Agile Product Lifecycle Management

Product Collaboration User Guide

v9.3.0.1

Part No. E15915-01
December 2009

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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.

Accessibility of Code Examples in Documentation

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
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  - 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

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

- History Tab on page 10

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.

Item tab name	Tab information includes
Title Block Tab on page 3	General information about the item, unique class and subclass fields defined by the Agile administrator
Changes Tab on page 5	Any pending or released changes against the item
BOM Tab on page 5	The item's bill of material
Manufacturers Tab on page 7	Manufacturer and manufacturer parts information about sources for that part
Sites Tab on page 7	The manufacturing sites that use the item
Prices Tab on page 8	Prices associated with the item. For more information about Product Cost Management (PCM), see the *Product Cost Management User Guide*.
Quality Tab on page 8	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 *Agile Product Quality Management User Guide*.
Compliance Tab on page 8	Information about the compliance to material regulations related to the item. For more information about Product Governance & Compliance (PG&C), see the *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 on page 8	Information about the approved suppliers for the item. This tab is used in both the PG&C and PCM solutions. For more information about PG&C, see the *Agile Product Governance and Compliance User Guide*. For more information about PCM, see the *Product Cost Management User Guide*. **Note**: The **Supplier** tab is visible in Web Client only. Agile PG&C and Agile PCM are Web Client-based solutions.

Item tab name	Tab information includes
Relationships Tab on page 8	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 Used Tab on page 27	Where the item is used
Attachments Tab on page 9	Attached drawings and files
History Tab on page 10	Actions taken on the item, for example, when attachments were added and removed

Lifecycle Phase

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.

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

Title Block Tab

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.

Field	Definition
Number	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.
Description	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).
Size	Drawing size; select from the list.
Product Line(s)	The product group or groups that include this item; select from the list.
Lifecycle Phase	The lifecycle phase of the item for the displayed revision, for example, Prototype or Production. See Lifecycle Phase on page 3 for more information.
Rev Incorp Date	The date an item is incorporated; automatically completed when the item is incorporated.
Rev Release Date	The date an item is released; automatically completed when the item is released.
Part Type	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.
Part Category	The category that includes the item; select from the list.
Effectivity Date	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.
Item Group(s)	If this field has been enabled, it displays the item groups of which the current item is a member.
Shippable Item **Exclude from Rollup** **Compliance Calculated Date** **Part Family**	These fields are associated with Agile PG&C. For more information about Product Governance & Compliance (PG&C), see the *Agile Product Governance and Compliance User Guide*. See also *Agile Administrator Guide* and *Getting Started with Agile PLM.*

Field	Definition
Mass **Overall Compliance**	

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 together. The common items are listed first; the Sites column is blank for common items. The Sites column of site-specific items displays the associated site name.

Note	You can directly edit the BOM table when an item is initially created and before it is added to the Affected Items table of a change. See Creating a Common BOM on page 6 and Creating a Site-Specific BOM on page 6.

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 G*uide.

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

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 Gettin*g 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 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

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:

- Incorporating an Item on page 25
- Unincorporating an Item on page 26

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 *un*incorporated.

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?

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 sties 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?

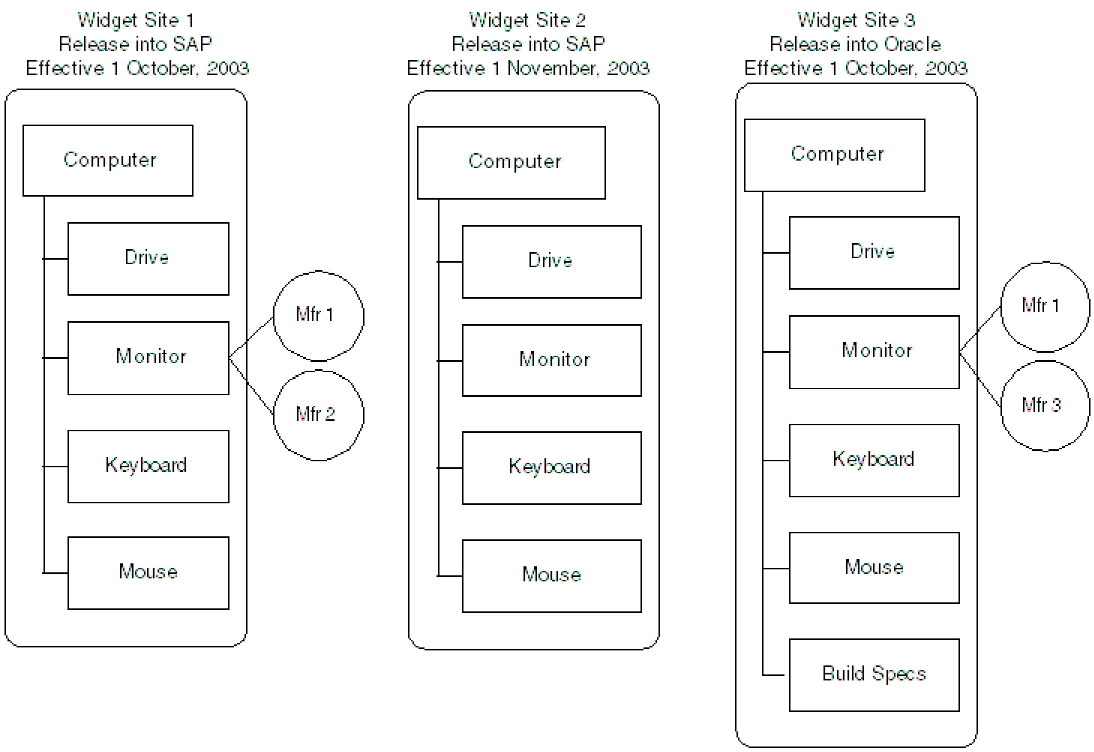
In Agile PLM, *site objects* represent manufacturing sites. Companies that practice distributed manufacturing use several different manufacturing sites for their products. For example, Widget Corporation manufactures its products at the corporate location in Austin, Texas, but also at manufacturing plants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

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:

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

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.

