

# **SAS<sup>®</sup> Warranty Analysis 4.2**

## **User's Guide**



The correct bibliographic citation for this manual is as follows: SAS Institute Inc. 2009. *SAS® Warranty Analysis 4.2: User's Guide*. Cary, NC: SAS Institute Inc.

**SAS® Warranty Analysis 4.2: User's Guide**

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SAS Institute Inc., SAS Campus Drive, Cary, North Carolina 27513.

1st electronic book, December 2009

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# What's New in SAS Warranty Analysis 4.2

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## Overview

SAS Warranty Analysis 4.2 has the following changes and enhancements:

- enhancements to emerging issues
- enhancements to projects
- enhancements to data selections
- support for accessing SAS Warranty Analysis business rules from within SAS programs

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## Enhancements to Emerging Issues

- My emerging issues

You can choose to subscribe to relevant specific combinations of product and event attributes (such as failure codes, part numbers, and so on) so that you receive e-mail when alerts occur.

The **Alerts** pane of the Emerging Issues workspace enables you to choose to display only your emerging issues.

- Analyze by alert

You can choose this analysis option that enables you to compare the time periods within an alert to the time periods outside of the alert.

- Analyze emerging issues alerts in a project directly from the Emerging Issues workspace

You can go directly from problem identification to problem resolution by choosing to analyze an emerging issues alert directly from the Emerging Issues workspace.

This direct approach reduces the effort of the problem-investigation process. It also improves the accuracy.

- Integration with Teradata Early Warning System

You can leverage your Teradata information within SAS Warranty Analysis to provide an additional method to identify emerging issues.

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## Enhancements to Projects

- Drill on multiple points

You can choose one or more points to drill into for more detail.

- Analyze multiple points as a group or separately

You can analyze a group of interesting points or bars as a group or as separate analyses. Analyzing these separately greatly increases the efficiency of creating multiple similar reports (for example, running a Pareto analysis by model and creating a trend chart for each of the top five models).

- Gaps in lines

Time periods with missing data are now represented by gaps in line plots.

- Roll-up extrapolation

The extrapolated calculation method now automatically rolls up from the system default level (such as weekly) to the user-selected level (such as annually). The automatic roll-up enhances the accuracy of the extrapolation at higher aggregation levels. You can disable this option as needed.

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## Enhancements to Data Selections

- Related word search

When selecting data based on the contents of a text field, you can choose to search for related words, such as synonyms, misspellings, acronyms, and so on.

These related words are managed via the synonym list in SAS Text Miner. The list can be generated automatically and then enhanced by advanced users.

- Delete data selection subset

To reduce disk space, you can delete the data behind an analysis or report without deleting the data selection definition or the analyses and reports that use the data.

- Data selection subset recovery

If a data selection subset has been deleted, you can recreate it when needed with data as of the original creation date.



This recovery feature enables you to drill into analyses and reports that no longer have a data selection subset.

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## **Support for Accessing SAS Warranty Analysis Business Rules**

SAS programs are available to enable access to the SAS Warranty Analysis business rules (such as calculation methods, sales lag distributions, and so on) from outside of the SAS Warranty Analysis user interface. This access enables power users to use such tools as SAS Enterprise Guide and SAS Add-In for Microsoft Office to create custom analyses and standardized reports that match the output of SAS Warranty Analysis.



## **Part 1**

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# Overview of SAS Warranty Analysis

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## Chapter 1

# Welcome

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## Welcome to SAS Warranty Analysis 4.2

Quality and reliability are the most significant prerequisites for profitability. Warranty data and other types of data about field failures are becoming increasingly important for manufacturers and resellers to analyze and to understand. In most practical situations, warranty information provides the closest representation of how a product operates in customers' hands. However, simply reporting on warranty data is not sufficient. Such reporting is reactive and time-consuming, and it can be misleading. Instead, successful enterprises are proactive with warranty data and use analytics to bring emerging issues to light and to accelerate problem identification and root cause analysis.

SAS Warranty Analysis is an integrated reporting and analysis tool that provides the flexibility and functionality to perform warranty-related problem identification, prioritization, and definition for root cause analysis. The components of SAS Warranty Analysis are the results of more than 30 years of experience helping leading manufacturers take full advantage of the data that they collect. SAS Warranty Analysis provides the foundation for incorporation of multiple data types (for example, call center, customer survey, and end-of-line audit data) to produce a more comprehensive representation of a product's field performance.

SAS Warranty Analysis empowers you to report on and analyze your warranty data. With SAS Warranty Analysis, you can easily create and save specific filtering criteria to apply to any of the base analyses in the solution. These criteria, called data selections, include product attributes, such as production and sales dates, and claim event attributes, such as claim dates. Analysis results are not static; you can interact with your results in a number of ways. The feature-rich set of analytics ensures not only that you have a clear view of the warranty-related events that have occurred, but also that you have a better understanding of the underlying causes.

Here are a few of the goals that you can accomplish using SAS Warranty Analysis:

- You can integrate customer, supplier, and organizational data with warranty data in one convenient location.
- You can create and automate an early warning process.
- You can perform statistical analyses to investigate the root cause of warranty issues.
- You can efficiently and effectively communicate key metrics, goals, and performance measures throughout the organization.

Using SAS Warranty Analysis, you can easily create and save specific data-selection criteria to apply to any of the base analyses. These data-selection criteria (called data selection definitions) include both product attributes (for example, production, repair, and sales dates) and event attributes (for example, claim dates).

You can interact with analysis results in various ways, including the following:

- You can dynamically filter the results for many of the analyses.
- You can drill into the subset of information for an individual bar on a Pareto chart to see a trend chart.
- You can then get a list of customer comments related to a spike on the trend chart.

The feature-rich set of analytics provides a clear view of not only what happened but also why it might have happened.

The purpose of this document is to provide an understanding of the key features of SAS Warranty Analysis.

## Chapter 2

# Getting Started

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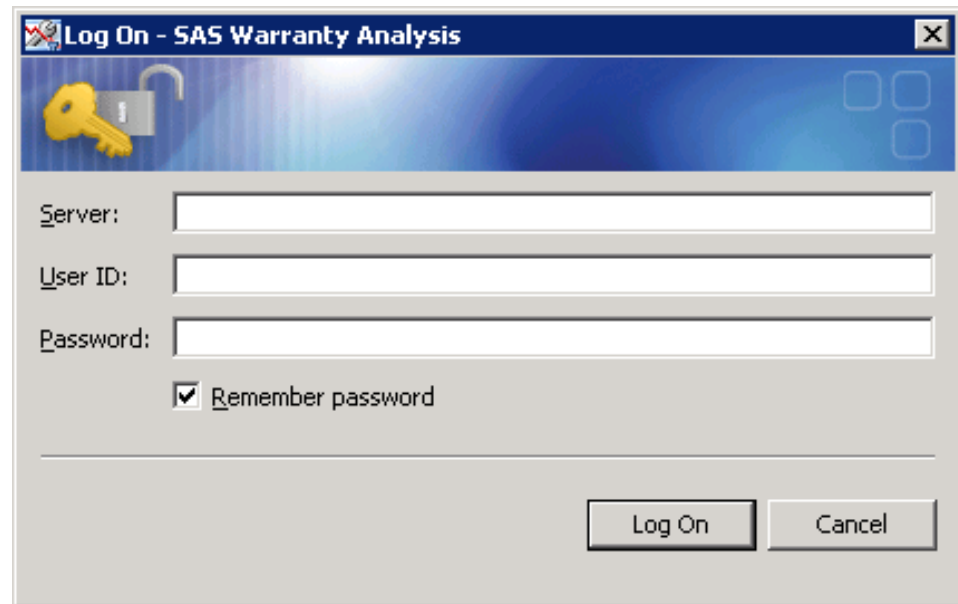
## Log On

To log on to SAS Warranty Analysis:

1. Type a valid server name in the **Server** field.
2. Type a valid user ID in the **User ID** field.
3. Type a valid password in the **Password** field.
4. (Optional) Select **Remember password**.

A best practice is to remove the check mark from the **Remember password** check box to prevent unauthorized logons by requiring a password each time any user logs on.

5. Click **Log On**.




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## Log Off

To log off from SAS Warranty Analysis, select **File** ⇒ **Exit** from the main menu.

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## Overview of SAS Warranty Analysis Menus, Toolbars, and Task Panes

### Introduction

After you log on to SAS Warranty Analysis, the main application window opens. By default, the Projects workspace is selected, but no project is displayed.

The SAS Warranty Analysis application includes the main application window with its own menu and toolbar, a workspaces pane, and a tasks pane. In addition, there are five distinct workspaces, each with its own menus, toolbars, and work areas. This section provides instructions for using the main menu and toolbar, as well as general information about using the application.

The items on the main menu bar (**File**, **Workspaces**, **Tools**, and **Help**) display drop-down lists of commands that are not specific to individual workspaces.


The main toolbar and the **Workspaces** pane both enable you to move quickly to the different workspaces by clicking an icon or shortcut for the workspace that you want to display.

Each unique workspace contains menus, toolbars, and/or display areas that enable you to accomplish related tasks efficiently.



## Summary of Navigation Methods


To access the Projects workspace, use any of the following methods:

- Select **Workspaces** ⇒ **Projects** on the main menu.
- Click  on the main toolbar.



Click **Projects** in the **Workspaces** pane.


To access the Data Selections workspace, use any of the following methods:

- Select **Workspaces** ⇒ **Data Selections** on the main menu.
- Click  on the main toolbar.



Click **Data Selections** in the **Workspaces** pane.


To access the Reports workspace, use any of the following methods:

- Select **Workspaces** ⇒ **Reports** on the main menu.
- Click  on the main toolbar.



Click **Reports** in the **Workspaces** pane.


To access the Emerging Issues workspace, use any of the following methods:

- Select **Workspaces** ⇒ **Emerging Issues** on the main menu.
- Click  on the main toolbar.



Click **Emerging Issues** in the **Workspaces** pane.

To access the Administration workspace, use any of the following methods:

- Select **Workspaces** ⇒ **Administration** on the main menu.
- Click  on the main toolbar.



Click **Administration** in the **Workspaces** pane.

## Summary of Task Access Paths

Each workspace provides a distinct combination of pane menus and pop-up menus, **Tasks** panes, and command links, all of which can be used to start the tasks that are available in a particular workspace.

The following list indicates the different ways that you can start a task; however, not every task can be accessed by every method listed.

