<td>Has Pending Changes</td>
</tr>
<tr>
<td><img src="psr.png" alt="Has Product Service Requests" /></td>
<td>Has Product Service Requests</td>
</tr>
<tr>
<td><img src="item_number.png" alt="Item Number" /></td>
<td>Item Number</td>
</tr>
<tr>
<td><img src="item_description.png" alt="Item Description" /></td>
<td>Item Description</td>
</tr>
<tr>
<td><img src="item_rev.png" alt="Item Rev" /></td>
<td>Item Rev</td>
</tr>
<tr>
<td><img src="qty.png" alt="Qty" /></td>
<td>Qty</td>
</tr>
<tr>
<td><img src="find_num.png" alt="Find Num" /></td>
<td>Find Num</td>
</tr>
<tr>
<td><img src="ref_des.png" alt="Ref Des" /></td>
<td>Ref Des</td>
</tr>
<tr>
<td><img src="sites.png" alt="Sites" /></td>
<td>Sites</td>
</tr>
<tr>
<td><img src="bom_notes.png" alt="BOM Notes" /></td>
<td>BOM Notes</td>
</tr>
<tr>
<td><img src="prices.png" alt="Has Prices" /></td>
<td>Has Prices</td>
</tr>
<tr>
<td><img src="pending_declarations.png" alt="Has Pending Declarations" /></td>
<td>Has Pending Declarations</td>
</tr>
</tbody>
</table>

- A dot icon • in this column indicates that the item has an attachment.
- Click the dot icon • to open the BOM item with its **Attachments** tab displayed.
- A dot icon • in this column indicates that the item contains manufacturing data.
- Click the dot icon • to open the BOM item with its **Manufacturers** tab displayed.
- A dot icon • in this column indicates that the item has a pending change.
- Click the dot icon • to open the BOM item with its **Changes** tab displayed.
- A dot icon • in this column indicates that the item has a PSR (Product Service Request) or QCR (Quality Change Request) that is not closed.
- Click the dot icon • to open the BOM item with its **Quality** tab displayed.
- The **Item Number** field contains the item’s number. Click an item number to open that item page.
- The **Item Description** field contains the description of that item.
- The **Item Rev** field shows the revision number of the BOM item. The latest released revision is displayed.
- The **Qty** field shows the quantity of that item used in the assembly or subassembly.
- The **Find Num** field shows the internal number used to locate that item in an Agile BOM.
- The **Ref Des** field contains the reference designators.
- The **Sites** field shows which manufacturing site the item is associated with. Items associated with multiple sites are listed on the BOM once per site.
- The **BOM Notes** field contains notes about the item.
- A dot icon • in this column indicates that the item has a published prices.
- Click the dot icon • to open the BOM item with its **Prices** tab displayed.
- Has Pending Declarations
<table>
<thead>
<tr>
<th>Web Client BOM column name or icon</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>A dot icon • in this column indicates that the item has a pending declarations. Click the dot icon • to open the BOM item with its <strong>Compliance</strong> tab displayed.</td>
</tr>
</tbody>
</table>

**Note**  
The Effective From date is different from the Rev Release Date field on the Title Block tab. The rev release date is the release date of the ECO that released the current revision of the item.

### Java Client BOM Table Fields

Java Client BOM table fields and icons appear as listed in the following table.

<table>
<thead>
<tr>
<th>Field name</th>
<th>Description</th>
</tr>
</thead>
</table>
| ![Icon](https://example.com/icon) | Has Attachment  
The appearance of this icon indicates that the item has an attachment. Click this icon to open the BOM item with its **Attachments** tab displayed. |
| ![Icon](https://example.com/icon) | The appearance of this icon indicates that the item contains manufacturing data. Click this icon to open the BOM item with its **Manufacturers** tab displayed. |
| ![Icon](https://example.com/icon) | The appearance of this icon indicates that the item has a pending change. Click this icon to open the BOM item with its **Changes** tab displayed. |
| Item Number         | The **Item Number** field contains the item’s number. Click an item number to open that item page. |
| ![Icon](https://example.com/icon) | The appearance of this icon indicates that the item has a PSR (Product Service Request) or QCR (Quality Change Request) that is not closed. Click this icon to open the BOM item with its **Quality** tab displayed. |
| Item Description    | The **Item Description** field contains the description of that item. |
| Item Rev            | The **Item Rev** field shows the revision number of the BOM item. The latest released revision is displayed. |
| Qty                 | The **Qty** field shows the quantity of that item used in the assembly or subassembly. |
| Find Num            | The **Find Num** field shows the internal number used to locate that item in an Agile BOM. |
| Ref Des             | The **Ref Des** field contains the reference designators. |
| Sites               | The **Sites** field shows which manufacturing site the item is associated with. Items associated with multiple sites are listed on the BOM once per site. |
| BOM Notes           | The **BOM Notes** field contains notes about the item. |

**Note**  
The Effective From date is different from the Rev Release Date field on the Title Block tab. The rev release date is the release date of the ECO that released the current revision of the item.
Common and Site-specific Portions of the BOM

If your company is using distributed manufacturing, the BOM table may include both common portions and site-specific portions. The sites listed on an item’s Sites tab determine whether or not the item can be added to the common or site-specific portions of the BOM table.

In order to appear on common portion of the BOM table, an item’s Sites tab must include all the sites that appear on the parent item assembly’s Sites tab. For example, parent assembly 4444 includes the sites India and San Jose on its Sites tab. Items added to the common portion of the BOM table must also include at least India and San Jose on their Sites tab. If these items include additional sites on their Sites tab it does not prevent them from being included on the common portion of the BOM table of assembly 4444.

In a similar manner, items added to a site-specific portion of the BOM table must include at least that site on their Sites tab. For example, in order to be included on the India site-specific portion of the BOM table, items must include at least India on their Sites tab. If these items include additional sites on their Sites tab, it does not prevent them from being included in the India portion of the BOM table of assembly 4444.

Items that appear on the top level of the BOM must adhere to these rules. Items that appear on the BOM tables of subassemblies must appropriately match the sites list of their own parent item, but they do not need to match the top assembly item’s site list.

Important When you are creating or modifying a BOM table (adding by Search or Type in Known Numbers), if the appropriate sites are not associated with the added or modified item’s Sites tab, you will see a warning telling you that the item does not have the correct site association. Accept the warning to add the item anyway or cancel the action.

You will need to add the site associations to the child items before the assembly item is released. When an assembly is released, the item is audited for the proper site association of the items on the BOM table. Depending on Agile system SmartRule settings, you might not be able to release a change order or site change order if the site associations are not correct. See also Site-Specific Effectivity and Obsolete Dates.

If you use Add > Create to Add (Web Client) or Add > Create (Java Client), the appropriate site associations are automatically added during the create process.

See also: Sites and Distributed Manufacturing on page 29.

Viewing BOMs by Site

You can view the BOM for a specific manufacturing site by selecting a site from the Site drop-down list above the tabs. Sites included in the list are the ones specified on the item’s Sites tab. (For information about manufacturing sites, see Sites and Distributed Manufacturing on page 29.)

When you select a site, the BOM tab displays the common BOM plus the BOM of the site you selected. To view the BOM for all sites at once, select ALL in the Site list.

If your organization assigns colors to sites, the rows in the BOM table may appear in different colors, distinguishing one site from another. Site colors are assigned on the site General Info tab.

You can perform actions only on the items that are displayed in the BOM table. For example, if you
select San Francisco in the Site drop-down list, you see all items that are part of the common and San Francisco portions of the BOM, and you can modify the common portion of the BOM and the San Francisco portion of the BOM. However, you cannot modify the Hong Kong portion of the BOM; it is not displayed.

The Rev and Site drop-down lists work independently. For more details, see Working with Item Revisions on page 10.

Opening Items on a BOM

In general, you can open any item listed on a BOM by clicking its item number (Web Client) or by double-clicking its row (Java Client). When you open an item, its page appears.

This section includes the following topics:
- Opening a Part, Assembly, or Document from the BOM Tab on page 80
- Expanding and Collapsing an Assembly on page 80
- Using BOM Go To on page 81

Opening a Part, Assembly, or Document from the BOM Tab

Web Client:
- You can open any item listed on a BOM by clicking its item number.
- You can view any item listed in the BOM in the Quick View palette.
  - Place your cursor on the item number link until the Quick View tooltip appears.
  - Click the Quick View tooltip. The Quick View palette appears.
  - Use the Next and Back buttons in the Quick View palette to view the next or previous item in the BOM table.
  - Click the palette Close button to close the Quick View palette.

Java Client:
- You can open any item listed on a BOM by double-clicking its row.

You can also view the BOM of a pending revision by selecting the pending revision (marked with parentheses, for example, Rev (B)) from the Rev drop-down list above the tabs.

See Working with Item Revisions on page 10 for more information about viewing different revisions of the same item.

Expanding and Collapsing an Assembly

See also: Opening Items on a BOM on page 80.

Close-up of the BOM tree, Web Client:

To expand an assembly or subassembly, click before its item number.
To collapse an assembly or subassembly, click ▼ before its item number.

Close-up of the BOM tree, Java Client:
To expand an assembly or subassembly, click ▼ before its item number.
To collapse an assembly or subassembly, click ▼ before its item number.

Using BOM Go To
The BOM Go To feature allows you to search for a specific item in the BOM tree.

To use the BOM Go To feature in Web Client:
1. On the BOM tab, click the Go To button.
2. In the Go To Item in BOM dialog box, define your search:
   a. In the Find: field, enter the text you want to find. The Go To search finds any item that includes (contains) the specified text in its attribute fields. You can use any type of character, including numerals and punctuation.
   b. In the drop-down list, choose which BOM table column you want to search. You can choose all columns or one specific column.
   c. Check Match Case if you want to perform a case-sensitive search where text capitalization matters.
   d. Choose how many BOM levels you want to search: Enter a number or check All levels.
3. To start the search, click Find Next. The first item that matches the search criteria is highlighted in the BOM table.
4. Use the Find Next and Find Previous buttons to scroll up and down the BOM table, highlighting items that match the search criteria.
5. When you have found the item you want, click Close in the Go To Item in BOM dialog box. The last item you highlighted in the BOM table remains highlighted.

To use the BOM Go To feature in Java Client:

1. Click the item’s BOM tab to display it.
2. If you want to limit your search to a specific assembly, expand the BOM as needed, and select the assembly you want in the BOM table. Otherwise, go to the next step.
3. Click the Go To button.
4. In the Go To dialog box, define your search:
   a. Enter the text you want to find. The Go To search finds any item that includes (contains) the specified text in its attribute fields. You can use any type of character, including numerals and punctuation.
   b. In the drop-down list, choose which BOM table column you want to search. You can choose all columns or one specific column.
   c. Check Match case if you want to perform a case-sensitive search where text capitalization matters.
   d. Choose how many BOM levels you want to search: Enter a number or check All levels.
   e. If you selected an assembly in step 2, check Limit the search to the selected assembly to limit your search to the selected assembly. If you did not select an assembly, this checkbox is disabled.
5. To start the search, click Find.

The search results are displayed in a search results dialog box. If it is not already expanded, the BOM table in the object window is expanded to show the number of levels specified in the search criteria dialog box.

You can sort the search results in the following ways:

- Drag and drop the column headers to rearrange the order in which the columns are displayed.
- In the Add: [Available Columns] drop-down list, choose more columns to display. For
example, add the Sites column to the results table so you can sort items by their sites.

- To remove displayed columns, use the Remove: [Displayed Columns] drop-down list.

6. If you want to modify the search criteria and run the search again, click Criteria. The search results dialog box closes and the search criteria dialog box is displayed with the settings you last specified. To redefine the search, go to step 4 above.

7. Find the item you want in the search results table. Use the Next and Previous buttons to scroll up and down the search results list. You can also click an item’s row to select it. The selected item in the search results table is highlighted. At the same time, that item is also highlighted in the BOM table in the object window. Whenever you select a different item in the search results table, that item is then highlighted in the BOM table.

8. When you have found the item you want, click Close in the search results dialog box. The last item you selected in the search results table remains highlighted in the BOM table in the object window.

See also: Opening Items on a BOM on page 80.

**Expanded BOM Display Window, Web Client**

The Web Client Expanded Display button opens the BOM in a separate window called the Expanded BOM Display window. While the Expanded BOM Display window is open, the Web Client content pane remains visible. Clicking an item link in the Expanded BOM Display window causes that item to be opened in the Web Client content pane. In the content pane, you can click and open any item tab.

By using the Expanded BOM Display feature in Web Client, you can view and edit objects in the Web Client content pane while viewing the entire BOM structure in the Expanded BOM Display window at the same time.

In addition, you can have two Expanded BOM Display windows open at one time. Navigate to another BOM item, and use the Expanded Display button on the BOM tab to open a second Expanded BOM Display window.

To use the Web Client Expanded Display feature:

1. On the BOM tab, click the Expanded Display button.

2. In the Select Levels to Display dialog, choose how many BOM levels you want to display: All, or from 1 to 7 levels. Click Display.

3. The Expanded BOM Display window opens. The following controls are available in the Expanded BOM Display window:

   - **Go To** – Use this BOM Go To feature to find a specific BOM item in the Expanded BOM Display window. See Using BOM Go To on page 81.

   - **Display Levels** – Click this button to open the Select Levels to Display dialog. If desired, choose a different BOM level to display.

   - **More menu** - This menu includes the following commands:
      - **Print** – Choose More > Print. In the Print Options dialog, you can choose to include manufacturers, preview the print page, print, or cancel.
      - **Copy** – Select and highlight one or more rows in the Expanded BOM Display window table. Choose More > Copy. You can now paste those items into any appropriate table in the Web Client content pane.
**Refresh** – Click **Refresh** to update the BOM information in the Expanded BOM Display window according to any modifications that have been made to the BOM.

4. In the Expanded BOM Display window, click any item link. That item is displayed in the Web Client content pane.

5. Close the Expanded BOM Display window by clicking the **Close** button.

### Revisions Listed on BOMs

The revision number (or letter) that appears in the **Item Rev** field of the BOM table is calculated by checking the release date of the parent item (if already released), then locating the latest revision of the child item prior to that date and analyzing it. If the parent item hasn’t been released, the most recent revision of the child item is found. For details, see [Details About Revision Display on BOMs on page 202](#).

**Caution** Be aware that the unrelease and release of child items may affect the child revisions displayed on the parent BOM.

### BOMs of Items Affected by an ECO

When you create an ECO against an item, Agile PLM creates a new revision of any item affected by that ECO. The new revision has an updated BOM based on the redlines.

For example, consider the following scenario in which someone does the following:

1. Creates an ECO that modifies part 1000-02 by replacing the currently used 1.0 GB disk with a 2.1 GB hard disk.
2. Releases the ECO.
3. Examines the BOM of item 1000-02.

When the ECO is released, Agile PLM displays the changed item as a new revision of item 1000-02. The new revision incorporates the modifications made by the ECO.

See also: [Changes on page 115](#), [Affected Items of Changes on page 137](#).

### About Modifying the BOM Table

If an item is not yet released, and has no changes pending against it, you can modify the BOM table directly (add, delete, or edit items).

If the item has been released or has a pending MCO against it, you must write an ECO against the item and redline its BOM. (If the item already has a pending ECO against it, you can redline the BOM through the pending ECO without creating another ECO.) See [Redlining the BOM of a Released Item on page 108](#).

**Note** You can use an SCO to modify the Site-specific portion of the BOM of a released item.

The following table illustrates how an item’s BOM table can be modified as a preliminary item and
as a production released item.

<table>
<thead>
<tr>
<th>Phase 1</th>
<th>Phase 2</th>
<th>Phase 3</th>
<th>Phase 4</th>
</tr>
</thead>
</table>
| Part_123
Lifecycle = Preliminary
Revision = Introductory | Part_123
Lifecycle = Preliminary
Revision = (A) ECO_001 | Part_123
Lifecycle = Production
Revision = A ECO_001 | Part 123
Lifecycle = Production
Revision = (B) ECO_005 |

No pending changes.

Part_123 has not yet been released. You may modify the BOM table as explained in [Adding Items to the BOM Table of a Preliminary Item](#) on page 92.

| Part_123 has not yet been released. You may modify the BOM table as explained in [Adding Items to the BOM Table of a Preliminary Item](#) on page 92. | Modify the BOM table of Part_123 by redlining the BOM through ECO_001. | You cannot modify the BOM table of Part_123 because it has been production released. | Part_123 is production released. You must make all changes to the BOM table by creating a change and redlining the BOM. |
| Pending ECO_001 has not yet been released. It creates pending Revision (A). | ECO_001 releases Part_123. | ECO_005 creates pending revision (B) of Part_123. |

This section includes the following topics:

- [Modifying Site-Specific Portions of the BOM of a Preliminary Item](#) on page 85
- [Adding Items to the BOM Table of a Preliminary Item](#) on page 92
- [Modifying the BOM Table of a Preliminary Item](#) on page 97
- [Removing Items from the BOM Table](#) on page 98

**Modifying Site-Specific Portions of the BOM of a Preliminary Item**

If your organization practices distributed manufacturing, you can modify each manufacturing site’s portion of the BOM separately. To modify a site-specific item on the BOM, select the site in the Site drop-down list, then select the site-specific item you want to modify or edit. See [Modifying the BOM Table of a Preliminary Item](#) on page 97. When adding an item to the BOM, you select the site you want. See [Adding Items to the BOM Table of a Preliminary Item](#) on page 92.

**Note**

Modifying the site-specific portion of the BOM of a released item does not require a revision change and can be done through an SCO. Modifying the common portion of the BOM of a released item requires a revision change and can be done only through an ECO. For more information about modifying the BOM of an item that has been released, see [Changes](#) on page 115 and [Affected Items of Changes](#) on page 137.
Web Client, Adding Items to the BOM Table of a Preliminary Item

There are several different ways to add items to the BOM tab. You can:

- The **Add** button on the BOM table allows you to:
  - Type in the number of an item.  
    See Web Client, Type in the Number of an Item to Add to the BOM Table on page 86.
  - Execute a Quick Search by clicking the palette **Search to Add** button.  
    See Web Client, Quick Search to Add Items to the BOM Table on page 87.
  - Create a new item by clicking the palette **Create to Add**.  
    See Web Client, Create New to Add Items to the BOM Table on page 88.
- Execute a saved search; from the search results table, you can use the **More...** menu Copy command, or you can populate the **NAVIGATOR** drawer, then drag and drop to add to the BOM table.  
  See Web Client, Saved Search to Add Items to the BOM Table of a Preliminary Item on page 88.
- Open a custom search palette and define a search (Basic or Advanced) and search for the items you want to add.  
  See Web Client, Custom Search to Add Items to the BOM Table on page 89.
- Add a place-holder row with a temporary number, and select an item for that row later.  
  See Web Client, Adding a Place-holder Row to the BOM Table on page 90.
  - Edit the blank row to enter BOM row details, including a temporary Item Number or item descriptions.  
    See Web Client, Editing a Place-holder Row on page 91.
  - Complete a blank row by selecting the item you want to use.  
    See Web Client, Completing a Place-holder Row in the BOM Table on page 91.

See also: About Modifying the BOM Table on page 84.

Web Client, Type in the Number of an Item to Add to the BOM Table

If you know the number of the item you want to add to the BOM table, you can use the Type in Known Numbers option in Web Client. See also, Web Client, Quick Search to Add Items to the BOM Table on page 87 and Web Client, Create New to Add Items to the BOM Table on page 88.

**Note** If you enter a non-existent item number, Agile displays a warning. If you accept the warning, Agile adds a placeholder row with the non-existent item number. See also Web Client, Adding a Place-holder Row to the BOM Table on page 90.

To add one or more known items to the BOM table in Web Client:

1. Click the BOM tab.
2. If you want to add a site-specific item to the BOM tab, select the site you want in the item’s Site drop-down list. To add items to the common portion of the BOM, select ALL.

3. Click the Add button. The object addition palette appears.

4. In the text entry field, type the items numbers you wish to add, separated by semicolons. For example:
   P00487; P00259; P00264

5. Or, you can also use the Web Client Type-Ahead search feature:
   a. If you type a partial item number, Agile PLM displays a list of items that match the text typed so far.
   b. Use the arrow up and arrow down keys to highlight the object you want.
   c. Press the right arrow key to select the object.
   d. Repeat steps a through c to select multiple objects to add.

6. In the palette drop-down list, select the site you want. To add an item to the common portion of the BOM, select Common.

   If you have already selected the site you want in the item’s Site drop-down list, it is preselected for you in the palette.

7. Press the Enter key to add the selected items to the table and close the palette.

   The items appear in the BOM table.

8. To add items for a different site, select the site you want in the item’s Site drop-down list and repeat the procedure.

   For information about other methods of adding items to the BOM table, see Web Client, Adding Items to the BOM Table of a Preliminary Item on page 86.

Web Client, Quick Search to Add Items to the BOM Table

Use Web Client Add features to perform a quick search to find the items you want to add to the BOM table.

To execute a quick search to find one or more known items to add to the BOM table in Web Client:

1. Click the BOM tab.

2. If you want to add a site-specific item to the BOM tab, select the site you want in the item’s Site drop-down list. To add items to the common portion of the BOM, select ALL.

3. Click the Add button. The object addition palette appears.

4. Click the palette Search to Add button. The Items Search palette appears.

5. Enter the search criteria and click to execute the quick search.

6. In the results table, select one or more items, and then:
   • Press Enter on the keyboard to add the selected items to the BOM table.
   • Or, drag the selected items and drop them onto the BOM table.

   The items are added to the BOM table.

7. To add site-specific items, use the Site drop-down list in the Items Search palette to select the
8. When you are finished, press Escape on the keyboard to close the Items Search palette.

**Web Client, Create New to Add Items to the BOM Table**

You can add to a BOM an item that hasn’t been created yet.

**Adding nonexistent items to the BOM table using Web Client:**

1. Click the BOM tab.
2. If you want to add a site-specific item to the BOM tab, select the site you want in the item’s Site drop-down list. To add an item to the Common portion of the BOM, select ALL.
3. Click the Add button. The object addition palette appears.
4. Click the palette Create to Add button.
   The Create New dialog appears.
5. In the Create New dialog, use the Type drop-down list to select the type (subclass) of item you want to create.
6. Use the number that appears, click the Autonumber button, or type a number.
7. Type a description in the Description field, if desired.
8. In the Add for Site drop-down list, select the site you want. To add an item to the common portion of the BOM, select Common.
   If you have already selected the site you want in the item’s Site drop-down list, it is preselected for you in the dialog.
9. Complete any required fields.
10. Click Add.

**Note** If you create a new item and decide you do not wish to keep it, you should delete it from the database with the Delete command on the Actions menu. For more information about deleting items from the BOM, see the section, **Removing Items from the BOM Table** on page 98.

For information about other methods of adding items to the BOM table, see **Web Client, Adding Items to the BOM Table of a Preliminary Item** on page 86.

**Web Client, Saved Search to Add Items to the BOM Table**

Agile PLM table addition features allow you use a saved search to find items to add to the BOM table.

**To use a saved search in Web Client to locate items to add to the BOM table:**

1. Execute the saved search.
2. Use one of the following methods to add search result items to the BOM table:
3. **Copy and Paste:**
   a. In the Search Results table, select one or more item rows.
b. Copy the items by choosing **Copy** in the **More...** menu, or use the Ctrl + C keyboard shortcut.

c. Open the desired item and click the **BOM** tab to display the BOM table.

d. Choose **Paste** in the **More...** menu, or use the Ctrl + V keyboard shortcut.

4. **NAVIGATOR** Drawer:

   a. In the Search Results table, click the **Navigator** button. The **NAVIGATOR** drawer in the left navigation pane is populated with the search results.

   b. Select one or more items in the **NAVIGATOR** drawer. Click to the left of the item icon to highlight and select a **NAVIGATOR** link.

   c. Drag and drop the highlighted items onto the BOM table.

   d. Alternately, you can copy the **NAVIGATOR** highlighted items (Ctrl + C) and paste them into the BOM table (Choose **Paste** in the **More...** menu, or use the Ctrl + V keyboard shortcut.)

**Web Client, Custom Search to Add Items to the BOM Table**

In Web Client, you can execute a custom search to locate items to add to the BOM table. Then, use copy and paste to add the items to the BOM table.

You can execute a custom search in the content pane and use the search results table features to populate the **NAVIGATOR** drawer or copy search results rows and paste them into the BOM table. See **Web Client, Saved Search to Add Items to the BOM Table of a Preliminary Item** on page 88.

You can also open a custom search palette, which allows you to view the BOM table while you search for and select the items you want to add.

**To open a Custom Search palette to find items to add to the BOM table:**

1. Click the **BOM** tab to display the BOM table.

2. On the keyboard, press Ctrl + Shift + X. The custom search palette appears. The BOM table remains visible behind the palette.

3. In the search palette, define a Basic search or an Advanced search. Execute the search. For more information about defining searches, see **Getting Started with Agile PLM**.

   **Note** In the upper left corner of the custom search palette, click ▼ to collapse the entire palette; click ▲ to expand the palette again.

4. Select one or more search results rows.

5. Click the **Copy** button.

6. Put the focus in the BOM table by clicking in the content pane or by selecting a BOM table row, then choose **Paste** in the **More...** menu.

7. If the BOM item has sites, Agile PLM prompts you are prompted to select a site setting for the pasted BOM rows. In the prompt drop-down list, select the site you want. To add an item to the common portion of the BOM, select Common.

   You can execute multiple searches to find and select additional items.
8. Press the Escape key on the keyboard to close the custom search palette.

Note You cannot add a site-specific row to the BOM table for an item that belongs to a subclass for which the Site-Specific BOM property is set to Disallow. If you have questions, contact the Agile administrator.

For information about other methods of adding items to the BOM table, see Web Client, Adding Items to the BOM Table of a Preliminary Item on page 86.

Web Client, Adding a Place-holder Row to the BOM Table

In Web Client, you can add a place-holder row to the BOM table as a place holder for an item you want to add later. You can edit the BOM Notes field of a place-holder row to specify which type of object to add later.

For example, Bob is creating a BOM for a computer. He is not sure which specific power cord he wants to use. He adds a place-holder row to the BOM, then edits the fields on that place-holder row. He specifies the find number, reference designator, and quantity. In the BOM Notes field, he types a note about the type of power cord that should be included in the BOM. Later, when he views the BOM again, Bob sees the place-holder row. It reminds him that he must select the appropriate item number to complete the information needed in that BOM row. See also Web Client, Completing a Place-holder Row in the BOM Table.

To add a place-holder row to the BOM table in Web Client:

1. Click the BOM tab.

2. If you want to add the place-holder row to a site-specific portion of the BOM, select the site from the item’s Site drop-down list. If you want to add the place-holder row to the common portion of the BOM, select ALL in the item’s Site drop-down list. (Items or place-holder rows must be associated with the site for which you want to add them. See Associating a Site with an Item on page 40 for information.)

Note You cannot add a site-specific row to the BOM table for an item that belongs to a subclass for which the Site-Specific BOM property is set to Disallow. If you have questions, contact the Agile administrator.

3. Click the Add button. The object addition palette appears.

4. In the text entry field, type a text string that will not match an existing item number. For example:
   
   xyz-456

5. Press the Enter key.

   A warning appears stating that item xyz-456 does not exist.

   Note If you entered the number of an existing item in step 4 above, no warning appears and that item is added to the BOM.

6. Ensure that the Continue option is selected in the warning and click Finish.

   A place-holder row is added to the appropriate section of the BOM table with a default find number and a default quantity. The default find number is zero (0). The default quantity is set by the Agile administrator.
A red question mark icon ? precedes the place-holder number to indicate that information is missing in that row. For example:

?xyz-456

For information about other methods of adding items to the BOM table, see Web Client, Adding Items to the BOM Table of a Preliminary Item on page 86.

**Web Client, Editing a Place-holder Row**

In the same manner that you can edit any BOM row, you can also edit a place-holder row, which allows you to fill in some BOM table fields before you specify the object you want to add. For example, you can fill in the Quantity, Find Number, Reference Designators, and additional custom fields that the Agile administrator had defined.

You can also provide a temporary Item Number or a temporary description for the item by following the instructions below.

**To edit a place-holder row (including entering or editing a temporary Item Number or Item Description) using Web Client:**

1. To begin editing the BOM table, double-click in any editable cell.  
   The table enters edit mode and the Save and Cancel buttons become active (not grayed).

2. Make the required changes in each field. Navigate to other fields by clicking the field, pressing the Tab key, or using the arrow keys.

3. When you are finished, click Save.
   If you modified the temporary item number, Agile PLM displays a Warning dialog which includes a warning that the item number does not exist. To finish specifying the temporary item number, check the Ignore this warning checkbox and click Finish.

For information about methods of adding items to the BOM table, see Web Client, Adding Items to the BOM Table of a Preliminary Item on page 86.

**Web Client, Completing a Place-holder Row in the BOM Table**

In Web Client, you can complete a blank row in a BOM table using the procedures below. The following conditions apply:

- You can edit the BOM table and remove the place-holder BOM row provided that there is no pending change against the item.
- You can perform a redline remove of the place-holder BOM row in the change order Redline BOM tab provided that the change order has not been released.
- Temp BOM row replacement (a blank BOM row with a name) can take place outside of the BOM table edit process:
  - When you create an item with that place-holder BOM row name, for example, from the main Create menu.
  - When an existing item is renamed to the same name as the place-holder BOM item.
  - On a Save As of an existing item to a new item with the same name as the place-holder BOM item.
To complete a place-holder row in the BOM table using Web Client:

1. On the BOM table, double-click the place-holder number in the Item Number cell of the place-holder row; For example, to complete the following place-holder row, click the `xyz-456` link:
   ![xyz-456](image)
   The add item palette appears. The text entry field is prepopulated with the place-holder number, which is selected and highlighted.

2. Begin typing to enter an item number and replace the place-holder number. See Web Client, Type in the Number of an Item to Add to the BOM Table on page 86.
   Or, select a different palette option:
   - Click the palette `🔍 Search to Add` button to execute a quick search for the item you want. See Web Client, Quick Search to Add Items to the BOM Table on page 87.
   - Click the palette `✍️ Create to Add` button to create a new item. See Web Client, Create New to Add Items to the BOM Table on page 88.

3. Press Enter on the keyboard to add the item and close the add item palette.
   The place-holder item number is replaced in the BOM table.

For information about methods of adding items to the BOM table, see Web Client, Adding Items to the BOM Table of a Preliminary Item on page 86.

Java Client, Adding Items to the BOM Table of a Preliminary Item

In Java Client, there are several different ways to add items to the BOM tab. You can:
- Type in the number of an item. See Java Client, Type in the Number of an Item to Add to the BOM Table on page 92.
- Select one of the available search methods and search for the items you want to add. See Java Client, Search for Items to Add to the BOM Table on page 93.
- Create a new item. See Java Client, Adding Nonexistent Items to the BOM Table on page 97.
- Add a blank row, and select an item for that row later. See Java Client, Adding a Blank Row to the BOM Table on page 94.
  - Edit the blank row to enter BOM row details, including a temporary Item Number or item descriptions. See Java Client, Editing a Blank Row on page 95.
  - Complete a blank row by selecting the item you want to use. See Java Client, Completing a Blank Row in the BOM Table on page 96.

See also: About Modifying the BOM Table on page 84.

Java Client, Type in the Number of an Item to Add to the BOM Table

If you know the number of the item you want to add to the BOM table, you can use the Type in Known Numbers option in Java Client.
To add one or more known items to the BOM table in Java Client:

1. Click the BOM tab.
2. If you want to add a site-specific item to the BOM tab, select the site you want in the item’s Site drop-down list. To add items to the common portion of the BOM, select ALL.
3. Click the Add button. The object addition palette appears.
4. In the text entry field, type the number or name of the item you wish to add.
5. If you type a partial item number, Agile PLM displays a list of items that match the text typed so far.
6. Use the arrow up and arrow down keys to highlight the object you want.
7. Press the right arrow key to select the object.
8. Repeat steps 4 through 7 to select multiple objects to add.
9. In the palette drop-down list, select the site you want. To add an item to the common portion of the BOM, select Common.
   - If you have already selected the site you want in the item's Site drop-down list, it is preselected for you in the palette.
10. Press the Enter key to add the selected items to the table and close the palette.
   - The items appear in the BOM table.
11. To add items for a different site, select the site you want in the item's Site drop-down list and repeat the procedure.

For information about other methods of adding items to the BOM table, see Java Client, Adding Items to the BOM Table of a Preliminary Item on page 92.

Java Client, Search for Items to Add to the BOM Table

You can use a saved search or define either a simple search or an advanced search to find items to add to the BOM table. You can also select items in your Bookmarks folder or Recently Visited folder.

To search for and add one or more items to the BOM table in Java Client:

When you add an item to the BOM, it is added below the selected item.

1. Click the BOM tab.
2. If you want to add a site-specific item to the BOM tab, select the site you want in the item’s Site drop-down list. To add items to the common portion of the BOM, select ALL.
3. Click the Add drop-down menu button and choose the Search option. The Add BOM dialog appears.
4. To edit the item information immediately after adding items, ensure that Edit rows after adding is checked.
5. Search for one or more existing items. In the Add BOM dialog box, select a search method. If you choose to perform a simple search, enter the value to search for and click Search. You can also define an advanced search, run a saved search, or select a bookmarked or recently visited item (Shortcuts). (For more information about searches, see Getting Started with Agile PLM.)

6. In the search results, select the items you want by moving them into the Selected Item(s) list. You can run multiple searches to find and select additional items.

7. If you have not already done so, select a site in the Site field. To add the selected items to the Common portion of the BOM, select Common. If you previously selected a specific site in the item’s Site drop-down list, that site is preselected for you in the dialog.