Site tab name	Tab information includes
General Info	General information about the site
Attachments	Attached drawings, files, and URLs pertaining to the site
History	Actions taken on the site, for example, when attachments were added and removed

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

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

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

Field	Definition
Planner	The planner code for the item at this site. Select one from a list of codes that have been assigned for sites.
Color	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.
Site AML Allowed	For items specified as Buy, indicates whether a site-specific manufacturer value is required, allowed, or disallowed.
AML Required on Buy	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.

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

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.

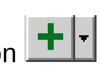
To add a site to the Sites tab in Web Client:

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*.

Chapter 3

Manufacturing Objects

This chapter includes the following:

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

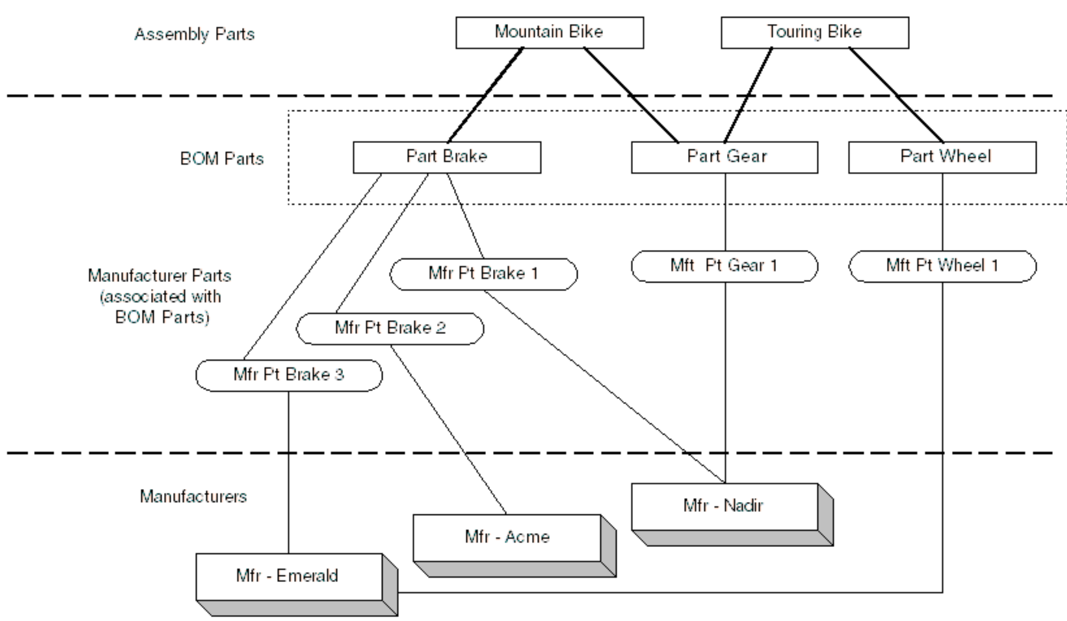
The AML features let you work with the following manufacturing objects:

- 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.



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 SCOs 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

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.

Manufacturer object tabs:

Tab	Fields include
General Info tab	**Name**, **Lifecycle Phase**, **Mfr. Type**, **Contact**, **URL, D-U-N-S Number**, contact information
Where Used tab on page 49	**Item Number**, **Item Description**, **Mfr. Part Number, Mfr. Part Lifecycle Phase**
Attachments tab	**Attachment Number, Attachment Description**, **File Name**, **File Version**, **File Size**, **File Type**, **Modified Date**, **Last View Date**, **Checkout User**, **Checkout Date**, **Checkout Folder** For information about working with attachments see *Getting Started with Agile PLM*.
History tab	**Action**, **User**, **Local Client Time**, **User Action Time** (optional), **Comments**, **Details**

Manufacturer Part object tabs:

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

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.

Lifecycle name	Lifecycle definition
Approved	This is an approved manufacturer.
Disqualified	This manufacturer is no longer qualified for use.
Obsolete	This manufacturer is no longer available for use.

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.

Lifecycle name	Lifecycle definition
Active	This manufacturer part is available for use.
Obsolete	This manufacturer part should no longer be used.

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

Creating and Managing Manufacturing Objects

This section covers the following topics:

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, 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.

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?

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.

Button or Action, Web Client	Description
Edit mode – Enter edit mode by double-clicking any editable table cell. **Save** **Cancel**	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.
Remove	Removes the selected rows from the table.
Add	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.

Button, Java Client	Description
Edit (Java Client)	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.