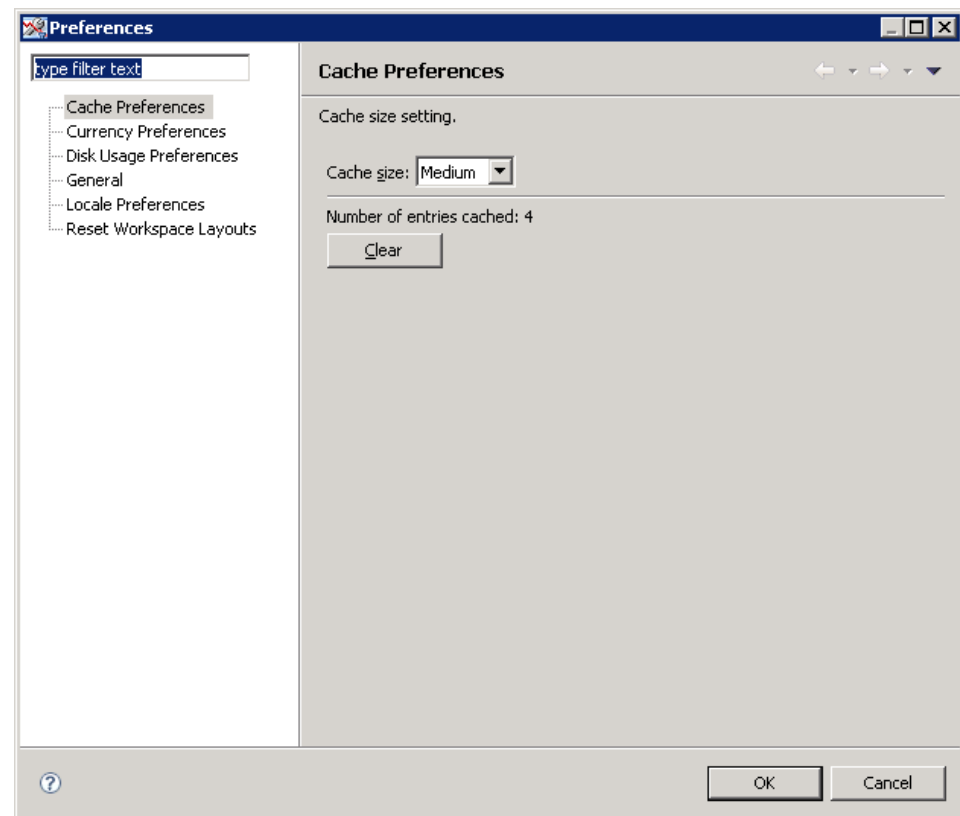
- Select the task from the pane's menu.
- Click the task in a toolbar.
- Select the task from the pop-up menu. (Click the right mouse button on an item to display the related pop-up menu.)
- Click the task in the **Tasks** pane.
- Click the link for the task in the content display area of the workspace.


---

## Preferences Overview

### Introduction

You can set some configuration preferences for SAS Warranty Analysis. To access the preferences, select **File** ⇒ **Preferences**.



Use the filter field (at the top of the list of preferences categories on the left) to filter the preference settings that are displayed in the Preferences dialog box. For example, you can type **C** to view only those items that start with C. Click  to return to the original list of preferences.

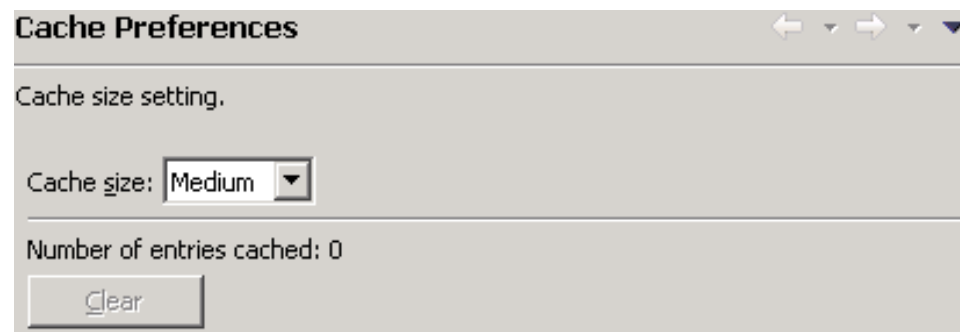
### See Also

- “Cache Preferences” on page 9
- “Currency Preferences” on page 9
- “General Preferences” on page 10
- “Locale Preferences” on page 10
- “Reset Workspace Layouts” on page 11

## Cache Preferences

The cache size setting determines how much of your computer’s random access memory is allocated to storing the results of analyses. Selecting a larger cache size enables analyses to be viewed faster, but this has the potential of limiting the system resources that are available for other applications or functions. If you need to run several applications simultaneously, select a smaller cache size for SAS Warranty Analysis.

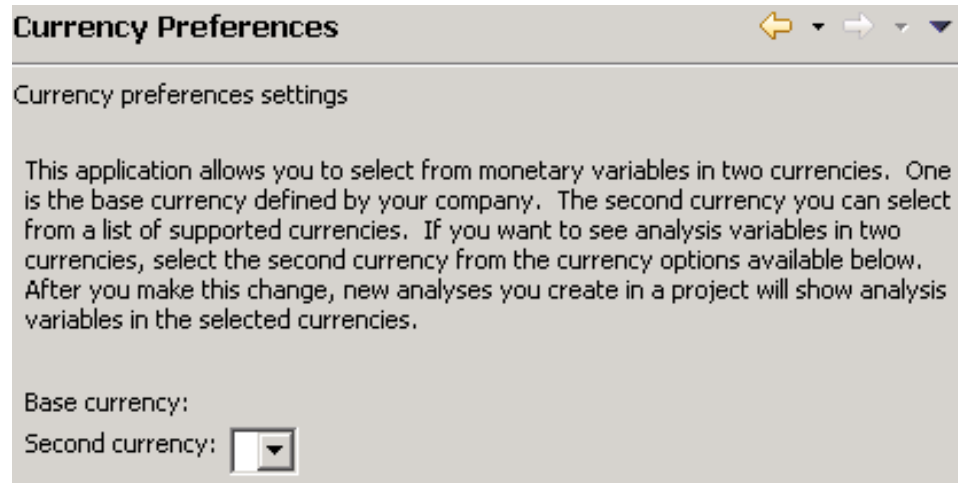
Select **Cache Preferences** to change the cache size, to view the number of entries that are currently cached, and to clear the cache.



## Currency Preferences

If your installation of SAS Warranty Analysis supports the use of multiple currencies, then you can select **Currency Preference** to select a second currency to display for selection as a variable for some analyses.

Select the currency from the **Second currency** drop-down list.

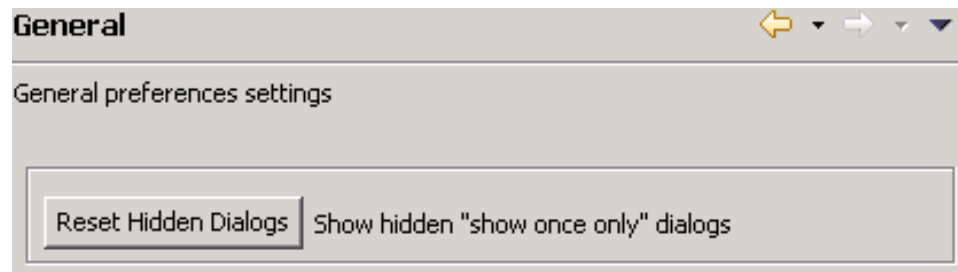


## General Preferences

Select **General** to reset hidden dialogs.

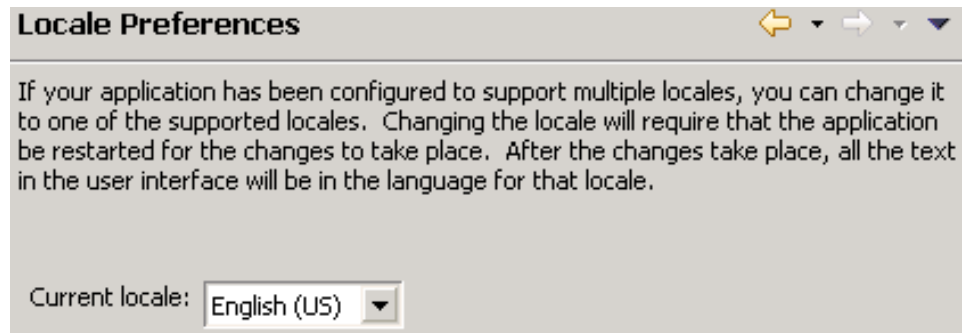
A hidden dialog is a message that you can prevent from appearing more than once. For example, if you attempt to edit a data selection that has already been used to create an analysis, a message is displayed that warns you that every analysis that was created using the selection will be resubmitted if the data selection is edited. You can mark a check box labeled **Do not show this message again** to deactivate this message. The next time you choose to edit a data selection, the Edit Data Selection dialog box opens immediately, with no warning message. Several message boxes of this type can be accessed and deactivated.

Select **Reset Hidden Dialogs** to activate all message boxes that have previously been deactivated.



## Locale Preferences

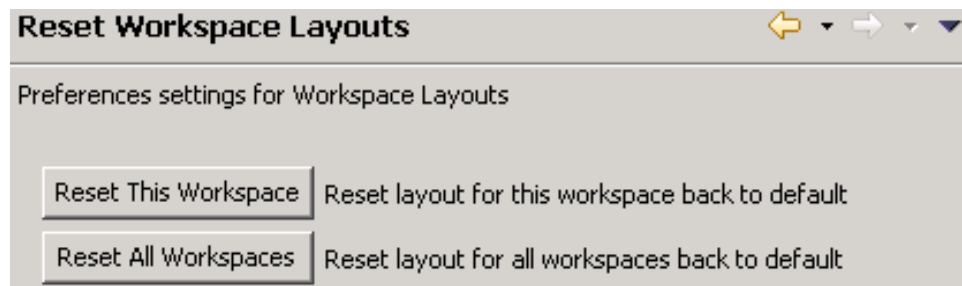
Select **Locale Preferences** to specify your locale. You must shut down and restart the system if you change the locale. After the system restart, all text in the user interface will display in the language specific to the selected locale, and all new analyses will be generated in the language for the locale (by default). For an individual analysis, you can choose to generate the analysis in any available locale.



## Reset Workspace Layouts

If you have resized or otherwise altered the appearance of the workspaces, you can quickly return them to the original settings.

Select **Reset Workspace Layouts** to reset a single workspace or all workspaces to the default layout.




---

## Help Overview

### Access Help throughout SAS Warranty Analysis

You can access the online Help for SAS Warranty Analysis in any of the following ways:

- F1 key.  
In any view of SAS Warranty Analysis, you can press the F1 key or select **Help** from any pane's menu to access the Help contents that are specific to the active workspace or dialog box.
- Help menu.  
You can view the entire Help system by selecting **Help** ⇒ **SAS Warranty Analysis Help**.
- Help buttons.  
Many views and dialog boxes have a Help button that you can click to see a Help topic.
- Help links.  
Some areas within a window have a Help link that opens the Help topic that pertains to that area.

## About the Different Types of Online Help

The following types of online Help are available with the SAS Warranty Analysis solution:

entire Help system

includes all available Help topics, with a table of contents in the left pane and Help content in the right pane.

context-specific Help

includes Help content that is specific to the active workspace or dialog box. Context-specific Help opens in a separate pane within the SAS Warranty Analysis solution.

tooltip Help












presents short, descriptive information about columns, metrics, or fields in a view.





Tooltip Help appears automatically when you position your mouse pointer over an item on your screen, such as an abbreviated column name.

## Navigate the Help System

When you open the Help system for SAS Warranty Analysis, the entire contents of the online Help open in a separate window. The Help window displays a table of contents in the left pane and the contents of specific Help topics in the right pane.