8. Click OK.

9. If Edit rows after adding was checked, edit the item information in the Editing Added Rows dialog and click OK.

   All the items in the Selected Item(s) list are added to the BOM. The BOM tab Site column is automatically completed with the selected site as the associated site. If you added items to the Common portion of the BOM, then the Site column is blank to indicate that the item is common to all sites, instead of being specific to one site.

10. To add items for a different site, select the site you want in the item’s Site drop-down list and repeat the procedure.

### Note
You cannot add a site-specific row to the BOM table for an item that belongs to a subclass for which the Site-Specific BOM property is set to Disallow. If you have questions, contact the Agile administrator.

For information about other methods of adding items to the BOM table, see Java Client, Adding Items to the BOM Table of a Preliminary Item on page 92.

### Java Client, Adding a Blank Row to the BOM Table

You can add a blank row to the BOM table as a place holder, editing the BOM Notes field to specify which type of object you want to add later.

For example, Bob is creating a BOM for a computer. He is not sure which specific power cord he wants to use. He adds a blank row to the BOM, then edits the blank row. He specifies the find number, reference designator, and quantity. In the BOM Notes field, he types a note about the type of power cord that should be included in the BOM. Later, when he views the BOM again, Bob sees the blank row. It reminds him that he must select the appropriate item number to complete the information needed in that BOM row. See also Java Client, Completing a Blank Row in the BOM Table on page 96.

### To add a blank row to the BOM table in Java Client:

When you add a blank row to the BOM, it is added above the selected rows.

1. Click the BOM tab.

2. If you want to add the blank row to a site-specific portion of the BOM, select the site from the item’s Site drop-down list. If you want to add the blank row to the common portion of the BOM, select ALL in the item’s Site drop-down list. (Items or blank rows must be associated with the site for which you want to add them. See Associating a Site with an Item on page 40 for
3. Click the Add drop-down menu button and choose the Add a blank row option.

A blank row is added to the appropriate section of the BOM table with a default find number and a default quantity. The default find number is zero (0). The default quantity is set by the Agile administrator.

**To add a blank row to the BOM table in Web Client:**

1. Click the BOM tab.

2. If you want to add the blank row to a site-specific portion of the BOM, select the site from the item’s Site drop-down list. If you want to add the blank row to the common portion of the BOM, select ALL in the item’s Site drop-down list. (Items or blank rows must be associated with the site for which you want to add them. See Associating a Site with an Item on page 40 for information.)

**Note** You cannot add a site-specific row to the BOM table for an item that belongs to a subclass for which the Site-Specific BOM property is set to Disallow. If you have questions, contact the Agile administrator.

3. Click the Add drop-down menu button and choose the Blank Row option.

A blank row is added to the appropriate section of the BOM table. By default, the find number is zero (0) and the quantity is one (1).

For information about other methods of adding items to the BOM table, see Java Client, Adding Items to the BOM Table of a Preliminary Item on page 92.

**Java Client, Editing a Blank Row**

In the same manner that you can edit any BOM row, you can also edit a blank row, which allows you to fill in some BOM table fields before you specify the object you want to add. For example, you can fill in the Quantity, Find Number, Reference Designators, and additional custom fields that the Agile administrator had defined.

You can also provide a temporary Item Number or a temporary description for the item by following the instructions below.

**To edit a blank row (including entering or editing a temporary Item Number or Item Description) using Java Client:**

1. Select one or more BOM rows, including the blank rows you want to modify and click the Edit button.

   The Edit BOM window appears.

2. Make the modifications in the table.

3. To provide a temporary description for the blank row, in the BOM Description field, type the text you want to use as the temporary item description.
The Item Description field of a blank row cannot be edited. However, Agile uses the text in BOM Description field as a temporary description of the item when you save your modifications.

4. To provide a temporary item number, in the Item Number field, type a number that does not exist in the Agile database.

5. When you are finished, click OK.

   If you entered a temporary item number, Agile displays a Warnings and Errors dialog box which includes a warning that the item number does not exist. To finish specifying the temporary item number, check the Accept checkbox and click OK.

   If you entered text for a temporary description in the BOM Description field, that text is now also displayed in the Item Description field of the blank row.

For information about methods of adding items to the BOM table, see Java Client, Adding Items to the BOM Table of a Preliminary Item on page 92.

Java Client, Completing a Blank Row in the BOM Table

In Java Client, you can complete a blank row in a BOM table using the procedures below. The following conditions apply:

- You can perform a blank BOM row replacement in the item BOM table provided that there is no pending change against the item.
- You can perform a blank BOM row replacement in the change order Redline BOM tab provided that the change order has not been released.
- Temp BOM row replacement (a blank BOM row with a name) can take place outside of the BOM table edit process:
  - When you create an item with that Temp name, for example, from the main Create menu.
  - When an existing item is renamed to the same name as the Temp BOM item.
  - On a Save As of an existing item to a new item with the same name as the Temp BOM item.

To complete a blank row in the BOM table using Java Client:

1. On the BOM table, double-click the blank row, which displays this symbol: 

2. In the Replace Temporary Item dialog box, select the method you want to use:

   Create a new Item
   a. In the Replace Temporary Item dialog box, select Create a new Item and click OK.
   b. In the New dialog box, select the item type in the Type drop-down list, fill in the required fields, and click OK. If an autonumber is not required, the New dialog Number field is prepopulated with the temporary number; you can use the temporary number or you can replace it. If an autonumber is required, the temporary number is automatically replaced with an autonumber.

   Search for an Item
   a. In the Replace Temporary Item dialog box, select Search for an Item and click OK.
   b. In the Select Objects dialog box, select a search method. If you choose to perform a
simple search, enter the value to search for and click **Search**. You can also define an advanced search, run a saved search, or select a bookmarked or recently visited item (Shortcuts). (For more information about searches, see Getting Started with Agile PLM.)

You can run multiple searches until you find the item you want.

c. In the search results, select the one item you want by moving it into the Selected Object(s) list and click **OK**.

**Replace it with Item**

a. In the Replace Temporary Item dialog box, select **Replace it with Item**.

b. Enter the item number of an existing item and click **OK**.

For information about methods of adding items to the BOM table, see [Java Client, Adding Items to the BOM Table of a Preliminary Item](#) on page 92.

**Java Client, Adding Nonexistent Items to the BOM Table**

You can add to a BOM an item that hasn't been created yet.

**Adding nonexistent items to the BOM table using Java Client:**

1. Click the **BOM** tab.

2. If you want to add a site-specific item to the **BOM** tab, select the site you want in the item’s **Site** drop-down list. To add an item to the Common portion of the BOM, select **ALL**.

3. Click the **Add** drop-down menu button and choose the **Create** option. The New dialog appears.

4. In the New dialog box, use the **Type** drop-down list to select the type (subclass) of item you want to create.

5. Assign a number to the item. To do so, either accept the number that appears, click the **Autonumber** button to use the next autonumber, or type a number.

6. In the **Add for Site** drop-down list, select the site you want. To add an item to the common portion of the BOM, select Common.

   If you have already selected the site you want in the item’s **Site** drop-down list, it is preselected for you in the dialog.

7. Complete any required fields.

8. Click **OK**.

   **Note** If you create a new item and decide you do not wish to keep it, you should delete it from the database with the **Delete** button in the object window. For more information about deleting items from the BOM, see [Removing Items from the BOM Table](#) on page 98.

For information about other methods of adding items to the BOM table, see [Java Client, Adding Items to the BOM Table of a Preliminary Item](#) on page 92.

**Modifying the BOM Table of a Preliminary Item**

You can directly modify the BOM table of an item that has *not* been released and has no pending changes.
When you create a new item and then click the BOM tab, the Agile PLM displays a blank BOM tab.

**To modify items in the BOM table of a preliminary item in Web Client:**

1. Open the unreleased item (the item that has *not* been released and has no pending changes).
2. Click the BOM tab.
3. If the BOM information you need is on a site-specific portion of the BOM, select the site from the Site drop-down list.
4. To begin editing the BOM table, double-click in any editable cell.
   - The table enters edit mode and the Save and Cancel buttons become active (not grayed).
5. Make the required changes in each field. Navigate to other fields by clicking the field, pressing the Tab key, or using the arrow keys.
6. When you are finished, click Save.

**To modify items in the BOM table of a preliminary item in Java Client:**

1. Open the unreleased item (the item that has *not* been released and has no pending changes).
2. Click the BOM tab.
3. If the BOM information you need is on a site-specific portion of the BOM, select the site from the Site drop-down list.
4. Select one or more items to modify.
   - Click the Edit button.
   - The Edit BOM window appears.
5. Make the modifications in the table.
6. When you are finished, click OK.

See also: [Adding Items to the BOM Table of a Preliminary Item](#) on page 92.

**Removing Items from the BOM Table**

**To remove an item from the BOM table in Web Client:**

1. If you want to remove an item from a site-specific portion of the BOM that is not currently displayed, select the site (or ALL) from the Site drop-down list to display the site-specific rows.
2. Select one or more items to remove from the BOM table.
3. Click the Remove button on the BOM tab or press the Delete key on the keyboard.
   - The items are deleted from the BOM table.

**To remove an item from the BOM table in Java Client:**

1. If you want to remove an item from a site-specific portion of the BOM that is not currently displayed, select the site (or ALL) from the Site drop-down list to display the site-specific rows.
2. Select one or more items to remove from the BOM table.
3. Click the Remove button on the BOM tab.
The items are deleted from the BOM table.

**Note**  
Be sure to use the **Remove** button on the **BOM** tab, not the **Delete** button in the item window. If you use the **Delete** button, the entire item is deleted.

See also: *Adding Items to the BOM Table of a Preliminary Item* on page 92.

## Working with Reference Designators

Reference designators are commonly used in the electronics industry as a labeling system to refer to components. If your company uses reference designators, you can assign and edit reference designators in Agile BOMs.

This section includes the following topics:

- Viewing Reference Designators
- Adding Reference Designators
- Deleting Reference Designators
- Modifying Reference Designators

### Viewing Reference Designators

Reference designators may appear in the BOM table in an expanded display (R1, R2, R3) or a collapsed display (R1-R3). The Agile administrator sets the following system preference to select the method of reference designator display used on your Agile system.

This section includes the topics:

- Reference Designators Allow Range Expand Collapse Preference Setting
- Viewing Reference Designators in Web Client
- Viewing Reference Designators in Java Client

### Reference Designators Allow Range Expand Collapse Preference Setting

Depending on the setting of the Reference Designators Allow Range Expand Collapse system preference, ranges of reference designators appear in the Ref Des field as either collapsed or expanded. For example, the range of reference designators R1, R2, R3, R4, R5 appear as follows:

- **Expanded: R1, R2, R3, R4, R5**
  
  Each reference designator is displayed in the Ref Des field.

- **Collapsed: R1-R5**
  
  Ranges of three or more reference designators are represented by the first reference designator in the sequence (R1), followed by the Reference Designator Range Indicator character (- the hyphen character), followed by the last reference designator in the sequence (R5). The hyphen character is the default reference designator character, however, the Agile
administrator may choose a different character, if needed.

If the reference designators include leading zeros, in collapsed mode the reference designators are displayed in groups according to the number of leading zeros. For example, the 100 reference designators:

R0001, R0002, R0003, R0004, ... R0099, R0100

Are displayed in collapsed mode as:

R0001-R0009, R0010-R0099, R0100

See also: Adding Reference Designators on page 101, Viewing Reference Designators on page 99.

**Viewing Reference Designators in Web Client**

When there are many reference designators to display, Web Client displays the beginning of the list in the **Ref Des** cell. You can resize the **Ref Des** column width, or you can display an expanded **Ref Des** cell with a scroll bar.

**To display all the reference designators in the Ref Des field in Web Client:**

1. Click the **Ref Des** cell to select it. The cell is highlighted.
2. Right-click once in the highlighted cell.
   
   The cell expands to display an expanded cell with a scroll bar. The expanded cell displays several lines of reference designators.
3. Use the scroll bar in the **Ref Des** expanded cell in the BOM table to scroll up and down to view the reference designators.
   
   Regardless of the Expand/Collapse system preference setting, the reference designators are displayed in expanded mode in the expanded cell. Each reference designator appears in the expanded cell.

See also: Bills of Material on page 73, Adding Reference Designators on page 101.

**Viewing Reference Designators in Java Client**

When there are many reference designators to display, Java Client displays one line of reference designators, followed by an ellipsis (... ) to indicate that there are more reference designators in the **Ref Des** field.

**To display all the reference designators in the Ref Des field:**

Click the Ref Des field cell in the BOM table.

A drop-down pane appears. The entire list of reference designators are displayed in this pane. If needed, a scroll bar is included in the pane.

Regardless of the Expand/Collapse system preference setting, the reference designators are displayed in expanded mode in the pane. Each reference designator appears in the pane.

See also: Bills of Material on page 73, Adding Reference Designators on page 101.
Adding Reference Designators

This section includes the topics:

- Reference Designator Entry Format Guidelines on page 102
- Leading Zeros in Reference Designators on page 102
- Multi-segmented Reference Designator Entry Format Guidelines on page 103
- Editing the Reference Designator Field on page 105
- Duplicate Reference Designators and Sites on page 105

You can enter, delete, and modify reference designators, either individually or several at once. If you have very few reference designators, you can enter them one by one (that is, R1, R2, R3). If you need to enter a larger set, you may use the format (Rx–Ry), where x and y are any numbers, but whose difference is less than 5000 (for example: R6–R2055).

Reference designators are limited to 5000 per BOM row. If you need more than 5000 reference designators, add a duplicate item to the BOM with a different find number (same item number) to define additional reference designators.

Reference designators are not sorted until you complete edits to the current item.

If the number in the Qty field does not match the number of reference designators, you see a message indicating that the reference designators and quantity don’t match.

If Qty is blank (null), Agile treats the contents of the Qty field as a 0 (zero), and verifies that the number of reference designators match, that is, that the number of reference designators is also 0 (zero). If there are any reference designators in the Ref Des field and Qty is blank, you see a message indicating that that the reference designators and quantity don’t match.

If Qty is not an integer, Agile treats the contents of the Qty field as text characters and does not verify that Qty and the number of reference designators match. Decimal numbers (for example, 7.8) are not integers and are therefore considered a text entry.

The length of an individual reference designator may be a minimum of 1 character and a maximum of 19 characters.

Duplicate reference designators are not allowed in the same unique single BOM row. If you enter the same reference designator twice (for example: A1, A1), Agile PLM resolves this to one reference designator (A1).

A unique BOM row is defined by a unique find number. If BOM table rows have the same find number, the Duplicate Ref Des SmartRule is ignored for those BOM table rows. However, if Find Number is blank for multiple BOM rows, Agile PLM validates Duplicate Ref Des SmartRule as if all those rows have Find Number = 0. For more information about the Duplicate Ref Des SmartRule, see the Administrator Guide.

See also: Deleting Reference Designators on page 106, Modifying Reference Designators on page 106.
Reference Designator Entry Format Guidelines

The following rules apply when entering reference designators:

- **Entering ranges** — You can always use ranges when entering reference designators, regardless of the setting of the Reference Designators Allow Range Expand Collapse system preference. If the preference is set to Expand, the reference designators are displayed in expanded format after you save your edits. For example:

  Enter: R1-R5
  
  Expanded Display: R1, R2, R3, R4, R5
  
  Collapsed Display: R1-R5

  **Note** Whenever you edit the reference designator field, the existing reference designators are displayed in Expand format while the BOM table row is in edit mode. If, during the same edit session, you navigate away from the Ref Des edit field, and return to the Ref Des edit field again, any ranges you entered previously are now displayed in Expanded format.

  For more information, see Reference Designators Allow Range Expand Collapse Preference Setting on page 216, on page 99.

- To add groups of reference designators that begin with different letters, you must separate each letter group with commas. For example, to enter the 10 designators A1, A2, A3, B4, B5, B6, B7, C8, C9, and C10, you would type:

  A1-A3,B4-B7,C8-C10


Leading Zeros in Reference Designators

You can use leading zeros when you enter individual reference designators or ranges of reference designators. For example,

- R001, R002, R010
  
  B001-B100

- The number of numeric characters in each segment of the range does not need to match. For example:

  R0001-R100

- When the number of numeric characters in each segment of the range does not match, the number of numeric characters in the first segment is used for all the reference designators in the range. In the above example, the range is saved as:

  R0001, R0002, R0003, R0004, ... R0099, R0100

  When you exit edit mode, the reference designators are displayed according to the Reference Designators Allow Range Expand Collapse preference setting. For more information, see Reference Designators Allow Range Expand Collapse Preference Setting on page 216, on page 99.

**Multi-segmented Reference Designator Entry Format Guidelines**

**Note** These rules apply when using a suffix, as defined below.

Reference designators may be separated into a maximum of three parts:

```
<Prefix> <Number> <Suffix>
```

- **Prefix** — may be any character that is not defined as the range indicator (for example, [- hyphen] the default range indicator) or a delimiter (for example, [, comma] used to separate – delimit – a list of reference designators).
- **Number** — must be a number (numerals 0 through 9)
- **Suffix** — may be any character that is not designated as the range indicator or a delimiter, and does not start with 0 (zero).

Only the last number string is considered the reference designator <Number>. For example,

```
A10B30D
```

- `<Prefix> = A10B <Number> = 30 <Suffix> = D`

A segmented reference designator may also include characters that divide the segments as long as they meet the requirements outlined above. If the Agile administrator has selected a non-hyphen character as the range indicator, then the hyphen character can be used. Contact the Agile administrator if you have questions about which characters you may use in a multi-segmented reference designator. For example:

```
A*10*B30D
```

- `<Prefix> = A*10*B <Number> = 30 <Suffix> = D`

**Note** If the Agile administrator has selected a non-hyphen character as the range indicator, then the hyphen character can be used. Contact the Agile administrator if you have questions about which characters you may use in a multi-segmented reference designator.


**Entering Multi-segmented Reference Designator Ranges**

When you enter a range, Agile evaluates the formats of the begin-range designator and the end-range designator to ensure that the formats are compatible and, therefore, the range is valid.

When you enter a multi-segmented range, both the prefix and the suffix must be identical in the begin-range designator and end-range designator. (For details, refer to step 3 below.)

The number segment may use leading zeros as described in Leading Zeros in Reference Designators on page 102.
Agile uses the following rules to evaluate the number portions of a multi-segmented range and the validity of the entered range:

1. Agile determines the number segments by scanning from right to left to find the first whole number in both the begin-range designator and the end-range designator.

2. Agile evaluates the begin-range number and the end-range number to ensure that they are the same formats.
   a. The numbers are the same precision (number of characters) from the end of the designator.
   b. The end-range designator number is greater than the begin-range designator number.

3. Agile evaluates the suffixes and prefixes to ensure that they match:
   a. The string of characters to the right of the whole number (suffix) is the same in both the begin-range designator and the end-range designator.
   b. The string of characters to the left of the whole number (prefix) is the same in both the begin-range designator and the end-range designator.

   Optionally, the prefix can be omitted in the end-range designator. Agile will use the same prefix as the start-range designator. This satisfies the rule that both prefixes must be the same. The following two ranges are equivalent:

   A1B1C - A1B3C
   <Prefix> = A1B  <Number> = 1  <Suffix> = C  
   -
   <Prefix> = A1B  <Number> = 3  <Suffix> = C

   A1B1C - 3C
   <Prefix> = A1B  <Number> = 1  <Suffix> = C  
   -
   <Prefix> = <use start-range designator prefix>  <Number> = 3  <Suffix> = C

The following table shows examples of valid multi-segmented reference designator ranges; the range indicator is - (hyphen):

<table>
<thead>
<tr>
<th>Range entered as:</th>
<th>Reference designators saved as:</th>
</tr>
</thead>
<tbody>
<tr>
<td>A1B*3B</td>
<td>A1B*A3B</td>
</tr>
<tr>
<td>A<em>001</em>TT - A<em>3</em>TT</td>
<td>A<em>001</em>TT, A<em>002</em>TT, A<em>003</em>TT</td>
</tr>
<tr>
<td>A<em>001 - A</em>3</td>
<td>A<em>001, A</em>002, A*003</td>
</tr>
<tr>
<td>A1B1 - A1B3</td>
<td>A1B1, A1B2, A1B3</td>
</tr>
<tr>
<td>A1B1C - A1B3C</td>
<td>A1B1C, A1B2C, A1B3C</td>
</tr>
<tr>
<td>A1B1C - 3C</td>
<td>A1B1C, A1B2C, A1B3C</td>
</tr>
</tbody>
</table>
**Editing the Reference Designator Field**

**To add reference designators in Web Client:**

1. To begin editing the Redline BOM table, double-click the Ref Des field you want to modify.
   The table enters edit mode and the Save and Cancel buttons become active (not grayed).
   
   **Note** You can double-click any editable field to enter edit mode. Navigate to the fields you want to modify by clicking the field, pressing the Tab key, or using the arrow keys.

2. Type the reference designators in the Ref Des field. Make any other required modifications to the row.
   
   **Note** If you need to, you can enter a new number in the Qty field.

3. When you have finished your edits, click Save.

**To add reference designators in Java Client:**

1. Select the item to modify. You can select multiple items.

2. Click the Edit button.
   
   The Edit BOM window appears.

3. Click the Ref Des field you want to modify. A drop-down edit pane appears.

4. Type the reference designators in this pane. Make any other required modifications to the row.
   
   **Note** If you need to, you can enter a new number in the Qty field.

5. When you are finished, click OK.

**Duplicate Reference Designators and Sites**

The same reference designator can be used in more than one site-specific portion of the BOM, regardless of the Duplicate Ref Des SmartRule setting. (See the Administrator Guide.) For example, reference designator B22 can be used for Part 123 in the India portion of the BOM and also for Part 556 in the San Jose portion of the BOM.

If the SmartRule is set to Disallow, then the same reference designator cannot be used in the common portion of the BOM and in a site-specific portion of the BOM, for example, using reference designator C55 for both Part 333 on the common portion of the BOM and for Part 678 on the Milpitas portion of the BOM. Nor can the same reference designator be used more than once in the
same site-specific portion of the BOM, for example, using reference designator D46 for both Part 989 on the Milpitas portion of the BOM and for Part 765, also on the Milpitas portion of the BOM.


**Deleting Reference Designators**

You can delete reference designators either individually or several at once.

**To delete reference designators in Web Client:**

1. To begin editing the Redline BOM table, double-click the **Ref Des** field you want to modify.

   The table enters edit mode and the **Save** and **Cancel** buttons become active (not grayed).

   **Note** You can double-click any editable field to enter edit mode. Navigate to the fields you want to modify by clicking the field, pressing the Tab key, or using the arrow keys.

2. Select the appropriate reference designators.

   To select a single reference designator, either double-click the appropriate reference designator, or use the Shift and arrow keys. To select several contiguous reference designators, use the Ctrl+Shift and arrow keys.

3. Press the keyboard Delete key.

4. When you have finished your edits, click **Save**.

**To delete reference designators in Java Client:**

1. Select the item to modify by clicking its row.

2. Click the **Edit** button.

   The Edit BOM window appears.

3. Click the **Ref Des** field you want to modify. A drop-down edit pane appears.

4. Select the appropriate reference designators.

   To select the appropriate single reference designator, use the Shift and arrow keys. To select several contiguous reference designators, use the Ctrl+Shift and arrow keys.

5. Press the keyboard Delete key.

6. When you have finished your edits, click **OK**.

   **Note** Be sure to use the keyboard Delete key, not the Remove button on the BOM tab. If you click the BOM Remove button, the entire item is removed from the BOM.


**Modifying Reference Designators**

You can modify reference designators, either singly or several at once.
To modify reference designators in Web Client:

1. To begin editing the Redline BOM table, double-click the Ref Des field you want to modify. The table enters edit mode and the Save and Cancel buttons become active (not grayed).

   | Note | You can double-click any editable field to enter edit mode. Navigate to the fields you want to modify by clicking the field, pressing the Tab key, or using the arrow keys.

2. In the editable Ref Des cell, select the appropriate reference designators.
   - To select a single reference designator, either double-click the appropriate reference designator, or use the Shift and arrow keys.
   - To select several contiguous reference designators, use the Ctrl+Shift and arrow keys.
   - To add a reference designator, position the cursor at the end of the list of reference designators.

   | Note | Although you may position the cursor anywhere in the list to add a reference designator, it is not necessary to insert the reference designator in a particular place in the list because the list is sorted after you save your modifications.

3. Type the modified reference designator.
4. Click Save.

To modify reference designators in Java Client:

1. Select one or more items to modify.
2. Click the Edit button.

   The Edit BOM dialog box appears.
3. Click the Ref Des field you want to modify. A drop-down edit pane appears.
4. Select the appropriate reference designators.
   - To select a single reference designator, position your cursor in the list of reference designators and use the Shift and arrow keys.
   - To select several contiguous reference designators, use the Ctrl+Shift and arrow keys.
   - To add a reference designator, position the pointer at the end of the list of reference designators.

   | Note | Although you may position the cursor anywhere in the list to add a reference designator, it is not necessary to insert the reference designator in a particular place in the list because the list is sorted after you save your modifications.

5. Type the modified reference designator.
6. When you are finished, click OK.

Redlining the BOM of a Released Item

This section includes the following topics:

- Overview of BOM Redlining on page 108
- Redline BOM Tab on page 109
- Adding an Item to a Redline BOM Table on page 111
- Removing an Item from a Redline BOM Table on page 111
- Editing Item Information on a Redline BOM Table on page 112
- Undoing Changes to a Redline BOM Table on page 113

Overview of BOM Redlining

To modify the BOM table, you must create a change against the item if:

- The item is released.
- The item is unreleased and it has a pending MCO against it.

You can use an ECO or SCO to redline the BOM:

- Use an ECO to modify common or site-specific portions of the BOM on the latest released revision of the item. Using an ECO creates a new revision of the item.
- Use an SCO to modify site-specific portions of the BOM on the latest released revision. Using an SCO does not create a new revision of the item. For more information about SCOs, see Site Change Orders on page 131.

When you add an item that has pending changes to the Affected Items tab, Agile PLM displays a warning that informs you that the item has a separate pending change, and allows you to choose whether or not to add it to the Affected Items tab. If you choose to add it, you can open the item from the Affected Items table. To view the pending changes, click the item’s Changes tab.

Note: If you do not have the Discovery privilege for an item on the BOM table, you cannot redline that item. You cannot replace an item on the BOM table with an item that you cannot discover.

If you have the appropriate privileges, you can modify a redlined BOM. For details, see the following sections:

- Editing Item Information on a Redline BOM Table on page 112
- Adding an Item to a Redline BOM Table on page 111

Note: You can add nonexistent items to the Redline BOM table. See Adding Items to the BOM Table of a Preliminary Item on page 92.

- Removing an Item from a Redline BOM Table on page 111
Redline BOM Tab

You display the Redline BOM tab from the Affected Items tab of an ECO or SCO. Select an item row in the Affected Items table and the corresponding BOM is displayed in the Redline BOM tab.

When the redline BOM tab is displayed:

- If a row in the table has a red line through every cell in the row, it means that item was deleted from the BOM.
- If just a few of the cells have a short red line through them, it means the item was modified, but not deleted. For example, redlines in only the Qty and Find Number cells indicate that the Qty and Find Number of that BOM item have been modified, while other values remain unchanged.
- Any cell that was modified has a red line through the old value; the new value appears in red. For example, in the Qty cell, a numeral seven with a redline through it 7 and a red numeral ten 10 indicates that the old quantity was 7 and the new quantity is 10.

For information about other BOM redlining actions, see Redlining the BOM of a Released Item on page 108.

To display the redline BOM for an item in Web Client:

1. Open the ECO or SCO through which you want to redline an item’s BOM.
2. Click the Affected Items tab of the change.
3. In the Affected Items table, click to select the row of the item for which you want to view or create redlines. If the item has already been redlined, a dot icon appears in the Has Been Redlined column of the row.

In the redline pane under the Affected Items table, the following redline tabs appear if they have been enabled on your Agile PLM system:

- Title Block – Change-controlled item attributes as defined for the item
- BOM – displays item BOM data.
- Manufacturer – displays manufacturing data.
- Attachments – (on ECOs only) displays item attachments.

Note: If your Agile PLM system does not use the Manufacturers tab or, on documents, the BOM tab, then those redline tabs do not appear in the redlines pane. The ECO redline Title Block tab appears on an ECO only if change-controlled item attributes have been enabled.

4. Click the redline BOM tab to display it (if it is not already displayed).

To display the Redline BOM tab for an item in Java Client:

1. Open the ECO or SCO through which you want to redline an item’s BOM.
2. Click the Affected Items tab of the change.
3. In the Affected Items table, click the row of the item for which you want to view or create redlines.

In the redline pane under the Affected Items table, the Redline BOM tab, Redline Manufacturers
tab, and **Redline Attachments** tab (on ECOs) only appear, displaying the item’s BOM data, manufacturing data, and attachments, respectively.

**Note** If your Agile PLM system does not use the **Manufacturers** tab or, on documents, the **BOM** tab, then those redline tabs do not appear in the redlines pane. The ECO redline **Title Block** redline tab is not displayed in Java Client.

4. Click the **Redline BOM** tab to display it (if it is not already displayed).

**Redline BOM Tab Buttons**

The following table lists the functions and buttons on the Redline BOM tab in Web Client:

<table>
<thead>
<tr>
<th>Button or function</th>
<th>Use</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Edit mode</strong></td>
<td>Double-click any editable cell in the table to enter edit mode. Move from one editable field to another by clicking the field, pressing the Tab key or pressing the arrow keys. Make the desired changes in each field and then click <strong>Save</strong> when you are finished.</td>
</tr>
<tr>
<td><strong>Add</strong></td>
<td>The <strong>Add</strong> button opens the add palette, which allows you to use one of the Web Client add options: type in a known number (with type-ahead search suggestions), click <strong>Search to Add</strong>, or click <strong>Create to Add</strong>. You can add an item or a place-holder row to the Redline BOM table. By default, the new item or row has a find number of zero (0) and a quantity of one (1). See <a href="#">Adding Items to the BOM Table of a Preliminary Item</a> on page 92.</td>
</tr>
<tr>
<td><strong>Remove</strong></td>
<td>The <strong>Delete</strong> button removes the selected row from the Redline BOM table.</td>
</tr>
<tr>
<td><strong>Undo Redlines</strong></td>
<td>The <strong>Undo Redlines</strong> button clears the redlines from the selected rows. See <a href="#">Undoing Changes to a Redline BOM Table</a> on page 113.</td>
</tr>
</tbody>
</table>
| **More...**        | The **More...** menu button provides the following Redline BOM table editing capabilities:  
  - **Copy**  
  - **Paste**  
  - **Fill-down**  
  - **Fill-down (selected cells)**  
  - **Fill-up**  
  - **Fill-up (selected cells)**  
  - **Full Display Mode** and **Standard Display Mode** (toggle setting) |

The following table lists the buttons on the Redline BOM tab in Java Client:

<table>
<thead>
<tr>
<th>Button</th>
<th>Use</th>
</tr>
</thead>
<tbody>
<tr>
<td><img src="image" alt="Redline BOM" /></td>
<td><strong>Redline BOM</strong> — Displays the selected rows in a Redline BOM window so that you can change editable fields.</td>
</tr>
<tr>
<td><strong>Button</strong></td>
<td><strong>Use</strong></td>
</tr>
<tr>
<td>-----------</td>
<td>---------</td>
</tr>
</tbody>
</table>
| ![Add](image) | **Add** — Adds an item or an empty row to the Redline BOM table. Depending on which option you choose, you can:  
- Create an item while adding it.  
- Search for an existing item.  
- Type in Known Number(s) of one or more existing items.  
- Add Blank Row — adds a blank row to the Redline BOM table that can be filled in later.  
  By default, the new item or row has a find number of zero (0) and a quantity of one (1).  
  See [Adding Items to the BOM Table of a Preliminary Item](#) on page 92. |
| ![Remove](image) | **Remove** — Removes the selected row from the Redline BOM table. |
| ![Undo](image) | **Undo Redlines** — Clears the redlines from the selected rows. See [Undoing Changes to a Redline BOM Table](#) on page 113. |

For information about BOM redlining actions, see [Redlining the BOM of a Released Item](#) on page 108.

### Removing an Item from a Redline BOM Table

You use the buttons on the Redline BOM tab to remove one or more rows and items.

- If a selected row is red (indicating that the row is redline-added to the BOM), it is removed.
- If a selected row is black, a red line is drawn through it, thus redline-deleting the item from the BOM.

**To remove an item from a redline BOM table in Web Client:**

1. Select one or more rows to delete.
2. Click the **Remove** button on the Redline BOM tab.

**To remove an item from a redline BOM table in Java Client:**

1. Select one or more rows to delete.
2. Click the **Remove** button on the Redline BOM tab.

For information about other BOM redlining actions, see [Redlining the BOM of a Released Item](#) on page 108.

### Adding an Item to a Redline BOM Table

**To add an item to the Redline BOM table in Web Client:**

1. Click the **Add** button.
2. Use one of the Web Client add options: type in a known number (with type-ahead search suggestions), click Search to Add, or click Create to Add.

3. Adding items to the Redline BOM table is similar to adding items to the BOM table. For more information about how to complete the dialogs, see:

- Web Client, Create New to Add Items to the BOM Table on page 88
- Web Client, Type in the Number of an Item to Add to the BOM Table on page 86
- Web Client, Quick Search to Add Items to the BOM Table on page 87
- Web Client, Saved Search to Add Items to the BOM Table on page 88
- Web Client, Custom Search to Add Items to the BOM Table on page 89
- Web Client, Adding a Place-holder Row to the BOM Table on page 90 and Web Client, Completing a Place-holder Row in the BOM Table on page 91

To add an item to the Redline BOM table in Java Client:

1. Click the Add drop-down menu button and choose one of the add options: Create, Type in Known Numbers, Search, or Add Blank Row.