Button, Java Client	Description
Remove (Java Client)	Removes the selected rows from the table.
Add > **Create** (Java Client) **Add** > **Search** (Java Client)	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.
View Redline (Java Client)	For the selected row, opens the associated change object with the **Redline Manufacturers** tab displayed.

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.

Field name	Description
	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 (visible only if the Agile administrator has enabled it)	Lets you define the percentage allocated for the manufacturer part at the selected site. For more information, see *Product Cost Management User Guide*.

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**.

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

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 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.

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

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 Sides, 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.

Java Client button	Action
Redline Manufacturer	Displays the selected row in the Redline Manufacturer dialog box so that you can redline editable fields. Use the buttons in the upper left corner to view and edit other rows in the table. Click **OK** when you are finished.
Add > **Create** **Add** > **Search**	Lets you redline-add a manufacturer part to the item.
Remove	Redline-deletes the selected rows from the Redline Manufacturers table.
Undo Redlines	Clears the redlines from the selected rows. See Undoing Changes to the Redline Manufacturers Tab on page 71.

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 page 64.

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

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

	A document
	An assembly

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.

Button or mode	Description
Double-click an editable cell to enter table edit mode.	Use the Web Client edit features to edit table cells. Press Tab or arrow keys to move the focus to the next editable cell.
Remove	Removes the selected rows from the BOM 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 place-holder 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 is 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.

Button	Description
	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.
	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.
	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.
	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).
	Remove — Removes the selected rows from the BOM table.
	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.
?	**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.

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.

Web Client BOM column name or icon	Description
	Has Attachment 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.
	Has Approved Manufacturers 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.
	Has Pending Changes 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.
Item Number	The **Item Number** field contains the item's number. Click an item number to open that item page.
	Has Product Service Requests 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.
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.
	Has Prices 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

Web Client BOM column name or icon	Description
	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 **Compliance** tab displayed.

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.

Field name	Description
	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.
	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.
	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.
	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.
  a. Place your cursor on the item number link until the **Quick View** tooltip appears.
  b. Click the **Quick View** tooltip. The Quick View palette appears.
  c. Use the **Next** and **Back** buttons in the Quick View palette to view the next or previous item in the BOM table.
  d. 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.

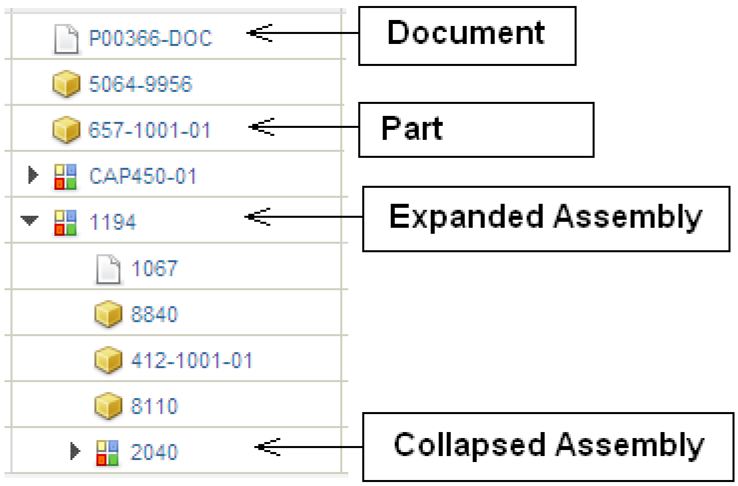
Expanding and Collapsing an Assembly

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.

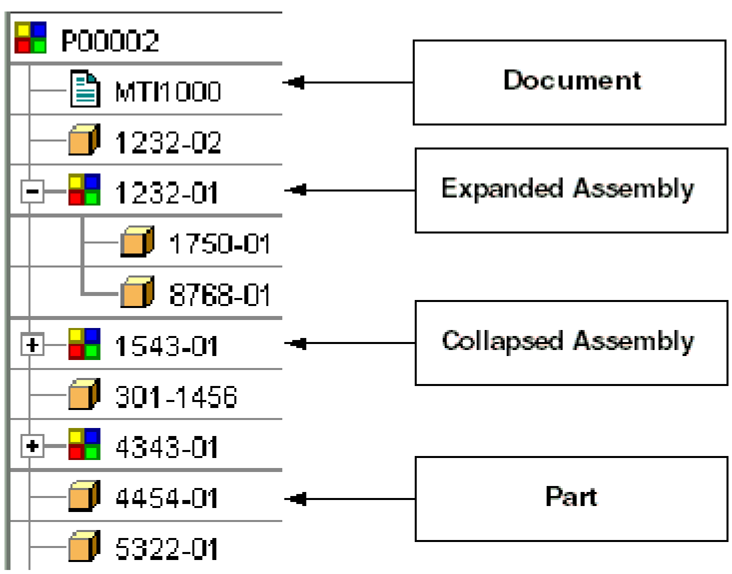
To collapse an assembly or subassembly, click ▼ before its item number



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.

Note You can also use the BOM Go To feature in the Expanded BOM Display window. See also Expanded BOM Display Window, Web Client on page 83.

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.

Phase 1	Phase 2	Phase 3	Phase 4
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.	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.
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.

This section includes the following topics:

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

site you want. Repeat step 6.

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

   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.

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 Java Client, Adding a Blank Row to the BOM Table on page 94.