The following table describes the functions of the navigation icons that are available in the Help window.

	refreshes the contents of the left pane; displays the location of the current topic in the table of contents.
	maximizes the current pane to fill the window.
	reverts the current pane to its previous size.
	returns you to the previous Help topic.
	sends you to the next Help topic.
	locates the current Help topic in the table of contents.
	adds the current Help topic to your list of bookmarks.
	deletes the selected bookmark from the bookmark list.
	deletes all bookmarks from the bookmark list.
	prints the current Help topic.
	displays the table of contents in the left pane.

	displays search results in the left pane.
	displays links to related Help topics.
	displays your list of bookmarks in the left pane.
	does not function in this release. In this release, the Help does not have an index; however, you can use the Search function to locate topics.

## View Related Topics

Dynamic Help appears in a separate pane within the SAS Warranty Analysis application when you press the F1 key or select **Help** from any pane's menu. The Help that automatically appears is the Related Topics page. You can switch to a different page by selecting one of the links at the bottom of the dynamic **Help** pane.

The Related Topics page has an **About** area with a link to the Help topic for the active workspace. This page also contains a **Dynamic Help** area that lists other similar topics.

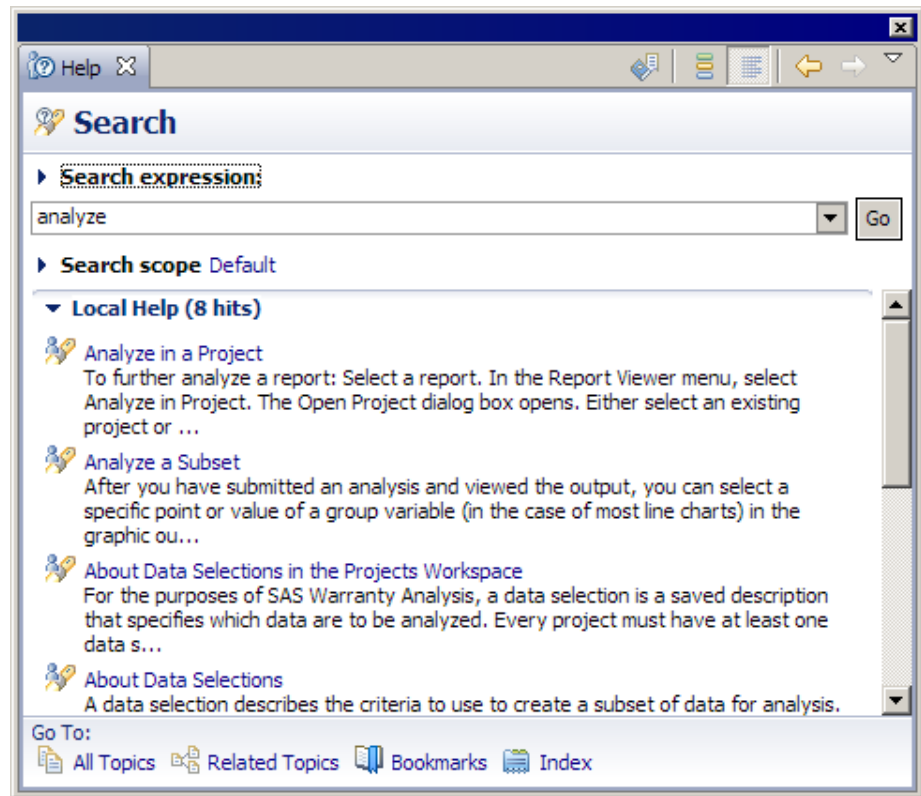
## Search Help Contents

### How to Search the Help Contents

To perform a search of the Help contents on the Search page of the dynamic **Help** pane:

1. Click **Search** at the bottom of the dynamic **Help** pane.
2. Type a term or expression in the search box.
3. Click **Go**.

Topics that meet the search criteria are listed.



### Modify Search Settings

To change the scope of the current search, click **Search scope** and check or clear the boxes to indicate which search types to include in the scope of your search.

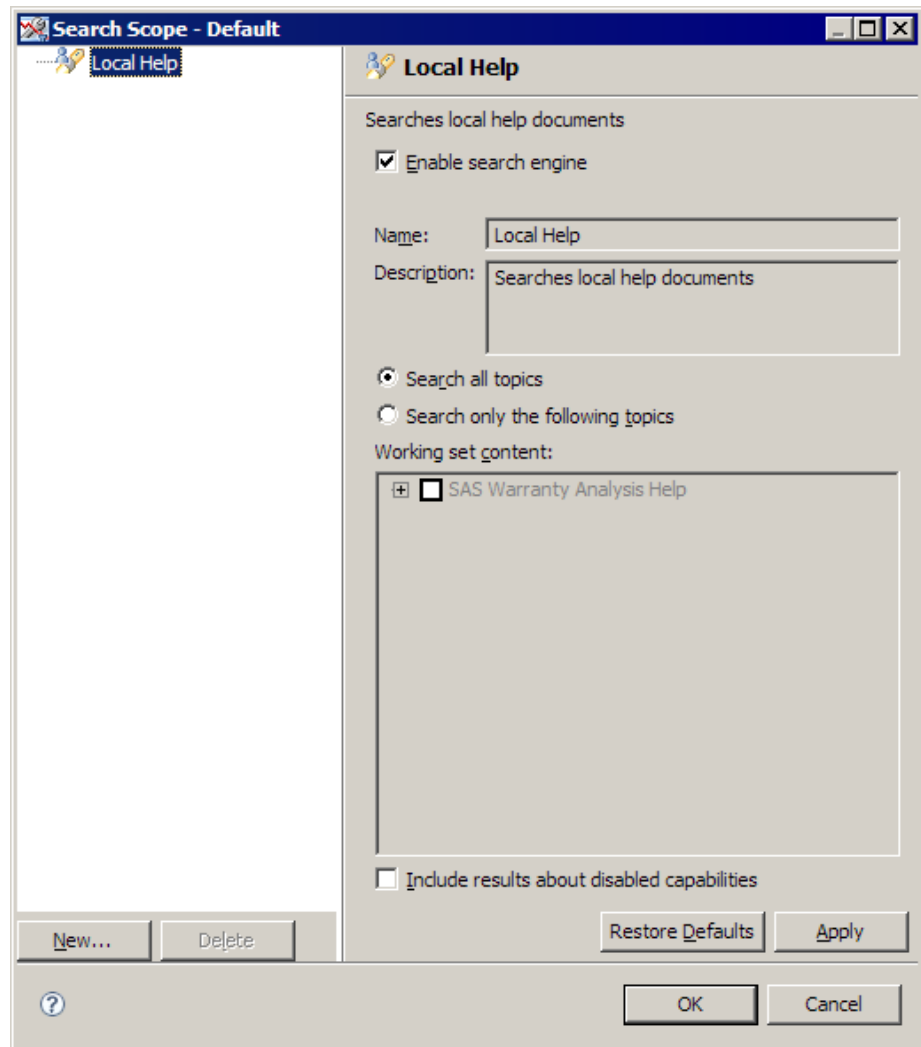
#### ▼ Search scope Default

- ☒ Local Help  
 Searches local help documents  
[Advanced Settings](#)

To modify the settings for search types:

1. Click the **Advanced Settings** link.  
 The Search Scope - Default dialog box opens.

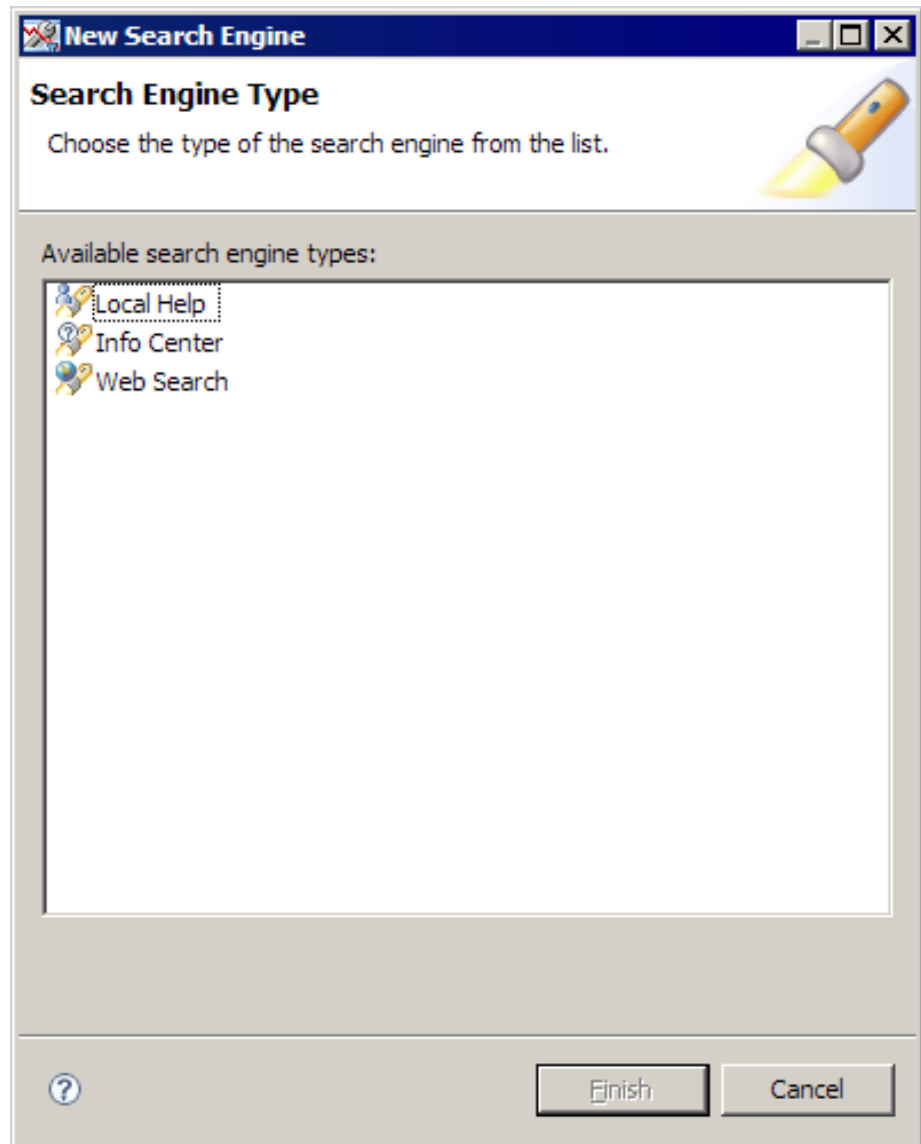




2. Select a search type in the left pane.  
The settings for the selected search type are displayed.
3. Change settings or click **Restore Defaults** to reset previous changes to default settings.

To add a new search type:

1. Click **New** on the Search Scope - Default dialog box.  
The New Search Engine dialog box opens.



2. Select the search engine type for a new search type.
3. Click **Finish**.

The New Search Engine dialog box closes, and the search type is added to the Search Scope - Default dialog box.

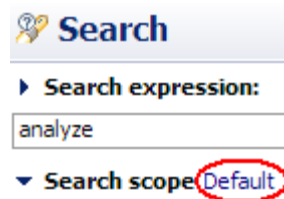
4. Select the new search type in the left pane to define its settings.