2. Adding items to the Redline BOM table is similar to adding items to the BOM table. For more information about how to complete the dialogs, see:

- Java Client, Adding Nonexistent Items to the BOM Table on page 97
- Java Client, Type in the Number of an Item to Add to the BOM Table on page 92
- Java Client, Search for Items to Add to the BOM Table on page 93
- Java Client, Adding a Blank Row to the BOM Table on page 94 and Java Client, Completing a Blank Row in the BOM Table on page 96

For information about other BOM redlining actions, see Redlining the BOM of a Released Item on page 108.

**Editing Item Information on a Redline BOM Table**

On the Redline BOM tab you can modify any editable BOM tab field, including any editable custom fields that the Agile administrator has enabled. Editable BOM tab fields usually describe or define the relationship between the parent item (the item BOM you are redlining) and the child item (the item that appears on the BOM table). For example, the Qty, Find Number, and Ref Des fields define the relationship between the assembly (parent item) and the BOM item (child item).

When you modify information on the Redline BOM tab, Agile PLM enters the new information, in red, below the old information.

When you redline the BOM Notes field, you can add, replace, or edit text. In the BOM Notes field, the new text and any redlined text are displayed.

You cannot modify the Redline BOM table Sites, Item Description, and Item Rev fields.

Redlining reference designators in the Redline BOM table is the same as editing reference designators on the BOM table. For more information, see Working with Reference Designators on page 99. Any new reference designators appear in red. Any deleted reference designators have a red line drawn through them.
Note You cannot use the Redline BOM tab to modify the attributes of the items that are listed on the BOM table. You cannot use the Redline BOM tab to modify non-editable BOM table fields.

If the Agile administrator has enabled them, the item BOM tab may also include read-through fields that allow you to conveniently view additional information derived from the items that are listed on the BOM table, for example, a child item’s Page Two fields. A read-through field contains a read-only copy of attribute data from a child item. BOM tab read-through fields cannot be edited on the BOM tab, nor can they be edited on the Redline BOM tab.

To modify the attributes of an item listed on the BOM table, if it is a Preliminary item with no pending revisions, you can open it and use the Edit feature to modify it. See Editing an Unreleased Item on page 20. If an item listed on the BOM table has been released, you must use a change order to modify it. See Editing a Released Item on page 21.

For more information about read-through fields and about which fields are editable on the item BOM tab, see Agile PLM Administrator Guide.

Your assigned roles and privileges also determine which attributes you are allowed to edit.

To edit a field on the Redline BOM table in Web Client:

1. To begin editing the Redline BOM table, double-click in any editable cell. The table enters edit mode and the Save and Cancel buttons become active (not grayed).

2. Make the required changes in each field. Navigate to other fields by clicking the field, pressing the Tab key, or using the arrow keys.

3. Click Save when you are finished.

To edit a field on the Redline BOM table in Java Client:

1. Select the rows to edit, and click the Edit button.

The Redline BOM dialog box appears.

2. Make the modifications.

3. When you are finished, click OK.

For information about other BOM redlining actions, see Redlining the BOM of a Released Item on page 108.

Undoing Changes to a Redline BOM Table

The Undo Redlines button lets you undo modifications to the Redline BOM tab. It removes the red elements from the selected row.

Note In Java Client, the Undo Redlines button is indicated with this icon: ☐.

To undo a deletion (where Agile PLM has drawn a red line through the entire row):

1. Select the deleted row. You can select more than one row.

2. Click Undo Redlines.
To undo a modification (where Agile PLM has drawn a short red line through the modified value):

1. Select the modified row (or rows).
2. Click Undo Redlines.

To undo a newly added item (remove it from the Redline BOM table):

1. Select the added row (or rows).
2. Click Undo Redlines.

For information about other BOM redlining actions, see Redlining the BOM of a Released Item on page 108.

Printing BOM Data

You can print object tabs and other data from your Agile PLM system. You can print the current tab or all tabs. Attachments are printed from their native applications or the AutoVue for Agile viewer.

In Web Client, with the object open, choose Actions > Print.

In Java Client, with the object open, use the Print button 📑.

For additional information about printing objects, see Getting Started with Agile PLM.

In Web Client, you can print BOM information from your Web browser. Go to the BOM tab of an item and choose Actions > Print. You can print just the BOM tab or all tabs. When printing the BOM, select the BOM Printing Option you want, including the number of BOM levels to print and whether to include the AML.

In Java Client, to print only the BOM tab data, use the Print button drop-down menu and choose BOM. Complete the BOM Printing Options dialog, including the number of BOM levels you want to print and whether to include the AML.

See also: Working with Product Reports and Process Reports on page 167.
This chapter includes the following:

- Change Classes .......................................................... 115
- Change Objects .......................................................... 117
- Workflow Routings Inbox ............................................. 129
- Changes and Manufacturing Sites .................................. 129
- The Relationship of Changes to Item Revisions ................ 132
- Creating Changes ......................................................... 132
- Modifying Changes ....................................................... 133
- Agile Change Control Workflows .................................. 134
- Redlining through ECOs, MCOs, and SCOs .................... 134
- Deleting Changes ......................................................... 135
- Printing Change Tabs .................................................... 135
- Routing Managers: Change Analyst and Component Engineer 135

Change Classes

The following classes, or types, of changes are available in Agile PLM:

- Change Orders class, including engineering change orders (ECOs)
- Change Requests class, including engineering change requests (ECRs)
- Manufacturer Orders class, including manufacturing change orders (MCOs)
- Site Change Orders class, including site change orders (SCOs)
- Deviations class
- Stop Ships class

Change Subclasses

Each Agile class has at least one out-of-the-box subclass. The Agile administrator may decide to use some or all of these change classes and subclasses, and may have created additional subclasses. For example, under the Change Orders class, you might have ECOs, Mechanical ECOs, Software ECOs, and so on.

The purpose of each change subclass is listed in the following table. Corresponding change icons are also listed. These icons are displayed next to the change number on the Changes tab, and next to each change in search results.
<table>
<thead>
<tr>
<th>Change type</th>
<th>Purpose</th>
</tr>
</thead>
</table>
| ECO         | An *engineering change order* tells users that changes need to be made to specific items, and to go ahead and do the work required to make those changes. ECOs create a new, trackable revision of an item. ECOs can affect common and site-specific portions of the BOM and AML. ECOs allow you to:  
- Release new items.  
- Create revision-specific redline modifications BOMs, manufacturer data, and attachments.  
- Create change-controlled redline modifications to item attributes.  
See [Redlining through ECOs](#) on page 134. |
| ECR         | An *engineering change request* is used to request a change to be made to items. You can create an ECR against a non-latest released revision of an item. ECRs do not have any redlining functions. |
| MCO         | A *manufacturer change order* tells users that changes need to be made to the manufacturing data of specific items. MCOs can affect common and site-specific portions of the AML. MCOs allow you to:  
- Release new items.  
- Redline the manufacturer data of an item.  
- Change the lifecycle phase of items.  
- Create change-controlled redline modifications to item attributes.  
See [Redlining through MCOs](#) on page 135. |
| SCO         | A *site change order* tells users that changes need to be made to site-specific items, and to go ahead and do the work required to make those changes. SCOs affect only the site-specific portion of the BOM and AML; they do not affect the common portion. You can create an SCO against a non-latest released revision of an item. SCOs let you redline BOMs and AMLs. |
| Deviation   | A *deviation* is used to switch from one part to another for a specific amount of time. You can create a deviation against a non-latest released revision of an item. Deviations do not have any redlining functions. |
| Stop Ship   | A *stop ship* alerts users to stop shipping or using an item. You can create a stop ship against a non-latest released revision of an item. Stop ships do not have any redlining functions. |
For information about changing the subclass of a change, see the chapter about workflows in Getting Started with Agile PLM.

### Change Objects

This section includes the following topics:

- **Cover Page Tab**
- **Affected Items Tab** on page 121
- **Workflow Tab** on page 122
- **Relationships Tab** on page 126
- **Attachments Tab** on page 127
- **History Tab** on page 127

When you view a change in Web Client, information about it is displayed on tabs in the right pane, the content pane.

When you view a change in Java Client, information about it is displayed on tabs in its object window.

The following table shows the tabs and the default fields for changes.

The Agile administrator may have added additional tabs or sections, called **Page Two** and **Page Three** by default. (The Agile administrator may have renamed these tabs in your Agile PLM system.) These tabs or sections contain custom fields defined by the administrator.

<table>
<thead>
<tr>
<th>Tab name</th>
<th>Tab information includes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cover Page</td>
<td>General information about the change plus any unique fields defined by the Agile administrator.</td>
</tr>
<tr>
<td>Affected Items</td>
<td>Which items are affected by the change. ECOs include redlined BOMs, AMLs, and file folders. SCOs include redlined BOMs and AMLs for a site. MCOs include redlined AMLs. ECOs and MCOs also include change-controlled redlined item attributes.</td>
</tr>
<tr>
<td>Workflow</td>
<td>Approvers and observers of the change and the results of their reviewing the change. The statuses of the workflow.</td>
</tr>
<tr>
<td>Relationships</td>
<td>The Relationships tab allows you to create relationships and dependencies between the current change object and other Agile objects, both routable objects and lifecycle objects. For more information about relationships, see Getting Started with Agile PLM.</td>
</tr>
<tr>
<td>Attachments</td>
<td>Attached files and URLs.</td>
</tr>
<tr>
<td>History</td>
<td>A record of the actions taken on the change.</td>
</tr>
</tbody>
</table>
Cover Page Tab

The Cover Page tab of a change shows the information traditionally shown on a paper ECO form. Agile PLM completes some of the fields; you complete the rest.

This section contains the following topics:

- Fields on the Cover Page Tab on page 118
- Status on the Cover Page Tab on page 120

To edit fields on the cover page tab in Web Client:

Click the Edit button, modify the fields, and click the Save button.

To edit fields on the Cover Page tab in Java Client:

Modify the fields and click Save.

Sometimes you cannot edit a field. A field may be uneditable for three reasons:

- You do not have sufficient privileges to modify that field.
- The field is automatically filled in as the change progresses through its workflow statuses, for example, Status, Date Released, or Final Complete Date.
- The field may not be edited when a certain event has occurred - for example, the Workflow field cannot be edited after the workflow has move out of the Pending status.

For information about all change object tabs, see Change Objects on page 117.

Fields on the Cover Page Tab

The following table summarizes the Cover Page fields and what they contain. The fields on the Cover Page tab vary from one change type to another.

In Web Client, the Cover Page can contain two additional sections, called Page Two and Page Three by default. In Java Client, these are separate tabs. The Agile administrator determines whether these sections are enabled, and what they are called.

<table>
<thead>
<tr>
<th>Field</th>
<th>How completed</th>
<th>Contents</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number</td>
<td>Usually automatically, when created; can be configured for manual entry.</td>
<td>The number assigned to the change when you create it.</td>
</tr>
<tr>
<td>Status</td>
<td>Automatically, when created; updated as the change moves through the assigned workflow.</td>
<td>Change status, described in Status on the Cover Page Tab on page 120; if no workflow has been selected, this field is Unassigned.</td>
</tr>
<tr>
<td>Change Type</td>
<td>Automatically, when created.</td>
<td>The type of change selected when you create the change.</td>
</tr>
<tr>
<td>Change Category</td>
<td>Usually manually; can contain a default.</td>
<td>Category defined by the Agile administrator (can be selected from a drop-down list).</td>
</tr>
<tr>
<td>Field</td>
<td>How completed</td>
<td>Contents</td>
</tr>
<tr>
<td>-----------------------</td>
<td>-------------------------------------------------------------------------------</td>
<td>------------------------------------------------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>Description Of Change</td>
<td>Usually manually; can contain a default.</td>
<td>Maximum number of bytes is set by the Agile administrator; can be up to 4000 bytes, including spaces and carriage returns (which count as 2 bytes). Non-English characters can be 2, 3, or 4 bytes.</td>
</tr>
<tr>
<td>Reason For Change</td>
<td>Usually manually; can contain a default.</td>
<td>Maximum number of bytes is set by the Agile administrator; can be up to 4000 bytes, including spaces and carriage returns (which count as 2 bytes). Non-English characters can be 2, 3, or 4 bytes.</td>
</tr>
<tr>
<td>Reason Code</td>
<td>Usually manually; can contain a default.</td>
<td>Code defined by the Agile administrator (can be selected from a drop-down list).</td>
</tr>
<tr>
<td>Workflow</td>
<td>Automatically (if only one workflow applies to the change), when the change is moved to the next status from the Unassigned status. If more than one workflow applies to the change, the workflow is selected manually; the workflow selection can be changed as long as the change is in the Pending status type. Selecting the blank field in the Workflow drop-down list switches the change to the Unassigned status.</td>
<td>The name of the workflow being used to move this change through the change control process.</td>
</tr>
<tr>
<td>Change Analyst or Component Engineer</td>
<td>May be provided automatically by the workflow; otherwise selected manually from an address book list of change analysts or component engineers.</td>
<td>Default routing manager. If the workflow is defined to notify the default change analyst or component engineer, the user in this field receives notifications about the change. If this field is left blank, then the notifications are sent to every change analyst or component engineer on the list. If the notification definition in the workflow is blank, no notifications are sent.</td>
</tr>
<tr>
<td>Originator</td>
<td>Usually automatically, when created (with the default set by the Agile administrator).</td>
<td>The user who created the change (can be selected from a drop-down list).</td>
</tr>
<tr>
<td>Date Originated</td>
<td>Usually automatically, when created.</td>
<td>The date the change was created.</td>
</tr>
<tr>
<td>Date Released</td>
<td>Automatically, when released.</td>
<td>The date the change was released.</td>
</tr>
<tr>
<td>Final Complete Date</td>
<td>Automatically, when the change enters the Complete status type.</td>
<td>The date the change moved into the Complete status type.</td>
</tr>
<tr>
<td>Product Line(s)</td>
<td>Usually manually; can contain a default.</td>
<td>Product line defined by the Agile administrator (can be selected from a drop-down list).</td>
</tr>
</tbody>
</table>
The **Cover Page** tab for deviations has two unique fields, **Effective From** and **Effective To**. The **Cover Page** tab for stop ships has one unique field, **Resume Date**.

The **Cover Page** tab for MCOs has a **Component Engineer** field (in the place of a **Change Analyst** field).

For information about all change object tabs, see Change Objects on page 117.

### Status on the Cover Page Tab

A label in the top right corner of a change indicates the status of the change. The Agile administrator defines the name of each status in each workflow.

**Note** The Agile administrator may have created customized workflows and statuses for your company. The table below lists only the 12 Agile default workflow statuses.

<table>
<thead>
<tr>
<th>Status name</th>
<th>Status definition</th>
</tr>
</thead>
<tbody>
<tr>
<td>Unassigned</td>
<td>No workflow has been assigned to this change. The originator may still be developing the change. No statuses are displayed on the Workflow tab.</td>
</tr>
<tr>
<td>Pending</td>
<td>The originator may still be developing the change. It has not yet been approved or perhaps even completed.</td>
</tr>
<tr>
<td>Submitted</td>
<td>The change has been routed to the change analyst or component engineer for review and analysis.</td>
</tr>
<tr>
<td>CCB</td>
<td>The change has been routed to the members of the change control board (CCB) for approval.</td>
</tr>
<tr>
<td>Released</td>
<td>The change has been signed off by the CCB members and released.</td>
</tr>
<tr>
<td>Closed</td>
<td>The change is an ECR that has been accepted and implemented.</td>
</tr>
<tr>
<td>Expired</td>
<td>The change is a deviation where the “Effective To” date has been reached.</td>
</tr>
</tbody>
</table>
### Status name | Status definition
---|---
Implemented (Complete status type) | The change is an ECO or SCO that has been implemented or incorporated into new drawings.
Hold (Hold status type) | The change has been placed on hold while information is being gathered by the component engineer.
Resumed (Complete status type) | The change is a stop ship that has been lifted. Production of affected items can resume.
Canceled (Cancel status type) | The change has been canceled due to a fundamental flaw or rejection by several people.
First Article Complete (Complete status type) | The manufacturer part has been received and passed incoming inspection or quality assurance. The physical part has been validated against design documents or specifications (MCO only).

The **Workflow** tab shows all the statuses the change has been through, and the statuses remaining to complete the change control process. See Workflow Tab.

With appropriate privileges, you can switch a change to another status with the **Workflow** tab or the **Next Status** button. For more information, see the chapter on workflows in *Getting Started with Agile PLM*.

For information about all change object tabs, see [Change Objects](#) on page 117.

**Affected Items Tab**

The **Affected Items** tab lists the items that are affected by a change. Users with sufficient privileges can complete the **Affected Items** tab and use it to redline BOMs, manufacturing data, and attachments. Also, on the **Affected Items** tab of ECOs and MCOs, you can create change-controlled redline modifications to item attributes.

**Note** If you do not have Discovery and Read privileges for an item, it does not appear on the **Affected Items** tab. You may see a message telling you how many items are not displayed.

**To open an item listed on the Affected Items tab:**

- In Web Client, click the item number link. The item opens with the **Title Block** tab on top. Alternately, you can use the Quick View feature to display Title Block attributes and attachment information of an item. Hover the cursor over the item link; when the Quick View tooltip appears, click the tooltip to open the Quick View palette.
- In Java Client, double-click the affected item row. The item opens with the **Title Block** tab on top. Or, right-click the item row, choose **Open**, then choose a tab. The item opens with the selected tab on top.

The revision associated with the change is selected in the **Rev** drop-down list.

For information about all change object tabs, see [Change Objects](#) on page 117.
For information about working with Affected Items tabs, see the chapter, Affected Items of Changes on page 137.

**Workflow Tab**

The Workflow tab shows all the statuses the change has passed through, and which statuses remain to be completed. It also shows all the approvals and rejections made during each approval cycle.

For example, suppose a change is returned to the originator, reworked, and then resubmitted for a second approval cycle. The Workflow tab shows the approvals and rejections of the change made during the first approval cycle, and during the second approval cycle.

Depending on where the change is in the workflow, the Workflow tab can have up to three sections:

- **Workflow Overview Section** on page 122
- **Web Client Workflow Tab Base View** (on page 123)
- **Web Client Workflow Tab Signoff Status View** (on page 123)
- **Java Client Workflow Summary Table** (on page 124)
- **Java Client Workflow Signoff History Table** (on page 125)

For information about all change object tabs, see Change Objects on page 117.

**Workflow Overview Section**

The top section of the Workflow tab (visible for all changes that have been assigned a workflow) displays the name of the assigned workflow and a flowchart of the workflow, highlighting the current status of the change.

Some of the statuses in the flowchart are links. Links are underlined. You can switch the change to one of these statuses by clicking the link and filling in the Notify field. You need sufficient privileges to do this.

In Web Client, the status with an orange background is the current status. At the top of the Summary flowchart pane, click to hide the flowchart, or click to display the hidden flowchart.

In Java Client, the status with a yellow background is the current status. At the top of the flowchart pane, click the Hide/View workflow chart button to hide the flowchart or view a hidden flowchart.

The ability to add or remove approvers or observers is controlled by the Ad Hoc Approvers/Observers property settings for each workflow. In addition, you must have the appropriate privileges to add or remove approvers and observers. If the Agile administrator has not granted the appropriate privileges to you, the buttons on the Workflow tab are not available, and you cannot perform the actions.

In Web Client, the Add Reviewers and Remove Reviewers buttons appear at the top left of the Workflow table. Click the button for the action you want to perform, then follow the dialog instructions.

In Java Client, the Add Approvers/Observers and Remove Approvers/Observers buttons appear
at the top left of the **Workflow** tab. To add approvers or observers, and click ![addicon] and select the workflow status you want in the dialog. To remove an approver or observer, click ![removeicon] and choose the status you want in the dialog.

### Web Client Workflow Tab, Base View

The Web Client workflow table shows the status information for the change, including the signoff information for past, current, and future signoff statuses. It has the following columns by default; the Agile administrator may have modified the table:

- **Status Code** – icon indicating the action or state for the status table row.
  - ![future] – *Future*; the change workflow has not yet moved to this status.
  - ![current] – *Current*; the workflow status of the change, the workflow is currently in this status.
  - ![forward] – *Forward*; the change moved forward to the next status in the workflow.
  - ![backward] – *Backward*; the change moved backward in the status list of the workflow. For example, when the Change Analyst returns the change to the originator, the change moves backwards in the workflow.
  - ![skip] – *Skip*; the change skipped a status as it moved forward in the workflow.

- **Workflow** – the name of the workflow that the change is following.

- **Workflow Status** – the name of the status.

- **Action** – the action taken by the reviewer.

- **Req’d** – whether the reviewer is a required reviewer (approver) or not (observer).

- **Reviewer** – the user who reviewed the change. This can be an approver or an observer, and it can be a single user or a user group.

- **Signoff User** – the name of the user who actually approved or rejected the change.

- **Status Changed By** – the name of the user who switched the status.

- **Local Client Time** – the date and time of the action.

- **Signoff Comments** – any comments made by the reviewers (approvers and observers) during signoff.

- **Signoff Duration** – the number of days the approver has taken to sign off the change for that status.

See also [Workflow Tab](#) on page 122, [User Action Timestamp](#) on page 126, [Signoff Duration](#) on page 125.

### Web Client Current Signoff Status View

In the **Views** drop-down list, choose Current Sign-off Status to view only the signoff information for the current Review-type or Release-type status. If the current status is not a review or release status, no data is displayed for this view.
The Current Signoff Status view has the following columns by default; the Agile administrator may have modified the table:

- **Status Code** – icon indicating the action or state for that table row; not used in the Current Status View.
- **Workflow** – the name of the workflow that the change is following.
- **Workflow Status** – the name of the status; not used in the Current Signoff Status View.
- **Action** – the action taken by the reviewer.
- **Req’d** – whether the reviewer is a required reviewer (approver) or not (observer).
- **Reviewer** – the user who reviewed the change. This can be an approver or an observer, and it can be a single user or a user group.
- **Signoff User** – the name of the user who actually approved or rejected the change.
- **Status Changed By** – the name of the user who switched the status.
- **Local Client Time** – the date and time of the action.
- **Signoff Comments** – any comments made by the reviewers (approvers and observers) during signoff.
- **Signoff Duration** – the number of days an approver has taken to sign off the change for that status.

See also .[Workflow Tab](#) on page 122, [User Action Timestamp](#) on page 126, [Signoff Duration](#) on page 125.

### Java Client Workflow Tab Summary Table

The Summary table records the transition of the change through the workflow statuses and the signoff information for the each review-type status or released-type status. It has the following columns by default; the Agile administrator may have modified the table:

- **Action** – the action taken by the reviewer.
- **Req’d** – whether the reviewer is a required reviewer (approver) or not (observer).
- **Reviewer** – the user who reviewed the change. This can be an approver or an observer, and it can be a single user or a user group.
- **Signoff User** – the name of the user who actually approved or rejected the change.
- **Local Client Time** – the date and time of the action.
- **Signoff Comments** – any comments made by the reviewers (approvers and observers) during signoff.
- **Signoff Duration** – the number of days an approver takes to sign off the change for that status.

See also .[Workflow Tab](#) on page 122, [User Action Timestamp](#) on page 126, [Signoff Duration](#) on page 125.
Java Client Workflow Tab Signoff History Table

The Signoff History table of the Workflow tab lists and signoff information for the current Review-type or Release-type status. If the current status is not a review or release status, the Signoff History table is not displayed.

The Signoff History table has the following columns by default; the Agile administrator may have modified the table:

- **Workflow** – the name of the workflow that the change is following.
- **Workflow Status** – the name of the status.
- **Action** – the action taken by the reviewer.
- **Req’d** – whether the reviewer is a required reviewer (approver) or not (observer).
- **Reviewer** – the user who reviewed the change. This can be an approver or an observer, and it can be a single user or a user group.
- **Signoff User** – the name of the user who actually approved or rejected the change.
- **Status Changed By** – the name of the user who switched the status.
- **Local Client Time** – the date and time of the action.
- **Signoff Comments** – any comments made by the reviewers (approvers and observers) during signoff.
- **Signoff Duration** – the number of days an approver takes to sign off the change for that status.

See also *Workflow Tab* on page 122, *User Action Timestamp* on page 126, *Signoff Duration* on page 125.

**Signoff Duration**

Signoff Duration data is recorded for statuses that have reviewers: Review-type and Release-type statuses. Signoff Duration records time in a manner similar to a stop watch or timer. The recorded time indicates either how long each reviewer has been able to signoff the change for that status, but has not yet done so, or the number of days it took the reviewer to signoff the change for that status.

Signoff Duration is recorded for each user in days. It is the lesser of:

- Time since the change entered the workflow status. The time is recorded for the most recent entry into the status.
- Time since the user was last added to this workflow status.

The Signoff Duration timer begins recording duration time when the user becomes a reviewer, either when the change enters the signoff status or the user is added as a reviewer to the signoff status.

The signoff duration timer continues to increment one day at a time. The timer freezes when:

- The reviewer signs off the change for that status.
- The change exits that status.
If the change enters a specific signoff status multiple times, a separate duration is recorded for each time the change enters the status.

Signoff Duration time is recorded in days. When a change enters a signoff status, if a reviewer signs off within the first 24 hours, the Signoff Duration time is recorded as 0 (zero).

**User Action Timestamp**

Agile PLM provides two ways to record the date and time of any action taken against the change:

- **Local Client Time** – This is the date and time as shown on the local client computer of the user who is viewing the timestamp. Local client time is the default method of viewing timestamps.

  For example, if Mary approves a change at 12 noon in New York (Eastern Time), when John looks at the Workflow tab of the change in California, he sees the time Mary approved the change as 9 o’clock in the morning (Pacific Time).

- **User Action Time** – This is the date and time on the computer where the action was performed. User action time is optional.

  If Mary approves a change at 12 noon in New York, when John in California looks at the Workflow tab of the change, he sees the following:

  - In the **Local Client Time** column, the time Mary approved the change is 9 o’clock in the morning (Pacific Time).
  - In the **User Action Time** column, the time Mary approved the change is 12 noon (Eastern Time).

  When Mary looks at the Workflow tab of the change, she sees the following:

  - In the **Local Client Time** column, the time she approved the change is 12 noon (Eastern Time).
  - In the **User Action Time** column, the time she approved the change is 12 noon (Eastern Time).

Local Client Time always appears on the Workflow tab and History tab. User Action Time is optional, and is displayed on the Workflow tab of changes and the History tab of any Agile object only if the Agile administrator specifies this.

See also: Workflow Tab on page 122.

**Relationships Tab**

The item object Relationships tab allows you to create relationships with other business objects, both lifecycle objects and routable objects. If the related object is a routable object, you can specify a rule for the relationship, thus creating a dependency between the current item and the routable object. A relationship with a rule indicates a routable object whose workflow progression is affected by the lifecycle phase of the current item object.

A relationship with no specified rule does not limit or affect the workflow progression of the related routable object. You can use non-rule relationships to record objects that are somehow related to the current item, but do not have any dependencies with the current item.
Note You cannot specify a rule for an item relationship with another lifecycle phase (non-routable) object.

For more information about relationships and how to use this tab, see the chapter about working with business objects in *Getting Started with Agile PLM*.

**Attachments Tab**

All objects have an **Attachments** tab. On the **Attachments** tab, you can attach files and URLs to the object by referencing those files and URLs in a file folder object. On the **Attachments** tab, you can view, copy (get), or print attached files if you have the appropriate privileges.

Individual attached files are stored in file folder objects and can be attached to multiple objects. The files in a file folder object can be drawings or scanned images, documents, non-viewable files, compressed files, and so on.

For detailed information about working with file folder objects and the **Attachments** tab, see *Getting Started with Agile PLM*.

**Note** Files that pertain to an item should be referenced on the **Attachments** tab of the *item*, rather than the **Attachments** tab of a change that affects the item.

For information about all change object tabs, see *Change Objects* on page 117.

For information about working with Thumbnails, see *Agile PLM Getting Started*.

**History Tab**

The **History** tab shows a summary of actions taken against an object, including a description of the action, which user took the action, the date of the action, and other details.

**Note** If you do not have the appropriate Read privilege for an object, you cannot see the contents of the fields on the **History** tab. See *Details about Discovery and Read Privileges* on page 197.

The **History** tab shows a summary of actions taken against the change, including:

- The current status of the change
- The next status of the change
- A description of the action
- Which user took the action
- The date and time of the action (local client time)
- The user action time (optional; see *User Action Timestamp* on page 126)
- Which affected object was the subject of the action
- The find number of the component of the affected item
Details of the action
Comments made by users
Users notified

While the change status is Unassigned or Pending, the following actions are recorded on the History tab:

- The creation of the change.
- Any subclass modifications.
- Any actions on the Relationships tab and the Attachments tab.

Comments
Send
Print
Subscribe
Save As
Share
Export
Delete
Undelete

Note   Actions for changes that have not moved out of the Pending status types are recorded for modifications to the Relationships tab and Attachments tab only. A change must have a status type other than Pending, such as Submit or Review, before other actions are recorded on the History tab.

The types of actions recorded after a change moves out of the Pending status are:

- Modify or remove an item on the Affected Items tab
- Redline an item on the redlines tab of the Affected Items tab
- Add, get, or check in or out a file attachment through the Attachments tab of the change
- Add or remove approvers
- Approvals and rejections
- Reminder notifications
- Escalation notifications
- Field change, any tab
- Status change
- Autopromotion failure
- Attempt to change status without satisfying status-specific criteria
When you make modifications to a date field on a change after the change has exited the Pending status type, Agile PLM records the dates and times in the Details column of the History tab using the local date and time on the computer where the Agile Application Server is installed. Agile PLM uses a static format, for example, 2003/08/02 15:00:23 (GMT - 07:00) (yyyy/MM/dd) (Greenwich Mean Time).

Comments on the History tab are different from the comments on the Workflow tab. Comments on the Workflow tab come from approvers and observers when they perform the online approval process. Comments on the History tab can be made by anyone with sufficient privileges at any time.

For information about all change object tabs, see Change Objects on page 117.

**Workflow Routings Inbox**

You can view Agile changes that have been submitted to you in the Agile Workflow Routings Inbox.

**To view the Workflow Routings Inbox in Web Client:**

In the menu bar, click the Home button (or press Ctrl+Shift+H). Depending on the Preferred Inbox View setting in your user profile, either the Workflow Routings tab appears, or you can click Workflow Routings tab to display it.

**To view the Workflow Routings Inbox in Java Client:**

In the menu bar, click the small down arrow next to the Inbox button ☄️, and choose Workflow Routings.

See also: Routing Managers: Change Analyst and Component Engineer on page 135.

For detailed information about working with routable objects, see Getting Started with Agile PLM.

**Changes and Manufacturing Sites**

Changes can affect site-specific information. Before you add affected items to a change, specify the manufacturing site that you want to affect. For general information about sites, see the chapter Sites and Distributed Manufacturing on page 29.
This section includes the following topics.

- Site Information Affected by Changes on page 130
- Sites and ECOs on page 131
- Sites and MCOs on page 131
- Site Change Orders on page 131

For information about working with the Affected Items tab, see the chapter Affected Items of Changes on page 137.

Site Information Affected by Changes

The following data is subject to change control:

- Site-specific portion of the BOM
- Site-specific portion of the AML
- Dispositions
- Effectivity dates
- Release of a site association after the item is released

All of the above data can be directly edited before an item is released. After the data is released, BOM and AML data may be redlined via an ECO, MCO, or SCO. A new item revision is not required, but will be made if the modification is made using an ECO.
See also: Changes and Manufacturing Sites on page 129.

**Sites and ECOs**

You can use an ECO to perform the following site-related actions:

- Modify the common or site-specific BOM of an item.
- Modify the common or site-specific AML of an item.
- Modify dispositions site-specifically.
- Modify the effectivity and obsolete dates of site-specific items.

See also: Changes and Manufacturing Sites on page 129.

**Sites and MCOs**

You can use an MCO to modify the common and site-specific AML of an item or change the lifecycle phase of an item.

You can use MCOs for all sites. For example, let’s say there are two competing MCOs with site-specific information. When the first MCO is released, the pending MCO is rebased to the newly released MCO. In a similar manner, if a pending MCO has competing site-specific redlines with a pending ECO or SCO, when the ECO or SCO is released, the pending MCO is rebased to the newly released ECO or SCO.

See also: Changes and Manufacturing Sites on page 129.

**Site Change Orders**

You can use site change orders (SCOs) to make site-specific changes to an item without changing the revision of the parent item.

With SCOs, you can modify the effectivity and obsolete dates, and the dispositions of previous revisions of an item, on a site-by-site basis. This allows you to use an explicit process to propose, review, and approve the modification of effectivity dates and to record the reasons why the effectivity dates were changed.

**Note**

You cannot use an SCO to make redline modifications to a previous revision of an item. All redline modifications must be made to the latest released revision of an item.

You can use an SCO to do the following:

- Modify the site-specific BOM of an item for latest revisions.
- Modify the site-specific AML of an item for the latest revisions.
- Modify the site-specific dispositions. Includes latest and non-latest revisions.
- Modify the effectivity and obsolete dates of site-specific items. Includes latest and non-latest revisions.

More than one site can be affected by an SCO, however, each row on the **Affected Items** tab applies
to only one site. Duplicate items are not allowed; for example, if you add item P001 for site A, you cannot also add P001 for site B. You cannot use an SCO to modify the common site portion of the BOM or AML. Also, you cannot use an SCO to modify the BOM of an item that has not been released by an ECO; that is, an SCO cannot modify preliminary BOMs.