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

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 **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

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

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:

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 (R*x*–R*y*), 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
  ```

See also: Working with Reference Designators on page 99, Adding Reference Designators on page 101.

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.

See also: Working with Reference Designators on page 99, Adding Reference Designators on page 101.

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.

See also: Working with Reference Designators on page 99, Adding Reference Designators on page 101.

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 valuates 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):

Range entered as:	Reference designators saved as:
A1B*A3B	A1B*A3B
A*07*FG - A*10*FG	A*07*FG, A*08*FG, A*09*FG, A*10*FG
A*001*TT - A*3*TT	A*001*TT, A*002*TT, A*003*TT
A*07 - A*10	A*07, A*08, A*09, A*10
A*001 - A*3	A*001, A*002, A*003
A1B1 - A1B3	A1B1, A1B2, A1B3
A1B1C - A1B3C	A1B1C, A1B2C, A1B3C
A1B1C - 3C	A1B1C, A1B2C, A1B3C
A1B1CD - A1B3CD	A1B1CD, A1B2CD, A1B3CD

Range entered as:	Reference designators saved as:
A1B1CD - 3CD	A1B1CD, A1B2CD, A1B3CD
A1B1C1 - A1B1C3	A1B1C1, A1B1C2, A1B1C3

See also: Working with Reference Designators on page 99, Adding Reference Designators on page 101.

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**.

See also: Working with Reference Designators on page 99, Adding Reference Designators on page 101.

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.

See also: Working with Reference Designators on page 99, Adding Reference Designators on page 101.

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.

See also: Working with Reference Designators on page 99, Adding Reference Designators on page 101.

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**.

See also: Working with Reference Designators on page 99, Adding Reference Designators on page 101.

Redlining the BOM of a Released Item

This section includes the following topics:

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:

Button or function	Use
Edit mode	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 **Save** when you are finished.
Add	The **Add** 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 **Search to Add**, or click **Create to Add**. 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 Adding Items to the BOM Table of a Preliminary Item on page 92.
Remove	The **Delete** button removes the selected row from the Redline BOM table.
Undo Redlines	The **Undo Redlines** button clears the redlines from the selected rows. See Undoing Changes to a Redline BOM Table on page 113.
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:

Button	Use
	Redline BOM — Displays the selected rows in a Redline BOM window so that you can change editable fields.

Button	Use
	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 — Removes the selected row from the Redline BOM table.
	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 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.

Chapter 5

Changes

This chapter includes the following:

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.

Change type	Purpose
ECO (Web Client) (Java Client)	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 (Web Client) (Java Client)	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 (Web Client) (Java Client)	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 (Web Client) (Java Client)	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 (Web Client) (Java Client)	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 (Web Client) (Java Client)	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:

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.

Tab name	Tab information includes
Cover Page	General information about the change plus any unique fields defined by the Agile administrator.
Affected Items	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.
Workflow	Approvers and observers of the change and the results of their reviewing the change. The statuses of the workflow.
Relationships	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*.
Attachments	Attached files and URLs.
History	A record of the actions taken on the change.

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.

Field	How completed	Contents
Number	Usually automatically, when created; can be configured for manual entry.	The number assigned to the change when you create it.
Status	Automatically, when created; updated as the change moves through the assigned workflow.	Change status, described in Status on the Cover Page Tab on page 120; if no workflow has been selected, this field is Unassigned.
Change Type	Automatically, when created.	The type of change selected when you create the change.
Change Category	Usually manually; can contain a default.	Category defined by the Agile administrator (can be selected from a drop-down list).

Field	How completed	Contents
Description Of Change	Usually manually; can contain a default.	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.
Reason For Change	Usually manually; can contain a default.	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.
Reason Code	Usually manually; can contain a default.	Code defined by the Agile administrator (can be selected from a drop-down list).
Workflow	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.	The name of the workflow being used to move this change through the change control process.
Change Analyst or **Component Engineer**	May be provided automatically by the workflow; otherwise selected manually from an address book list of change analysts or component engineers.	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.
Originator	Usually automatically, when created (with the default set by the Agile administrator).	The user who created the change (can be selected from a drop-down list).
Date Originated	Usually automatically, when created.	The date the change was created.
Date Released	Automatically, when released.	The date the change was released.
Final Complete Date	Automatically, when the change enters the Complete status type.	The date the change moved into the Complete status type.
Product Line(s)	Usually manually; can contain a default.	Product line defined by the Agile administrator (can be selected from a drop-down list).

Field	How completed	Contents
Effective From	Manually.	Deviations only. The date the deviation goes into effect.
Effective To	Manually.	Deviations only. The date the deviation is no longer in effect.
Resume Date	Manually.	Stop Ships only. The date the stop ship is no longer effective and the company can resume shipping of the item.

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.

Status name	Status definition
Unassigned (no status type)	No workflow has been assigned to this change. The originator may still be developing the change. No statuses are displayed on the **Workflow** tab.