To delete a search type:

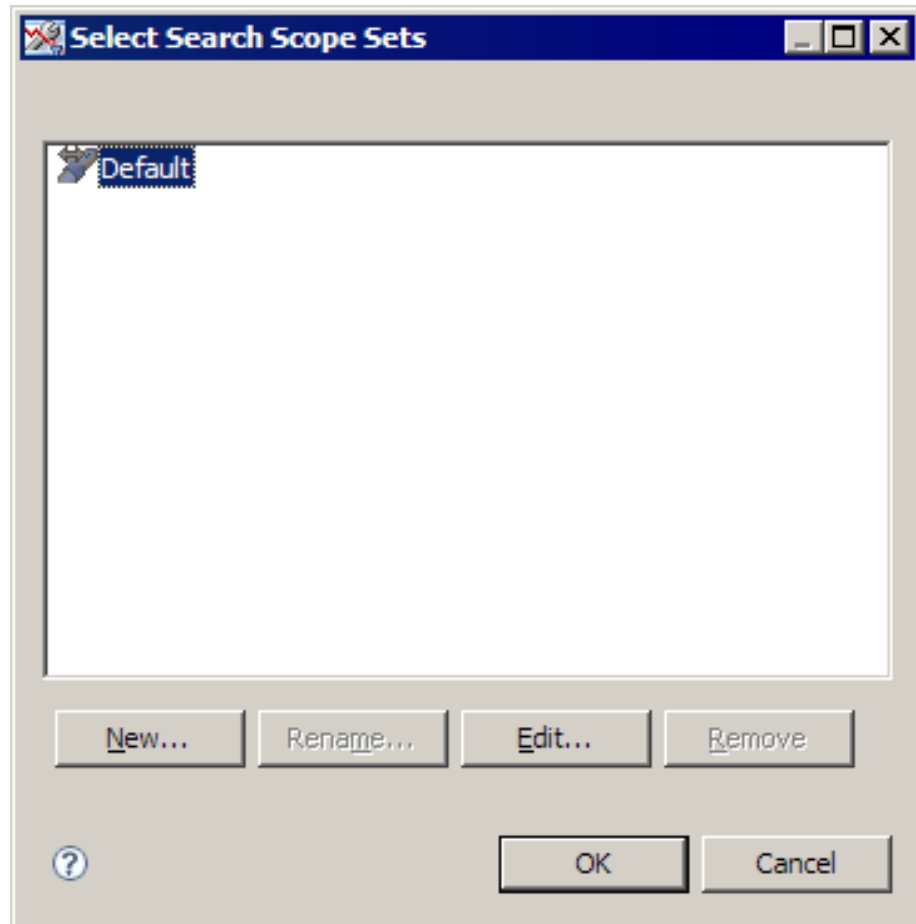
1. On the Search Scope - Default dialog box, select a search type.
2. Click **Delete**.

The selected search type is removed from the list.

To change the search scope set that is currently in use, click the name of the search scope set.



The Select Search Scope Sets dialog box opens.



Use the Select Search Scope Sets dialog box to complete the following tasks:

- To select an alternate search scope set, select the set name.
- To create a new search set, click **New**.  
The New Scope Set dialog box opens. Type a name for the scope set.  
The new search set appears in the list.
- To modify a search set, select the name of the scope set and click **Edit**. Type your changes.
- To rename a search set, select a scope set and click **Rename**.  
The Rename Scope Set dialog box opens.  
Type the new name.
- To delete a search set from the list, select the set name and click **Remove**.

### ***View All Topics***

View a list of all Help topics in a table-of-contents format by clicking **All Topics** at the bottom of the dynamic **Help** pane. Click a topic name to view topic contents or to see a list of related subtopics.

### ***View Your Help Bookmarks***

View a list of Help topics that you have bookmarked by clicking **Bookmarks** at the bottom of the dynamic **Help** pane. Click a topic name to view the topic contents.

## Chapter 3

# Tools

---

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---

## Tools Overview

Here are the tools that are available:

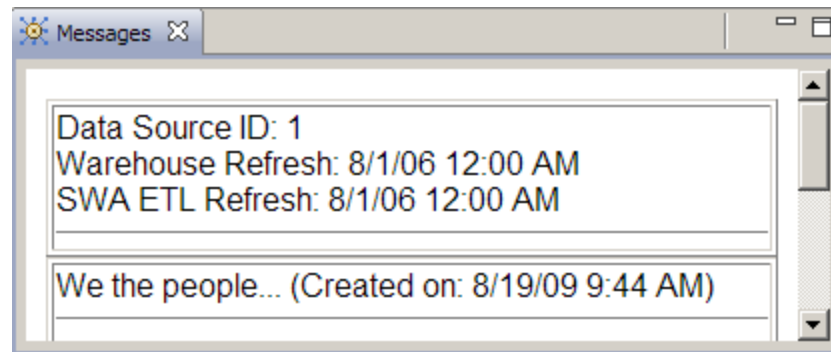
- [“The Messages Utility” on page 19](#)
  - [“The Disk Usage Utility” on page 20](#)
  - [“The Lookup Values Utility” on page 22](#)
  - [“The Job Queue Utility” on page 23](#)
- 

## The Messages Utility

The Messages utility displays system-generated messages and messages posted by the SAS Warranty Analysis administrator.

To open the Messages utility, select **Tools** ⇒ **Messages** from the main menu.

System-generated messages are displayed in full, while the messages posted by administrators appear as links. Click on a message link to display the full text of the message.



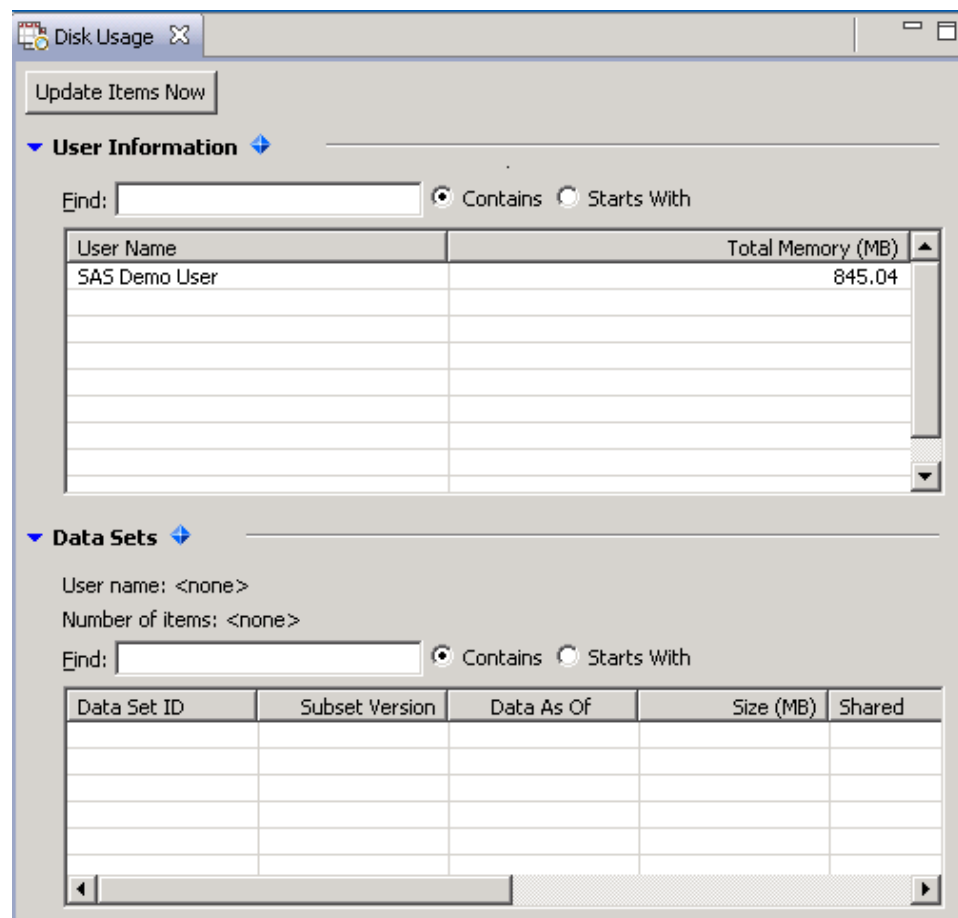
By default, the utility window is displayed in the content display area of the workspace. To reposition the window, drag it to a new location.

## The Disk Usage Utility

### Overview

The Disk Usage utility displays information about the amount of hard drive space that each user and each data set is currently consuming.

To open the Disk Usage utility, select **Tools** ⇒ **Disk Usage** from the main menu.



By default, the utility window is displayed in the content display area of the workspace. To reposition the window, drag it to a new location.

Click the blue triangle to collapse (▼) or expand (►) an area of the window. Double-click the blue diamond (◀▶) to fully expand the related area and hide the other area.

To ensure that the information displayed is current, click **Update Items Now**.

## Working with Data Sets

To view a user's data sets in the **Data Sets** area, select a user row in the **User Information** area. The user's data sets are shown in the table in the **Data Sets** area.

After you display a user's data sets, you can manage the data sets. Select a data set row in the **Data Sets** area, right-click, and then select a command from the pop-up menu:

- To see more detailed information about the data set, select **Open Disk Usage Details** from the pop-menu.

The Disk Usage Details dialog box opens.

**Disk Usage Details**

Data Selection: Platform (XE) Make (Zeus) : Primary Labor Code (G-000)  
 Data Set ID: SFFZX4EJIV  
 Version: 001  
 Data As Of: 8/1/06  
 Size (MB): 84.57  
 Shared: No

▼ **Reports** ◀▶

Number of items: <none>

▼ **Projects** ◀▶

Number of items: 1

Find:  ☒ Contains ☐ Starts With

Project Name	Description	Analysis Name	Analysis ID	Status	Subset Analysis
DK Test		Enterprise - Analytic Grap...	ANFZX4EIR5	Ready	No