See also: Changes and Manufacturing Sites on page 129.

Site-Specific Effectivity and Obsolete Dates

To modify or set the effective and obsolete date for a specific site, and nothing else is being done with the ECO, add the item to the Affected Items tab and create a new revision. If you do not want to create a new revision just for this modification, create an SCO and modify the effective and obsolete dates for the site on the SCO Affected Items tab.

The Relationship of Changes to Item Revisions

This section describes the rules Agile PLM uses to determine which revision of an item is affected by the change and offers additional guidelines. For more information about item revisions, see Working with Item Revisions on page 10.

Items with an ECO Revision Only

- A pending or released SCO can be based only on a revision created by a released ECO.
- An ECO cannot be unreleased if there is a pending or released SCO based on it.

MCOs on Items with ECO Revisions

- When a new ECO is created and released, and a pending MCO exists against a previous revision of the item, the MCO changes to be based on the new ECO revision, and it inherits content from the new revision.
- An MCO cannot be unreleased if there is a released SCO based on it.

Items with an Initial MCO Revision Only

When an MCO is released against the item before the item is released by an ECO (called an initial MCO revision, or blank revision), a pending SCO cannot be based on the blank revision.

Creating Changes

To create a change, you must have the appropriate privilege.

In Web Client, you can create an item with the Create New > Change command or the Actions > Save As command.

In Java Client, you can create a change with the File > New > Change command, the New Object button, or the Save As command, on the More Actions menu (click the More button at the top of the object window) and on the right-click shortcut menu.
For a site change order (SCO), when you add an item to the Affected Items table, if the selected site is not listed on the Sites tab of the item, you are prompted to add it to the Sites tab of the item. If you later cancel the SCO, or remove the item from the Affected Items table, the new site assignment remains on the Sites tab of the item.

For more information about creating changes and other objects, see Getting Started with Agile PLM.

Once a change is created, it exists until you delete it. If you create a new change, then decide you do not wish to keep it, be sure to delete the change (soft-delete, then hard-delete); otherwise, the new change remains in the database, and the number cannot be reused. For information, see Deleting Changes on page 135.

See also: Modifying Changes on page 133.

**Site Change Order Save As Limitations**

You cannot initiate Save As from a non-Site Change Order (SCO) change object in order to create an SCO object, nor can you initiate Save As from an SCO object in order to create a non-SCO change object. Because Site Change Orders (SCOs) affect only site-specific information, and other types of changes are not limited to site-specific information (for example, ECOs and MCOs), SCOs can be Save-As-created only from another SCO. The Site Change Order's site-specific only usage makes it incompatible with other change types when using the Save As feature.

**Modifying Changes**

With sufficient privileges, you can modify editable fields. You can modify only fields that have been made editable by the Agile administrator.

**To edit a change:**

1. On the Cover Page tab:
   - In Web Client, click Edit to put the Cover Page tab in edit mode. Modify the appropriate fields. Click Save when you are finished.
   - In Java Client, modify the appropriate fields. Click Save when you finish editing the Cover Page tab.

2. On the Affected Items tab, you can remove, add, and edit rows of affected items. (For more information, see Adding an Item to the Affected Items Tab on page 145.)

3. On the Relationships tab, you can add, edit, or remove relationships, and you can add, edit, or remove relationship rules. (For more information, see Getting Started with Agile PLM.)

4. On the Attachments tab, you can add and remove references to files and URLs in file folder objects. (For more information, see Getting Started with Agile PLM.)

You cannot edit information on the Workflow or History tabs; those tabs are completed automatically.

See also: Creating Changes on page 132.
Agile Change Control Workflows

An Agile workflow is a sequence of statuses that a change follows as it goes through the change control process. The Agile administrator specifies the name of the workflow, the number and names of the statuses, and the properties that define each status.

See also: Routing Managers: Change Analyst and Component Engineer on page 135.

For more information about routing changes and other Agile objects through workflows, see Getting Started with Agile PLM.

Redlining through ECOs, MCOs, and SCOs

Redlining highlights, in red, changes made to an object. ECOs, MCOs, and SCOs are the only changes that have redlining functions. Use these changes when you need to modify a released item. For information about the functions of these types of changes, see Change Classes on page 115.

This section contains the following topics:

- Redlining through ECOs on page 134
- Redlining through MCOs on page 135
- Redlining through SCOs on page 135

Depending on your company policy, when you redline manufacturing data, use an ECO when you want to advance the revision of an item, or use an MCO when you don’t want to advance the revision of an item.

For information about redlining a BOM, see Redlining the BOM of a Released Item on page 108.

For information about redlining an AML, see Modifying Manufacturing Data from the Redlines Tab on page 67.

For information about redlining attachments, see Getting Started with Agile PLM.

Redlining through ECOs

You can redline BOM and AML data and attachments using an ECO. In addition, you can create change-controlled redline modifications to item attributes.

ECOs let you release new items and modify previously released items. When you create an ECO, a pending item revision is created for any items modified by the change (the ones listed on the Affected Items tab). When the ECO is released, the pending item revision is converted to a released revision for each modified item.

See also: What are Change-Controlled Attributes? on page 226
Redlining through MCOs

You can redline AML data using an MCO. In addition, you can create change-controlled redline modifications to item attributes.

MCOs are similar in appearance and function to an ECO. However, MCOs do not change the revision of an item, unlike an ECO. Instead, the MCO number is displayed alongside the corresponding revision number in the Rev drop-down list. For example, if there is a pending MCO #M12345 against Rev B of an item, then, on the Rev drop-down list, that revision is listed as (B) M12345.

MCOs can be used to:
- Release a new item without a revision (but you can select its lifecycle phase)
- Modify the lifecycle phase of an item without changing its revision
- Redline manufacturing data (add, modify, or delete) on items (Manufacturers tab)

Redlining through SCOs

You can redline site-specific BOM and AML data using an SCO, but only against the latest released revision.

SCOs are similar in appearance and function to an ECO. However, SCOs do not change the revision of an item, unlike an ECO. Instead, the SCO number is displayed alongside the corresponding revision number in the Rev drop-down list. For example, if there is a pending SCO S12345 against revision B of an item, then, on the Rev drop-down list, that revision is listed as (B) S12345.

Deleting Changes

See Deleting Agile Objects on page 207 for important details about deleting change objects and about undeleting change objects.

Printing Change Tabs

You can print object tabs and other data from your Agile PLM system. You can print the current tab or all tabs. Attachments are printed from their native applications or the AutoVue for Agile viewer.

In Web Client, with the object open, choose Actions > Print.

In Java Client, with the object open, use the Print button 🖨.

For additional information about printing objects, see Getting Started with Agile PLM.

When you print the Affected Items tab, redline information is also included.

Routing Managers: Change Analyst and Component
The user who oversees the routing and approval process of a change is the routing manager. The routing manager for changes is called the change analyst, and the routing manager for manufacturing change orders (MCOs) is called the component engineer. The Change Analyst or Component Engineer field on the Cover Page tab of the change lists the routing manager for that change. These fields are filled in automatically (as designated by the Agile administrator in the workflow settings) or selected manually by the user from a drop-down list.

Routing managers evaluate and assign changes, and they receive email notifications pertaining to the change objects to which they are assigned. Specific roles and privileges are required to perform the tasks of a routing manager. If you have questions about your assigned roles, contact the Agile administrator.

The following is an example of a typical change control process for a change using default Agile workflows:

1. A change (for example, an ECO or MCO) is created, and a workflow is selected.
2. The change is submitted to the change analyst (ECO) or component engineer (MCO).
3. The change analyst or component engineer switches the change to the next status, which routes the change to the specified approvers (members of the change control board) and observers.
4. The members of the change control board (CCB) either approve or reject the change, and their approval or rejection is recorded on the Workflow tab of the change.
5. If all the approvers approve the change, it is automatically promoted to the Released status (the next status).

If any approvers reject the change, the change analyst or component engineer is notified and either:

- Cancels the change by switching the status to Canceled.
- Returns the change to the originator by switching the status to Pending.
- Releases the change in spite of the rejection.

Depending on the workflow settings, the change may automatically be switched to a specified status when an approver rejects it.

For detailed information about working with and managing changes, see the chapter about routing objects with workflows in Getting Started with Agile PLM.

See also: Agile Change Control Workflows on page 134.
Affected Items of Changes

This chapter includes the following:

- Affected Items Tab ................................................................. 137
- Affected Items by Manufacturing Site ................................................ 137
- Viewing the Disposition of Parts in an ECO or SCO ........................................ 144
- Adding an Item to the Affected Items Tab ............................................ 145
- Working with the Affected Items Table .................................................. 157
- Removing an Item from the Affected Items Tab ....................................... 163
- Editing Rows in the Affected Items Tab .................................................. 163
- Viewing the Redlines of an Affected Item .............................................. 166

Affected Items Tab

This section includes the following topics:

- Buttons on the Affected Items Tab on page 138
- Fields on the Affected Items Tab on page 140

The Affected Items tab of a change lists the items that are affected by the change. If an item belongs to multiple manufacturing sites, then the default Affected Items row values are the default value for each site row. Users with sufficient privileges can use the Affected Items tab to:

- List the items affected by a change and give those items a pending revision (ECOs)
- Specify the revision of the item that is affected by the change (SCOs, ECRs, Deviations, Stop Ships)

Note: ECOs and MCOs affect only the most recently released revision of the item.

- View items listed on the Affected Items tab
- Create, view, or modify the Redline BOM tab data of affected items (ECOs and SCOs)
- Create, view, or modify the Redline Manufacturers tab data of affected items (SCOs, and MCOs; ECOs if SmartRule is set to allow it)
- Add redlines to attachments of items through the Redline Attachments tab (ECOs only)
- Specify the disposition of existing parts (ECOs, MCOs, SCOs, ECR, Deviation, and Stop Ship)

Users with Read privileges can:

- Open affected items
- Redline affected items (ECOs, MCOs, and SCOs)
- View the disposition of existing parts (ECOs, MCOs, and SCOs); you must scroll to the right to
bring the disposition fields into view.

**Note** If you do not have the Discovery privilege for an item, it does not appear on the **Affected Items** tab. You may see a message telling you how many items are not displayed. Depending on your Read privileges, you may not be able to view all the fields on the **Affected Items** tab.

**To open an item listed on the Affected Items tab:**
- In Web Client, click the item number. The item opens with the **Title Block** tab on top.
- In Java Client, double-click the affected item row. The item opens with the **Title Block** tab on top.
  - Or, right-click the item row, choose **Open**, then choose a tab. The item opens with the selected tab on top.

The revision associated with the change is selected in the **Rev** drop-down list.

**Buttons on the Affected Items Tab**

The following buttons on the **Affected Items** tab in Web Client are available or unavailable, depending on your privileges and whether it is appropriate to use them.

<table>
<thead>
<tr>
<th>Button or Mode</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>(edit mode)</td>
<td>Double-click any editable cell of the affected items table. The affected items table enters edit mode and the <strong>Save</strong> and <strong>Cancel</strong> buttons become active.</td>
</tr>
<tr>
<td>Remove</td>
<td>Deletes the selected item from the Affected Items table.</td>
</tr>
</tbody>
</table>
| Add            | **Add** — Adds an item below the selected item. Depending on which option you choose, you can:  
  - Create an item while adding it.  
  - Search for an existing item.  
  - Type in Known Number(s) of one or more existing items. |
| Bulk Change    | Applies a change of an item to multiple BOMs or AMLs that use the item. |
| More...        | **More...** menu button  
  - Provides access to the following actions:  
    - **Copy** — Copy the selected item row to paste it into a different table.  
    - **Paste** — Paste a previously copied item row into the affected items table.  
    - **Fill Down** — Copy the contents of the highlighted cell to all the cells below it.  
    - **Fill-down (selected cells)** — When non-contiguous cells are selected (highlighted), copy the contents of the uppermost highlighted cell to the highlighted cells below.  
    - **Fill Up** — Copy the contents of the highlighted cell to all the cells above it.  
    - **Fill Up (selected cells)** — When non-contiguous cells are selected (highlighted), copy the contents of the uppermost highlighted cell to the highlighted cells below.  
    - **Full Display Mode** — Hide the redline tabs and use the full content pane display the
### Button or Mode

<table>
<thead>
<tr>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>affected items table.</td>
</tr>
</tbody>
</table>

**Standard Display Mode** – Display the previously hidden redline tabs and use the content pane to display both the affected items table and the redline tabs.

(Appear in Edit mode only. Appear next to each attribute that can be filled up or down.)

Copies the value of the field where the button is clicked to the fields above (Fill Up) or below (Fill Down) in the column of the selected rows.

See Editing Affected Items Tab Rows in Web Client on page 164.

### Save

Active only in table edit mode.

Click the appropriate button to either save or cancel the edits to the affected items table.

### Cancel

### Views drop-down list

Select the view you want, for example, Hide Site Rows or Base View.

Select Base View to list the site-specific information for each affected item. Each item is listed in multiple rows in the table, once for the default or common display of the item (the Sites field is blank) and once for each site associated with the item (the Sites field contains the appropriate site name.)

Select Hide Site Rows to list only the default or common information of the item. Each item is listed only once in the table, and the Sites field is blank.

You can select other views if the Agile administrator has defined global views or if you have defined personal views. For more information about personal views, see Getting Started with Agile PLM.

---

The following buttons on the Affected Items tab in Java Client are available or unavailable, depending on your privileges and whether it is appropriate to use them.

<table>
<thead>
<tr>
<th>Button</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Edit Affected Items <img src="image" alt="icon" /></td>
<td>Displays the selected (checked) item in edit mode.</td>
</tr>
<tr>
<td>Remove <img src="image" alt="icon" /></td>
<td>Deletes the selected item from the Affected Items table.</td>
</tr>
<tr>
<td><img src="image" alt="icon" /></td>
<td>Add — Adds an item below the selected item. Depending on which option you choose, you can:</td>
</tr>
<tr>
<td><img src="image" alt="icon" /></td>
<td>Create an item while adding it.</td>
</tr>
<tr>
<td><img src="image" alt="icon" /></td>
<td>Search for an existing item.</td>
</tr>
<tr>
<td><img src="image" alt="icon" /></td>
<td>Type in Known Number(s) of one or more existing items.</td>
</tr>
<tr>
<td>Fill Down Rows, Fill Up Rows <img src="image" alt="icon" /> <img src="image" alt="icon" /></td>
<td>Copies the values in each column of the first selected row (for Fill Down) or the last selected row (Fill Up), and pastes them into the corresponding cells of all other selected rows. See Fill Up Rows and Fill Down Rows Buttons in Java Client on page 165.</td>
</tr>
<tr>
<td>BOM Bulk Change <img src="image" alt="icon" /> <img src="image" alt="icon" /></td>
<td>Applies a change of an item to multiple BOMs that use the item.</td>
</tr>
</tbody>
</table>
### Button | Description
--- | ---
Manufacturer Part Bulk Change | Applies a change of an item to multiple AMLs that use the item.

**View drop-down list**

- Select Show Sites to list the site-specific information for each affected item. Each item is listed in multiple rows in the table, once for the default or common display of the item (the Sites field is blank) and once for each site associated with the item (the Sites field contains the appropriate site name.)

- Select Hide Sites to list only the default or common information of the item. Each item is listed only once in the table, and the Sites field is blank.

### Fields on the Affected Items Tab

The following table shows the **Affected Items** fields for each change class.

<table>
<thead>
<tr>
<th>Affected Items tab field</th>
<th>ECO</th>
<th>MCO</th>
<th>SCO</th>
<th>ECR</th>
<th>Stop ship</th>
<th>Deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sites</td>
<td>✔️</td>
<td>✔️</td>
<td>✔️</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Item Number</td>
<td>✔️</td>
<td>✔️</td>
<td>✔️</td>
<td>✔️</td>
<td>✔️</td>
<td>✔️</td>
</tr>
<tr>
<td>Old Rev</td>
<td>✔️</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Old Lifecycle Phase</td>
<td>✔️</td>
<td>✔️</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Obsolete Date</td>
<td>✔️</td>
<td></td>
<td></td>
<td></td>
<td>✔️</td>
<td></td>
</tr>
<tr>
<td>New Rev</td>
<td>✔️</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Revision</td>
<td></td>
<td>✔️</td>
<td>✔️</td>
<td>✔️</td>
<td>✔️</td>
<td>✔️</td>
</tr>
<tr>
<td>Effective Date</td>
<td>✔️</td>
<td></td>
<td></td>
<td></td>
<td>✔️</td>
<td></td>
</tr>
<tr>
<td>Lifecycle Phase</td>
<td>✔️</td>
<td>✔️</td>
<td></td>
<td></td>
<td>✔️</td>
<td></td>
</tr>
<tr>
<td>Change Function</td>
<td>✔️</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Old Item Description (appears only if enabled)</td>
<td>✔️</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Item Description</td>
<td>✔️</td>
<td>✔️</td>
<td>✔️</td>
<td>✔️</td>
<td>✔️</td>
<td>✔️</td>
</tr>
</tbody>
</table>
## Affected Items tab field

<table>
<thead>
<tr>
<th>Affected Items tab field</th>
<th>ECO</th>
<th>MCO</th>
<th>SCO</th>
<th>ECR</th>
<th>Stop ship</th>
<th>Deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>On Order</td>
<td>✓</td>
<td>✓</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Stock</td>
<td>✓</td>
<td>✓</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Work in Progress</td>
<td>✓</td>
<td>✓</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Finished Goods</td>
<td>✓</td>
<td>✓</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Field</td>
<td>✓</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### Notes

All required fields must be completed before a change can be released. (A user with Override privilege can release a change without filling in the required fields.) The Agile administrator determines which fields are required, but the NewRev field on an ECO is always required and cannot be overridden. Perform a status audit or release audit to verify that all required fields have been completed. For more information about auditing, see the chapter on workflows in *Getting Started with Agile PLM*. See the Agile administrator if you have questions about required fields.

### Sites Field in Affected Items Table

The Sites field indicates the manufacturing site for which the affected item was added. When the Sites field is blank, it indicates that the row shows information about the item that is common among all sites assigned to the item.

### Old Item Description and Item Description

If the Agile administrator has configured the Agile system so that a released item’s Description field can be changed only by using the Affected Items tab of a change order, the affected items table will include both the Old Item Description field and the Item Description field (which might be renamed to New Item Description).

If your Agile system is configured for change order modification of the item’s Description field, the Old Item Description field is filled in automatically when you add the item to the Affected Items tab. You cannot modify the Old Item Description field on the Affected Items tab. However, if you have the appropriate privileges, you can enter a new description in the affected items table (New Item Description field). This description appears in the Description field of the pending revision of the item.

The Item Description field (or New Item Description field) of a released change order cannot be used to modify an item’s Description field; the released item’s Description field can only be modified through the item’s Title Block tab, with the appropriate modify item privileges. Once the change order with the item on its Affected Items tab is released, even though you may have a modify privilege for released change orders, the change order Item Description field of released change orders cannot be modified, and therefore cannot be used to modify the item’s Description field.
For more information about modifying the item Description field, see Editing a Released Item’s Description Field (on page 21).

**Important** The item Description field cannot be modified through an MCO because an MCO does not create a new item revision. The MCO uses the Description field information from the ECO revision or Introductory revision on which it is based.

### Revision

The Revision field indicates which revision of the item is affected by the change. The following table explains which item revisions can be affected by each kind of Agile change.

<table>
<thead>
<tr>
<th>Change class</th>
<th>Can be edited?</th>
<th>Default revision when item is added to Affected Items table</th>
</tr>
</thead>
<tbody>
<tr>
<td>Change Order (ECO)</td>
<td>No</td>
<td>When an item is added to the Affected Items table of a change order, the most recently released revision of the item appears in the Old Rev field. You cannot edit the ECO Affected Items table Old Rev field. Change orders always affect the most recently released revision of the item. If the item has never been released, then the change order affects the Introductory revision of the item. An ECO creates a new revision of the item and you must specify a new revision number or letter in the Affected Items table New Rev field. <strong>Note:</strong> A change order is the only Agile change object that can create a new item revision. For more information about ECOs, see Special Considerations for ECOs on page 158.</td>
</tr>
<tr>
<td>Manufacturer Change Order (MCO)</td>
<td>—</td>
<td>Manufacturer change orders always affect the most recently released revision of the item. If the item has never been released, then the MCO affects the Introductory revision of the item. The item revision number upon which the MCO is based is not displayed on the Affected Items tab if an MCO. For more information about MCOs, see Special Considerations for MCOs on page 160.</td>
</tr>
<tr>
<td>Site Change Order (SCO)</td>
<td>Yes</td>
<td>When an item is added to the Affected Items table of a site change order, the most recently released revision of the item appears in the Revision field. You can edit the SCO Affected Items table Revision field to select a different item revision. An SCO can affect any released revision of the item. An SCO cannot affect an Introductory revision of an item. Only one revision of an item can be included on the Affected Items table of an SCO.</td>
</tr>
</tbody>
</table>
### Change class

<table>
<thead>
<tr>
<th>Change class</th>
<th>Can be edited?</th>
<th>Default revision when item is added to Affected Items table</th>
</tr>
</thead>
<tbody>
<tr>
<td>Engineering Change Request (ECR)</td>
<td>Yes</td>
<td>When an item is added to the Affected Items table of an engineering change request, the <strong>Revision</strong> field is blank. When the <strong>Revision</strong> field is blank, the ECR will affect the most recently released revision. Only released revisions are available for selection in this field. Pending revisions do not appear in this field. If the item has never been released, then the engineering change request affects the Introductory revision of the item. You can edit the ECR Affected Items table <strong>Revision</strong> field to select a different item revision.</td>
</tr>
<tr>
<td>Deviation</td>
<td>Yes</td>
<td>When an item is added to the Affected Items table of a deviation, the <strong>Revision</strong> field is blank. When the <strong>Revision</strong> field is blank, the deviation will affect the most recently released revision of the item. If the item has never been released, then the deviation affects the Introductory revision of the item. You can edit the deviation Affected Items table <strong>Revision</strong> field to select a different item revision.</td>
</tr>
<tr>
<td>Stop Ship</td>
<td>Yes</td>
<td>When an item is added to the Affected Items table of a stop ship, the <strong>Revision</strong> field is blank. When the <strong>Revision</strong> field is blank, the stop ship will affect the most recently released revision of the item. If the item has never been released, then the stop ship affects the Introductory revision of the item. You can edit the stop ship Affected Items table <strong>Revision</strong> field to select a different item revision.</td>
</tr>
</tbody>
</table>

### Obsolete Date and Effective Date

The **Obsolete Date** field applies to the prior revision of the affected item, not the new revision. The obsolete date is the date the old revision becomes obsolete.

The **Effective Date** field applies to the new revision, and reflects the date that the new revision becomes effective.

### Lifecycle Phase and Old Lifecycle Phase

By default, the **Lifecycle Phase** list has the following entries (the Agile administrator can add more):

- **Inactive** – Temporarily not in use and may be reactivated.
- **Obsolete** – Permanently discontinue the item.
- **Pilot** – Build with limited initial quantities as a pilot project.
- **Production** – Release for regular production.
- **Prototype** – Produce in very limited quantities for testing.

The **Old Lifecycle Phase** field is filled in automatically when you add the item to the **Affected Items** tab.
You cannot modify the **Old Lifecycle Phase** field on the **Affected Items** tab.

If the item has been released, when you add it to the **Affected Items** tab, the **Lifecycle Phase** field is automatically filled in with the item's current lifecycle phase; you can then modify the **Lifecycle Phase** field. If the item has never been released, when you add it to the **Affected Items** tab, initially both the **Old Lifecycle Phase** field and the **Lifecycle Phase** field are blank. You can then modify the **Lifecycle Phase** field.

---

**Note**

If you leave the **Affected Items** table **Lifecycle Phase** field blank and release the change order, Agile uses the **Old Lifecycle Phase** to determine the lifecycle phase of the released object.

---

**Affected Items by Manufacturing Site**

With a change order (for example, an ECO), you can view and work with affected items for a specific manufacturing site by:

- Web Client – select Base View in the **Views** drop-down list on the **Affected Items** tab.
- Java Client – select Show Sites in the **View** drop-down list on the **Affected Items** tab.

Each item on the table is expanded to display a row for each site associated with the item. Sites displayed are the ones to which you have access.

For example, to work with part number P345 for the Hong Kong site, select the row for part P345 with the site name Hong Kong in the **Sites** field of the row.

With a site change order (SCO), you view and work with items for a specific manufacturing site by selecting the appropriate site when you add the item to the **Affected Items** table. The modifications you specify on an SCO apply only to the site selected for the item.

**Fields That Allow Site-Specific Values**

The following fields in the **Affected Items** table can contain values that differ by site:

- Disposition fields: On Order, Work in Progress, Finished Goods, Stock, Field
- Effective Date
- Obsolete Date

The following fields in the **Affected Items** table **cannot** contain values that differ by site:

- Item Description
- Old Item Description
- Lifecycle Phase
- Old Lifecycle Phase
- Old Rev
The Agile administrator uses the Site-Specific Field property to determine whether the other fields in the Affected Items table can contain values that differ by site.

**Site-Specific Effectivity and Obsolete Dates**

To modify or set the effective and obsolete date for a specific site, and nothing else is being done with the ECO, add the item to the Affected Items tab and create a new revision. If you do not want to create a new revision just for this modification, create an SCO and modify the effective and obsolete dates for the site on the SCO Affected Items tab.

**Viewing the Disposition of Parts in an ECO or SCO**

ECOs and SCOs have fields on the Affected Items table that specify what to do with existing parts affected by the change: On Order, Stock, Work In Progress, or Finished Goods. ECOs also include Field (for “in the field”). Each of these fields can have a list of disposition types defined by the Agile administrator. Examples of dispositions are Use, Scrap, and Rework.

**Adding an Item to the Affected Items Tab**

You can use the Add button to add an item to the Affected Items tab.

In Web Client, if you create a change from an open item by using Actions > Create New > Change, that item is added to the Affected Items tab automatically.

In Java Client, if you create a change from an open item by using the Create Change command on the More Actions menu (click the More button at the top of the object window) and on the right-click shortcut menu. That item is added to the Affected Items tab automatically.

This section contains the following topics:

- Web Client, Adding Items to the Affected Items Tab on page 146.
- Java Client, Using the Add Affected Items Wizard on page 149
- Performing Bulk Changes on page 150
- Special Considerations for ECOs on page 158
- Special Considerations for MCOs on page 160
- Removing an Item from the Affected Items Tab on page 163

**Note** You cannot add an item that is locked by another user. An item is locked if a user has made modifications to the item, but has not yet saved those modifications. Once the item is saved, it is unlocked.
Web Client, Adding Items to the Affected Items Table

There are several different ways to add items to the Affected Items tab. You can:

- The Add button on the Affected Items table allows you to:
  - Type in the number of an item.
    See Web Client, Type in the Number of an Item to Add to the Affected Items Table on page 146.
  - Execute a Quick Search by clicking the palette Search to Add button.
    See Web Client, Quick Search to Add Items to the Affected Items Table on page 148.
  - Create a new item by clicking the palette Create to Add.
    See Web Client, Create New to Add Items to the Affected Items Table on page 147.
- Execute a saved search; from the search results table, you can use the More... menu Copy command, or you can populate the NAVIGATOR drawer, then drag and drop to add to the Affected Items table.
  See Web Client, Saved Search to Add Items to the Affected Items Table on page 148.
- Open a custom search palette and define a search (Basic or Advanced) and search for the items you want to add.
  See Web Client, Custom Search to Add Items to the Affected Items Table on page 148.

Web Client, Type in the Number of an Item to Add to the Affected Items Table

If you know the number of the item you want to add to the BOM table, you can use the Type in Known Numbers option in Web Client. See also, Web Client, Quick Search to Add Items to the Affected Items Table on page 148 and Web Client, Create New to Add Items to the Affected Items Table on page 147.

To add one or more known items to the Affected Items table in Web Client:

1. Click the Affected Items tab.
2. Click the Add button. The object addition palette appears.
3. In the text entry field, type the items numbers you wish to add, separated by semicolons. For example:
   P00487; P00259; P00264
4. Or, you can also use the Web Client Type-Ahead search feature:
   a. If you type a partial item number, Agile PLM displays a list of items that match the text typed so far.
   b. Use the arrow up and arrow down keys to highlight the object you want.
   c. Press the right arrow key to select the object.
   d. Repeat steps a through c to select multiple objects to add.
   Note          For SCOs, in the palette drop-down list, select the site you want.
5. Press the Enter key to add the selected items to the table and close the palette.
The items appear in the Affected Items table.

For information about other methods of adding items to the Affected Items table, see Web Client, Adding Items to the Affected Items Table on page 146.

Web Client, Quick Search to Add Items to the Affected Items Table

Use Web Client Add features to perform a quick search to find the items you want to add to the Affected Items table.

To execute a quick search to find one or more known items to add to the Affected Items table in Web Client:

1. Click the Affected Items tab.
2. Click the Add button. The object addition palette appears.
3. Click the palette Search to Add button. The Items Search palette appears.
4. Enter the search criteria and click to execute the quick search.
5. In the results table, select one or more items, and then:
   • Press Enter on the keyboard to add the selected items to the Affected Items table.
   • Or, drag the selected items and drop them onto the Affected Items table.

   The items are added to the Affected Items table.

   Note For SCOs, in the palette drop-down list, select the site you want.

6. When you are finished, press Escape on the keyboard to close the Items Search palette.

Web Client, Create New to Add Items to the Affected Items Table

You can add an item that hasn't been created yet to Affected Items table.

Adding nonexistent items to the Affected Items table using Web Client:

1. Click the Affected Items tab.
2. Click the Add button. The object addition palette appears.
3. Click the palette Create to Add button.

   The Create New dialog appears.
4. In the Create New dialog, use the Type drop-down list to select the type (subclass) of item you want to create.
5. Use the number that appears, click the Autonumber button, or type a number.
6. Type a description in the Description field, if desired.
7. Complete any required fields.
8. Click Add.
Note If you create a new item and decide you do not wish to keep it, you should delete it from the database with the Delete command on the Actions menu. For more information about deleting items from the Affected Items table, see the section, Removing an Item from the Affected Items Tab on page 163.

For information about other methods of adding items to the Affected Items table, see Web Client, Adding Items to the Affected Items Table on page 146.

Web Client, Saved Search to Add Items to the Affected Items Table

Agile PLM table addition features allow you use a saved search to find items to add to the Affected Items table.

To use a saved search in Web Client to locate items to add to the Affected Items table:

1. Execute the saved search.
2. Use one of the following methods to add search result items to the Affected Items table:
   3. Copy and Paste:
      a. In the Search Results table, select one or more item rows.
      b. Copy the items by choosing Copy in the More... menu, or use the Ctrl + C keyboard shortcut.
      c. Open the desired item and click the Affected Items tab to display the Affected Items tab.
      d. Choose Paste in the More... menu, or use the Ctrl + V keyboard shortcut.

4. NAVIGATOR Drawer:
   a. In the Search Results table, click the Navigator button. The NAVIGATOR drawer in the left navigation pane is populated with the search results.
   b. Select one or more items in the NAVIGATOR drawer. Click to the left of the item icon to highlight and select a NAVIGATOR link.
   c. Drag and drop the highlighted items onto the Affected Items table.
   d. Alternately, you can copy the NAVIGATOR highlighted items (Ctrl + C) and paste them into the Affected Items table (Choose Paste in the More... menu, or use the Ctrl + V keyboard shortcut.)

Web Client, Custom Search to Add Items to the Affected Items Table

In Web Client, you can execute a custom search to locate items to add to the Affected Items table. Then, use copy and paste to add the items to the Affected Items table.

You can execute a custom search in the content pane and use the search results table features to populate the NAVIGATOR drawer or copy search results rows and paste them into the Affected Items table. See Web Client, Saved Search to Add Items to the Affected Items Table on page 148.

You can also open a custom search palette, which allows you to view the Affected Items table while you search for and select the items you want to add.
To open a Custom Search palette to find items to add to the Affected Items table:

1. Click the Affected Items tab to display the Affected Items table.

2. On the keyboard, press Ctrl + Shift + X. The custom search palette appears. The Affected Items table remains visible behind the palette.

3. In the search palette, define a Basic search or an Advanced search. Execute the search. For more information about defining searches, see *Getting Started with Agile PLM*.

   **Note** In the upper left corner of the custom search palette, click to collapse the entire palette; click to expand the palette again.

4. Select one or more search results rows.

5. Click the Copy button.

6. Put the focus in the Affected Items table by selecting an Affected Items table row, then choose Paste in the More... menu.

   You can run multiple searches to find and select additional items.

7. Press the Escape key on the keyboard to close the custom search palette.

For information about other methods of adding items to the Affected Items table, see *Web Client, Adding Items to the Affected Items Table* on page 146.

### Using the Add Affected Items Wizard

**Tip:** An easy way to use the Add button on the Affected Items tab in Java Client is to click it once. The dialog appears that allows you to enter the number of an item, if you know it. In this dialog, click the Create or Search link to use those add item methods. If you are adding affected items to an SCO, the Create link is not available.

**Note** If you are adding affected items to an SCO, the Create option is not available.

To add an item to the Affected Items tab in Java Client:

1. Open a change, and display the Affected Items tab.

2. Click the Add drop-down menu button and choose one of the add options: Search, Type in Known Numbers, or Create.

   **Note** If you are adding affected items to an SCO, the Create option is not available.

3. Depending on your menu selection, do one of the following:

   - **Search** – Search for one or more existing items. In the Add Affected Item dialog box, select a search method. If you choose to perform a simple search, enter the value to search for and click Search. You can also define an advanced search, run a saved search, or select a bookmarked or recently visited item (Shortcuts). (For more information about searches, see *Getting Started with Agile PLM.*) In the search results, select the items you want, and click OK. All the items in the Selected Affected Item(s) list are added to the Affected Items table.