Pending (Pending status type)	The originator may still be developing the change. It has not yet been approved or perhaps even completed.
Submitted (Submit status type)	The change has been routed to the change analyst or component engineer for review and analysis.
CCB (Review status type)	The change has been routed to the members of the change control board (CCB) for approval.
Released (Released status type)	The change has been signed off by the CCB members and released.
Closed (Complete status type)	The change is an ECR that has been accepted and implemented.
Expired (Complete status type)	The change is a deviation where the “Effective To” date has been reached.

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 and select the workflow status you want in the dialog. To remove an approver or observer, click 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**; the change workflow has not yet moved to this status.
  - – **Current**; the workflow status of the change, the workflow is currently in this status.
  - – **Forward**; the change moved forward to the next status in the workflow.
  - – **Backward**; the changed 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**; 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

- Subclass change
- Comments
- Send
- Print
- Subscribe
- Save As
- Share
- Export
- Delete
- Undelete

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.

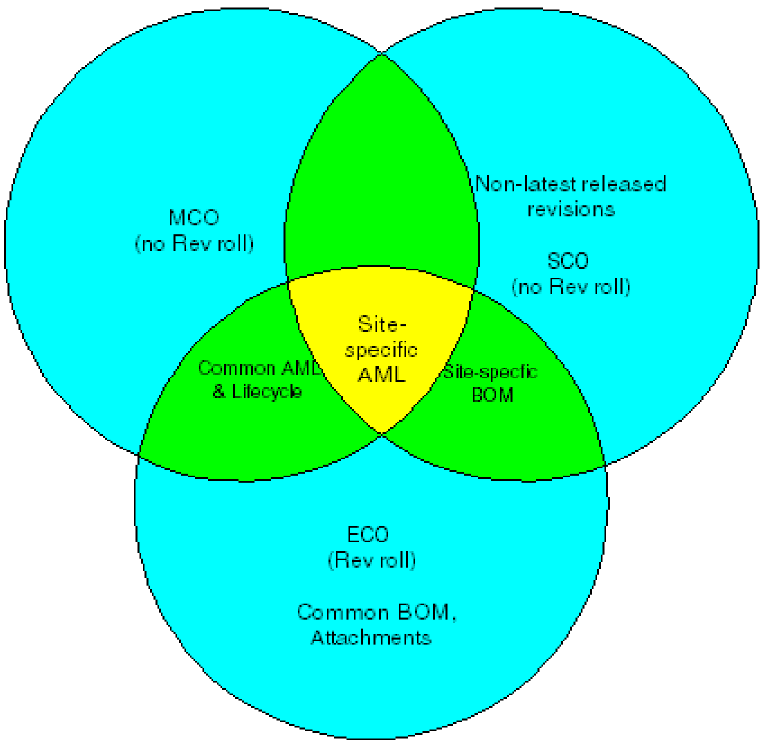
For detailed information about working with routable objects, see *Getting Started with Agile PLM*.

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.

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.

Note 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*.

Note 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:

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

Engineer

Note For detailed information about how to perform routing manager tasks, see *Getting Started with Agile PLM*, Chapter 8, Routing Objects with Workflows.

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).

   Note Agile Administrator settings, including workflow settings and SmartRule settings, control when a change can be autopromoted. These settings determine the required fields that must be completed, the required actions of the approvers, and other conditions that must be met for autopromotion.

   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.

Chapter 6

Affected Items of Changes

This chapter includes the following:

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.

Button or Mode	Description
(edit mode)	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.
Remove	Deletes the selected item from the Affected Items 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	Description
	affected items 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 **Cancel**	Active only in table edit mode. Click the appropriate button to either save or cancel the edits to the affected items table.
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.

Button	Description
Edit Affected Items	Displays the selected (checked) item in edit mode.
Remove	Deletes the selected item from the Affected Items table.
	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.
Fill Down Rows, Fill Up Rows	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.
BOM Bulk Change	Applies a change of an item to multiple BOMs that use the item.

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.

Affected Items tab field	ECO	MCO	SCO	ECR	Stop ship	Deviation
Sites	✓	✓	✓			
Item Number	✓	✓	✓	✓	✓	✓
Old Rev	✓					
Old Lifecycle Phase	✓	✓				
Obsolete Date	✓		✓			
New Rev	✓					
Revision			✓	✓	✓	✓
Effective Date	✓		✓			
Lifecycle Phase	✓	✓		✓	✓	✓
Change Function	✓					
Old Item Description (appears only if enabled)	✓					
Item Description	✓	✓	✓	✓	✓	✓

Affected Items tab field	ECO	MCO	SCO	ECR	Stop ship	Deviation
On Order	✓		✓			
Stock	✓		✓			
Work in Progress	✓		✓			
Finished Goods	✓		✓			
Field	✓					

Note 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 **New Rev** 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.

Change class	Can be edited?	Default revision when item is added to Affected Items table
Change Order (ECO)	No	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. **Note:** 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
Manufacturer Change Order (MCO)	—	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.
Site Change Order (SCO)	Yes	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

Change class	Can be edited?	Default revision when item is added to Affected Items table
Engineering Change Request (ECR)	Yes	When an item is added to the Affected Items table of an engineering change request, the **Revision** field is blank. When the **Revision** 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 **Revision** field to select a different item revision.
Deviation	Yes	When an item is added to the Affected Items table of a deviation, the **Revision** field is blank. When the **Revision** 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 **Revision** field to select a different item revision.
Stop Ship	Yes	When an item is added to the Affected Items table of a stop ship, the **Revision** field is blank. When the **Revision** 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 **Revision** field to select a different item revision.

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

- New 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 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 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

Note 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.

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

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 preformed, 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 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 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 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 to execute a quick search for the item.
5. In the **Replacement Item** field, type an item number, or click to execute a quick search for the item. Click 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 and 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**.

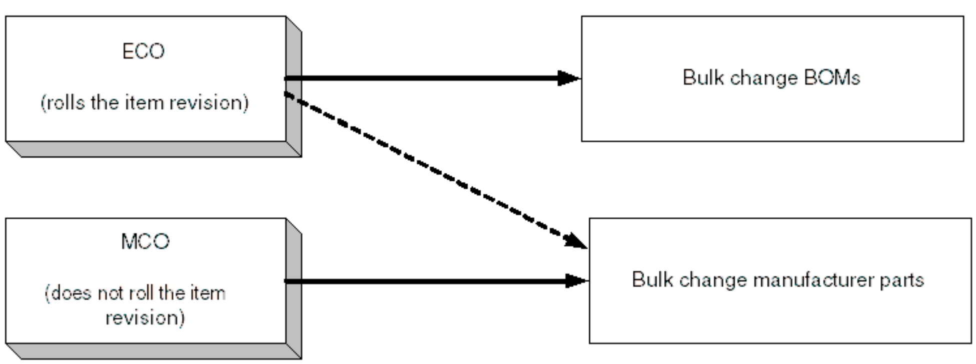
  The assemblies (selected in step 5) will be added to the Affected Items table if they are not already in the Affected Items table, and no redline changes will be made to them. Select an assembly in the Affected Items table, then make the redline changes you want on the **Redline BOM** tab.

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. Click to create a new 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 SCOs

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.

See Site Change Orders on page 131.

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 on page 164
- Editing Affected Items Tab Rows in Java Client on page 165

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 topmost 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

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.

Report	Displays...