▼ **Emerging Issues** ◀▶

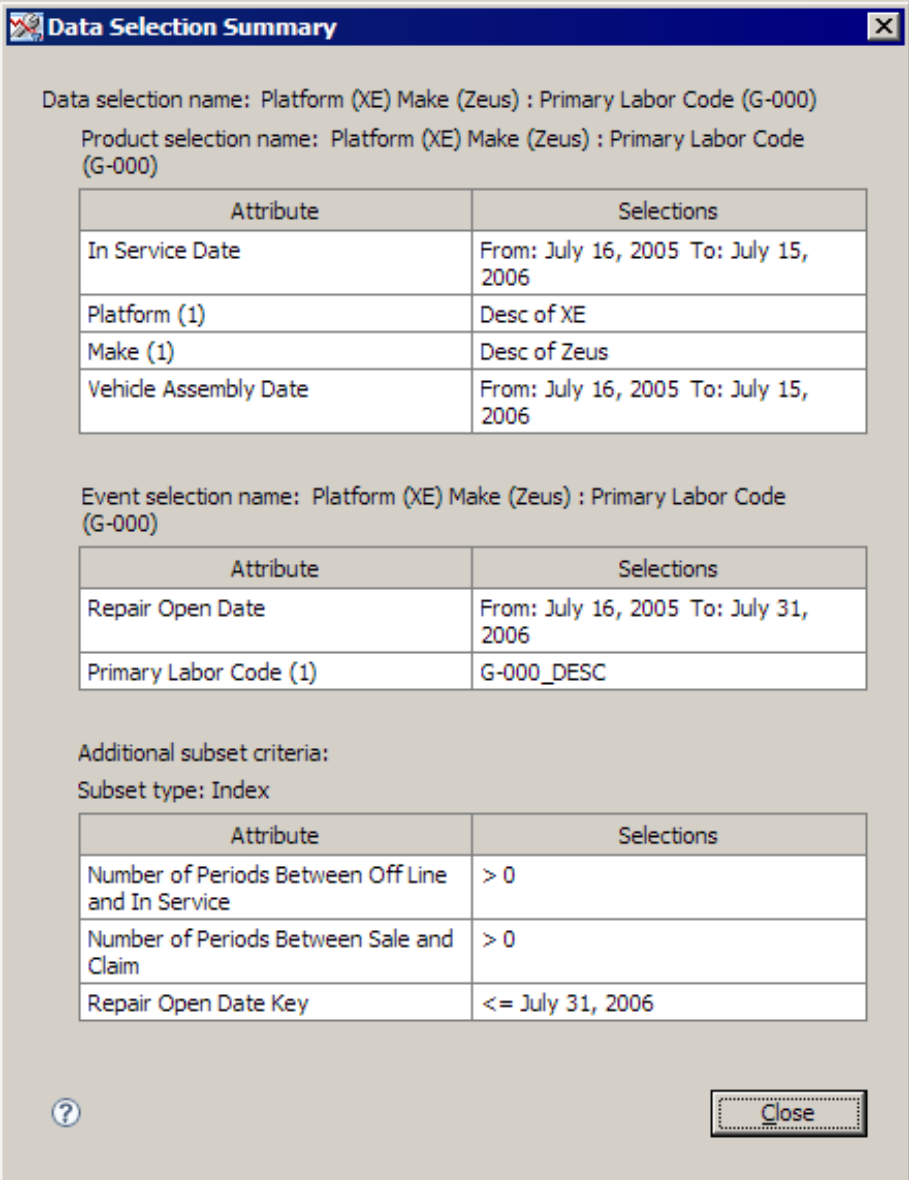
Number of items: <none>

? Delete Data Set Cancel Help

To delete the data set, click **Delete Data Set**.

- To delete the data set, select **Delete Data Set** from the pop-menu.
- To see detailed information about the data selection used by the data set, select **View Data Set Details** from the pop-up menu.

The Data Selection Summary dialog box opens.



**Data Selection Summary**

Data selection name: Platform (XE) Make (Zeus) : Primary Labor Code (G-000)  
 Product selection name: Platform (XE) Make (Zeus) : Primary Labor Code (G-000)

Attribute	Selections
In Service Date	From: July 16, 2005 To: July 15, 2006
Platform (1)	Desc of XE
Make (1)	Desc of Zeus
Vehicle Assembly Date	From: July 16, 2005 To: July 15, 2006

Event selection name: Platform (XE) Make (Zeus) : Primary Labor Code (G-000)

Attribute	Selections
Repair Open Date	From: July 16, 2005 To: July 31, 2006
Primary Labor Code (1)	G-000_DESC

Additional subset criteria:  
 Subset type: Index

Attribute	Selections
Number of Periods Between Off Line and In Service	> 0
Number of Periods Between Sale and Claim	> 0
Repair Open Date Key	<= July 31, 2006

Close

### See Also

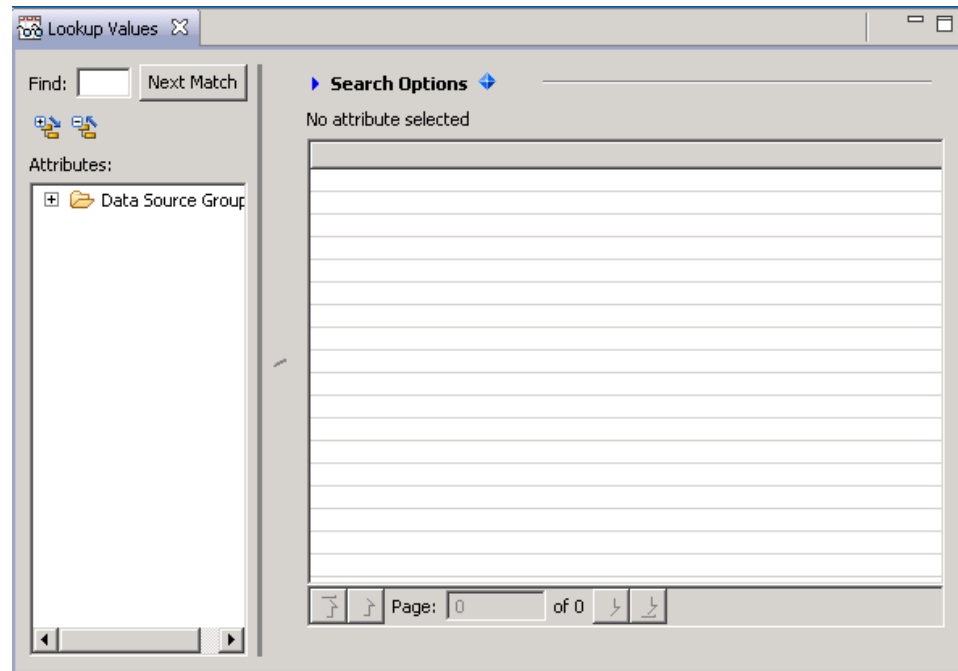
- “Customize Table Columns” on page 82
- “Export Information to a Spreadsheet” on page 176

## The Lookup Values Utility

The Lookup Values utility enables you to search for the product and event data configured for the application and to view the details (for example, values and labels) that are associated with the data.

To open the Lookup Values utility, select **Tools** ⇒ **Lookup Values** from the main menu.





To locate an item in the Attributes tree, type a term in the **Find** field and click **Next Match**.

Click the blue triangle to collapse (▼) or expand (▶) an area of the window. Double-click the blue diamond (◆) to fully expand the related area and hide the other area.

To fully expand the **Attributes** tree, click . To collapse the **Attributes** tree, click .

To display related details for an item in the **Data Source Group** tree, double-click the item.

By default, the utility window is displayed in the content display area of the workspace. To reposition the window, drag it to a new location.

## See Also

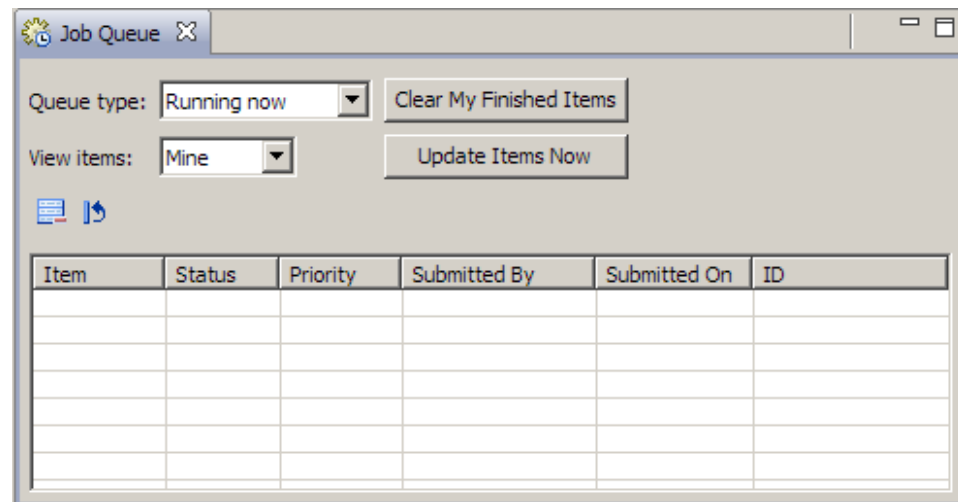
[“Customize Table Columns” on page 82](#)

---

## The Job Queue Utility

The Job Queue utility displays information about the analyses that you have defined and submitted.

To open the Job Queue utility, select **Tools** ⇒ **Job Queue** from the main menu.



From the **Queue type** drop-down list, select a type of job.

From the **View items** drop-down list, select **Mine** to view only your own items, or select **All Users** to view all available items. To remove your own finished items from the display, click **Clear My Finished Items**. To refresh the display with the latest information, click **Update Items Now**.

The following tools are also available:

The **Remove from Queue** button (📄✖) enables you to cancel a job that is in the list to be run but that is not currently running. This function is available only for the **Running now** queue type. Select a job and click 📄✖ to remove that job from the queue.

The **Reset Job** button (🔄) returns a finished job to the ready state. This function is available only for the **Running in batch** queue type. Select a job that has finished running and click 🔄 to return the job to a ready state to be submitted the next time the batch runs.

*Note:* Note that an emerging issues analysis that is run immediately must be reset to a ready state for the next extract, transform, and load (ETL) update, but you can reset any finished job in the **Running in batch** queue.

Right-click anywhere in the table to display a pop-up menu, where you can select from the following:

- Select **Sort Ascending** to sort the items in the table by ascending alphanumeric order.
- Select **Sort Descending** to sort the items in the table by descending alphanumeric order.
- Select **Export to Spreadsheet** to export the table to a Microsoft Excel spreadsheet or a comma-separated value (CSV) file.

For information, see [“Export a Table to a Spreadsheet” on page 169](#).

- Select **Customize Columns** to customize the table’s columns.

For information, see [“Customize Table Columns” on page 82](#).

By default, the Job Queue utility window is displayed in the content display area of the workspace. To reposition the window, drag it to a new location.

## Part 2

---

# Projects

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<i>Chapter 5</i>	
<b>Working with Projects in the Projects Workspace</b> .....	<a href="#">37</a>
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<b>Working with Data Selections in the Projects Workspace</b> .....	<a href="#">43</a>



## Chapter 4

# Overview of the Projects Workspace

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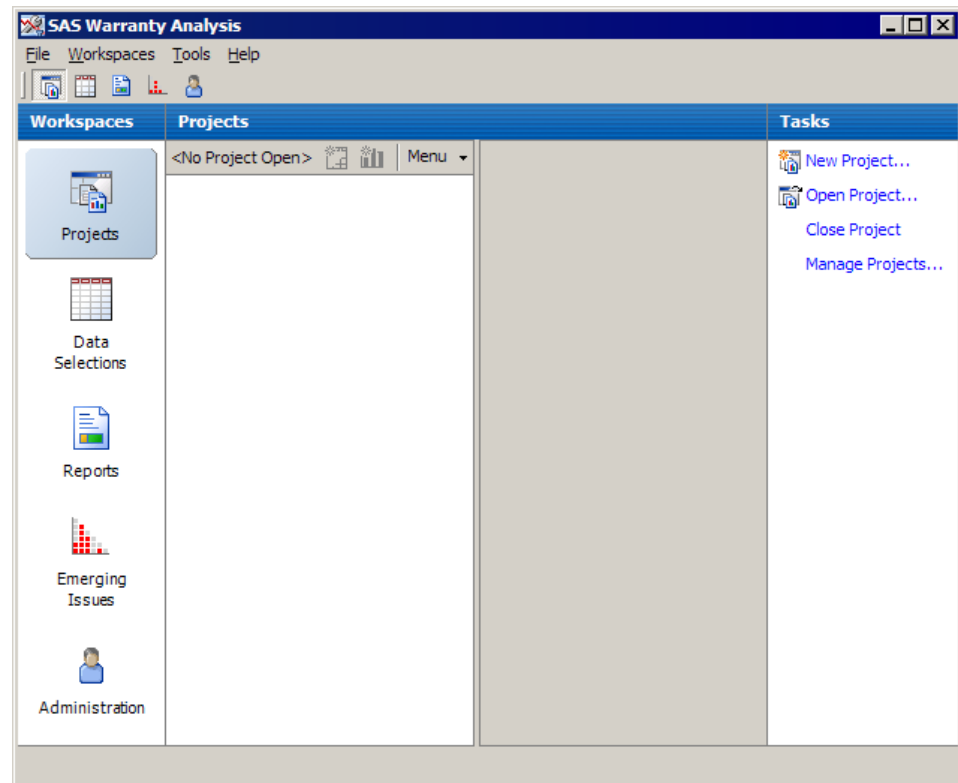
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---


## The Projects Workspace

The Projects workspace enables you to group and track your analytical activities, and those activities persist in the workspace until you delete them. All work that you conduct in the Projects workspace is visible only to you. You can save and share data selections that you create in a project, and you can save and share analyses as reports. The Projects workspace display area contains a project tree and a project pane where the results and details of analyses are displayed.