   - **Type in Known Numbers** – enter one or more numbers and click Add.

   - **Create** – Select a type from the Type drop-down list. If appropriate, enter an object number. Click OK.
Note: If you are adding affected items to an SCO, in the Add for Site drop-down list, select the site you want.

Adding items to the Affected Items table is similar to adding items to the BOM table. For more information about how to complete the dialogs, see Java Client, Search for Items to Add to the BOM Table on page 93, Java Client, Type in the Number of an Item to Add to the BOM Table on page 92, and Java Client, Adding Nonexistent Items to the BOM Table on page 97.

Performing Bulk Changes

You can create an ECO that automatically adds, replaces, or removes an item from the assemblies on several BOMs at one time. Likewise, you can create an ECO or MCO that automatically replaces or removes a manufacturer part on the AML (Manufacturers tab) of several assemblies at one time. Such changes are called bulk changes and are created with a Bulk Change wizard.

The following sections explain how to use the bulk change features:

- BOM Bulk Changes Overview on page 150
- Web Client BOM Bulk Change Wizard on page 150
- Java Client BOM Bulk Change Wizard on page 150
- Manufacturer Part (AML) Bulk Changes Overview on page 154
- Web Client Manufacturer Part Bulk Change Wizard on page 155
- Java Client Manufacturer Part Bulk Change Wizard on page 156

BOM Bulk Changes Overview

BOM bulk changes are available only from ECOs by using the BOM Bulk Change wizard. The BOM bulk change process provides the following options:

- Add an item to multiple assemblies.
- Remove an item from all or some of the assemblies that use the item, and automatically redline the BOM of the assemblies affected by the Bulk Change.
- Replace an item in all or some of the assemblies that use the item, and automatically redline the BOM of the assemblies affected by the Bulk Change.
- Find assemblies related to a specific item and add them to the Affected Items tab. No BOM Bulk redlines are performed, rather, you manually redline the BOMs after the items are added to the Affected Items table.

Web Client BOM Bulk Change Wizard

The Web Client BOM Bulk Change wizard allows you to specify modifications to multiple assemblies at one time. You have the following BOM bulk change options:

- Add one item to multiple assemblies.
- Replace an item on multiple assemblies.
- Remove an item from multiple assemblies.
Find assemblies related to an item and add them as affected items.

The procedures vary slightly; however, each wizard step guides you through the process. All the procedures are described below.

To add an item to multiple assemblies, Web Client:

1. From a pending or unassigned change, click the Affected Items tab to bring it forward. (You can use an existing change or create a new one.)
2. Click the Bulk Change button and choose BOM from the menu. The BOM Bulk Change wizard appears.
3. In the Select Bulk Change Option wizard step, select Add an item to multiple assemblies, then click Next.
4. In the Select Item To Add wizard step, you specify the item that you want to add to multiple assemblies. Type an item number, or click \(^\text{search}\) to execute a quick search for the item. After you select an item number, click Next.
5. In the Identify Assemblies to Add to wizard step, you specify which assemblies this bulk change will affect.
   - Click the Add button and type a list of item numbers separated by semi-colons and press the Return key.
   - Or, click the Add button, then click \(^\text{search}\) to execute a quick search for the assemblies. Select the items you want by double-clicking the rows in the palette quick search results.
6. After you have identified the assemblies to which you want to add the item selected in step 4, click Finish.

The redlined assemblies are added to the Affected Items table. You can view the change on the Redline BOM tab.

To replace an item from multiple assemblies, Web Client:

1. From a pending or unassigned change, click the Affected Items tab to bring it forward. (You can use an existing change or create a new one.)
2. Click the Bulk Change button and choose BOM from the menu. The BOM Bulk Change wizard appears.
3. In the Select Bulk Change Option wizard step, select Replace an item on multiple assemblies, then click Next.
4. In the Select Item To Replace wizard step, you specify both the item that you want to redline remove from the assemblies that use it and you specify the item that will replace the removed item. In the Item to Remove field, type an item number, or click \(^\text{search}\) to execute a quick search for the item.
5. In the Replacement Item field, type an item number, or click \(^\text{search}\) to execute a quick search for the item. Click \(^\text{create}\) to create a new item. When you have specified both the item to remove and its replacement item, click Next.
6. In the Select Assemblies on which to Replace Item wizard step, you specify which assemblies this bulk change will affect. From the displayed list of assemblies that use the item specified in
step 4, select the assemblies you want to affect, then click Finish.

The redlined assemblies (selected in step 6) will be added to the Affected Items table if they are not already in the Affected Items table. You can view the changes on the Redline BOM tab.

**To remove an item from multiple assemblies, Web Client:**

1. From a pending or unassigned change, click the Affected Items tab to bring it forward. (You can use an existing change or create a new one.)

2. Click the Bulk Change button and choose BOM from the menu. The BOM Bulk Change wizard appears.

3. In the In the Select Bulk Change Option wizard step, select Remove an item from multiple assemblies, then click Next.

4. In the Select Item To Remove wizard step, you specify the item that you want to redline remove from the assemblies that use it. In the Item to Remove field, type an item number, or click to execute a quick search for the item. After you select an item, click Next.

5. In the Select Assemblies on which to Replace Item wizard step, you specify which assemblies this bulk change will affect. From the displayed list of assemblies that use the item specified in step 4, select the assemblies you want to affect, then click Finish.

6. The redlined assemblies (selected in step 6) will be added to the Affected Items table if they are not already in the Affected Items table. You can view the changes on the Redline BOM tab.

**To find assemblies related to a specific item and then add those assemblies to the affected items table (without making any redline BOM modifications to the assemblies), Web Client:**

1. From a pending or unassigned change, click the Affected Items tab to bring it forward. (You can use an existing change or create a new one.)

2. Click the Bulk Change button and choose BOM from the menu. The BOM Bulk Change wizard appears.

3. In the In the Select Bulk Change Option wizard step, select Find assemblies related to an item and add them as affected items, then click Next.

4. In the Select Item wizard step, you specify the item that is used on the BOM of the assemblies you want to add to the affected items table. In the Item field, type an item number, or click to execute a quick search for the item. After you select an item, click Next.

5. In the Select Assemblies to Add to the Affected Items Table wizard step, you specify which assemblies this bulk change will affect. From the displayed list of assemblies that use the item specified in step 4, select the assemblies you want to affect, then click Finish.

6. The assemblies (selected in step 4) will be added to the Affected Items table and no redline changes will be made to them. Select an assembly in the Affected Items table, then make the redline changes you want on the Redline BOM tab.

**Java Client BOM Bulk Change Wizard**

The Java Client BOM Bulk Change wizard allows you to specify modifications to multiple assemblies at one time. You have two BOM bulk change options:

- Add one item to multiple assemblies.
- Replace or remove one item from multiple assemblies.
The two procedures vary slightly; however, each wizard dialog guides you through the process. Both procedures are described below.

**To add an item to multiple assemblies, Java Client:**

1. From a pending or unassigned change, click the **Affected Items** tab to bring it forward. (You can use an existing change or create a new one.)

2. Click the **BOM Bulk Change** button.

   The BOM Bulk Change wizard appears.

3. Select the option **Add an Item to multiple Assemblies**, and click **Next**.

4. In the next wizard dialog, you specify the item that you want to add to multiple assemblies. Type an item number, or click to search for the item. In the Select Objects dialog, you can click the **Create** link to create a new item. After you specify an item number, click **Next**.

5. In the next wizard dialog, you specify which assemblies this bulk change will affect. Click the **Add** button to search for the assemblies to which you want to add the item selected in step 4. After you specify the assemblies, click **Finish**.

The redlined assemblies are added to the Affected Items table. You can view the change on the **Redline BOM** tab.

**To replace or remove an item from multiple assemblies, Java Client:**

1. From a pending or unassigned change, click the **Affected Items** tab to bring it forward. (You can use an existing change or create a new one.)

2. Click the **BOM Bulk Change** button.

   The BOM Bulk Change wizard appears.

3. Select **Replace or remove an item from multiple Assemblies**, and click **Next**.

4. In the next wizard dialog, you specify the item that you want to redline (replace, delete, or otherwise modify) in the assemblies that use it. Type an item number, or click to search for the item. After you specify an item number, click **Next**.

5. In the next wizard dialog, you specify which assemblies this bulk change will affect. From the displayed list of assemblies that use the item specified in step 4, select the assemblies you want to affect, then click **Next**.

6. In the next wizard dialog, you specify which action to perform. Your options are:
   - **Replace <item> on all selected assemblies with <item>**.
     That is, on the assemblies you selected in step 5, replace the item you selected in step 4 with the item you specify here. Type an item number, or click to search for the item.
     When you are done, click **Next**.
     The redlined assemblies (selected in step 5) will be added to the Affected Items table. You can view the changes on the **Redline BOM** tab.
   - **Remove <item> from all selected assemblies**
     That is, remove the item you selected in step 4 from the assemblies you selected in step 5.
Click Next.

The redlined assemblies (selected in step 5) will be added to the Affected Items table if they are not already in the Affected Items table. You can view the changes on the Redline BOM tab.

- Just add the selected assemblies to the Affected Items table and I will redline the BOMs myself.

That is, add the assemblies you selected in step 5 to the Affected Items table (if they are not already in the Affected Items table), but do not make any redline changes to the assemblies.

Click Finish.

The assemblies (selected in step 5) will be added to the Affected Items table if they are not already in the Affected Items table, and no redline changes will be made to them. Select an assembly in the Affected Items table, then make the redline changes you want on the Redline BOM tab.

The assemblies are added to the Affected Items table according to the option you selected in step 6 above.

**Manufacturer Part (AML) Bulk Changes Overview**

You can perform a manufacturer part bulk change from an ECO (with AML capabilities) or an MCO, which automatically replaces or removes a manufacturer part from the Manufacturers tab of several items at one time. Manufacturer part bulk changes are created with the Manufacturer Part Bulk Change wizard.

You can use MCOs to bulk-change manufacturers data without rolling the revision, and use ECOs to bulk-change manufacturers data when you want to roll the revision. Depending on your company policy, use an ECO or an MCO to determine if the revision of an item advances when you redline manufacturers data.

The Manufacturer Part Bulk Change wizard, from an MCO or an ECO, gives you the option to:

- Remove a manufacturer part from all or some of the parts that use it, and automatically redline the Manufacturers tab of the assemblies affected by the manufacturer part bulk change.
Replace a manufacturer part in all or some of the parts that use it, and automatically redline the Manufacturers tab of the assemblies affected by the manufacturer part bulk change.

Just add the selected manufacturer part to the Manufacturers tabs, and then go back later to manually redline it.

**Web Client Manufacturer Part Bulk Change Wizard**

To replace or remove a manufacturer part from multiple items, Web Client:

1. From a change that has not been released, click the Affected Items tab to bring it forward. (You can use an existing change or create a new one.)
2. Click the Bulk Change button and choose Manufacturer Part from the menu.
   
The Manufacturer Part Bulk Change wizard appears.
3. In the Select Bulk Change Option wizard step, choose Replace a manufacturer part on multiple items. Click Next.
4. In the Select Manufacturer Part to Replace wizard step, you specify the manufacturer part that you want to redline replace in the items that use it and you also select the replacement manufacturer part. In the Manufacturer Part to Remove field, begin typing a manufacturer part number, then select the appropriate number/manufacturer combination from the displayed list, or click to execute a quick search for the manufacturer part.
5. In the Replacement Manufacturer Part field, begin typing a manufacturer part number, then select the appropriate number/manufacturer combination from the displayed list, or click to execute a quick search for the manufacturer part. When you have specified both the manufacturer part to remove and its replacement manufacturer part, click Next.
6. In the Select Items on which to Replace Manufacturer Part wizard step, you specify which items this bulk change will affect. From the displayed list of items that use the manufacturer part specified in step 3, select the items you want to affect, then click Finish.
7. The redlined items (selected in step 6) will be added to the Affected Items table if they are not already in the Affected Items table. You can view the changes on the redline Manufacturers tab.

To remove a manufacturer part from multiple items:

1. From a change that has not been released, click the Affected Items tab to bring it forward. (You can use an existing change or create a new one.)
2. Click the Bulk Change button and choose Manufacturer Part from the menu.
   
The Manufacturer Part Bulk Change wizard appears.
3. In the Select Bulk Change Option wizard step, choose Remove a manufacturer part from multiple items. Click Next.
4. In the Select Manufacturer Part to Remove wizard step, you specify the manufacturer part that you want to redline delete from the items that use it. In the Manufacturer Part to Remove field, begin typing a manufacturer part number, then select the appropriate number/manufacturer combination from the displayed list, or click to execute a quick search for the manufacturer part. Click Next.
5. In the Select Items on which to Replace Manufacturer Part wizard step, you specify which items this bulk change will affect. From the displayed list of items that use the manufacturer part specified in step 3, select the items you want to affect, then click Finish.

The redlined items (selected in step 5) will be added to the Affected Items table if they are not already in the Affected Items table. You can view the changes on the redline Manufacturers tab.

To find items related to a specific manufacturer part and then add those items to the affected items table (without making any redline Manufacturers modifications to the items), Web Client:

1. From a change that has not been released, click the Affected Items tab to bring it forward. (You can use an existing change or create a new one.)
2. Click the Bulk Change button and choose Manufacturer Part from the menu.

The Manufacturer Part Bulk Change wizard appears.

3. In the Select Bulk Change Option wizard step, choose Find items related to a manufacturer part and add them as affected items. Click Next.
4. In the Select Manufacturer Part wizard step, you specify the manufacturer part for which you want from the items that use it. In the Manufacturer Part field, begin typing a manufacturer part number, then select the appropriate number/manufacturer combination from the displayed list, or click to execute a quick search for the manufacturer part. Click Next.
5. In the Select Items on which to Replace Manufacturer Part wizard step, you specify which items this bulk change will affect. From the displayed list of items that use the manufacturer part specified in step 3, select the items you want to affect, then click Finish.

The items (selected in step 5) will be added to the Affected Items table and no redline changes will be made to them. Select an item in the Affected Items table, then make the redline changes you want on the redline Manufacturers tab.

Java Client Manufacturer Part Bulk Change Wizard

To replace or remove a manufacturer part from multiple items, Java Client:

1. From a change that has not been released, click the Affected Items tab to bring it forward. (You can use an existing change or create a new one.)
2. Click the Manufacturer Part Bulk Change button.

The Manufacturer Part Bulk Change wizard appears.

3. In the first wizard dialog, you specify the manufacturer part that you want to redline (replace, delete, or otherwise modify) in the items that use it. Enter a manufacturer name and manufacturer part number, or click to search for the manufacturer part you want. After you specify a manufacturer part, click Next.
4. In the next wizard dialog, you specify which items this bulk change will affect. From the displayed list of items that use the manufacturer part specified in step 3, select the items you want to affect, then click Next.
5. In the next wizard dialog, you specify which action to perform. Your options are:
   • Replace <manufacturer part> on all selected assemblies with <manufacturer part>.

That is, on the items you selected in step 4, replace the manufacturer part you selected in step 3 with the manufacturer part you specify here. Enter a manufacturer name and
manufacturer part number, or click to search for the manufacturer part you want.

For additional information about selecting a manufacturer name, see How to Use Manufacturer Name Automatic Validation on page 57.

When you are done, click Next.

The redlined items (selected in step 4) will be added to the Affected Items table if they are not already in the Affected Items table. You can view the changes on the Redline Manufacturers tab.

- Remove <manufacturer part> from all selected assemblies

That is, remove the manufacturer part you selected in step 3 from the items you selected in step 4.

Click Next.

The redlined items (selected in step 4) will be added to the Affected Items table if they are not already in the Affected Items table. You can view the changes on the Redline Manufacturers tab.

- Just add the selected assemblies to the affected items table.

That is, add the items you selected in step 4 to the Affected Items table (if they are not already in the Affected Items table), but do not make any redline changes to the items.

Click Finish.

The items (selected in step 4) will be added to the Affected Items table and no redline changes will be made to them. Select an item in the Affected Items table, then make the redline changes you want on the Redline Manufacturers tab.

The items are added to the Affected Items table according to the option you selected in step 5 above.

Working with the Affected Items Table

Once items have been added to the Affected Items table, there are additional steps required to complete each type of Agile change. The following sections summarize those steps.

- Title Block Redline Tab of ECOs and MCOs on page 158
- Special Considerations for ECOs on page 158
- Special Considerations for MCOs on page 160
- Special Considerations for SCOs on page 160
- Special Considerations for ECRs on page 161
- Special Considerations for Deviations on page 162
- Special Considerations for Stop Ships on page 162
Title Block Redline Tab of ECOs and MCOs

**Important** The Affected Items redline tab for Title Block change-controlled attributes is available in Web Client only.

When change-controlled attributes have been enabled, the **Title Block** redline tab appears on the **Affected Items** tab of ECOs and MCOs. Use the **Title Block** redline tab to modify the change controlled attributes.

Until the change is approved, the new attribute values are not in use. If the change is cancelled, the new values are discarded and are never used.

To view and compare attributes of different item revisions, use the Compare Item Attributes Report on page 176 and the Item Attribute History Report on page 183.

**Change Controlled Attributes**

The Agile PLM Change Controlled Attributes feature allows an Agile PLM system to use Change objects to control how the item attribute values change.

The Agile administrator uses Agile PLM system settings to define which item attributes are under change control. An item attribute that is not change-controlled can be modified if you have the appropriate Modify privileges. By comparison, a change-controlled attribute can be modified only by using a change (ECO or MCO).

For more information, see What are Change-Controlled Attributes? on page 226.

**Special Considerations for ECOs**

The basic steps to complete an ECO are:

1. Add the items you want to modify to the **Affected Items** tab.
   
   See Adding an Item to the Affected Items Tab on page 145.
   
   **Note** If you add a released item that has pending changes against it, Agile PLM tells you that the item has pending changes.

2. Edit the **Affected Item** tab fields, including the required fields, as described in Fields Required to Release an ECO on page 159.
   
   See Editing Rows in the Affected Items Tab on page 163.

3. If you added a released item that has BOM data or manufacturing data, you can redline the BOM data or manufacturing data and attachments (referenced in file folder objects) on the Redlines pane of the **Affected Items** tab.
   
   • See Redlining the BOM of a Released Item on page 108.
   
   • See Modifying Manufacturing Data from the Redlines Tab on page 67.
   
   • For information about redlining attachments, see the Viewer Supplement. For more information about attachments, see Getting Started with Agile PLM.

4. In Web Client, if the Agile administrator has configured Change-Controlled attributes for items,
you can make redline edits to those Change-Controlled attributes. (See What are Change-Controlled Attributes? on page 226)

**Note** If you use the Create Change command to create an ECO from an open item, Agile PLM adds the item to the Affected Items table and, for released items, automatically prompts you to redline any BOM or manufacturer data.

In Java Client, the Create Change command is available on the item More Actions menu (click the More button at the top of the object window) and on the right-click shortcut menu. In Web Client, use Actions > Create Change in the item Actions menu.

**Fields Required to Release an ECO**

Required fields are defined for each status in the workflow. Use the audit feature to determine if all the required fields have been filled in.

In addition to the required fields defined in the workflow, the following Affected Items tab fields must always be completed before Agile PLM releases the ECO:

- **New Rev** (for each item on the Affected Items table)
- **Item Number**

**Note** The Item Number field is completed automatically when you add the item to the Affected Items tab.

**To complete the fields required to release an ECO:**

In the **New Rev** field, type the new revision number.

If you leave the **New Rev** field blank, Agile PLM places a question mark (?) in the **Rev** field of the item.

You cannot release an ECO with a blank value in the affected item’s **Rev** field.

**Note** Other tabs may also have required fields that must be completed. The specific fields on your system may vary, depending on the workflow settings.

In Web Client, use the Audit Release command on the Actions menu to verify that all required fields have been completed. Use the Audit Status command on the Actions menu to verify that status required fields have been completed.

In Java Client, use the Audit Release button on the object window toolbar to verify that all required fields have been completed. Use the Audit Status button to verify that status required fields have been completed.

You cannot change the **New Rev** field on the Affected Items tab on a released change, even if you have the appropriate privileges to modify released changes. If you do not have the appropriate privilege to modify the Lifecycle Phase on the Affected Items tab of a released change, you can use an MCO to modify the lifecycle phase of an item without changing its revision level. See Redlining through MCOs on page 135 or more information.
Special Considerations for MCOs

The basic steps to complete an MCO are:

1. Add the items you want to modify to the Affected Items tab.
   See Adding an Item to the Affected Items Tab on page 145.

2. Edit the Affected Item tab fields, including the required fields. MCOs allow you to select a new Lifecycle Phase.
   See Editing Rows in the Affected Items Tab on page 163.

3. If you added a released item that has manufacturing data, redline the manufacturers data.
   See Modifying Manufacturing Data from the Redlines Tab on page 67.

   Note If you use the item object Create Change command to create an MCO from an open item, Agile PLM adds the item to the Affected Items table and, for released items, automatically prompts you to redline any manufacturer data.

   In Web Client, use Actions > Create New > Change.

   In Java Client, the Create Change command is available on the item More Actions menu (click the More button at the top of the object window) and on the right-click shortcut menu.

   In addition to the required fields defined in the workflow, the Item Number field on the Affected Items tab must be completed before Agile PLM releases the MCO. This field is completed automatically when you add items to the Affected Items tab.

   Note Other tabs also have required fields that must be completed. The specific fields on your system may vary, depending on the workflow settings.

   In Web Client, use the Audit Release command on the Actions menu to verify that all required fields have been completed.

   In Java Client, use the Audit Release button on the object window toolbar to verify that all required fields have been completed.

Special Considerations for SOCos

The basic steps to complete an SCO are:

1. Add the items you want to modify to the Affected Items tab.
   See Adding an Item to the Affected Items Tab on page 145.

   Note If you add a released item that has pending changes against it, Agile PLM tells you that the item has pending changes.

2. Edit the Affected Item tab fields, including the required fields. You can modify the site-specific dispositions and the effective and obsolete dates of site-specific items for both the latest and non-latest revisions.
3. If you added the most recently released revision of an item to the SCO, you can redline site-specific BOM and AML data, but only against the latest released revision.
   - See Redlining through ECOs, MCOs, and SCOs on page 134.
   - See Redlining the BOM of a Released Item on page 108.
   - See Modifying Manufacturing Data from the Redlines Tab on page 67.

Note

Only the most recently released revision of an item can be redlined with an SCO.
Other tabs also have required fields that must be completed. The specific fields on your system may vary, depending on the workflow settings.

In Web Client, use the Audit Release command on the Actions menu to verify that all required fields have been completed. Use the Audit Status command on the Actions menu to verify that status required fields have been completed.

In Java Client, use the Audit Release button on the object window toolbar to verify that all required fields have been completed. Use the Audit Status button to verify that status required fields have been completed.

Special Considerations for ECRs

The basic steps to complete an ECR are:

1. Add the items to the Affected Items tab.
   - See Adding an Item to the Affected Items Tab on page 145.
   - When adding by Type in Known Numbers, you can enter the revision, preceded by a space character, when you type the number. For example:
     
     1000-02 A
     P003872 D
   
   Note
   If you add a released item that has pending changes against it, Agile PLM tells you that the item has pending changes.

2. Edit the Affected Item tab Revision field and any custom fields that may be defined for your Agile system.
   - See Editing Rows in the Affected Items Tab on page 163.

Note
Other tabs also have required fields that must be completed. The specific fields on your system may vary, depending on the workflow settings.

In Java Client, use the Audit Release button on the object window toolbar to verify that all required fields have been completed.

In Web Client, use the Audit Release command on the Actions menu to verify that all required fields have been completed.
Special Considerations for Deviations

The basic steps to complete a Deviation are:

1. Add the items to the Affected Items tab.
   
   See [Adding an Item to the Affected Items Tab](#) on page 145.
   
   When adding by Type in Knows Numbers, you can enter the revision, preceded by a space character, when you type the number. For example:
   
   1000-02 A
   P003872 D
   
   **Note** If you add a released item that has pending changes against it, Agile PLM tells you that the item has pending changes.

2. Edit the Affected Item tab Revision field and any custom fields that may be defined for your Agile system.
   
   See [Editing Rows in the Affected Items Tab](#) on page 163.
   
   **Note** Other tabs also have required fields that must be completed. The specific fields on your system may vary, depending on the workflow settings.

In Java Client, use the Audit Release button on the object window toolbar to verify that all required fields have been completed.

In Web Client, use the Audit Release command on the Actions menu to verify that all required fields have been completed.

Special Considerations for Stop Ships

The basic steps to complete a Stop Ship are:

1. Add the items to the Affected Items tab.
   
   See [Adding an Item to the Affected Items Tab](#) on page 145.
   
   When adding by Type in Knows Numbers, you can enter the revision, preceded by a space character, when you type the number. For example:
   
   1000-02 A
   P003872 D
   
   **Note** If you add a released item that has pending changes against it, Agile PLM tells you that the item has pending changes.

2. Edit the Affected Item tab Revision field and any custom fields that may be defined for your Agile system.
   
   See [Editing Rows in the Affected Items Tab](#) on page 163.
   
   **Note** Other tabs also have required fields that must be completed. The specific fields on your system may vary, depending on the workflow settings.
In Java Client, use the Audit Release button on the object window toolbar to verify that all required fields have been completed.

In Web Client, use the Audit Release command on the Actions menu to verify that all required fields have been completed.

Removing an Item from the Affected Items Tab

When you delete an item from the Affected Items tab, any attachments added to the item under the pending revision defined in that change are lost. This is true for all pending revisions, including items that have never been released and have only one change against them. If there is only one change pending against the item, and you delete the item from that change, the item reverts to a preliminary item with no changes against it, and any attachments added under that last change are lost.

When you remove an item from the Affected Items tab, any item redlines made through that change are dropped and discarded. Any attachments added to the pending revision created by that change are removed from the item. Agile PLM displays warnings before dropping redlines or removing attachments; accept the warnings to complete the item removal.

To remove an item from the Affected Items tab in Web Client:
1. If necessary, select Base View in the Views drop-down list to expand the table to show a row for each site assigned to the item.
2. Select one or more rows in the table. The selected rows are highlighted.
3. Click the Remove button.

To remove an item from the Affected Items tab in Java Client:
1. If necessary, select Show Sites in the View drop-down list to expand the table to show an item row for each site assigned to the item.
2. Click to select the row for the item that you want to delete. (You can select multiple items.)
3. Click the Remove button.

Note Be sure to use the Remove button on the Affected Items tab to remove items from that tab. If you use the Delete button on the object window toolbar (Java Client) or the Delete command on the object Actions menu (Web Client), Agile PLM deletes the entire change.

Editing Rows in the Affected Items Tab

You can edit rows on the Affected Items table, including rows associated with a specific site. You can also copy and paste information between these rows.

Note You cannot edit the item description from MCOs, ECRs, deviations, or stop ships. The item description is inherited from the latest released ECO.

This section includes the topics:
Editing Affected Items Tab Rows in Web Client

To edit affected item information in Web Client:

1. If necessary, select Base View in the Views drop-down list to expand the table to show a row for each site assigned to the item.
2. Double-click any editable cell of the affected items table.
   
   The affected items table enters edit mode and the Save and Cancel buttons become active. Press the Tab key to move to the next editable field, use the arrow keys, or click in a cell.
3. Make any changes, then click Save to save the changes, or click Cancel to cancel the changes.

Using Fill-Up and Fill-Down in Web Client Tables

From the tab More menu button, Web Client provides the following Fill-Up and Fill-Down table editing commands:

- Fill-down
- Fill-down (selected cells)
- Fill-up
- Fill-up (selected cells)

To Fill-down or Fill-up:

1. If the table is not already in edit mode, enter table edit mode:
   
   Double-click any editable cell of the table. The table enters edit mode and the Save and Cancel buttons become active. To navigate from one cell to another, press the Tab key to move to the next editable field, use the arrow keys, or click in a cell.
2. Select one cell in the column. The selected cell is highlighted.
   
   • To fill-down, choose More > Fill-down in the tab menu or use the Ctrl + Shift + D keyboard shortcut.
     
     The contents of the highlighted cell are copied down the column into all the cells below the highlighted cell.
   • To fill-up, choose More > Fill-up in the tab menu or use the Ctrl + Shift + U keyboard shortcut.
     
     The contents of the highlighted cell are copied up the column into all the cells above the highlighted cell.

To Fill-down or Fill-up selected cells only:

1. If the table is not already in edit mode, enter table edit mode:
   
   Double-click any editable cell of the table. The table enters edit mode and the Save and Cancel buttons become active. To navigate from one cell to another, press the Tab key to move to the
next editable field, use the arrow keys, or click in a cell.

2. Select two or more cells in the column. Use Shift-click to select contiguous cells. Use Ctrl-click to select non-contiguous cells. The selected cells are highlighted.
   - To fill-down, choose More > Fill-down (selected cells) in the tab menu or use the Ctrl + Shift + D keyboard shortcut.
     The content of the upper-most highlighted cell is copied down the column into only the highlighted cells below the up-most highlighted cell.
   - To fill-up, choose More > Fill-up (selected cells) in the tab menu or use the Ctrl + Shift + U keyboard shortcut.
     The content of the lower-most highlighted cell is copied up the column into only the highlighted cells above the lower-most highlighted cell.

### Editing Affected Items Tab Rows in Java Client

To edit affected item information in Java Client:

1. If necessary, select Show Sites in the View drop-down list to expand the table to show a row for each site assigned to the item.
2. Click to select the rows you want to edit. You can use Ctrl-click and Shift-click to select multiple rows.
3. Click the Edit button.
   The Edit Affected Items dialog box appears.
4. Make the modifications you want.
5. When you are finished, click OK.

### Fill Up Rows and Fill Down Rows Buttons in Java Client

By selecting a group of fields in one column, you can use the Fill Up Rows button to copy the contents of the bottom-most selected field into all the selected fields above it. You can use the Fill Down Rows button to copy the contents of the top-most selected field into all the selected fields below it. You can use Ctrl-click to select non-contiguous fields, and you can use Shift-click to select contiguous fields.

You can fill up and fill down in multiple columns at one time. Once you have selected fields in one column, you can select multiple additional columns using Ctrl-click (non-contiguous columns) and Shift-click (contiguous columns). The Fill Up Rows button copies the contents of the bottom-most selected field in each column into all the selected fields in each column. The Fill Down Rows button copies the contents of the top-most selected fields in each column into all the selected fields in each column.
**Note**
Fill Up and Fill Down are available in edit mode for any editable table. Attributes that require unique identifier data or other unique data do not have Fill Up and Fill Down capability, for example: Item Number on the Affected Items tab, Manufacturer Name and Manufacturer Part Number on the item Manufacturers tab, or Item Number and Find Number on the item BOM tab.

**To copy information between rows in Java Client:**

1. If necessary, select Show Sites in the View drop-down list to expand the table to show a row for each site assigned to the item.
2. Click to select the rows you want to edit. You can use Ctrl-click and Shift-click to select multiple rows.
3. Click the Edit button.
   The Edit Affected Items dialog box appears.
4. Click to select the fields you want to fill in. Use Shift-click and Ctrl-click to select the fields in each column and to select additional columns you want to fill in. The fill up and fill down action is defined by the selected (highlighted) fields in each column in the Affected Items table.
   Both the source row and the target rows must be highlighted. The top-most row or the bottom-most row is the source row.
   You may want to edit the top-most or bottom-most row in the Affected Items table, then use the Fill Up Rows and Fill Down Rows buttons to complete the remaining rows in the table.
5. Click the Fill Up Rows or Fill Down Rows button to fill in the selected Affected Items table fields.
6. When you are finished, click OK.

**Viewing the Redlines of an Affected Item**

In Web Client, if an affected item has a BOM, an AML, or attachments, and the Has Redlines icon appears in the Affected Items table if the item has any redlines, you can view its Redlines tabs by selecting its row in the Affected Items table (click the row selector to highlight the row). The Redline tabs for the selected item appear in the bottom portion of the Affected Items tab.

In Java Client, if an affected item has a BOM, an AML, or attachments, you can view its Redlines tabs by clicking in its row in the Affected Items table. The Redline tabs for the selected item appear in the bottom portion of the Affected Items tab.

- For information about the Redline BOM tab, see Redlining the BOM of a Released Item on page 108.
- For information about the Redline Manufacturers tab, see Modifying Manufacturing Data from the Redlines Tab on page 67.
- For information about the Redline Attachment tab, see Getting Started with Agile PLM.
Chapter 7

Working with Product Reports and Process Reports

This chapter includes the following:

- About Agile Reports ................................................................. 167
- About Product Reports and Process Reports ................................ 168
- Product Reports ........................................................................... 170
- Process Reports ........................................................................... 186

About Agile Reports

Reports allow you to display the values of your product records. By accessing this information and summarizing it in a meaningful way, reports provide insight into your business processes and can help guide better-informed decisions. Agile PLM provides a robust reporting platform that allows you to:

- Measure and monitor business performance using standard out-of-the-box reports. These standard reports capture the best practices in product lifecycle management business processes.
- Configure reports with Agile’s custom reporting to obtain the specific information you need.
- Use a single point of access to all relevant reports—even those developed outside of the Agile PLM application—through Agile’s external reporting capability.