Bill of Materials (BOM) reports	
Assembly Cost (Item Master) Report on page 170	The Assembly Cost report takes the bill of material for a specified assembly and computes the cost of the BOM and each subassembly.
BOM Explosion Report on page 172	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.
Consolidated BOM Report on page 173	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.
Effective BOM Explosion Report on page 174	The Effective BOM report displays the bill of material for a specified assembly that is effective during a specific time period.

Report	Displays...
Item Activity Report on page 176	The Item Activity report shows the items that were processed during a specified period of time.
Compare Item Attributes Report on page 176	Shows the attribute differences between two or more items.
Where Used Report on page 179	The Where Used report shows where the component or subassembly is used, up to any practical number of levels.
BOM Comparison Report on page 180	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.
Legacy BOM Comparison Report - Single Level Only on page 182	The Legacy BOM Comparison report shows the differences between two or more bills of material, using the first BOM level.
Item Attribute History Report on page 183	Shows how Item Attribute Values have been changed over time through Change Orders or Manufacturing Orders.
Manufacturer reports	
Item Manufacturers Report on page 184	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.)
Manufacturer BOM Report on page 178	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.)

Agile Process Reports Summary

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:

Report	Displays...
Change process reports	
Change Activity Report on page 186	The Change Activity report shows the changes that were processed during a specified period of time.
Change Backlog Report on page 187	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.
Change Cycle Time Report on page 189	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.
User Signoff Duration Report on	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

Report	Displays...
page 191	has not acted yet upon it.
Change Metrics Report on page 194	The Change Metrics report counts the changes that were moved to a specified status during a specified period.
Change Package Report on page 192	You can print the Change Package report to view the information about a change in an easy-to-read format.
IP Transfer reports	
IP Transfer Report on page 194	The IP Transfer report show the objects sent (by Agile transfer orders) to a given destination and when they were sent. (Requires the Agile Content Service server license.)

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:

1. Select the Assembly Cost report in the **Products Reports** folder. The Assembly Cost 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 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.
   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.

Report layout fields	Description
Level	The BOM level, for example, 0, 1, 2, or 3.

Report layout fields	Description
Individual Cost	The part cost selected in the **Cost Field** in the report wizard.
Total Cost	Individual Cost * total quantity (Qty) for that row
Assembly Cost	Cost of the assembly.
Item fields as specified in the selected layout	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*.

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:

1. Select the BOM Explosion report in the **Products Reports** folder. The BOM Comparison 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 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 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.
10. Click **Next**. The Select Additional Report Parameters step appears.
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.

Report layout fields	Description
Level	The BOM level, for example, 0, 1, 2, or 3.
Item fields as specified in the selected layout	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*.

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. 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 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.

Report layout fields	Description
Total Quantity	Total quantity of each specific item in the whole assembly (BOM)
Item fields as specified in the selected layout	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*.

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:

1. Select the Effective BOM Comparison Report in the **Products Reports** folder**.** The Effective BOM Comparison 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 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.
   c. Repeat steps a and b to select as many item revisions as you want.
9. Click **Next.** The Select Additional Report Parameters step appears.
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.

Default fields	Description
Level	The BOM level, for example, 0, 1, 2, or 3
Item fields as specified in the selected layout	Depending on the layout, the report can include any attributes from the selected item's **Title Block**, **Page Two**, **Changes**, or **BOM** tabs. For detailed information about layouts, see the Working with Agile Reports chapter in *Getting started With Agile PLM*.

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 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 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	Description
Site	The name of the site associated with the listed item. The sites listed are determined by the sites you selected in the report wizard.
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** or **Page Two** tabs. For detailed information about layouts, see the Working with Agile Reports chapter in *Getting started With Agile PLM*.

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.

Report layout fields	Description
Items	The Items listed are determined by the items you selected in the report wizard.
Item fields as specified in the selected layout	Depending on the layout, the report can include attributes from the listed item's **Title Block** or **Page Two** or **Page Three** tabs. For detailed information about layouts, see the Working with Agile Reports chapter in *Getting started With Agile PLM*.

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.
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. Click **Next**. The Select Additional Report Parameters step appears.
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.

Report layout fields	Description
Item attributes	

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:

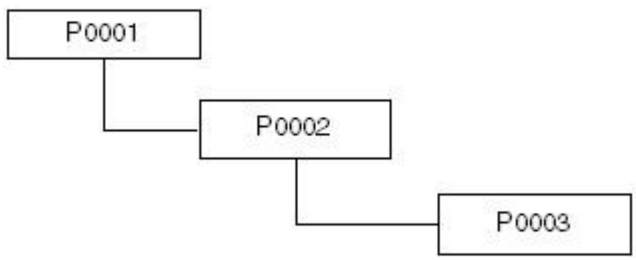
1. Select the Where Used report in the **Products Reports** folder. The Where Used Report page appears.
2. Click the **Execute** button. The Select Layout and Configuration wizard step appears.
3. Select the layout you want from the drop-down list, or use the **Edit** button to edit an existing layout 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 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. 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.

Default fields	Description