When you log on to SAS Warranty Analysis for the first time after the software is installed, the Projects workspace is displayed by default; however, the workspace is empty. The title bar of the project view pane reads **<No Project Open>**, and the content pane is blank. To begin working with SAS Warranty Analysis, you must create a new project.



To access the Projects workspace, use any of the following methods:

- Select **Workspaces** ⇒ **Projects** on the main menu.
- Click  on the main toolbar.
- 



Click **Projects** in the **Workspaces** pane.

## Projects

A project is an area where you can group any combination of data selections and analyses. You determine how to group these elements in a way that makes sense to you.

You might choose to organize project elements in any of the following ways:

- all analyses related to a specific field issue (for example, power supply failures on a given model)
- all analyses conducted for a specific person (for example, analyses for Joe)
- analyses to track the validation of fixes (for example, trend charts for all closed issues)

You can create a new project or open a project that already exists. You specify a name and description for each project when you create it. When you select **Open** ⇒ **Project**, a list of the names and descriptions of all of your projects is displayed. After you select a project, its name and any data selections and analyses that it contains are displayed in the Projects workspace.

In a project, you can perform the following tasks:

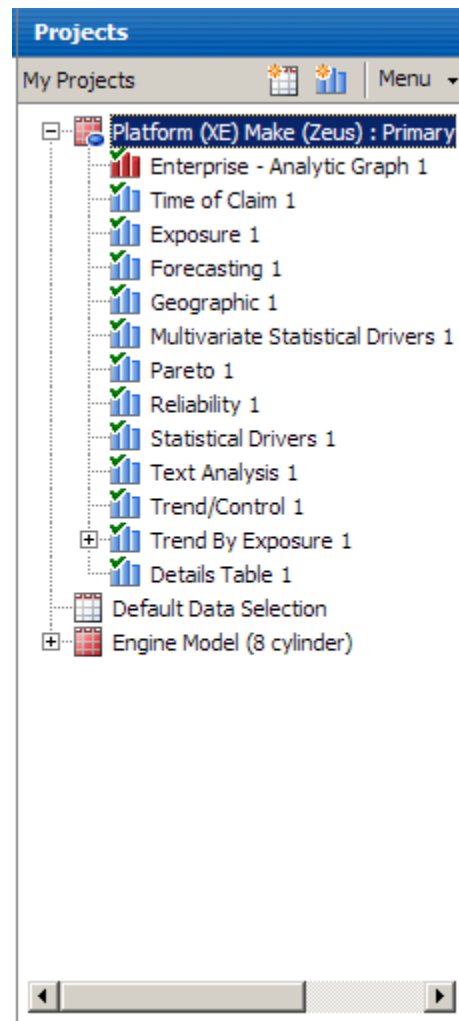
- create and edit data selections (and use the data selections that you create in the Data Selections workspace)
- run multiple analyses against a data selection
- set the analysis options for each analysis that you submit
- drill into the analysis results, and have results persist across sessions
- copy data selections and associated analyses
- delete data selections and associated analyses
- see when a data selection has become outdated, either because the data selection definition has been changed in the Data Selections workspace (if the original one was in the Data Selections workspace) or because the data warehouse has been refreshed
- update data selections and associated analyses when data selections have become outdated
- save a data selection (into the Data Selections workspace) after drilling into an analysis
- save any analysis as a report (into the Reports workspace)
- conduct analyses on the same data referenced by a saved report
- conduct analyses on the same data referenced by an emerging issues alert
- export any analysis as a PDF file
- export most analysis tables to a spreadsheet (for example, Microsoft Excel) or comma-separated value (CSV) format
- zoom into and dynamically filter graphs
- copy graphs to paste into PowerPoint or other external applications

---

## The Projects Workspace Content Display Areas

### *The Project Tree*

The project tree displays the project hierarchy for the selected project.



The title of the project that is currently open is displayed in the title bar of the project tree. The project tree toolbar enables the user to quickly select a new data selection for analysis or to select a new analysis to run. The project tree menu displays a list of actions that can be initiated or completed from the project view pane.

When you select a node in the project tree, the project content displays information for the selected node. Depending on which node you select, one or more of the following is displayed in the project content area:

- the **Data Selection Details** pane

For information, see [“The Projects Workspace Data Selection Details Pane”](#) on page 31.

- the **Results** tab

For information, see the Results tab on page 32.

- the **Details** tab

For information, see the Details tab on page 33.

- the **Messages** tab

For information, see the Messages tab on page 34.

- the **Explore Results** pane

For information, see [“The Projects Workspace Explore Results Pane”](#) on page 34.



## The Projects Workspace Data Selection Details Pane

When you select a data selection node in the project tree, the **Data Selection Details** pane is displayed in the project content area. The **Data Selection Details** pane contains information about product and event selections. It also contains controls that enable you to work with product and event selections.

Data Selection Details
Menu

Data selection name: Platform (XE) Make (Zeus) : Primary Labor Code (G-000)  
Data source: UTF-8 Mart  
Data selection date: 9/22/09 4:50:28 PM EDT  
Data as of: 8/1/06 12:00:00 AM EDT  
Data size (MB): 84.57  
Status: Ready

---

Product selection name: Platform (XE) Make (Zeus) : Primary Labor Code (G-000)  
Product type: Products

Attribute	Selections
In Service Date	From: July 16, 2005 To: July 15, 2006
Platform (1)	Desc of XE
Make (1)	Desc of Zeus
Vehicle Assembly Date	From: July 16, 2005 To: July 15, 2006

Event selection name: Platform (XE) Make (Zeus) : Primary Labor Code (G-000)  
Event type: Claims

Attribute	Selections
Repair Open Date	From: July 16, 2005 To: July 31, 2006
Primary Labor Code (1)	G-000_DESC

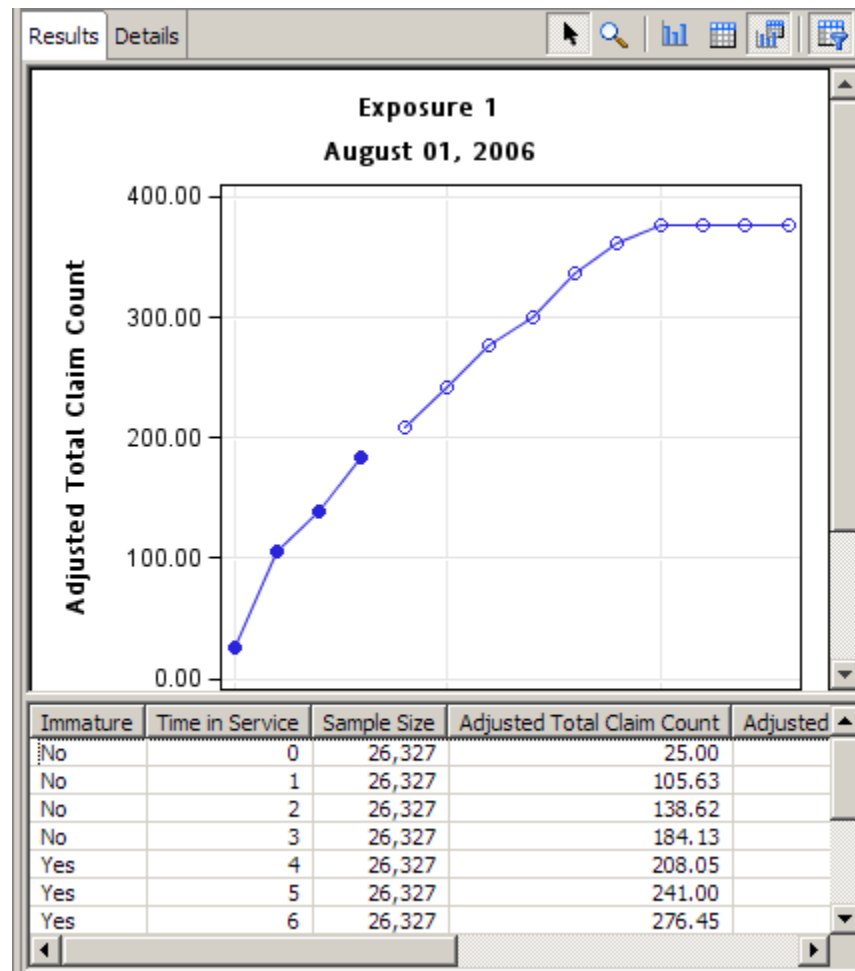
## The Projects Workspace Analysis Results Display Area

### Overview

When you select an analysis node in the project tree, several content tabs are displayed in the project content area. The three primary tabs that usually appear for an analysis node are **Results**, **Details**, and **Messages**. By default, the **Results** tab is displayed initially.

### The Results Tab

The **Results** tab contains the graphics and related tables produced by running the selected analysis. You can interact with the displayed information in several ways, including customizing the columns of the table. For more information, see [“Customize Table Columns”](#) on page 82.



### The Details Tab

When you select an analysis node in the project tree, the **Details** tab displays data selection and analysis details for the selected node, including the components and options that were used when the analysis was created. When you export the analysis to PDF format, the information on the **Details** tab is automatically included.

Results Details

Analysis name: Exposure 1

Analysis ID: ANG09YHUEI

Analysis type: Exposure

Analysis status: Ready

Analysis size (MB): 0.39

Date created: 10/1/09 4:26:00 PM EDT

Locale: English (US)

Data as of: 8/1/06 12:00:00 AM EDT

Data size (MB): 84.57

Data selection details:

Data selection name: Platform (XE) Make (Zeus) : Primary Labor Code (G-000)

Product selection name: Platform (XE) Make (Zeus) : Primary Labor Code (G-000)

Attribute	Selections
In Service Date	From: July 16, 2005 To: July 15, 2006
Platform (1)	Desc of XE
Make (1)	Desc of Zeus
Vehicle Assembly Date	From: July 16, 2005 To: July 15, 2006

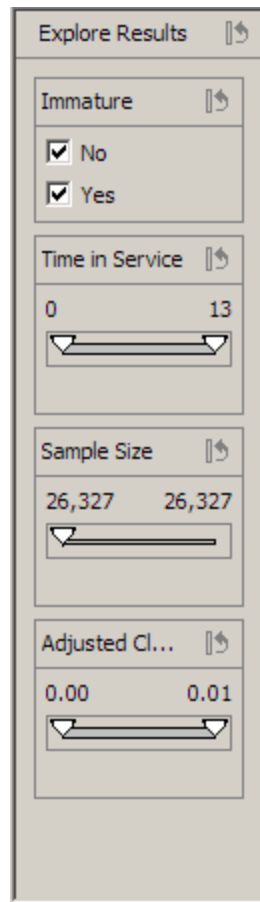
Event selection name: Platform (XE) Make (Zeus) : Primary Labor Code (G-000)

Attribute	Selections
Repair Open Date	From: July 16, 2005 To: July 31, 2006
Primary Labor Code (1)	G-000_DESC

### The Messages Tab

When you select an analysis node in the project tree, the **Messages** tab displays messages that have been generated by the system for the selected node.