For detailed information about using all types of Agile reports, see the Working with Agile Reports chapter in Getting Started with Agile PLM, which includes information about:

- How your roles and privileges affect reports
- Report object tabs
- Creating and modifying report layouts
- Creating custom and external reports
- Running, scheduling, saving, and deleting reports
- Report output window

This chapter covers the Agile standard reports that are included as part of Agile Product Collaboration: product reports and process reports.
About Product Reports and Process Reports

Standard reports provide you with the information you commonly need to analyze your business processes. Product reports and process reports are the standard out-of-the-box reports for Product Collaboration. You select predefined criteria and specify the results you want. You can run them as they are, modify the default layouts, or create your own layouts. You can run Agile product reports and process reports from Agile Web Client or Java Client.

Accessing Product Reports and Process Reports

To access product reports in Web Client:
1. Click the REPORTS drawer in the left pane to display the reports folders.
2. Open the Reports and Analytics folder.
3. Open the Standard Reports folder to locate the Product Reports folder or the Process Reports folder.
4. Open the Product Reports folder or the Process Reports folder and click the report you want. The report page is displayed in the content pane on the right.

To access product reports in Java Client:
1. Click the Analytics and Reports tab in the left pane to display the reports folders.
2. Open the Standard Reports folder to locate the Product Reports folder or the Process Reports folder.
3. Open the Product Reports folder or the Process Reports folder and double-click the report you want. Web Client opens and displays the report page you selected.

Agile Products Reports Summary

The Products Reports folder under Standard Reports in the navigation pane lists the Product Collaboration reports.

<table>
<thead>
<tr>
<th>Report</th>
<th>Displays…</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bill of Materials (BOM) reports</td>
<td></td>
</tr>
<tr>
<td>Assembly Cost (Item Master) Report on page 170</td>
<td>The Assembly Cost report takes the bill of material for a specified assembly and computes the cost of the BOM and each subassembly.</td>
</tr>
<tr>
<td>BOM Explosion Report on page 172</td>
<td>The BOM Explosion report displays the bill of material for a specified assembly up to the desired number of levels. Select a BOM snapshot date.</td>
</tr>
<tr>
<td>Consolidated BOM Report on page 173</td>
<td>The Consolidated BOM report takes the bill of material for a specified assembly and consolidates it into a single-level bill, computing the total quantity of each item.</td>
</tr>
<tr>
<td>Effective BOM Explosion Report on page 174</td>
<td>The Effective BOM report displays the bill of material for a specified assembly that is effective during a specific time period.</td>
</tr>
</tbody>
</table>
The Item Activity report shows the items that were processed during a specified period of time.

Shows the attribute differences between two or more items.

The Where Used report shows where the component or subassembly is used, up to any practical number of levels.

The BOM Comparison report shows the differences between two bills of material. Select the number of BOM levels to compare and select a BOM snapshot date.

The Legacy BOM Comparison report shows the differences between two or more bills of material, using the first BOM level.

Shows how Item Attribute Values have been changed over time through Change Orders or Manufacturing Orders.

The Manufacturer Item report displays a list of all the items matching a query and shows the manufacturers that are used for each item. (Requires AML server license.)

The Manufacturer BOM report runs the BOM Explosion report and includes the manufacturers that are used for each item in the bill of material. (Requires AML server license.)

The Agile Process reports provide information about changes and transfer orders. The Process Reports node folder under Standard Reports in the navigation pane lists the following reports:

The Change Activity report shows the changes that were processed during a specified period of time.

The Change Backlog report counts the changes that were at a specified status but have not moved to another specified status during a time period.

The Change Cycle Time report calculates the time it took the specified changes to move from one status to another during the specified period. For example, the report indicates the average time it took for a change to go from Submitted to Released each month during the last year, grouped by product line.

The User Signoff Duration report calculates the amount of time that a user has had to sign off a routable object requiring his approval, and he
Products Reports

The Products Reports folder lists the following reports:

- **Assembly Cost (Item Master) Report** on page 170
- **BOM Explosion Report** on page 172
- **Consolidated BOM Report** on page 173
- **Effective BOM Explosion Report** on page 174
- **Item Activity Report** on page 176
- **Compare Item Attributes Report** on page 176
- **Manufacturer BOM Report** on page 178
- **Where Used Report** on page 179
- **BOM Comparison Report** on page 180
- **Legacy BOM Comparison Report - Single Level Only** on page 182
- **Item Attribute History Report** on page 183
- **Item Manufacturers Report** on page 184

For more information about specific product reports, see Agile Products Reports on page 168.

Assembly Cost (Item Master) Report

This report generates a cost rollup by determining the cost and quantity of each component and assembly and calculating the total cost. The report shows the same data as the BOM Explosion report with the addition of three columns:

- Individual Cost
- Total Cost
Assembly Cost

To run the Assembly Cost report:


2. Click the Execute button. The Select Layout and Configuration wizard step appears.

3. Select the layout you want from the drop-down list, or use the Edit button to edit an existing layout or use the Create button to create a new layout.

For more detailed information about layouts, see the Working with Agile Reports chapter in Getting Started with Agile PLM.

4. Select a report output format: PDF, WORD, EXCEL, HTML, or STANDARD.


6. Select the items you want to include in the report.
   - Use the table Add button. Type the item numbers you want or use the Add by Search palette button.
   - Use More... > Paste to paste item rows you have copied from another table or from the FOLDERS navigation drawer Bookmarks or Recently Visited list.
   - Click Custom Search and define a query. Copy rows from the search results table and paste them into the Select Items for Report wizard table.

7. By default, the most recently released revision of the item is selected in the Select Items for Report step of the report wizard. To select a different revision, edit the Revision column of the table.

8. To select multiple revisions of an item, use the following procedure:
   a. Edit the Revision field for the item and select a revision other than the most recently released revision. Press Enter on the keyboard to save your edits.
   b. Click the Add button. In the add palette, type the item number and add it to the table again.
      The most recently released revision is selected.
   c. Repeat steps a and b to select as many item revisions as you want.

9. Click Next. The Select Additional Parameters step is displayed.

10. Specify the item types you want. Click the small X button to remove an item type. Click to launch the palette and select additional item types.

11. Click Next. The Select Cost Field and Cost Option wizard step appears.

12. Select values from the Cost Field and Option drop-down lists. The options are Part Cost Only, Assembly Level Cost only, or Assembly Level Cost Plus Rolled-Up Cost.

13. Click Finish to run and display the report.

If you chose a format other than the STANDARD format, you are prompted to download the report in the format you selected.

<table>
<thead>
<tr>
<th>Report layout fields</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Level</td>
<td>The BOM level, for example, 0, 1, 2, or 3.</td>
</tr>
</tbody>
</table>
### Report layout fields

<table>
<thead>
<tr>
<th>Field</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Individual Cost</td>
<td>The part cost selected in the Cost Field in the report wizard.</td>
</tr>
<tr>
<td>Total Cost</td>
<td>Individual Cost * total quantity (Qty) for that row</td>
</tr>
<tr>
<td>Assembly Cost</td>
<td>Cost of the assembly.</td>
</tr>
<tr>
<td>Item fields as specified in the selected layout</td>
<td>Depending on the layout, the report can include any attributes from the selected item’s Title Block, Page Two or BOM tabs. For detailed information about layouts, see the Working with Agile Reports chapter in Getting Started with Agile PLM.</td>
</tr>
</tbody>
</table>

### BOM Explosion Report

The BOM Explosion report displays the items that are in the bill of material for a specified assembly, up to the desired number of levels.

**To run the BOM Explosion report:**


2. Click the `Execute` button. The Select Layout and Configuration wizard step appears.

3. Select the layout you want from the drop-down list, or use the `Edit` button to edit an existing layout or use the `Create` button to create a new layout.

   For more detailed information about layouts, see the Working with Agile Reports chapter in Getting Started with Agile PLM.

4. Select a report output format: PDF, WORD, EXCEL, HTML, or STANDARD.


6. Select the items you want to include in the report.

   - Use the table Add button. Type the item numbers you want or use the `Add by Search` palette button.
   - Use More... > Paste to paste item rows you have copied from another table or from the FOLDERS navigation drawer Bookmarks or Recently Visited list.
   - Click Custom Search and define a query. Copy rows from the search results table and paste them into the Select Items for Report wizard table.

7. By default, the most recently released revision of the item is selected in the Select Items for Report step of the report wizard. To select a different revision, edit the Revision column of the table.

8. To view a snapshot of the exploded BOM at a specific date and time, double-click the Date As Of field and select the date and time you want.
9. To select multiple revisions of an item, use the following procedure:
   a. Edit the Revision field for the item and select a revision other than the most recently released revision. Press Enter on the keyboard to save your edits.
   b. Click the Add button. In the add palette, type the item number and add it to the table again. The most recently released revision is selected.
   c. Repeat steps a and b to select as many item revisions as you want.


11. Specify the depth, or number of levels in the BOM, you want to include.

12. Specify the item types you want. Click the small X button to remove an item type. Click to launch the palette and select additional item types.

13. Click Finish to run and display the report.

   If you chose a format other than the STANDARD format, you are prompted to download the report in the format you selected.

<table>
<thead>
<tr>
<th>Report layout fields</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Level</td>
<td>The BOM level, for example, 0, 1, 2, or 3.</td>
</tr>
<tr>
<td>Item fields as specified in the selected layout</td>
<td>Depending on the layout, the report can include any attributes from the selected item's <strong>Title Block</strong>, <strong>Page Two</strong> or <strong>BOM</strong> tabs. For detailed information about layouts, see the Working with Agile Reports chapter in <em>Getting started With Agile PLM</em>.</td>
</tr>
</tbody>
</table>

**Consolidated BOM Report**

The Consolidated BOM report takes the bill of material for a specified assembly and consolidates it into a single-level bill, computing the total quantity of each item. It shows a summary of all parts for a given assembly, regardless of level, including total quantities in the whole assembly.

To run the Consolidated BOM report:

1. Select the Consolidated BOM report in the **Products Reports** folder. The Consolidated BOM Report page appears.

2. Click the ![Execute](button) button. The Select Layout and Configuration wizard step appears.

3. Select the layout you want from the drop-down list, or use the ![Edit](button) button to edit an existing layout or use the ![Create](button) button to create a new layout.

   For more detailed information about layouts, see the Working with Agile Reports chapter in *Getting Started with Agile PLM*.

4. Select a report output format: PDF, WORD, EXCEL, HTML, or STANDARD.

5. Click **Next**. The Select Items for Report wizard step appears.

6. Select the items you want to include in the report.
• Use the table **Add** button. Type the item numbers you want or use the **Add by Search** palette button.

• Use **More... > Paste** to paste item rows you have copied from another table or from the **FOLDERS** navigation drawer Bookmarks or Recently Visited list.

• Click **Custom Search** and define a query. Copy rows from the search results table and paste them into the Select Items for Report wizard table.

7. By default, the most recently released revision of the item is selected in the Select Items for Report step of the report wizard. To select a different revision, edit the Revision column of the table.

8. To select multiple revisions of an item, use the following procedure:
   a. Edit the Revision field for the item and select a revision other than the most recently released revision. Press Enter on the keyboard to save your edits.
   b. Click the **Add** button. In the add palette, type the item number and add it to the table again. The most recently released revision is selected.

   a. Repeat steps a and b to select as many item revisions as you want.

9. Click **Next**.

10. Specify the depth, or number of levels in the BOM, you want to include.

11. Specify the item types you want. Click the small **X** button to remove an item type. Click **to launch the palette and select additional item types.

12. Click **Finish** to run and display the report.

   If you chose a format other than the STANDARD format, you are prompted to download the report in the format you selected.

<table>
<thead>
<tr>
<th>Report layout fields</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total Quantity</td>
<td>Total quantity of each specific item in the whole assembly (BOM)</td>
</tr>
<tr>
<td>Item fields as specified in the selected layout</td>
<td>Depending on the layout, the report can include any attributes from the selected item’s <strong>Title Block</strong>, <strong>Page Two</strong> or <strong>BOM</strong> tabs. For detailed information about layouts, see the Working with Agile Reports chapter in <strong>Getting started With Agile PLM</strong>.</td>
</tr>
</tbody>
</table>

**Effective BOM Explosion Report**

The Effective BOM Explosion report displays the report based on the **Rev Release Date** of parts in the BOM and the dates selected for the reporting period.

**To run the Effective BOM Explosion report:**


2. Click the **Execute** button. The Select Layout and Configuration wizard step appears.
3. Select the layout you want from the drop-down list, or use the Edit button to edit an existing layout or use the Create button to create a new layout.

For more detailed information about layouts, see the Working with Agile Reports chapter in Getting Started with Agile PLM.

4. Select a report output format: PDF, WORD, EXCEL, HTML, or STANDARD.


6. Select the items you want to include in the report.
   - Use the table Add button. Type the item numbers you want or use the Add by Search palette button.
   - Use More... > Paste to paste item rows you have copied from another table or from the FOLDERS navigation drawer Bookmarks or Recently Visited list.
   - Click Custom Search and define a query. Copy rows from the search results table and paste them into the Select Items for Report wizard table.

7. By default, the most recently released revision of the item is selected in the Select Items for Report step of the report wizard. To select a different revision, edit the Revision column of the table.

8. To select multiple revisions of an item, use the following procedure:
   a. Edit the Revision field for the item and select a revision other than the most recently released revision. Press Enter on the keyboard to save your edits.
   b. Click the Add button. In the add palette, type the item number and add it to the table again. The most recently released revision is selected.
   c. Repeat steps a and b to select as many item revisions as you want.


10. Specify the depth, or number of levels in the BOM, you want to include.

11. Specify the item types you want. Click the small X button to remove an item type. Click to launch the palette and select additional item types.

12. Select the sort type: Maintain BOM Structure or Sort By Item Number. Click Next.

13. On the Select Date Range step, select a start date and an end date.

   The report will display all the BOM components that were released on or after the start date and on or before the end date.

14. Click Finish to run and display the report.

   If you chose a format other than the STANDARD format, you are prompted to download the report in the format you selected.

<table>
<thead>
<tr>
<th>Default fields</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Level</strong></td>
<td>The BOM level, for example, 0, 1, 2, or 3</td>
</tr>
<tr>
<td><strong>Item fields as specified in the selected layout</strong></td>
<td>Depending on the layout, the report can include any attributes from the</td>
</tr>
<tr>
<td></td>
<td>selected item's Title Block, Page Two, Changes, or BOM tabs.</td>
</tr>
<tr>
<td></td>
<td>For detailed information about layouts, see the Working with Agile Reports</td>
</tr>
<tr>
<td></td>
<td>chapter in Getting Started With Agile PLM.</td>
</tr>
</tbody>
</table>
**Item Activity Report**

The Item Activity report shows the items that were processed during a specified period of time.

**To run the Item Activity report:**
1. Select the Item Activity report in the **Products Reports** folder. The Item Activity Report page appears.
2. Click the **Execute** button. The Select Layout and Configuration wizard step appears.
3. Select the layout you want from the drop-down list, or use the **Edit** button to edit an existing layout or use the **Create** button to create a new layout.
   
   For more detailed information about layouts, see the Working with Agile Reports chapter in *Getting Started with Agile PLM*.
4. Select a report output format: PDF, WORD, EXCEL, HTML, or STANDARD.
5. Click **Next**. The Select Date Range step appears.
6. Specify the date range by choosing a start date and an end date.
7. Click **Next**. The Select Additional Report Parameters step appears.
8. In the **Item Lifecycle Phase** field select the lifecycles to be included. Click **Invoke** to launch the palette and select lifecycles. Click the small **X** button to remove a lifecycle.
9. In the **Sites** field you may specify sites. Click **Invoke** to launch the palette and select the sites you want. Click the small **X** button to remove a site.
10. Click **Finish** to run and display the report.

   If you chose a format other than the STANDARD format, you are prompted to download the report in the format you selected.

### Report layout fields

<table>
<thead>
<tr>
<th><strong>Report layout fields</strong></th>
<th><strong>Description</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Site</strong></td>
<td>The name of the site associated with the listed item. The sites listed are determined by the sites you selected in the report wizard.</td>
</tr>
<tr>
<td><strong>Item fields as specified in the selected layout</strong></td>
<td>Depending on the layout, the report can include any attributes from the listed item’s <strong>Title Block</strong> or <strong>Page Two</strong> tabs. For detailed information about layouts, see the Working with Agile Reports chapter in <em>Getting started With Agile PLM</em>.</td>
</tr>
</tbody>
</table>

**Compare Item Attributes Report**

The Compare Item Attribute report allows you to compare Item Attribute values of multiple items or item revisions.
Reported attributes include change-controlled attributes and revision-controlled attributes.

**To run the Compare Item Attributes report:**

1. Select the Compare Item Attributes report in the **Products Reports** folder. The Compare Item Attributes Report page appears.

2. Click the **Execute** button. The Select Layout and Configuration wizard step appears.

3. Select the layout you want from the drop-down list, or use the **Edit** button to edit an existing layout or use the **Create** button to create a new layout.
   
   For more detailed information about layouts, see the Working with Agile Reports chapter in *Getting Started with Agile PLM*.

4. Select a report output format: PDF, WORD, EXCEL, or HTML.

5. Click **Next**. The Select Items for the Report step appears.

6. Select the items you want to include in the report.
   
   - Use the table **Add** button. Type the item numbers you want or use the **Add by Search** palette button.
   
   - Use **More... > Paste** to paste item rows you have copied from another table or from the **FOLDERS** navigation drawer Bookmarks or Recently Visited list.
   
   - Click **Custom Search** and define a query. Copy rows from the search results table and paste them into the Select Items for Report wizard table.

7. By default, the most recently released revision of the item is selected in the Select Items for Report step of the report wizard. To select a different revision, edit the Revision column of the table.

8. To select multiple revisions of an item, use the following procedure:
   
   a. Edit the Revision field for the item and select a revision other than the most recently released revision. Press Enter on the keyboard to save your edits.
   
   b. Click the **Add** button. In the add palette, type the item number and add it to the table again. The most recently released revision is selected.

9. Click **Finish** to run and display the report.
   
   You are prompted to download the report in the format you selected.

<table>
<thead>
<tr>
<th>Report layout fields</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Items</strong></td>
<td>The Items listed are determined by the items you selected in the report wizard.</td>
</tr>
<tr>
<td><strong>Item fields as specified in the selected layout</strong></td>
<td>Depending on the layout, the report can include attributes from the listed item’s <strong>Title Block</strong> or <strong>Page Two</strong> or <strong>Page Three</strong> tabs. For detailed information about layouts, see the Working with Agile Reports chapter in <em>Getting started With Agile PLM</em>.</td>
</tr>
</tbody>
</table>
Manufacturer BOM Report

The Manufacturer BOM report runs the BOM Explosion report and shows the manufacturers that are used for each item in the bill of material. Manufacturer data can be filtered by the lifecycle status of the manufacturer or of the manufacturer part.

To run the Manufacturer BOM report:
1. Select the Manufacturer BOM report in the Products Reports folder. The Manufacturer BOM Report page is displayed.
2. Click the Execute button. The Select Layout and Configuration wizard step appears.
3. Select the layout you want from the drop-down list, or use the Edit button to edit an existing layout or use the Create button to create a new layout.
   For more detailed information about layouts, see the Working with Agile Reports chapter in Getting Started with Agile PLM.
4. Select a report output format: PDF, WORD, EXCEL, HTML, or STANDARD.
6. Select the items you want to include in the report.
   - Use the table Add button. Type the item numbers you want or use the Add by Search palette button.
   - Use More... > Paste to paste item rows you have copied from another table or from the FOLDERS navigation drawer Bookmarks or Recently Visited list.
   - Click Custom Search and define a query. Copy rows from the search results table and paste them into the Select Items for Report wizard table.
8. Specify the depth, or number of levels in the BOM, you want to include.
9. Specify the item types you want. Click the small X button to remove an item type. Click to launch the palette and select additional item types.
10. Click Next in the report wizard. The Select AML Information step appears. Complete the required fields:
    a. Select one or more manufacturer part Preferred Status. Type in the text field or click to launch the palette.
    b. Select one or more Manufacturer Part Lifecycle Phase. Type in the text field or click to launch the palette.
11. Click Finish to run and display the report.
   If you chose a format other than the STANDARD format, you are prompted to download the report in the format you selected.

<table>
<thead>
<tr>
<th>Report layout fields</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Item attributes</td>
<td></td>
</tr>
</tbody>
</table>
Report layout fields | Description
--- | ---
Level | The BOM level, for example, 0, 1, 2, or 3.

For each item listed in the report, item fields as specified in the selected layout

Depending on the layout, the report can include any attributes from the listed item’s Title Block, Page Two, or BOM tabs.

For detailed information about layouts, see the Working with Agile Reports chapter in Getting started With Agile PLM.

Manufacturer part attributes

Under each listed item, manufacturer part information as specified in the selected layout

Depending on the layout, the manufacturer part information under each item can include any attributes from the listed item’s Manufacturers tab, attributes from the manufacturer part’s General Info tab, and attributes from the manufacturer’s General Info tab.

For detailed information about layouts, see the Working with Agile Reports chapter in Getting started With Agile PLM.

Where Used Report

The Where Used report shows where the specified component or subassembly is used, up to the specified number of levels. It can show just the highest level of the assembly, all levels, or any number of levels in between.

Note

An item will be selected for the report only if the specified component or subassembly is included in the BOM of the item’s latest released revision.

To run the Where Used report:


2. Click the Execute button. The Select Layout and Configuration wizard step appears.

3. Select the layout you want from the drop-down list, or use the Edit button to edit an existing layout or use the Create button to create a new layout.

   For more detailed information about layouts, see the Working with Agile Reports chapter in Getting Started with Agile PLM.

4. Select a report output format: PDF, WORD, EXCEL, HTML, or STANDARD.


6. Select the items you want to include in the report.

   - Use the table Add button. Type the item numbers you want or use the Add by Search palette button.
   - Use More... > Paste to paste item rows you have copied from another table or from the FOLDERS navigation drawer Bookmarks or Recently Visited list.
   - Click Custom Search and define a query. Copy rows from the search results table and paste
them into the Select Items for Report wizard table.

7. Click Next. The Select Additional Parameters step is displayed.

8. Specify the depth, or number of levels in the BOM, you want to include. Deselect the Top Level Assemblies Only checkbox to change the default All Levels setting.

The Top Level Assemblies Only checkbox determines which items that contain the specified item are included in the report. In a Where Used report on Item P0003 below, selecting the checkbox causes only P0001 to be included, while clearing the checkbox causes P0001 and P0002 to be included.

9. Specify the item types you want. Click the small X button to remove an item type. Click to launch the palette and select additional item types.

10. Click Finish to run and display the report.

If you chose a format other than the STANDARD format, you are prompted to download the report in the format you selected.

<table>
<thead>
<tr>
<th>Default fields</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Level</td>
<td>The BOM level, for example, 0, 1, 2, or 3.</td>
</tr>
<tr>
<td>Item fields as specified in the selected layout</td>
<td>Depending on the layout, the report can include any attributes from the listed item’s Title Block, Page Two, or BOM tabs. For detailed information about layouts, see the Working with Agile Reports chapter in Getting started With Agile PLM.</td>
</tr>
</tbody>
</table>

**BOM Comparison Report**

The BOM (Bills of Material) Comparison report shows the differences between two bills of material. It compares multiple levels of the BOM of one selected item to the BOM of the other item on the report and shows you which components are not common to both.

Only those items that have differences are listed in the report. Components that match exactly are not listed. An item may be listed multiple times to indicate the differences in find number and reference designator information.

You can compare the BOMs by item number or by find number. The comparison will be sorted by item number and by find number.
To run the BOM Comparison report:

1. Select the BOM Comparison report in the **Products Reports** folder. The BOM Comparison Report page appears.

2. Click the ![Execute](image) button. The Select Layout and Configuration wizard step appears.

3. Select the layout you want from the drop-down list, or use the ![Edit](image) button to edit an existing layout or use the ![Create](image) button to create a new layout.

   For more detailed information about layouts, see the Working with Agile Reports chapter in *Getting Started with Agile PLM*.

4. Select a report output format: PDF, WORD, EXCEL, or HTML.

5. Click **Next**. The Set Compare Parameters step appears.

6. Specify the depth, or number of levels in the BOM, you want to include.

7. Select the Compare Structures you want to use. By default, BOM structure is always selected. You can also compare the AML and Attachment information by selecting the appropriate checkbox.

8. Specify the item types you want. Click the small ![X](image) button to remove an item type. Click ![Edit](image) to launch the palette and select additional item types.
   - If you selected AML compare structure, specify the AML attributes you want. Click the small ![X](image) button to remove an item type. Click ![Edit](image) to launch the palette and select additional AML attributes.
   - If you selected Attachment compare structure, specify the Attachment attributes you want. Click the small ![X](image) button to remove an item type. Click ![Edit](image) to launch the palette and select additional Attachment attributes.

9. Select the two items you want to include in the report.
   - Use the table ![Add](image) button. Type the item numbers you want or use the ![Add by Search](image) palette button.
   - Use **More... > Paste** to paste item rows you have copied from another table or from the ![FOLDERS](image) navigation drawer Bookmarks or Recently Visited list.
   - Click **Custom Search** and define a query. Copy rows from the search results table and paste them into the Select Items for Report wizard table.

10. By default, the most recently released revision of the item is selected in the Select Items for Report step of the report wizard. To select a different revision, edit the Revision column of the table.

11. To compare snapshots of a BOM at a specific date and time, double-click the **Date As Of** field and select the date and time you want.

12. To select multiple revisions of an item, use the following procedure:
   a. Edit the Revision field for the item and select a revision other than the most recently released revision. Press Enter on the keyboard to save your edits.
   b. Click the ![Add](image) button. In the add palette, type the item number and add it to the table again. The most recently released revision is selected.
13. Click Finish to run and display the report.

You are prompted to download the report in the format you selected.

<table>
<thead>
<tr>
<th>Report layout fields</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Comparison Data</strong></td>
<td>The report includes one column for each item revision selected in the Select Items for Report wizard page.</td>
</tr>
<tr>
<td><strong>Item fields as specified in the selected layout</strong></td>
<td>Depending on the layout, the report can include any attributes from the selected item’s Title Block, Page Two or BOM tabs. For detailed information about layouts, see the Working with Agile Reports chapter in Getting started With Agile PLM.</td>
</tr>
</tbody>
</table>

**Legacy BOM Comparison Report - Single Level Only**

The BOM (Bills of Material) Comparison report shows the differences between two or more bills of material. It compares the first-level BOM of the selected items to the BOMs of the other items on the report and shows you which components are not common to both.

Only those items that have differences are listed in the report. Components that match exactly are not listed. An item may be listed multiple times to indicate the differences in item number and reference designator information.

You can compare the BOMs by item number or by find number. The comparison will be sorted by item number and by find number.

**To run the BOM Comparison report:**


2. Click the Execute button. The Select Layout and Configuration wizard step appears.

3. Select the layout you want from the drop-down list, or use the Edit button to edit an existing layout or use the Create button to create a new layout.

   For more detailed information about layouts, see the Working with Agile Reports chapter in Getting Started with Agile PLM.

4. Select a report output format: PDF, WORD, EXCEL, HTML, or STANDARD.

5. Click Next. The Select items for the Report step appears.

6. Select the two items you want to include in the report.
   - Use the table Add button. Type the item numbers you want or use the Add by Search palette button.
   - Use More... > Paste to paste item rows you have copied from another table or from the FOLDERS navigation drawer Bookmarks or Recently Visited list.
   - Click Custom Search and define a query. Copy rows from the search results table and paste...
them into the Select Items for Report wizard table.

7. By default, the most recently released revision of the item is selected in the Select Items for Report step of the report wizard. To select a different revision, edit the Revision column of the table.

8. To select multiple revisions of an item, use the following procedure:
   a. Edit the Revision field for the item and select a revision other than the most recently released revision. Press Enter on the keyboard to save your edits.
   b. Click the Add button. In the add palette, type the item number and add it to the table again. The most recently released revision is selected.

9. Click Next. The Select Type step appears.

10. Specify the Item types you want to include in the report. Click the small X button to remove an item type. Click to launch the palette and select additional item type.

11. Click Next. The Set Compare Attribute step appears.

12. Select the Compare Attribute you want to use.
   a. In the Compare By field, select the attribute used to match items being compared: Item Number or Find Number.
   b. If you wish to use a secondary compare attribute, make a selection in the Then By field.
   c. Complete the Select Other Attributes Used for Comparison section: In the View in field, select an item type, then use the arrow buttons to move values to and from the Selected Values list.

13. Click Finish to run and display the report.
   If you chose a format other than the STANDARD format, you are prompted to download the report in the format you selected.

<table>
<thead>
<tr>
<th>Report layout fields</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Comparison Data</td>
<td>The report includes one column for each item revision selected in the Select Items for Report wizard page.</td>
</tr>
<tr>
<td>Item fields as specified in the selected layout</td>
<td>Depending on the layout, the report can include any attributes from the selected item’s Title Block, Page Two or BOM tabs. For detailed information about layouts, see the Working with Agile Reports chapter in Getting started With Agile PLM.</td>
</tr>
</tbody>
</table>

**Item Attribute History Report**

The Item Attribute History report allows you to view how Item Attribute values have changed over time through Change Order (ECOs) or Manufacturing Change Orders (MCOs).

Reported attributes include change-controlled attributes and revision-controlled attributes. The attributes included in the report are defined in the report layout. You can create a report layout that includes the attributes you want.
To run the Item Attribute History report:


2. Click the Execute button. The Select Layout and Configuration wizard step appears.

3. Select the layout you want from the drop-down list, or use the Edit button to edit an existing layout or use the Create button to create a new layout.

   For more detailed information about layouts, see the Working with Agile Reports chapter in Getting Started with Agile PLM.

4. Select a report output format: PDF, WORD, EXCEL, or HTML.

5. Click Next. The Select Item wizard step appears.

6. Select the item you want to include in the report. Type in the text field or click to execute a quick search.

7. In the Change Type field, use the drop-down list to select the changes you want to include in the report: Changer Orders, Manufacturing Orders, or Both.

8. Click Finish to run and display the report.

You are prompted to download the report in the format you selected.

<table>
<thead>
<tr>
<th>Report layout fields</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>For the item listed in the report, item fields as specified in the selected layout</td>
<td>Depending on the layout, the report can include revision-controlled attributes and any change-controlled attributes from the listed item’s Title Block or Page Two tabs. For detailed information about layouts, see the Working with Agile Reports chapter in Getting started With Agile PLM.</td>
</tr>
<tr>
<td>Item changes, ECOs, MCOs or both, as selected in the report wizard.</td>
<td>Item field content is displayed for each field at each change revision. Modified fields are highlighted.</td>
</tr>
</tbody>
</table>

Item Manufacturers Report

The Item Manufacturers report displays a list of all the items matching a query and shows the manufacturers that are used for each item.

To run the Item Manufacturers report:

1. Select the Item Manufacturer report in the Products Reports folder. The Item Manufacturer Report page appears.

2. Click the Execute button. The Select Layout and Configuration wizard step appears.

3. Select the layout you want from the drop-down list, or use the Edit button to edit an existing
layout or use the Create button to create a new layout.

For more detailed information about layouts, see the Working with Agile Reports chapter in Getting Started with Agile PLM.

4. Select a report output format: PDF, WORD, EXCEL, HTML, or STANDARD.

5. Click Next. The Select or Create a Query wizard step appears.

6. To select a saved search:
   a. Click the radio button to select the Saved Search option.
   b. Click the Add by Search button to open the Saved Search palette.
   c. Navigate to the saved search you want to use.
   d. Double-click or press Enter on the keyboard to select the search.
   e. Press Escape on the keyboard to close the palette.

7. To define an advanced search:
   a. Click the radio button to select the Advanced Search option.
   b. Click the Define Query button to open the Report Search definition palette.
   c. Define the query you want to use and click Finish. For detailed information about advanced searches, see Getting Started with Agile PLM.

8. Click Next in the report wizard. The Select AML Information step appears. Complete the required fields:
   a. Select one or more manufacturer part Preferred Status. Type in the text field or click to launch the palette.
   b. Select one or more Manufacturer Part Lifecycle Phase. Type in the text field or click to launch the palette.
   c. The Sites selection is optional. Select one or more sites. Type in the text field or click to execute a quick search.

9. Click Finish to run and display the report.

If you chose a format other than the STANDARD format, you are prompted to download the report in the format you selected.

<table>
<thead>
<tr>
<th>Report layout fields</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Item attributes</td>
<td>Depending on the layout, the report can include any attributes from the listed item’s Title Block or Page Two tabs. For detailed information about layouts, see the Working with Agile Reports chapter in Getting started With Agile PLM.</td>
</tr>
<tr>
<td>Manufacturer part attributes</td>
<td></td>
</tr>
</tbody>
</table>
Under each listed item, manufacturer part information as specified in the selected layout can include any attributes from the listed item’s **Manufacturers** tab, attributes from the manufacturer part’s **General Info** tab, and attributes from the manufacturer’s **General Info** tab.

For detailed information about layouts, see the Working with Agile Reports chapter in *Getting started With Agile PLM*.

---

## Process Reports

The **Process Reports** folder lists the following reports:

- [Change Activity Report](#) on page 186
- [Change Backlog Report](#) on page 187
- [Change Cycle Time Report](#) on page 189
- [User Signoff Duration Report](#) on page 191
- [Change Package Report](#) on page 192
- [IP Transfer Report](#) on page 194
- [Change Metrics Report](#) on page 194

For more information about specific product reports, see [Agile Process Reports](#) on page 169.

### Change Activity Report

The Change Activity report shows the changes that were processed during a specified period of time. You choose which workflow to include in the report (for example, Default Change Orders or All Change Workflows). You also choose which status transitions to include in the report. For example, if you select Default Change Orders workflow and **Released** status type, the report lists all the changes orders that used the Default Change Orders workflow and that moved into the Released type status during the specified time period.