Level	The BOM level, for example, 0, 1, 2, or 3.
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*.

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** 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 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** button to remove an item type. Click 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** button to remove an item type. Click 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** button to remove an item type. Click 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** 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.
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** 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.

Report layout fields	Description
Comparison Data	The report includes one column for each item revision selected in the Select Items for Report wizard page.
Item fields as specified in the selected layout	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*.

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 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** 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.

Report layout fields	Description
Comparison Data	The report includes one column for each item revision selected in the Select Items for Report wizard page.
Item fields as specified in the selected layout	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*.

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:

1. Select the Item Attribute History report in the **Products Reports** folder. The Item Attribute History 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 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.

Report layout fields	Description
For the item listed in the report, item fields as specified in the selected layout	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*.
Item changes, ECOs, MCOs or both, as selected in the report wizard.	Item field content is displayed for each field at each change revision. Modified fields are highlighted.

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.

Report layout fields	Description
Item attributes	
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** or **Page Two** tabs. For detailed information about layouts, see the Working with Agile Reports chapter in *Getting started With Agile PLM*.
Manufacturer part attributes	

Report layout fields	Description
Under each listed item, manufacturer part information as specified in the selected lay	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*.

Process Reports

The **Process Reports** folder lists the following reports:

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 reports 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:

1. Select the Change Activity report in the **Process Reports** folder. The Change 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 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.

Report layout fields	Description
Main Header attributes	
Status	Status based on the **Status Changes** selections in wizard.
Status Date	Date the change entered the selected status.
For each change listed in the report, change object fields as specified in the selected layout	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 chapter in *Getting started With Agile PLM*.
Affected Item attributes	
Under each change object status transition row, item information from the change's **Affected Items** tab, as specified in the selected layout	Depending on the layout, the report can include any attributes from the listed change's **Affected Items** tab. For detailed information about layouts, see the Working with Agile Reports chapter in *Getting started With Agile PLM*.

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:

1. Select the Change Backlog report in the **Process Reports** folder. The Change Backlog 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.

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.

Report layout fields	Description
Main Header attributes	
Days since Submitted	Number of days since the change entered the Submit type status.
Days at current status	Number of days the change has been at the current status.
Hold Date	Date the change entered the Hold type status.
Submit Date	Date the change entered the Submit type status
For each change listed in the report, change object fields as specified in the selected layout	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 chapter in *Getting started With Agile PLM*.
Affected Item attributes	
Under each change object status transition row, item information from the change's **Affected Items** tab, as specified in the selected layout	Depending on the layout, the report can include any attributes from the listed change's **Affected Items** tab. For detailed information about layouts, see the Working with Agile Reports chapter in *Getting started With Agile PLM*.

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:

1. Select the Change Cycle Time report in the **Process Reports** folder. The Change Cycle Time 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.

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.

Default fields	Description
Main Header attributes	
Days since Submitted	Number of days since the change entered the Submit type status.
Days at current status	Number of days the change has been at the current status.
Enter Status Date	Date the change entered the starting status selected in the report wiz
End Status Date	Date the change entered the ending status selected in the report wizard.
Number Days	The number of days between the Enter Status Date and the End Status Date.
For each change listed in the report, change object fields as specified in the selected layout	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 chapter in *Getting started With Agile PLM*.
Affected Item attributes	
Under each change object row, item information from the change's **Affected Items** tab, as specified in the selected layout	Depending on the layout, the report can include any attributes from the listed change's **Affected Items** tab. For detailed information about layouts, see the Working with Agile Reports chapter in *Getting started With Agile PLM*.

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:

1. Select the User Signoff Duration report in the **Process Reports** folder. The User Signoff Duration 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.
4. Click **Next**. The Select Changes for the Report step appears
5. Select the changes you want. You can:
   - 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.

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.

Default fields	Description
Change Number	The number of the change.
Status	Status as selected in the report wizard.
Status Entry Date	Date the change entered the status as selected in the report wizard.
User Name	Name of signoff user.
User Role	User role, as selected in the report wizard.
User Add Date	Date the user was added as a approver or observer
User Signoff Date	Date the user signed off the change.
Signoff Duration	The number of days between the Status Entry Date and the User Signoff Date.