The screenshot shows the 'Explore Results' pane with four filter sections, each with a refresh icon:

- Immature**: Two checked checkboxes, 'No' and 'Yes'.
- Time in Service**: A slider bar ranging from 0 to 13.
- Sample Size**: A slider bar ranging from 26,327 to 26,327.
- Adjusted Cl...**: A slider bar ranging from 0.00 to 0.01.

When you select an analysis node in the project tree, the **Explore Results** pane, if it is available, enables you to filter the analysis results dynamically and interactively. The controls on the **Explore Results** pane provide an easy way to filter the data displayed in the graphs and table. For example, slider bars enable you to change the range of a particular variable, and check boxes enable you to hide or show a particular group from the graph and table. For more information, see [“Slider Bars” on page 84](#) and [“Check Boxes” on page 85](#).



## Chapter 5

# Working with Projects in the Projects Workspace

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---

## About Projects

SAS Warranty Analysis uses projects to manage a collection of related data, tasks, and analyses. All analyses are defined and submitted in the Projects workspace. Projects enable you to run multiple analyses on a single data selection. You can open and work with only one project at a time. A project is composed of at least one data selection. You can select from twelve different analyses to submit for the specified data selections. You can then apply additional analyses to the results. This process enables you to pinpoint product attributes that seem to be related to specific failures.

*Note:* If you use the same user ID to log on to the SAS Warranty Analysis application client on two different PCs simultaneously, then the same project could be opened and altered on each PC, and errors and unpredictable results could occur. To avoid this risk, you should have only one active logon session at any given time.

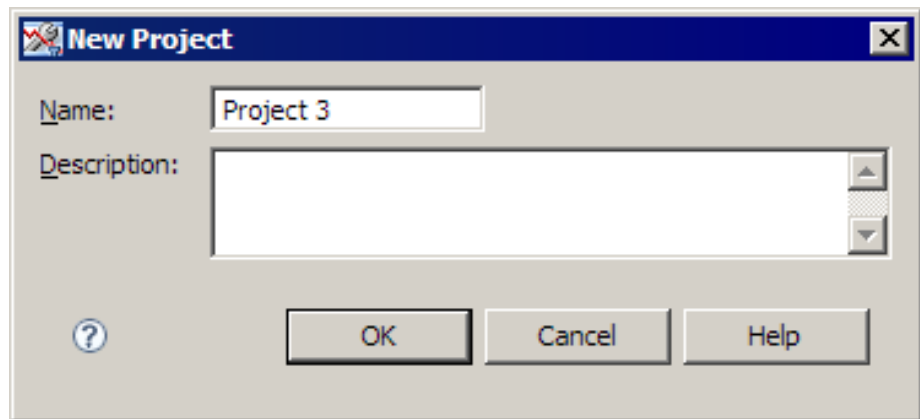
---

## Create a Project

To create a new project in the Projects workspace:

1. On the project tree menu, select **New** ⇒ **Project**.

The New Project dialog box opens.



2. Specify a valid SAS name for the project.

By default, the name for a new project is Project n, where n is the lowest available integer value (for example, **Project 3**). The project name must be unique. Duplicate names are not allowed.

3. (Optional) Type a description for the project.

Your new project is now open. To finish defining the new project, you can replace or edit the default data selection. Then you can specify which analyses to run against the data.

---

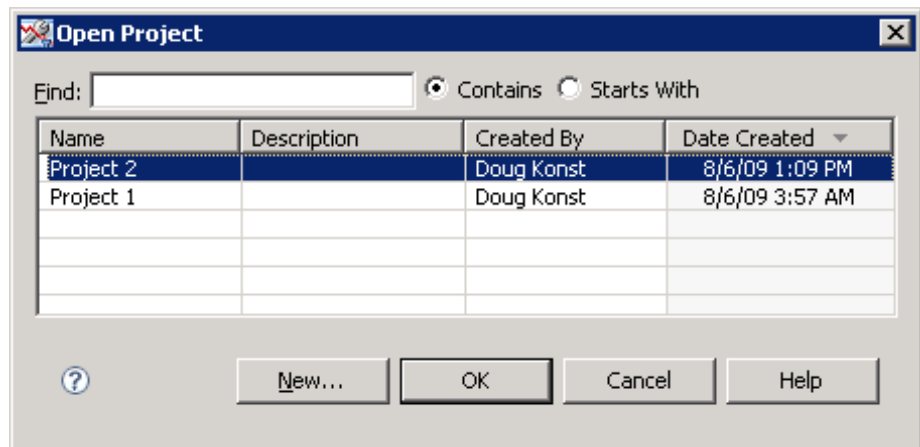
## Open a Project

To open a project:

1. On the project tree menu, select **Open Project**.

The Open Project dialog box opens.





- (Optional) To limit the projects displayed, type a word or part of a word in the **Find** field, and select **Contains** to list only the projects that contain that term, or select **Starts With** to list only the projects that begin with that term.
- Either select an existing project or select **New** to create a new project.

The project opens in the Projects workspace, and a new top-level data selection node is added to the project tree.

For instructions on creating a new project, see [“Create a Project” on page 38](#).

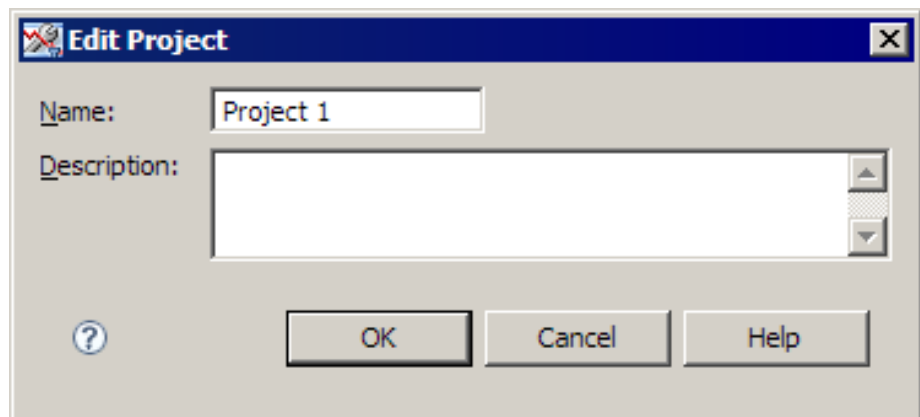
## Edit a Project

You edit a project in the Projects workspace (see [“The Projects Workspace” on page 27](#)) or in the Manage Projects dialog box (see [“Edit a Project” on page 41](#)).

To change the name or description of a project:

- On the project tree menu, select **Edit Project**.

The Edit Project dialog box opens.



- Type the changes to the name and the description of the project.

---

## Delete a Project

To delete a project:

1. Select the project in the project tree and select **Delete** ⇒ **Project** on the project tree menu.

A deletion confirmation message opens.

2. Click **Yes** to delete the project and all its content permanently. To keep some of the data selections, save them before you delete the project. Simply select the data node and select **Save Data Selection As** on the project tree menu. To keep an analysis, select the analysis node on the project tree and select **Save As Report** from the project tree menu.

---

## Close a Project

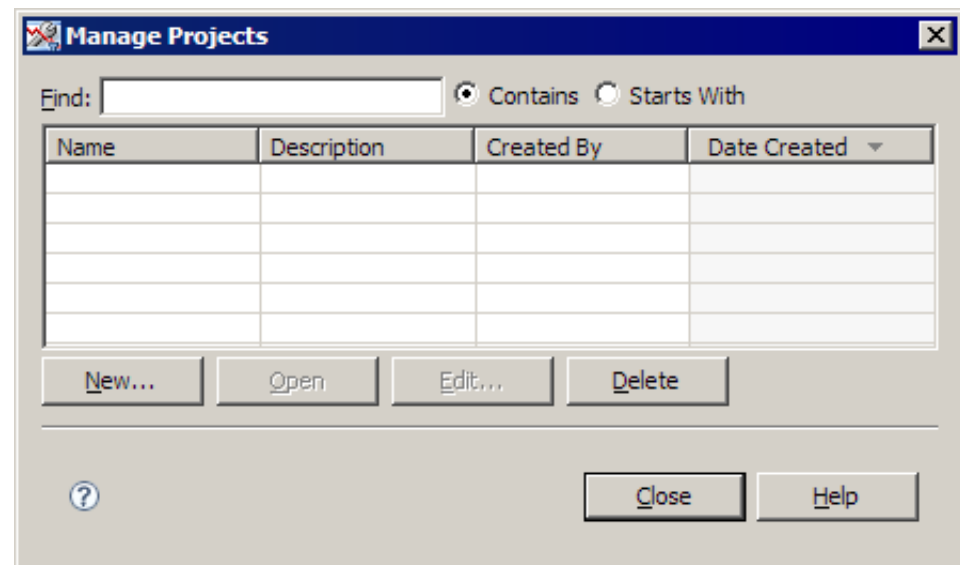
To close a project, select **Close Project** on the project tree menu.

---

## Manage Projects

### Overview

To open the Manage Projects dialog box, select **Manage Projects** on the project tree menu.



## Find a Project

Both the Manage Projects dialog box and the Open Project dialog box contain a **Find** field that you can use to dynamically filter the projects that are listed. If a large number of projects have been defined, you can type the full name of the project to list only that project, or you can type a partial name to list all projects that have matching text in the **Name** or **Description** fields or in other property fields.

For example, if the project is named 20074Q Laptops, then you can type **20074Q Laptops** to list the project. You can also type **2007** and set the **Find** option to **Starts With** to list all projects that begin with 2007.

To find an existing project:

1. On the project tree menu, select **Open Project** or **Manage Projects**. (You can also select **Open Project** or **Manage Projects** in the **Tasks** pane.)  
The Projects dialog box opens and all available projects are listed.
2. To reduce the number of projects that are listed, type a term in the **Find** field. (Search is not case-sensitive.)
3. Select **Contains** to filter by a term that is part of the project's name or description. Select **Starts With** to filter by one or more letters that the project's name or description begins with. As you type the text, the list of projects is dynamically filtered, and the only projects that are listed are those with matching text in the **Name** or **Description** fields.
4. Select a project.

## Create a Project

To create a new project from the Manage Projects dialog box, click **New**.

The New Project dialog box opens. For more information, see [“Create a Project” on page 38](#).

## Open a Project

To open a project from the Manage Projects dialog box, select a project, and then click **Open**.

## Edit a Project

To edit the name or description of a project from the Manage Projects dialog box, select a project, and then click **Edit Project**.

The Edit Project dialog box opens. For more information, see [“Edit a Project” on page 39](#).

## Delete a Project

To delete a project from the Manage Projects dialog box, select a project, and then click **Delete**.



## Chapter 6

# Working with Data Selections in the Projects Workspace

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---

## About Data Selections in the Projects Workspace

For the purposes of SAS Warranty Analysis, a data selection is a saved description that specifies which data is to be analyzed. Every project must have at least one data selection assigned to it, and each data selection includes at least one product selection and one event selection.