**To run the Change Activity report:**


2. Click the ![Execute] button. The Select Layout and Configuration wizard step appears.

3. Select the layout you want from the drop-down list, or use the ![Edit] button to edit an existing layout or use the ![Create] button to create a new layout.

   For more detailed information about layouts, see the Working with Agile Reports chapter in *Getting Started with Agile PLM*.

4. Select a report output format: PDF, WORD, EXCEL, HTML, or STANDARD.
5. Click Next. The Select Date Range wizard step appears.

6. Specify the start and end dates of the period to be covered by the report. Click Next.

7. Select the workflow type from the drop-down list.

8. Select one or more Status Changes To: options. Type in the text field or click to launch the palette.

   **Note** If you select All Change Workflows, the status types are listed in the Status Changes selection dialog; this allows you to select status types that apply to all workflows (for example, Released status type). However, if you select a specific workflow (for example, All Change Orders) the specific status names that apply to that workflow are listed in the Status Changes selection dialog.

9. Click Finish to display the report.

   If you chose a format other than the STANDARD format, you are prompted to download the report in the format you selected.

<table>
<thead>
<tr>
<th>Report layout fields</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Main Header attributes</strong></td>
<td></td>
</tr>
<tr>
<td><strong>Status</strong></td>
<td>Status based on the <strong>Status Changes</strong> selections in wizard.</td>
</tr>
<tr>
<td><strong>Status Date</strong></td>
<td>Date the change entered the selected status.</td>
</tr>
<tr>
<td><strong>For each change listed in the report, change object fields as specified in the selected layout</strong></td>
<td>Depending on the layout, the report can include any attributes from the listed change’s <strong>Cover Page</strong> or <strong>Page Two</strong> tabs. For detailed information about layouts, see the Working with Agile Reports chapter in <em>Getting started With Agile PLM</em>.</td>
</tr>
<tr>
<td><strong>Affected Item attributes</strong></td>
<td></td>
</tr>
<tr>
<td><strong>Under each change object status transition row, item information from the change’s <strong>Affected Items</strong> tab, as specified in the selected layout</strong></td>
<td>Depending on the layout, the report can include any attributes from the listed change’s <strong>Affected Items</strong> tab. For detailed information about layouts, see the Working with Agile Reports chapter in <em>Getting started With Agile PLM</em>.</td>
</tr>
</tbody>
</table>

**Change Backlog Report**

The Change Backlog report counts the changes that were at a specified status but have not moved to another specified status during a time period.

**Note** The option to use Oracle Business Intelligence Publisher (BI Publisher) is not available with this report.

**To run the Change Backlog report:**

2. Click the **Execute** button. The Select Layout and Configuration wizard step appears.

3. Select the layout you want from the drop-down list, or use the **Edit** button to edit an existing layout or use the **Create** button to create a new layout.

   **Note** For more detailed information about layouts, see the Working with Agile Reports chapter in *Getting Started with Agile PLM*. To run this report for price change orders, select a layout that applies to price change orders. (The Agile-provided default layouts are Default Layout for Change and Default Layout for PCO.) If you create new layouts for this report, you can choose a Layout Type: either Changes or Price Change Orders. Make sure the name you choose for the new layout indicates whether the layout applies to changes or price change orders.

4. Click **Next**. The Select or Create a Query wizard step appears.

5. To include all changes in the report, click the radio button to select the **All Changes** option.

6. To select a saved search:
   a. Click the radio button to select the **Saved Search** option.
   b. Click the **Add by Search** button to open the Saved Search palette.
   c. Navigate to the saved search you want to use.
   d. Double-click or press Enter on the keyboard to select the search.
   e. Press Escape on the keyboard to close the palette.

7. To define an advanced search:
   a. Click the radio button to select the **Advanced Search** option.
   b. Click the **Define Query** button to open the Report Search definition palette.
   c. Define the query you want to use and click **Finish**. For detailed information about advanced searches, see *Getting Started with Agile PLM*.

8. Click **Next** in the report wizard. The Define Report wizard step appears.

9. Specify the other settings for the report:
   - The time period covered
   - The time unit used in the report
   - The workflow
   - The starting status (to include changes that were in this status or moved into this status during the specified time period) and ending status (to include changes that have *not yet* moved into this status during the specified time period)

   For example, if you select starting status = Pending and ending status = Released, the report will count changes that were either in the Pending status or moved into the Pending status during the specified time period, but these changes have *not* moved into the Released status. The changes might be in a Submit type or Review type status, but they have not moved through the workflow to the Released status.
   - The way to group data to evaluate trends

   Select the checkboxes if you want to display the changes or price change orders and exclude empty columns.

10. Click **Finish** to display the report.
If you chose a format other than the STANDARD format, you are prompted to download the report in the format you selected.

<table>
<thead>
<tr>
<th>Report layout fields</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Main Header attributes</td>
<td></td>
</tr>
<tr>
<td>Days since Submitted</td>
<td>Number of days since the change entered the Submit type status.</td>
</tr>
<tr>
<td>Days at current status</td>
<td>Number of days the change has been at the current status.</td>
</tr>
<tr>
<td>Hold Date</td>
<td>Date the change entered the Hold type status.</td>
</tr>
<tr>
<td>Submit Date</td>
<td>Date the change entered the Submit type status.</td>
</tr>
<tr>
<td>For each change listed in the report,</td>
<td>Depending on the layout, the report can include any attributes from the listed change's Cover Page or Page Two tabs.</td>
</tr>
<tr>
<td>item information from the change's</td>
<td>For detailed information about layouts, see the Working with Agile Reports chapter in Getting started With Agile PLM.</td>
</tr>
<tr>
<td>Affected Items tab, as specified in</td>
<td></td>
</tr>
<tr>
<td>the selected layout</td>
<td></td>
</tr>
<tr>
<td>Affected Item attributes</td>
<td></td>
</tr>
<tr>
<td>Under each change object status</td>
<td>Depending on the layout, the report can include any attributes from the listed change’s Affected Items tab.</td>
</tr>
<tr>
<td>transition row, item information from</td>
<td>For detailed information about layouts, see the Working with Agile Reports chapter in Getting started With Agile PLM.</td>
</tr>
<tr>
<td>the change’s Affected Items tab, as</td>
<td></td>
</tr>
<tr>
<td>specified in the selected layout</td>
<td></td>
</tr>
</tbody>
</table>

**Change Cycle Time Report**

The Change Cycle Time report calculates the time it took the specified changes to move from one status to another during the specified period. For example, the report indicates the average time (in days) it took for a change to go from Submitted to Released each week during the last year, grouped by product line.

**Note** The option to use Oracle Business Intelligence Publisher (BI Publisher) is not available with this report.

**To run the Change Cycle Time report:**


2. Click the **Execute** button. The Select Layout and Configuration wizard step appears.

3. Select the layout you want from the drop-down list, or use the **Edit** button to edit an existing layout or use the **Create** button to create a new layout.
4. Click **Next**. The Select or Create a Query wizard step appears.

5. To include all changes in the report, click the radio button to select the **All Changes** option.

6. To select a saved search:
   a. Click the radio button to select the **Saved Search** option.
   b. Click the **Add by Search** button to open the Saved Search palette.
   c. Navigate to the saved search you want to use.
   d. Double-click or press Enter on the keyboard to select the search.
   e. Press Escape on the keyboard to close the palette.

7. To define an advanced search:
   a. Click the radio button to select the **Advanced Search** option.
   b. Click the **Define Query** button to open the Report Search definition palette.
   c. Define the query you want to use and click **Finish**. For detailed information about advanced searches, see *Getting Started with Agile PLM*.

8. Click **Next** in the report wizard. The Define Report wizard step appears.

9. Specify the other settings for the report:
   - The time period covered
   - The time unit used in the report
   - The workflow
   - The starting status (to include changes that were in this status or moved into this status during the specified time period) and ending status (to include changes that have *not yet* moved into this status during the specified time period)

   For example, if you select starting status = Pending and ending status = Released, the report will count changes that were either in the Pending status or moved into the Pending status during the specified time period, but these changes have *not* moved into the Released status. The changes might be in a Submit type or Review type status, but they have not moved through the workflow to the Released status.

   - The way to group data to evaluate trends

   Select the checkboxes if you want to display the changes or price change orders and exclude empty columns.

10. Click **Finish** to display the report.
    
    If you chose a format other than the STANDARD format, you are prompted to download the report in the format you selected.
### User Signoff Duration Report

The User Signoff Duration report calculates the time it took the specified users to signoff the specified changes at the specified statuses. Duration is calculated in days.

#### To run the Change Cycle Time report:


2. Click the ![Execute](image) button. The Select Layout and Configuration wizard step appears.

3. Select the layout you want from the drop-down list, or use the ![Edit](image) button to edit an existing layout or use the ![Create](image) button to create a new layout.

4. Click ![Next](image). The Select Changes for the Report step appears.

5. Select the changes you want. You can:
   - Use the table ![Add](image) button. Type the item numbers you want or use the ![Add by Search](image) palette button.
   - Use ![More... > Paste](image) to paste item rows you have copied from another table or from the ![FOLDERS](image) navigation drawer Bookmarks or Recently Visited list.
   - Click ![Custom Search](image) and define a query. Copy rows from the search results table and paste them into the Select Items for Report wizard table.
Click **Next**. The User Signoff Duration wizard step appears.

6. Select the number of days for the duration.
7. **Click Next**. The Set Other Parameters wizard step appears.
8. Specify the other settings for the report:
   - The workflow statuses you want. The default is the current status of the workflow.
   - Check to **Include Historical Statuses**.
   - Include all users (default) or select specific users.
   - User Role: Approver, Observer, Approver or Observer.
   - User Signoff Action: All, Pending Signoff Only, Signed Off Only
   - The workflow
9. **Click Finish** to display the report.

You are prompted to download the report in the format you selected.

<table>
<thead>
<tr>
<th>Default fields</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Change Number</td>
<td>The number of the change.</td>
</tr>
<tr>
<td>Status</td>
<td>Status as selected in the report wizard.</td>
</tr>
<tr>
<td>Status Entry Date</td>
<td>Date the change entered the status as selected in the report wizard.</td>
</tr>
<tr>
<td>User Name</td>
<td>Name of signoff user.</td>
</tr>
<tr>
<td>User Role</td>
<td>User role, as selected in the report wizard.</td>
</tr>
<tr>
<td>User Add Date</td>
<td>Date the user was added as an approver or observer</td>
</tr>
<tr>
<td>User Signoff Date</td>
<td>Date the user signed off the change.</td>
</tr>
<tr>
<td>Signoff Duration</td>
<td>The number of days between the Status Entry Date and the User Signoff Date.</td>
</tr>
</tbody>
</table>

**Change Package Report**

You can print the Change Package report to view the information about a change in an easy-to-read format.

**Note**

The option to use Oracle Business Intelligence Publisher (BI Publisher) is not available with this report.

**To run the Change Package report:**

2. **Click the 🔄 Execute button.** The Select Layout and Configuration wizard step appears.
3. Select the layout you want from the drop-down list, or use the Edit button to edit an existing layout or use the Create button to create a new layout.

For more detailed information about layouts, see the Working with Agile Reports chapter in Getting started With Agile PLM.

**Note** Agile PLM supplies a default layout for each change type. If you create new layouts for this report, you can choose a Layout Type. The layout type can be for all changes in a particular class (for example, change orders) or the layout type can be for a specific type of subclass of change (for example, ECOs). For ease of use, make sure the name you choose for the new layout indicates the selected layout type.


5. Select the changes you want to include in the report.
   - Use the table Add button. Type the change numbers you want or use the Add by Search palette button.
   - Use More... > Paste to paste change rows you have copied from another table or from the FOLDERS navigation drawer Bookmarks or Recently Visited list.
   - Click Custom Search and define a query. Copy rows from the search results table and paste them into the Select Changes for Report wizard table.

6. Click Next. The Select Tables to Include wizard step appears.

7. Specify the tables to include in the report. Click the small X button to remove a table. Click to launch the palette and select additional tables.

8. Click Finish to display the report.

If you chose a format other than the STANDARD format, you are prompted to download the report in the format you selected.

<table>
<thead>
<tr>
<th>Report layout pages and fields</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Cover Page</strong></td>
<td>Tabs of the change object that can be included in the report layout. Depending on the layout, the report can include any attributes from the change’s tabs.</td>
</tr>
<tr>
<td><strong>Affected Items</strong></td>
<td>For detailed information about layouts, see the Working with Agile Reports chapter in Getting started With Agile PLM.</td>
</tr>
<tr>
<td><strong>Workflow</strong></td>
<td>All Change Package layouts can include these tabs. Some change types can include additional information, as explained below.</td>
</tr>
<tr>
<td><strong>Attachments</strong></td>
<td>Lists the BOM redlines that appear on the change's affected item Redline BOM tab. Depending on the layout, the report can include any attributes from this tab. Available for change orders and site change orders only.</td>
</tr>
<tr>
<td><strong>History</strong></td>
<td></td>
</tr>
<tr>
<td><strong>Affected Items.BOM</strong></td>
<td></td>
</tr>
</tbody>
</table>

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Report layout pages and fields | Description
--- | ---
Affected Items.Manufacturers | Lists the manufacturer redlines that appear on the change’s affected item Redline Manufacturers tab. Depending on the layout, the report can include any attributes from this tab. Available for change orders, site change orders, and manufacturer orders only.
Affected Items.Attachments | Lists the attachments that appear on the change’s affected item Redline Folder tab: the list of attachments for the pending revision of the item. Depending on the layout, the report can include any attributes from this tab. Available for change orders only.

**IP Transfer Report**

**Note** For information about Agile Content Service (ACS) and transfer orders, see the chapter about ACS settings in Administrator Guide and see Agile Content Service User Guide.

This report shows the objects sent by transfer orders to a given destination and when they were sent.

For details about running this report, see the Working with Transfer Orders chapter of Agile Content Service User Guide.

**Change Metrics Report**

The Change Metrics report counts the changes that were moved to a specified status during a specified period.

**Note** The option to use Oracle Business Intelligence Publisher (BI Publisher) is not available with this report.

To run the Change Metrics report:

2. Click the Execute button. The Select Layout and Configuration wizard step appears.
3. Select the layout you want from the drop-down list, or use the Edit button to edit an existing layout or use the Create button to create a new layout.
Note  For more detailed information about layouts, see the Working with Agile Reports chapter in *Getting Started with Agile PLM*. To run this report for price change orders, select a layout that applies to price change orders. (The Agile-provided default layouts are Default Layout for Change and Default Layout for PCO.) If you create new layouts for this report, you can choose a Layout Type: either Changes or Price Change Orders. Make sure the name you choose for the new layout indicates whether the layout applies to changes or price change orders.

4. Click Next. The Select or Create a Query wizard step appears.

5. To include all changes in the report, click the radio button to select the **All Changes** option.

6. To select a saved search:
   a. Click the radio button to select the **Saved Search** option.
   b. Click the **Add by Search** button to open the Saved Search palette.
   c. Navigate to the saved search you want to use.
   d. Double-click or press Enter on the keyboard to select the search.
   e. Press Escape on the keyboard to close the palette.

7. To define an advanced search:
   a. Click the radio button to select the **Advanced Search** option.
   b. Click the **Define Query** button to open the Report Search definition palette.
   c. Define the query you want to use and click **Finish**. For detailed information about advanced searches, see *Getting Started with Agile PLM*.


9. Specify the other settings for the report:
   * The time period covered
   * The time unit used in the report
   * The workflow
   * The status type (to include changes that moved into this status type during the specified time period)
   * The way to group data to evaluate trends

   Select the checkboxes if you want to display the changes or price change orders and exclude empty columns.

10. Click Finish to display the report.

    If you chose a format other than the STANDARD format, you are prompted to download the report in the format you selected.

<table>
<thead>
<tr>
<th>Report layout fields</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Main Header attributes</td>
<td>Date the change entered the status you selected in the report wizard.</td>
</tr>
<tr>
<td>Date</td>
<td>Depending on the layout, the report can include any attributes from the listed change’s Cover Page or Page Two tabs. For detailed information about layouts, see the Working with Agile Reports</td>
</tr>
</tbody>
</table>

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### Report layout fields

<table>
<thead>
<tr>
<th>Report layout fields</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>chapter in <em>Getting started With Agile PLM.</em></td>
<td></td>
</tr>
</tbody>
</table>

### Affected Item attributes

<table>
<thead>
<tr>
<th>Affected Item attributes</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Under each change object row, item information from the change’s <strong>Affected Items</strong> tab, as specified in the selected layout</td>
<td>Depending on the layout, the report can include any attributes from the listed change’s <strong>Affected Items</strong> tab. For detailed information about layouts, see the Working with Agile Reports chapter in <em>Getting started With Agile PLM.</em></td>
</tr>
</tbody>
</table>
Chapter 8

Help for Power Users

This chapter includes the following:

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- Part or Document? ..................................................................................................... 198
- Changing an Item's Subclass .................................................................................. 200
- About Matching Criteria in Workflows .................................................................. 201
- Details About Revision Display on BOMs .............................................................. 202
- Quick Access to Agile Objects using Smart Object URLs ......................................... 203

Details about Discovery and Read Privileges

**Note** For more information about the discovery warning messages, see the chapter about SmartRules in the *Administrator Guide*.

The Agile administrator can use the Discovery privilege to limit discovery of objects in the following ways:

- Prevent a set of users from seeing certain objects when they run a search. These objects are not displayed on the results table, even though they meet the search criteria. The Agile administrator can specify whether or not to display a warning message on the search results page.

- Prevent a set of users from seeing certain objects that are listed on these tables:
  - Affected items
    - Where used
    - Manufacturers
    - Changes
    - Sites
    - User address book
  
  The Agile administrator can specify whether to display a warning message.

- Prevent a set of users from seeing certain objects on the BOM tab. The Agile administrator specifies whether or not to display a warning message. The Agile administrator also has the option of displaying either the item number only or the item description only on the BOM tab, so the user can see a complete BOM, but does not have access to the undiscovered items.

- Prevent a set of users from running reports.

Note that while one set of users is prevented from seeing certain objects or fields, other users with different Discovery privilege and Read privilege settings can see those same objects and fields.
In order to see the objects he creates, the creator of an object must also have the appropriate Discovery and Read privileges for the objects he creates. (See *Administrator Guide*, "Roles" chapter, Default Agile PLM Roles list for information about the Creator can read and discover object he or she created role.)

Discovery and Read privileges are assigned by the Agile administrator. If you have questions about your Discovery privileges or Read privileges, see the Agile administrator.

### Displaying Non-viewable Fields

**Note** The Agile administrator can create Read privilege masks that limit your ability to read specific fields. The Enforce Field Level Read privilege determines whether or not the Read privilege mask is enforced at the field level. If you have a role that includes the Enforce Field Level Read privilege, you may not be able to view the contents of specific fields. This section describes how those non-viewable fields are displayed. For more information, see the *Administrator Guide*.

If you do not have the appropriate Read privilege for a field, the words No Privilege appear in the field.

If a copy of a non-readable field appears in another object or in a table, the words No Privilege appear there also. For example, if you do not have Read privilege for the Description field of changes, when those changes are listed in a table, the words No Privilege also appear in the Description field of that table. Following are examples of tables where objects may be listed:

- Search results
- Change history
- Manufacturers
- Where used
- Affected items
- Audit results

On the BOM table only, the SmartRule that determines how non-discovered items are displayed on the BOM table is also applied to the non-readable fields. See [How the Agile Administrator Controls What You See](#) on page 74.

### Part or Document?

In general, if the document is shipped as part of a product, or it has costs associated with it, create it as a part object. If the document is an internal document, procedure, or reference, create it as a document object.

In certain cases, though, you may want to create a document as a part. Here are three examples illustrating when you might choose to create a document as a part object or as a document object.

**Example 1**: If a document is the controlling document for a part (that is, it has the same number as the part), create that document as a part object.
For example, if you have an engineering drawing number 123 that specifies and describes part number 123 (thus the document controls the part), create part 123 and include the engineering drawing as an attachment.

Use this method if the part number must be the same as the document number. Note that the document does not exist as a separate document object in the Agile PLM database.

In contrast to the above example, if it is not necessary for the drawing number and part number to be the same, create a document object (for example, document number 222) and add the engineering drawing to its Attachments tab (reference the engineering drawing in the appropriate file folder object). Then create a part object (for example, part 444). Add document 222 to the BOM tab of part 444 and enter zero or REF as the quantity. Enter zero as the find number; this forces a document object to appear at the top of the BOM tab for easy reference.

Example 2: If the document has costs associated with it, or it is shipped as part of a product, create it as a part object.

An example of a document that is shipped with a product is a manual. A manual might have a BOM that includes the binder, labels for the binder, binder tabs, and the printed document itself.

If a document goes to your customer with a product, create it as a part object, even if it does not have a BOM. Examples of such a document might be a warranty card, an instruction booklet, assembly instructions, or a printed software licensing agreement.

If the document has costs associated with it, such as printing costs, create it as a part object. When you add the document part to a BOM tab, and you enter a quantity of 1, the costs of the document part object are included in any reports that compute costs. (See Getting Started with Agile PLM for information about running reports.)

Example 3: If the following applies to a document, create it as a document object:

- It does not need to have the same number as a part.
- It is not shipped as part of a product.
- It does not have costs associated with it.

Examples of such documents might be a manufacturing process (a Quality Assurance procedure, a test procedure, or manufacturing instructions) or a reference document (a specification or an engineering drawing).

Create any internal company documents as document objects.

Note Because Agile PLM is so flexible, you are not required or forced to use the approach outlined in these examples when creating documents. You should, however, always follow your company’s policies or guidelines when creating a document as a part object or as a document object. If you have questions, see the Agile administrator.

If you create a document object, and later want to change it to a part object, you can hard-delete the document object (if you have the appropriate privileges), which removes it from the database and frees up the item number. Then you can create the document as a part object, using the same item number. For more information, see Deleting Agile Objects on page 207.
Changing an Item’s Subclass

If the Agile administrator has created additional subclasses, and you have the appropriate privileges, you can change the subclass of an item. For example, you can change the subclass of a particular document from Specification to Data Sheet.

**Note** When you change the subclass of an item, its data fields change, and all previous information about the Page Three tab is cleared.

**To change the subclass of an item:**

1. On the **Title Block** tab of the part, select a new subclass from the **Part Type** drop-down list.
2. If **Page Three** is visible and has data, a warning message appears, alerting you that all Page Three data is cleared.
   - **Web Client:**
     - Choose **Continue** in the warning and click **Finish** to continue changing the subclass and to allow **Page Three** to be cleared.
     - Choose **Cancel** in the warning and click **Finish** to cancel the change subclass process; no changes are made to the item. In the object pane, click **Cancel** to discard your modifications and exit the edit mode.
   - **Java Client:**
     - Click **Yes** to continue changing the subclass and to allow **Page Three** to be cleared.
     - Click **No** to cancel the change subclass process; no changes are made to the item. In the object window, click **Cancel** to discard your modifications and exit the edit mode.
3. If the new subclass has an autonumber scheme assigned by the Agile administrator, Agile PLM asks you if you want to select a new autonumber for the new subclass.
   - **Web Client:**
     - Choose **Continue** in the warning and click **Finish** to continue changing the subclass and to allow the same number or name to be used.
     - Choose **Cancel** in the warning and click **Finish** to cancel the change subclass process; no changes are made to the item. In the object pane, click **Cancel** to discard your modifications and exit the edit mode.
   - **Java Client:**
     - Click **Yes** to change the subclass but retain the existing number.
     - Click **No** to reject the existing number. Manually select or enter a number, then click **Save** in the object page or window.

If you reject the existing number in the Java Client step above, you must manually select a new number. Depending on your system configuration, do one of the following:

- If there is one autonumber source designated for the new subclass, click the **Autonumber** button to assign a new autonumber. Click **Save** in the object window or page to complete the process.
- If an autonumber is not required, you can type in a number. Click **Save** in the object window or page to complete the process.
- If autonumbering is required in your system, and more than one autonumber source is designated for the new subclass, use the **Autonumber** button to select one of the
autonumber sources. Click Save in the object window or page to complete the process.

**Note**  If the item is in use, you may see a dialog box alerting you that the item is locked. Click OK; the change subclass process is canceled.

4. Agile PLM displays the new number in the **Number** field, and enters the event on the **History** tab of the item.

## About Matching Criteria in Workflows

Matching criteria are used to find which workflows may be used for each change. Agile PLM matches each change to a list of valid workflows for that change.

The Agile administrator selects matching criteria from a list of reusable criteria. A reusable criteria is a database query, just like an advanced search. Reusable criteria are named and defined by the Agile administrator.

Some examples of possible reusable criteria are:

- **All MECOs** – finds all the changes that are MECOs (mechanical ECOs).
- **Scorpio ECOs** – finds all the ECOs that include “Scorpio” in the **Product Line(s)** field of the change.
- **Libra Project** – finds all the change orders that have any items on the **Affected Items** tab that contain “Libra” in the **Product Line(s)** field of the item.

By specifying a list of reusable criteria for each workflow, the Agile administrator limits which changes can use a specific workflow. For example, the Agile administrator might create a workflow named General Use, and select the three reusable criteria named above (All MECOs, Scorpio ECOs, and Libra Project) as the matching criteria for that workflow.

**Example 1:** If you create a change that is a Mechanical ECO (MECO), it matches one of the matching criteria of the General Use workflow (All MECOs). The General Use workflow appears in the **Workflow** drop-down list on the **Cover Page** tab of the change.

**Example 2:** If you create a change that is an ECO that includes “Scorpio” in the **Product Line(s)** field of the ECO, it matches one of the matching criteria of the General Use workflow (Scorpio ECOs). The General Use workflow appears in the **Workflow** drop-down list on the **Cover Page** tab of the change.

**Example 3:** If you create a change order and add items to its **Affected Items** tab that contain “Libra” in the **Product Line(s)** field, Agile PLM examines the **Product Line(s)** field on the **Affected Items** tab for every affected item. The General Use workflow appears in the **Workflow** drop-down list on the **Cover Page** tab of the change depending on the Criteria Matching Type setting for the workflow:

- **Some** – One or more (but not all) affected items must match the affected item–based reusable criteria, in this case, Libra Project.
- **All** – When multiple affected item–based reusable criteria are used as matching criteria, each affected item must match at least one affected item–based reusable criteria; however, each affected item does not have to match the same reusable criteria.
- **Same** – All affected items must match the same affected item–based reusable criteria, in this case, Libra Project.
As you add items to the **Affected Items** tab and complete the fields on the tabs of the change, the **Workflow** drop-down list on the **Cover Page** tab may vary, depending on which matching criteria apply at the moment. Contact the Agile administrator if you have questions about the matching criteria of a specific workflow.

In Java Client, when editing a change object, click the **Refresh** button to save and update the change object and display the correct list of workflows in the **Workflow** drop-down list.

In Web Client, when editing the **Cover Page** tab, click the **Validate** button to save and update the change object and display the correct list of workflows in the **Workflow** drop-down list.

The Criteria Matching Type setting also applies for each status in the workflow. For detailed information about workflows and Criteria Matching Type, see the **Administrator Guide**.

### Details About Revision Display on BOMs

Agile PLM calculates the revision number (or letter) that appears in the **Rev** field of the BOM table is by checking the release date of the parent item, if already released, then locating the latest revision of the child item prior to that date and analyzing it. If the parent item hasn’t been released, the most recent revision of the child item is found.

The child item revision is analyzed according to three criteria:

- Its lifecycle phase (Preliminary or other)
- Whether there are any released revisions of the child item
- Whether there are no released revisions of the child item

Note: In Agile PLM, if there are no released revisions of an item (the item has never been released), the Introductory revision is considered the latest revision, regardless of whether or not there are pending revisions of the never-released item. See [Introductory Revisions](#) on page 11.

Depending on which revision of the parent you select, the child revision displayed may or may not be the latest revision of that child item. The following is an explanation of which child revision appears:

- The latest revision of the parent item always displays the latest revision of the child item. This means that the parent BOM reflects any changes that may be made to the child item since the parent revision was released. This applies until the next revision of the parent is released.
- The rev shown for a child item of any past revision of the parent item is the latest revision as of the time just preceding the next parent revision.
- For each child item, the lifecycle phase appears that corresponds to the displayed revision.
  - The child item may display a blank **Rev** field if it has no revision number as of the release of the parent revision. This occurs:
    - If the child item has never been released as of the present moment, if you are viewing the latest parent revision, or
    - If it had not been released by the time of the next occurring parent revision, if you are
viewing past parent item revisions.

<table>
<thead>
<tr>
<th>Caution</th>
<th>Be aware that the unrelease and release of child items may affect the child revisions displayed on the parent BOM.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Note</td>
<td>Pending revisions of the child item are not displayed on the parent item BOM table. However, any child item that has a pending change is indicated by the icon in its row in the parent item BOM table.</td>
</tr>
</tbody>
</table>

The change order (ECO) or manufacturer change order (MCO) number associated with the displayed revision is included in the Item Rev column of the BOM table. The ECO number is the ECO that released the displayed revision. An MCO number is displayed with the revision upon which it is based.

Site change orders (SCO) are based on ECO-released revisions and the revision displayed on the BOM table may include SCO-defined content, however, SCO numbers are not displayed on the BOM table.

For more information about item revisions, see Working with Item Revisions on page 10.

Quick Access to Agile Objects using Smart Object URLs

You can generate quick access URLs that provide direct pointers to either Agile objects or to Agile attachment files.

These quick access URLs can be pasted into other applications or files such as spreadsheet files, word processing files, a company Intranet web page or WIKI page, or into an email.

This section includes the topics:

- Agile-Generated Quick Access Object URLs on page 203
- Formats for User-Generated Smart Object URLs on page 204
- Using Quick Access Object URLs on page 204

For information about quick access to attachment files using attachment quick access URLs, see Getting Started with Agile PLM.

Agile-Generated Quick Access Object URLs

From Web Client, you can generate Agile PLM object quick access URLs from the Web Client Actions menu.

To generate an Agile PLM object quick access URL:

1. Login to Agile PLM Web Client and open the desired object.
2. In the Actions menu, choose Copy URL to Clipboard.
3. The URL is copied to your clipboard. You can then paste it into another application or file, such as a word processing file, a spreadsheet file, or an email.
Formats for User-Generated Smart Object URLs

The Agile Smart Object URL feature is designed to enable effective collaboration through email, spreadsheets, documents, WIKIs, and so forth. Users or automated tools can generate smart readable URLs that point to a specific object in Agile PLM. By using the following format, a user does not need to log into Agile PLM to generate the object URL. Automated tools can also use this format to generate object URLs.

Smart Object URLs can be used for objects available from Web Client.

**Smart Object URL Format**

URLs for pointing to Agile objects use the following format:

http://server:port/VirtualPath/object/ObjectType/ObjectName

The following table defines the Smart Object URL parameters:

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><a href="http://server:port/">http://server:port/</a>&lt;VirtualPath&gt;/object/&lt;ObjectType&gt;/&lt;ObjectName&gt;</td>
<td>Server, port, and VirtualPath identify the Agile PLM instance.</td>
</tr>
<tr>
<td>server</td>
<td>Server, port, and VirtualPath identify the Agile PLM instance.</td>
</tr>
<tr>
<td>port</td>
<td>The text &quot;object&quot; indicates to Agile PLM that the URL is an object URL.</td>
</tr>
<tr>
<td>VirtualPath</td>
<td></td>
</tr>
<tr>
<td>object</td>
<td>ObjectType refers to the subclass (type) of object, for example, ECO, Part, Manufacturer, File Folder, Project, Activity, or Discussion.</td>
</tr>
<tr>
<td>ObjectType</td>
<td></td>
</tr>
<tr>
<td>ObjectName</td>
<td>ObjectName refers to the unique identifier for the object. Depending on the object class, the unique identifier is either an object number or a name.</td>
</tr>
<tr>
<td></td>
<td><strong>Note</strong>: Manufacturer Parts are a special class of objects that are uniquely identified by two parameters: a Manufacturer Name and a Manufacturer Part Number. Therefore, a URL referring to a specific Manufacturer Part uses the following format:</td>
</tr>
<tr>
<td></td>
<td><a href="http://server:port/VirtualPath/object/ObjectType/MfrName/MfrPart">http://server:port/VirtualPath/object/ObjectType/MfrName/MfrPart</a> Number</td>
</tr>
</tbody>
</table>

Agile PLM identifies and handles special tags (such as %20) added to URLs to handle special characters (such as spaces and other special characters such as asterisk "*"*) in an object’s unique identifier. For example:

http://server:port/VirtualPath/object/Manufacturer/Philips%20Semiconductor

This URL resolves to the manufacturer "Philips Semiconductor".

**Using Quick Access Object URLs**

When a user clicks a Quick Access Object URL, the user actions are the same whether the URL is
an Agile-generated quick access URL or a user-generated Smart Object URL:

1. The user clicks the URL and the Agile PLM login screen is displayed in a browser window.
2. The user enters the respective login information.
3. Upon successful login, Agile PLM searches for the object specified in the link.
   (If the object is not found, Agile PLM displays an error and returns to the user's Home page.)

When the object is found, Agile PLM verifies that the user has the appropriate privileges to read the object and displays the object's first tab, for example, the **Title Page**.
Deleting Agile Objects

This Appendix includes the following:

- Soft-Deleting an Object
- Undeleting an Object
- Hard-Deleting an Object
- Notes about Deleting Specific Agile Object Types

This section contains the following topics:

- Soft-Deleting an Object on page 208
- Undeleting an Object on page 208
- Hard-Deleting an Object on page 209
- Notes about Deleting Specific Agile Object Types on page 209

Java Client and Web Client support "soft" and "hard" deletes for many Agile object classes. When you soft-delete an object in the database, it is not permanently deleted. A soft-deleted object is marked "Deleted" in the database, and its object number or name is reserved. You cannot create another object with the same type and number or name as a soft-deleted object.