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:

1. Select the Change Package report in the **Process Reports** folder. The Change Package 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*.

   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.

4. Click Next. The Select Changes for the Report wizard step appears.
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.

Report layout pages and fields	Description
Cover Page **Affected Items** **Workflow** **Attachments** **History**	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. For detailed information about layouts, see the Working with Agile Reports chapter in *Getting started With Agile PLM*. All Change Package layouts can include these tabs. Some change types can include additional information, as explained below.
Affected Items.BOM	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.

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:

1. Select the Change Metrics report in the **Process Reports** folder. The Change Metrics 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.

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 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.

Report layout fields	Description
Main Header attributes	
Date	Date the change entered the status you selected in the report wizard.
For each change listed in the report, change object fields as specified in the selected layout	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

Report layout fields	Description
	chapter in *Getting started With Agile PLM*.
Affected Item attributes	
Under each change object row, item information from the change's **Affected Items** tab, as specified in the selected layout	Depending on the layout, the report can include any attributes from the listed change's **Affected Items** tab. For detailed information about layouts, see the Working with Agile Reports chapter in *Getting started With Agile PLM*.

Chapter 8

Help for Power Users

This chapter includes the following:

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.

Note	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.

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

Note	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.

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:

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:

Parameter	Description
http://server:port/<VirtualPath>/object/<ObjectType>/<ObjectName>	
server port VirtualPath	Server, port, and VirtualPath identify the Agile PLM instance.
object	The text "object" indicates to Agile PLM that the URL is an object URL.
ObjectType	ObjectType refers to the subclass (type) of object, for example, ECO, Part, Manufacturer, File Folder, Project, Activity, or Discussion.
ObjectName	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. **Note** 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: http://server:port/VirtualPath/object/ObjectType/MfrName/MfrPart *Number*

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**.

Appendix A

Deleting Agile Objects

This Appendix includes the following:

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:

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*.

Default Item Privilege Mask		Default Change Privilege Mask		Change Order Affected Items table, "Item Description" attributes
Name	Applied To property	Name	Applied To Property	
Modify Preliminary Items (applies to Introductory or Pending	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:

Default Item Privilege Mask		Default Change Privilege Mask		Change Order Affected Items table, “Item Description” attributes
Name	Applied To property	Name	Applied To Property	
revisions)				Item Description
Modify Released 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: Item Description

Revision Controlled, All Items

Goal: Modify the Item Type (subclass) description on Change Order *only*.

Note 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.

Default Item Privilege Mask		Default Change Privilege Mask		Change Order Affected Items table, “Item Description” attributes
Name	Applied To property	Name	Applied To Property	

Default Item Privilege Mask		Default Change Privilege Mask		Change Order Affected Items table, "Item Description" attributes
Name	Applied To property	Name	Applied To Property	
Modify Preliminary Items (specific Item Type) (applies to Introductory or Pending revisions)	REMOVE: Items.Title Block.Description	All default privilege masks with object type Changes	ADD: Changes.Affected Items.Item Description *where* Change.Affected Item. Item Type = (specific Item Type) Use criteria: Change. $AFFECTEDITEMTYPE = (specific Item Type)	SHOW (enable): Old Item Description *and* New Item Description
Modify Released Items (specific Item Type)	REMOVE: Items.Title Block.Description	All default privilege masks with object type Changes	ADD: Changes.Affected Items.Item Description *where* Change.Affected Item. Item Type = (specific Item Type) Use criteria: Change. $AFFECTEDITEMTYPE = (specific Item Type)	SHOW (enable): Old Item Description *and* New Item Description

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.

Default Item Privilege Mask		Default Change Privilege Mask		Change Order Affected Items table, "Item Description" attributes
Name	Applied To property	Name	Applied To Property	
Modify Preliminary Items (specific Item Type) (applies to Introductory or Pending revisions)	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: Item Description
Modify Released Items (specific Item Type)	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: Item Description

Revision Controlled, All Items

Goal: Modify the Item description on Change Order *only*.

Default Item Privilege Mask		**Default Change Privilege Mask**		**Change Order Affected Items table, "Item Description" attributes**
Name	Applied To property	Name	Applied To Property	
Modify Preliminary Items (applies to Introductory or Pending revisions)	REMOVE: Items.Title Block.Description	All default privilege masks with object type Changes	ADD: Changes.Affected Items.Item Description	SHOW (enable): Old Item Description *and* New Item Description
Modify Released Items	REMOVE: Items.Title Block.Description	All default privilege masks with object type Changes	ADD: Changes.Affected Items.Item Description	SHOW (enable): Old Item Description *and* New Item Description

Goal: Modify the Item description on Item object *or* on Change Order.

Default Item Privilege Mask		Default Change Privilege Mask		Change Order Affected Items table, "Item Description" attributes
Name	Applied To property	Name	Applied To Property	
Modify Preliminary Items (applies to Introductory or Pending revisions)	ADD: Items.Title Block.Description	All default privilege masks with object type Changes	ADD: Changes.Affected Items.Item Description	SHOW (enable): Old Item Description *and* New Item Description
Modify Released Items	ADD: Items.Title Block.Description	All default privilege masks with object type Changes	ADD: Changes.Affected Items.Item Description	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 Sties 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.