When you run a search, soft-deleted objects do not appear in the search results table. To locate soft-deleted objects, you must run the predefined deleted object searches in the Recycle Bin Searches folder.

Note: You have access to the Recycle Bin Searches folder if Recycle Bin Searches is included in the Searches field of your user profile. If you have the appropriate privileges, you can edit your user profile and add Recycle Bin Searches to the list of searches in the Searches field. If you do not have the appropriate privileges to modify the Searches field in your user profile, ask the Agile administrator to modify your user profile.

A hard-deleted object is permanently removed from the database.

Caution: You cannot undelete a hard-deleted object.

In order to soft-delete, hard-delete or undelete an Agile object:

- You must have the appropriate Delete or Undelete privileges for that object.
- All relationships and subscriptions must be removed.
- The object must meet any additional conditions that determine whether it can be deleted or undeleted.
In general, if deleting or undeleting an object would cause the compromise of data integrity, the delete or undelete action is disabled.

For detailed information about deleting specific object types, see Notes about Deleting Specific Agile Object Types on page 209.

**Soft-Deleting an Object**

When an object is soft-deleted, it is no longer available for use. However, until it is hard-deleted, its number or name is reserved in the Agile database and cannot be reused.

*To soft-delete an object in Web Client:*
1. Select and open the object you want to delete.
2. Choose Actions > Delete, and respond OK to the confirmation prompt.

The object is soft-deleted.

*To soft-delete an object in Java Client:*
1. Select and open the object you want to delete.
2. Click the Delete button ✗, and respond Yes to the confirmation prompt.

The object is soft-deleted.

See also: Deleting Agile Objects on page 207, Undeleting an Object on page 208, and Hard-Deleting an Object on page 209.

**Undeleting an Object**

If you have the appropriate privileges, you can undelete soft-deleted objects.

*To undelete an object in Java Client:*
1. Run the appropriate Deleted <objects> search from the Recycle Bin Searches folder.
2. Open the deleted object you want to restore.
3. Click the Undelete button ✗.

*To undelete an object in Web Client:*
1. Run the appropriate Deleted <objects> search from the Recycle Bin Searches folder.
2. Open the deleted object you want to restore.
3. Choose Actions > Undelete.

*Note* You can click the Navigator button in the search results table to display the search result object links in the left pane NAVIGATOR drawer.

See also: Deleting Agile Objects on page 207, Soft-Deleting an Object on page 208, and Hard-
Deleting an Object on page 209.

Hard-Deleting an Object

Soft-deleted objects still exist in the database. To remove an object permanently, you must hard-delete it. While an object is still only soft-deleted, you can undelete it. Run the appropriate Deleted object search from the Recycle Bin Searches folder.

To hard-delete a soft-deleted object (if you have the appropriate privileges) in Java Client:
1. Run the appropriate Deleted <objects> search from the Recycle Bin Searches folder.
2. Open the object.
3. Click the Delete Object button, and respond Yes to the confirmation prompt.

To hard-delete a soft-deleted object (if you have the appropriate privileges) in Web Client:
1. Run the appropriate Deleted <objects> search from the Recycle Bin Searches folder.
2. Select the one or more object rows in the search results table.
3. Click the Delete button.
4. In response to the warning prompt, choose Continue, then click Finish.
5. Or, you can hard-delete one object at a time:
   - Open the object.
   - Choose Actions > Delete, and respond OK to the confirmation prompt.

Note: You can click the Navigator button in the search results table to display the search results object links in the left pane NAVIGATOR drawer.

See also: Deleting Agile Objects on page 207, Undeleting an Object on page 208, and Soft-Deleting an Object on page 208.

Notes about Deleting Specific Agile Object Types

Notes about Deleting Item Objects

Before you can delete an item object, it must meet the conditions described below.

- The Agile administrator has assigned to you a role that has the appropriate Delete privileges.
- All relationships and subscriptions have been removed.
- The item has no released changes against it.
- The item is not listed on the Affected Items tab of any pending changes.
  You must first remove the item from the Affected Items tab of each pending change before you can delete the item.
The item has not been added to PSR.

The item has not been added to QCR.

The item has not been added to Material Declaration.

The item has not been added to Price.

The item has no content on its BOM tab for the current revision or any pending revisions.

The item has no content on its Manufacturers tab for the current revision or any pending revisions.

The item is not used on any other item's Bill of Materials, that is, the item to be deleted is not a child item on the BOM tab of a parent item revision, including the latest released revision, past released revisions, or pending revisions of the parent item.

The item is not associated with a Part Family, that is, the item does not appear on the Parts tab of a Part Family object. On the Title Page of the item to be deleted, the Part Family field must be empty. If the Part Family field is populated, the Actions > Delete command is disabled.

Notes about Deleting Change Objects

Before you can delete a change object, it must meet the conditions described below.

- The Agile administrator has assigned to you a role that has the appropriate Delete privileges. For example, you are the change analyst or component engineer, and the Agile administrator has given change analysts or component engineers the appropriate privileges to delete a change.

- All relationships and subscriptions have been removed.

- The change is at the Pending status type or the Unassigned status.

- You have Discovery and Read privileges for any items on the Affected Items table, otherwise, you cannot delete the change.

  **Note** To delete a change that has already been released, you must first unrelease the change. You need the appropriate privileges to unrelease a change by using the Workflow tab to switch it to a different status.

- When you soft-delete a change that has items on the Affected Items tab, all redlines associated with that change are discarded. To preserve data integrity, a soft-deleted change with items on the Affected Items tab cannot be undeleted. That is, a soft-deleted change can be undeleted only if there are no items on the Affected Items tab.

  **Note** If you think you might want to undelete a soft-deleted routable object in the future, be sure to clear its Affected Items tab before you delete it. You can undelete only routable objects with no entries on the Affected Items tab. If you want to keep the record of affected items but still want to delete the change object, use the Save As command to copy it under another change object number before deleting it.
Notes about Deleting Transfer Order Objects

Before you can delete a Transfer Order object, it must meet the conditions described below.

- The Agile administrator has assigned to you a role that has the appropriate Delete privileges.
- All relationships and subscriptions have been removed.
- The transfer order is at the Pending status type or the Unassigned status.

Notes about Deleting PSR or QCR Objects

Before you can delete a Product Service Request (PSR) or Quality Change Request (QCR) object, it must meet the conditions described below.

- The Agile administrator has assigned to you a role that has the appropriate Delete privileges.
- All relationships and subscriptions have been removed.
- The PSR or QCR is at the Pending status type or the Unassigned status.
- You have Discovery and Read privileges for any items on the Affected Items table; otherwise, you cannot delete the PSR or QCR.

Note

To delete a PSR or QCR that has already been released, you must first unrelease it. You need the appropriate privileges to unrelease a PSR or QCR by using the Workflow tab to switch it to a different status.

You cannot delete a PSR if:

- It appears on a QCR’s Relationships tab.
- It is currently part of a corrective action process. Remove the PSR from the QCR and then delete the PSR.
- It appears in the Related PSR tab of another PSR.
- It is currently part of a larger problem. Remove this PSR from the parent PSR and then delete it.
- It appears on the Related PSR tab.
- It is being used to aggregate multiple problems. Remove the related PSRs and then delete it.

You cannot delete a QCR if:

- It has any PSRs on the Relationships tab.
- If the corrective action process contains Problem Reports. Remove the PSR from the QCR and then delete the QCR.
- It has any Changes on its Relationships tab.
- If the corrective action process is already routed through engineering changes. Remove the Changes from the QCR and then delete the QCR.
Notes about Deleting Sourcing Project, RFQ and RFQ Response Objects

Agile Product Cost Management (PCM) objects include: Sourcing Project, RFQ, and RFQ Response. Before you can delete any Agile PCM object it must meet the conditions described below.

- The Agile administrator has assigned to you a role that has the appropriate Delete privileges.
- All relationships and subscriptions have been removed.

Sourcing Project
- The sourcing project has no RFQs.
- If the sourcing project has RFQs, the RFQs are in the closed state.

Note: Sourcing project objects can be soft deleted, but soft-deleted sourcing project objects cannot be undeleted or hard deleted.

- RFQ
  - The RFQ has no released changes against it.

Note: RFQ objects can be soft deleted, but soft-deleted RFQ objects cannot be undeleted or hard deleted.

- RFQ Response
  - The delete action is not supported for RFQ response objects.

Notes about Deleting Package Objects

Before you can delete a Package object, it must meet the conditions described below.

- The Agile administrator has assigned to you a role that has the appropriate Delete privileges.
- All relationships and subscriptions have been removed.
- The package is at the Pending status type or the Unassigned status.

Notes about Deleting Manufacturer Objects

Before you can delete a manufacturer object, it must meet the conditions described below.

- The Agile administrator has assigned to you a role that has the appropriate Delete privileges.
- All relationships and subscriptions have been removed.
- It is not listed on the Manufacturers tab of an item. (Check the Where Used tab of the manufacturing object.)
- If the object is a manufacturer, no manufacturer parts are associated with it.
Note  If all manufacturer parts associated with a manufacturer have been deleted, then the manufacturer can be deleted as well. However, you will not be allowed to undelete the soft-deleted manufacturer parts until the soft-deleted manufacturer object is undeleted.

Notes about Deleting Site Objects

Before you can delete a Site object, it must meet the conditions described below.

Note  Site objects can be soft deleted, but soft-deleted sites cannot be undeleted or hard deleted. If you are no longer using a site, Agile recommends that you disable it.

- The Agile administrator has assigned to you a role that has the appropriate Delete privileges.
- All relationships and subscriptions have been removed.
- The site does not appear on any item’s Sites tab.
- The site is not associated with any other Agile object.
- The site has a lifecycle of Disabled.

Note  If it meets the conditions listed above, a disabled site can be soft-deleted even when it is listed in the Sites or Default Site field of user profiles. The deleted site is automatically removed from the Sites list in any user profile where it is listed.

Once the site has been associated with an item, you can change its status to Disabled, but you cannot delete it.

Notes about Deleting User Objects

Before you can delete a User object, it must meet the conditions described below.

- The Agile administrator has assigned to you a role that has the appropriate Delete privileges.
- All relationships and subscriptions have been removed.

Note  User objects cannot be hard-deleted.

User access to Agile PLM can also be controlled by using the user profile Status property. For example, if someone leaves the company, or will no longer be using Agile PLM, or you need to prevent a user from logging in to the Agile PLM system, disable the user object by setting the Status property to Inactive. The user remains listed on the Java Client Administrator Users node and on the Web Client Address Book Users tab, and the name still appears on existing workflows, escalations, and so forth, but the user will no longer appear in the Address Book for other users to select. You can re-set the user to Active status at any time.

In Java Client Administrator, to display the list of deleted users, you can use either the Deleted Users node or the Recycle Bin search Deleted Users. In Agile Web Client, to display the list of deleted users, use the Recycle Bin search Deleted Users.

For detailed information about managing Agile PLM users, see Agile PLM Administrator Guide.
Notes about Deleting User Group Objects

You can delete a user group that is no longer needed.

Before you can delete a user group object, it must meet the conditions described below.

- The Agile administrator has assigned to you a role that has the appropriate Delete privileges.
- All relationships and subscriptions have been removed.

| Note | If you set a user group Status to Inactive, the inactive group appears in the search results table. In contrast, a soft-deleted user group does not appear in the search results table. |

If you delete a user group to which users have been assigned, you can do so without removing the users who were in the user group:

- Global User Groups – when you soft-delete a global user group, the group is listed in the group members' user profile Groups tabs as an inactive group. When you hard-delete a global user group, the user assignments to that global user group are also deleted and do not appear on the user profile Groups tab.
- Personal User Groups – For personal user groups, whether active or inactive, assignments are not listed on the group members' user profile Groups tabs.

When you delete a user group, it is removed from the Agile PLM address book. You cannot delete a user group if it is in use in these cases:

- It is on any routable object signoff list on the routable object Workflow tab.
- It is listed in any workflow definition Notify properties.
- It is used as a designated escalation person for any users, user groups, and partners.

In Java Client Administrator, to display the list of deleted user groups, you can use either the Deleted User Groups node or the Recycle Bin search Deleted User Groups. In Agile Web Client, to display the list of deleted users, use the Recycle Bin search Deleted User Groups.

Notes about Deleting PG&C Objects

Agile Product Governance & Compliance (PG&C) objects include: Declarations, Specifications, Substances, and Part Groups. Before you can delete any Agile PG&C object it must meet the conditions described below.

- The Agile administrator has assigned to you a role that has the appropriate Delete privileges.
- All relationships and subscriptions have been removed.
- Substances, Specifications, and Part Groups
  - If the substance, specification or part group object is in use, it cannot be deleted.
- Declaration
  - The Declaration is at the Pending status type or the Unassigned status.
Appendix B

Configuring Product Collaboration in Agile Administrator

This Appendix includes the following:

- Reference Designator Preferences ................................................................. 215
- Revising Item Descriptions ............................................................................. 218
- Notes on Configuring Product Collaboration Object Tabs ............................ 223
- Notes on Configuring Agile PLM Settings that Affect Product Collaboration 223
- Configuring Sites – Distributed Manufacturing ........................................... 224
- What are Change Controlled Attributes? .................................................... 226

This chapter provides information about Product Collaboration administration settings.

Reference Designator Preferences

Agile PLM 9.3 includes two system preferences related to reference designators. One preference defines the way reference designators are displayed in the BOM table. The second preference helps to determine the format of individual reference designators, including the format in which they are stored in the Agile database.

Caution Changing the Reference Designator Range Indicator preference after the initial implementation of Agile PLM may affect user data. See “Reference Designator Range Indicator” below for more information.

Read this entire section about “Reference Designator Preferences” before you make any updates or changes to these preference settings.

- Reference Designators Allow Range Expand Collapse
  Allows reference designators to be displayed in the BOM table as a range instead of a sequence. For example, the reference designator range R1 through R5 can be displayed as either:

  - Expand setting:
    R1, R2, R3, R4, R5

  - Collapse setting:
    R1-R5

- Reference Designator Range Indicator
  The symbol that appears between lower and upper range values in reference designator
statements. The default character is hyphen ( - ). If the reference designator number format that you want to use includes the hyphen character as part of the format, you can use this setting to select a different character to use as the range indicator. For important information about this preference, see “Reference Designator Range Indicator” before you make any updates or changes.

Reference Designators Allow Range Expand Collapse

This setting is now editable in this release. By default, the Reference Designators Allow Range Expand Collapse preference is set to Collapse, which means it collapses ranges of reference designators, for example, RefDes01-03. A setting of Expand forces the sequence to list each individual reference designator, separated by commas, for example, RefDes01,02,03.

Edit Mode — How editing reference designators is affected by the Expand/Collapse setting

When a BOM row is in edit mode, the reference designators are always displayed in expanded mode, regardless of the RDAREC preference setting. This allows the user to select and delete individual reference designators.

Regardless of the RDAREC preference setting, the user can always type a reference designator range in edit mode. If the user enters R1-R99, when he saves his edits, the reference designators are displayed according to the RDAREC preference setting. If the Expand setting is selected, each individual reference designator is displayed on the BOM table.

Note Whether they are originally entered as individual numbers or as ranges, Agile PLM stores reference designators as individual reference designator numbers. The RDAREC preference setting determines only the manner in which they are displayed on the BOM table (expanded or collapsed).

Reference Designator Range Indicator

This preference determines which character is used to indicate a range of reference designators. The default reference designator range indicator is the hyphen character: -.

When the Reference Designators Allow Range Expand Collapse (RDAREC) preference is set to Collapse, this character is used to indicate the “missing” reference designators in the sequence. For example, the range R1-R5 indicates that the range consists of the reference designators beginning with R1 and ending with R5. Although R2, R3, and R4 are not displayed, the range indicator character implies that they are included in the range.

Why Select a Non-default Reference Designator Range Indicator?

If you need to use a reference designator format that includes the hyphen character as part of the reference designator number (for example, a segmented reference designator such as R3-AB46), you can use this system preference to select a different character to use as the Reference Designator Range Indicator. If you select the colon character ( : ) as the reference designator range indicator, and the RDAREC is set to Collapse, the range of reference designators beginning with R3-AB44 and ending with R3-AB48 is displayed as:
R3-AB44:R3-AB48

If the RDAREC is set to Expand, the same range of reference designators beginning with R3-AB44 and ending with R3-AB48 is displayed as:

R3-AB44, R3-AB45, R3-AB46, R3-AB47, R3-AB48

**Caution** Changing the reference designator range indicator character may affect user data. Updates or changes after the initial Agile implementation should be made with extreme caution. Selecting a range indicator character that was previously used to segment reference designators may cause data mismatch problems.

For example, if you select the colon character as the range indicator character and use the hyphen character to segment reference designators, then you subsequently select the hyphen character as the range indicator character, a range indicator value R3-AB47 no longer has the same meaning, as the hyphen now indicates a range rather than part of the reference designator value.

**Reference Designators with Leading Zeros**

The following rules apply to the manner in which reference designators with leading zeros may be entered on the BOM table:

- The user may enter leading zero reference designators regardless of the Expand/Collapse setting.
  (See **Reference Designators Allow Range Expand Collapse** on page 216, on page 99.)

- The number of the numeric characters between reference designator segments in a range need not match. For example, the user may enter R0001-R100.

- When the number of numeric characters does not match, the first segment’s number of numeric characters is used to store the reference designator values in the database. For example, R0001-R100 is stored as R0001, R0002, ... R0100.

**Multi-segmented Reference Designators**

The following rules apply to the format of multi-segmented reference designators, that is, when the reference designator has a suffix.

- Reference designators may be separated into a maximum of three parts:
  - Prefix — May be any character that is not designated as the Range Indicator or a delimiter.
  - Number — Must be numeric (include only characters 0 through 9)
  - Suffix — May be any character that is not designated as the range indicator or a delimiter AND does not start with “0” (zero).

- Only the last number string is considered as the Number.

For example, in reference designator value A10B30D

- Prefix = A10B
- Number = 30
- Suffix = D
Revising Item Descriptions

Agile PLM 9.3 provides several ways to manage and control the modification of the Description field of Item objects.

| Important | Regarding revision-controlled Description field modification: The item Description field cannot be modified through an MCO because an MCO does not create a new item revision. The MCO uses the Description field information from the ECO revision or introductory revision on which it is based. |

Three basic behaviors:

- **Item object modification**
  
  The end user edits the Description field of the item object. This method is controlled by Modify privilege masks for item objects applied to the item Description field.

  **Note**  
  Item descriptions are associated with a specific item revision. Although the actual modifications are made on the item object itself (a change order is not required), the resulting descriptions are revision-specific.

- **Revision controlled - all Item objects**
  
  The end user must modify the item Description field on the Affected Items table of a change order, in the same manner that an item’s Revision and Lifecycle attributes are revision controlled and, thus, are modified on the Affected Items table of a change order.

  This method is controlled by Modify privilege masks for the change order object applied to the Item Description field of the Affected Items table. Also, the Item Description field must be enabled on the Affected Items table.

- **Revision controlled - selected Item subclasses**
  
  This method is a mixture of the previous two methods: some selected item subclasses require revision-controlled modification of the Description field, while other item subclasses do not require it.

  This method is controlled by using a combination of the previous methods:

  - Modify privilege masks for the item subclass applied to the item Description field (for the subclasses that do not require revision-controlled description modification, but the users may edit the description on the item object itself).

    The Item Description field must be enabled on the Affected Items table.

  - Modify privilege masks for the change order object applied to the Item Description field of the Affected Items table (for the subclasses that do require revision-controlled modification).

    In addition, the Modify privilege masks for the change order object must use the wildcard $AFFECTEDITEMTYPE to determine which subclasses require revision-controlled modifications to the specific item subclass Description field.
Setting up the Change Order Object

The Affected Items tab of change order objects (for example, ECOs) includes the following two attributes, which must be enabled or disabled appropriately for each Item Description modification method:

- **Old Item Description**
  
  This Affected Items attribute is populated with existing Item Description field value when the item is added to the change order. This attribute is not editable on the Affected Items tab. By default, this attribute is not enabled.

  For any item revision method that requires change order revision-controlled modification, you must enable this attribute.

- **Item Description**
  
  This is the default Affected Items table item description attribute. With the appropriate modify privilege masks for change order objects, this attribute is editable on the Affected Items table.

  In effect, this is the New Item Description and you may rename it if you wish.

When both these change order Affected Items table attributes are enabled, the Old Item Description field automatically displays the item description of the most recently released item (upon which the change order is based). The (New) Item Description field is available for the user to enter the desired item description for the pending revision of the item. This scenario requires the appropriate change order Modify privilege masks, with the appropriate Applied To properties for the (New) Item Description field.

Setting up the Appropriate Modify Privilege Masks for each Method

The following tables illustrate how you should modify the Agile-supplied default privilege masks for each method. Use this table as a guideline for setting up the desired method in your Agile PLM system. If you are not using the Agile-supplied default roles and privilege masks, examine the Example privilege masks and compare them to the actions outlined in the tables.

### Item Object Description Field Modification

**Goal:** Modify the Item Description on the Item Object only.

<table>
<thead>
<tr>
<th>Default Item Privilege Mask</th>
<th>Default Change Privilege Mask</th>
<th>Change Order Affected Items table, “Item Description” attributes</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Name</strong></td>
<td><strong>Applied To property</strong></td>
<td><strong>Name</strong></td>
</tr>
<tr>
<td><strong>Applied To Property</strong></td>
<td></td>
<td><strong>Applied To Property</strong></td>
</tr>
</tbody>
</table>
| Modify Preliminary Items    | ADD: Items.Title Block.Description | All default privilege masks with object type Changes | REMOVE: Changes.Affected Items.Item Description | HIDE (disable): Old Item Description | Enable and RENAME: New Item Description to:
The page contains a table titled "Revision Controlled, All Items". The table describes the actions required to modify the Item Type (subclass) description on Change Order only. The table includes columns for Default Item Privilege Mask, Default Change Privilege Mask, and Change Order Affected Items table, "Item Description" attributes. The table lists the following actions:

- **Modify Released Items**
  - **ADD:** Items.Title Block.Description
  - **REMOVED:** Changes.Affected Items.Item Description
  - **HIDE (disable):** Old Item Description
  - **Enable and RENAME:** New Item Description to: Item Description

The table also includes columns for Name, Applied To property, and Applied To Property. The Note section states that for each Item Type (subclass) to be modified by Change Order only, a modify privilege mask for change orders (with criteria for $AFFECTEDITEMTYPE) is required.
<table>
<thead>
<tr>
<th>Default Item Privilege Mask</th>
<th>Default Change Privilege Mask</th>
<th>Change Order Affected Items table, “Item Description” attributes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Name</td>
<td>Applied To property</td>
<td>Name</td>
</tr>
<tr>
<td>Modify Preliminary Items (specific Item Type)</td>
<td>REMOVE: Items.Title Block.Description</td>
<td>All default privilege masks with object type Changes</td>
</tr>
<tr>
<td>Modify Released Items (specific Item Type)</td>
<td>REMOVE: Items.Title Block.Description</td>
<td>All default privilege masks with object type Changes</td>
</tr>
</tbody>
</table>

**Goal:** Modify the Item description on Item object or on Change Order.

**Note** For each Item Type (subclass) to be modified on the item subclass, a modify privilege mask (with criteria for Title Block.Part Type) is required.
### Revision Controlled, All Items

**Goal:** Modify the Item description on Change Order only.

<table>
<thead>
<tr>
<th>Default Item Privilege Mask</th>
<th>Default Change Privilege Mask</th>
<th>Change Order Affected Items table, “Item Description” attributes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Name</td>
<td>Applied To property</td>
<td>Name</td>
</tr>
<tr>
<td>Modify Preliminary Items</td>
<td>ADD:</td>
<td>REMOVE: Changes.Affected Items.Item Description</td>
</tr>
<tr>
<td>(specific Item Type)</td>
<td>Items.Title</td>
<td>Items.Title</td>
</tr>
<tr>
<td>(applies to Introductory or Pending revisions)</td>
<td>Block.Description</td>
<td>Changes.Affected Items.Item Description</td>
</tr>
<tr>
<td>Modify Released Items</td>
<td>ADD:</td>
<td>REMOVE: Changes.Affected Items.Item Description</td>
</tr>
<tr>
<td>(specific Item Type)</td>
<td>Items.Title</td>
<td>Items.Title</td>
</tr>
<tr>
<td></td>
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<td>Changes.Affected Items.Item Description</td>
</tr>
</tbody>
</table>
**Goal:** Modify the Item description on Item object or on Change Order.

<table>
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<th>Change Order Affected Items table, “Item Description” attributes</th>
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</thead>
<tbody>
<tr>
<td><strong>Name</strong></td>
<td><strong>Applied To property</strong></td>
<td><strong>Name</strong></td>
</tr>
<tr>
<td>Modify Preliminary Items</td>
<td>ADD: Items.Title Block.Description</td>
<td>ADD: Changes.Affected Items.Item Description</td>
</tr>
</tbody>
</table>
| (applies to Introductory or Pending revisions) | All default privilege masks with object type Changes | SHOW (enable):
|                             |                               | Old Item Description and New Item Description |
| Modify Released Items       | ADD: Items.Title Block.Description | ADD: Changes.Affected Items.Item Description |
|                             | All default privilege masks with object type Changes | SHOW (enable):
|                             |                               | Old Item Description and New Item Description |

**Notes on Configuring Product Collaboration Object Tabs**

- Only the editable attributes on the BOM tab and the Manufacturers tab can be redlined. For more information, see Read-Through Fields.

- In the BOM Bulk Change wizard to replace or remove an item from an assembly, when the user identifies an item to bulk replace or remove, a table of assemblies where that item is used is displayed in the wizard. That table is derived from the item’s Where Used tab. That is, any attributes that are visible on the item object Where Used tab will also appear in the BOM Bulk Change wizard.

  For example, if you want the assembly revision to appear in the table in the BOM Bulk Change wizard, then you must enable (make visible) the Revision attribute on the Where Used tab of item objects. For more information, see Configuring Tabs.

**Notes on Configuring Agile PLM Settings that Affect Product Collaboration**

- The Multiple Items Per Manuf Part SmartRule is applied when the user creates an item with the Save As feature. That is, if the original item has a manufacturer part and the user displays that item and chooses Save As, the SmartRule is applied to the new item. If the SmartRule is set to Disallow, the user is presented with an error message and will not be allowed to create the new item. If the SmartRule is set to Warning or Allow, no error message is displayed and the new item is created.
Configuring Sites – Distributed Manufacturing

Note  For information about implementing and configuring Agile multi-site manufacturing, see Administrator Guide. For information about using Agile multi-site manufacturing, see Product Collaboration User Guide, in particular, chapter 2, "Sites and Distributed Manufacturing."

When the Agile administrator enables the Agile PLM Sites license, the Agile Site object is available and Agile PLM multi-site manufacturing functions become available. Agile multi-site manufacturing capabilities are used to assist a company that builds its products in multiple locations (distributed manufacturing). Before taking this step, you must determine and plan how Agile PLM multi-site manufacturing will be integrated with your ERP system.

Warning  Agile PLM multi-site manufacturing functionality is built differently than ERP sites. Agile Site objects and ERP sites are similar, but they are not identical. You should work with an Oracle Consulting - Agile practice representative to plan your Agile PLM to ERP integration before you enable the Agile Sites license. The type of information that you want to track in Agile PLM and how you choose record that information in Agile PLM may depend on how product information is stored in your ERP system.

Agile multi-site manufacturing helps a company that builds its products in multiple locations to do so by enabling parts and documents in those locations that are specific to the manufacturing process. In Agile PLM, revisions are global item attributes. If a part is used in two manufacturing sites, it must share the revision level, although the effectivity dates and disposition settings can be different.

The Agile multi-site manufacturing features allow you to annotate product data with three types of site relationships:

- Item object-to-Site relationship
  An item can be associated with one or more sites by adding the site object to the sites table on the item Sites tab. Item-site relationships are similar, but not identical to ERP item-site relationships. You can see if an Agile part is enabled in any sites by viewing its Sites tab.
  - Parts that are not released in any site have only global item effectivity dates and dispositions.
  - Parts released in sites are can have both site-specific item effectivity dates and dispositions and global item effectivity dates and dispositions.

- BOM row-to-Site relationship
  BOM row-site relationships are unique to Agile PLM. A child part can relate to its parent with no site relationship or through one or more specific sites. Each BOM row has either no site relationship or one site relationship. Use multiple rows, one for each site, to represent more than one site relationship for the same child part.
  - A child part that reports to its parent without a specific BOM row-site relationship is considered a common part, that is, a part common to all manufacturing sites.
  - A child part that reports to its parent with a BOM row-site relationship is a site-specific part, that is, a part that is specific to the related manufacturing site.

- AML table row-to-Site relationship
On an part's **Manufacturers** tab, you can specify site-specific AMLs (Approved Manufacturer List). Rows on the part manufacturer table can be common (specify no site) or a site-specific (associated with a site listed on the part's **Sites** tab). BOM row-site relationships and AML row-site relationships are independent of one another.

- An manufacturer part without a specific AML row-to-site relationship is a common manufacturer part and can be used at any manufacturing site.
- A manufacturer part with an AML row-to-site relationship is a site-specific manufacturer part, which allows the manufacturer part to be used at the specified manufacturing site.

Other important Agile PLM sites and ERP sites differences to keep in mind:

- In many ERP systems, a part can appear in different sites and have independent revisions. Agile considers all revision to be a global attribute of the part, therefore, site-based revisions are not supported in Agile PLM. To accommodate this need, simply prefix or suffix the part number with a unique string, for example SJC-P1000 and NYC-P100. These are unique parts which have global revision, but because these parts aren't used in other sites their revisions appear to be site-specific.

- The item-site relationship and the BOM row-site relationship are independent of one another in that you can add a part to a BOM as a site-specific BOM row without first adding the site to the part. Unlike typical ERP systems, Agile does not require that a part must first be released in a site before it can be added to a site-specific BOM row.

- When adding a row to a BOM where the parent has Sites that are not on the child, Agile PLM prompts the user to add the Sites to the child. This occurs only on the initial add of the BOM row - either in authoring mode (direct editing of a part) or in redlining mode (modifying a part through change redline). The user can choose only to **Copy** the sites onto the child in order to add the row to the BOM; choosing **Close** will not add the BOM row. If additional Sites are subsequently added to the parent, the newly added Sites are not automatically copied to the child. If Sites are removed from the child, no check is made on whether there is inconsistency between Sites on the parent and the child.

- The SmartRule Child Released First is enforced by the Release Audit when a part is released. When a parent part is released, this rule checks the BOM components for Site association and whether the BOM components are also released. The Release Audit verifies whether or not the item has been released by a Change or Manufacturer Change after a Site was added. In order to correctly pass this SmartRule, the Item must be released after adding a Site.
What are Change Controlled Attributes?

Important terms and concepts:

- **Change-Controlled Attributes**
  This term is used to describe attributes which can be Change Controlled (Redlined on a change order or manufacturer change order) and which are configured in Agile Administrator to be Change-Controlled.

- **Rebasing**
  *Rebasing* is the process of rationalizing values when there are multiple pending changes to an item. For example, if two ECOs are redlining the same BOM, Agile PLM must update, or rebase, the second ECO when the first ECO is released.

- **Pending Change**
  When discussing Agile PLM, *pending change* refers to a change which has not reached the first released status of its workflow.

- **Change**
  When discussing Change Controlled attributes, a *change* means either a change order (ECO) or a manufacturer change order (MCO).

Using the Agile PLM Change Controlled Attributes feature allows you to control how item attributes are modified. In the Agile Administrator Data Settings node, setting an item attribute *Change controlled* property to Yes means that the attribute can only be modified by using a either a change (ECO) or a manufacturer change order (MCO) and redline editing the attribute on the change object *Affected Items* tab, *Title Block* redline tab.

**Note** The *Title Block* redline tab is available only in Web Client.

The Title Block redline attribute modifications are controlled by the change approval process. The proposed new attribute values are not in use until the change is released. If the change is cancelled, the proposed new values are discarded and are not used.

Change-Controlled attributes are not displayed in the item object by revision. When the user selects a different revision in the *Rev* drop-down list, revision controlled attributes (for example, Description) appear in the item display as appropriate for each revision. A Changed-Controlled attribute displays the latest value for that attribute, regardless of which Rev is selected.

To view and compare historical values of item attributes, Agile PLM 9.3 provides the Item Attribute History report. This report allows you to view attribute changes that took place at each revision. Both revision controlled attributes and Change-Controlled attributes can be included in the report. See also *Item Attribute History Report* on page 183.

Change-Controlled attributes include Title Block, Page 2 and Page 3 attributes. For each attribute you wish to be under Change Control, set the *Change controlled* attribute property to Yes. When items are added to a change order (ECO) or manufacturer change order (MCO), the change's *Affected Items* tab includes a *Title Block* redline tab in Web Client.
Configuring Change Controlled Attributes

To configure an item attribute to be Change Controlled:
1. Login to Java Client Agile Administrator and navigate to the object tab you wish to configure.
2. On the Attributes tab, double-click the attribute you want.
3. Set Change controlled to Yes and then click Save.

Attributes that can be defined as Change Controlled are:
- Title Block attributes that are not revision-controlled. Revision-controlled attributes display N/A in the Change controlled column of the Attributes table.
- Page Two attributes, with the exception of the Create User attribute.
- Page Three attributes.