A data selection has the following characteristics:

- It describes the data that you want to analyze.
- It can be used with any analysis.
- It can be reused.
- It can be a copy of a data selection that was created by another user.
- It contains at least a product selection and an event selection.

Your SAS Warranty Analysis administrator defines the product and event data selections that are assigned by default to all new projects.

---

## Create a New Data Selection

To create a new data selection node in the project tree, select **New** ⇒ **Data Selection** from the project tree menu.

A new data selection node is added to the project tree and is labeled **Default Data Selection**.

After the new data selection node is displayed, you can edit it in any of the following ways:

- You can change the attributes of the product selection or event selection components.
- You can replace the product selection component or the event selection component with a product selection or event selection that you created previously in the Data Selections workspace.
- You can replace the entire data selection node with a simple data selection or a combined data selection that you created previously in the Data Selections workspace.

When you create a new data selection, you can save the data selection to the Data Selections workspace. You must save a data selection before you can save its related analyses as reports.

### See Also

[“Save a Data Selection” on page 45](#)

## Save a Data Selection

### Overview

If you create a new data selection by editing the default data selection in the project, you can save the entire data selection as a simple data selection into the Data Selections workspace. This enables you to save the product and event components as well as the simple data selection that references the product and the event components.

You can also save only the product selection component or save only the event selection component.

Combined data selections cannot be saved in the Projects workspace. Combined data selections can be edited only in the Data Selections workspace; therefore, there is no need to save them in the Projects workspace.

Note that only a data selection node that is at the top level of the project tree can be saved as a simple data selection, a product selection, or an event selection. A subset data selection can be saved to the Data Selections workspace only as a subset data selection.

### Save a Data Selection as a Simple Data Selection

To save a data selection as a simple data selection:

1. In the project tree, select a top-level data selection node.
2. On the project tree menu, select **Save Data Selection As** ⇒ **Simple Data Selection**.

The Save Simple Data Selection As dialog box opens.

Selection Name	Description	Data Source Group	Selection Type	Created By	Created Date	Shared
Zeus		Data Source Group 1	Simple Data Selection		8/7/09 4:41 PM	No

Simple data selection name:

Components:

Product selection name:

Event selection name:

OK Cancel Help

3. In the **Simple data selection** name field, type a name for the saved data selection.
4. Click in the **Product selection name** field.

The **Product selection name** field and the **Event selection name** field are automatically completed with default names based on the name that you typed in the **Simple data selection name** field.

5. You can change the default names of the product selection and the event selection.

### Save a Data Selection as a Product Selection

To save a data selection as a product selection:

1. In the project tree, select a top-level data selection node.
2. On the project tree menu, select **Save Data Selection As** ⇒ **Product Selection Only**.

The Save Product Selection As dialog box opens.

Selection Name	Description	Data Source Group	Selection Type	Created By	Created Date	Shared
DK		Data Source Group 1	Product Selection		8/6/09 5:41 AM	No

Product selection name:

? OK Cancel Help

3. In the **Product selection name** field, type a name for the saved data selection.

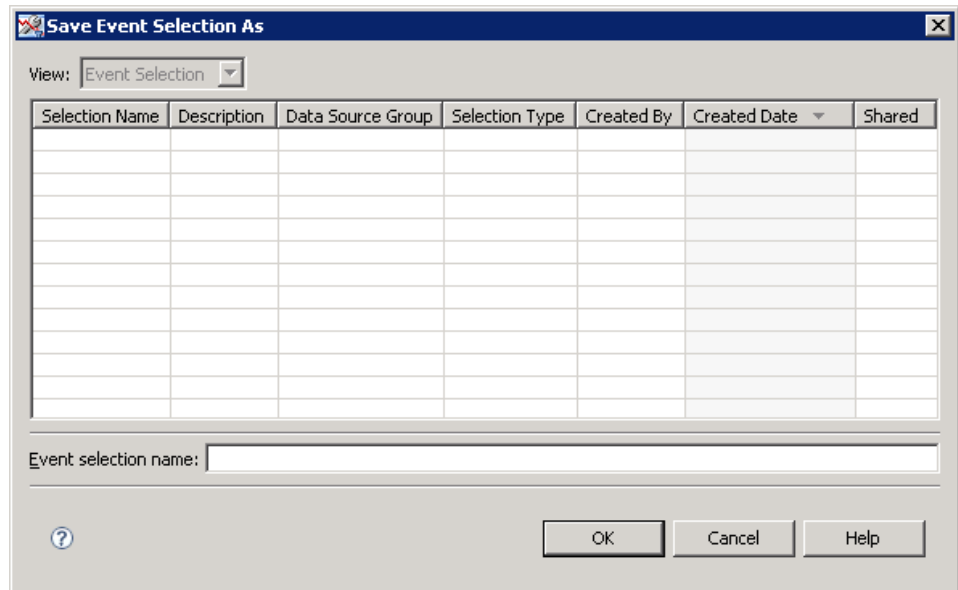
### Save a Data Selection as an Event Selection

To save a data selection as an event selection:

1. In the project tree, select a top-level data selection node.
2. On the project tree menu, select **Save Data Selection As** ⇒ **Event Selection Only**.

The Save Event Selection As dialog box opens.





The dialog box titled "Save Event Selection As" features a "View:" dropdown menu set to "Event Selection". Below this is a table with the following columns: Selection Name, Description, Data Source Group, Selection Type, Created By, Created Date (with a dropdown arrow), and Shared. The table is currently empty. At the bottom of the dialog, there is a text field labeled "Event selection name:" and three buttons: "?", "OK", "Cancel", and "Help".

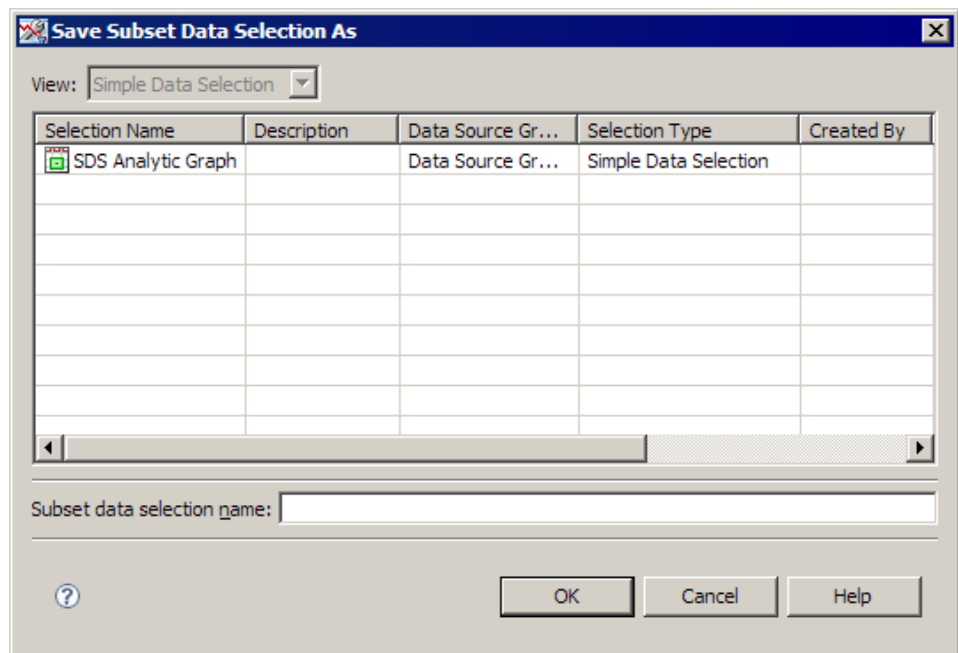
3. In the **Event selection name** field, type a name for the saved data selection.

### Save a Data Selection as a Subset Data Selection

To save a subset data selection:

1. In the project tree, select a subset data selection node.
2. On the project tree menu, select **Save Data Selection As** ⇒ **Subset Data Selection**.

The Save Subset Data Selection As dialog box opens.



The dialog box titled "Save Subset Data Selection As" features a "View:" dropdown menu set to "Simple Data Selection". Below this is a table with the following columns: Selection Name, Description, Data Source Gr..., Selection Type, and Created By. The first row of the table contains the following data: Selection Name: SDS Analytic Graph (with a small icon), Description: (empty), Data Source Gr...: Data Source Gr..., Selection Type: Simple Data Selection, and Created By: (empty). The table has a scrollbar at the bottom. At the bottom of the dialog, there is a text field labeled "Subset data selection name:" and three buttons: "?", "OK", "Cancel", and "Help".

3. In the **Subset data selection name** field, type a name for the saved subset data selection.

*Note:* Subset data selections can be saved and reused, but they cannot be edited.

---

## Copy a Data Selection

To copy a data selection in the Projects workspace:

1. Select the data selection node in the project tree.
2. Click **Copy Data Selection** on the project tree menu.

The copy is created and added to the project tree. **Copy of** is prefixed to the name of the copy to differentiate it from the original data selection node.

---

## Delete a Data Selection


To delete a data selection in the Projects workspace:

1. Select the data selection node in the project tree.
2. Click **Delete Data Selection** on the project tree menu.

*Note:* A project must have at least one data selection. If a project has only one data selection, the **Delete Data Selection** command is unavailable.

---

## Update a Data Selection

If a data selection becomes outdated (for example, as a result of a recent data warehouse refresh or because the data selection has changed since it was selected in the project), then the data selection is marked as outdated (  ). You can update the data selection and associated analyses, which means that the latest data warehouse information and the latest data selection definition are used. When you update, you must indicate whether you want to replace the selected data selection node and associated analyses or save them and create a new data selection node and analyses.

To update a data selection in the Projects workspace, complete these steps:

1. In the project tree, select a top-level data selection node.
2. Select **Update Data Selection** on the project tree menu.  
An update confirmation message opens.
3. Select an option to replace the selected data selection node and analyses or to create a new data selection node and analyses.

Creating a new data selection node and analyses preserves the data node that was selected in step 2.

4. Click **Update Now** to update the data selection node.

*Note:* Only those data selection nodes that are at the top level of the project tree can be updated. If no data selections are out of date, then **Update Data Selection** is not available.

---

## Detach a Data Selection

To open a separate, detached window that displays the details of a data selection:

1. Select a data selection.
2. On the project tree menu, select **Detach in Window**.

When you detach a data selection, the detached window appears to float above the main application window. The content in the detached window is identical to the content in the main application window, but none of the application's menus, tasks, or toolbars are available in the detached window. These separate windows can be tiled or cascaded, and they can be minimized, restored, or maximized. While a detached window is open, the main application window is still active. Detached windows remain open even when you select a different workspace.

---

## Replace a Data Selection

To replace a data selection:

1. In the project tree, select a data selection.
2. On the **Data Selection Details** pane menu, select **Replace Data Selection**.

The Select Data Selection dialog box opens.

3. Complete the steps to select a data selection.

For more information, see [“Select a Data Selection” on page 174](#).

The data selection replaces the selected data selection.

---

## Return to Default Data Selection

If you previously altered or replaced the default data selection and you want to revert to using the original default data selection:

1. In the project tree, right-click a data selection.
2. From the **Data Selection Details** pane menu, select **Return to Default Data selection**.

---

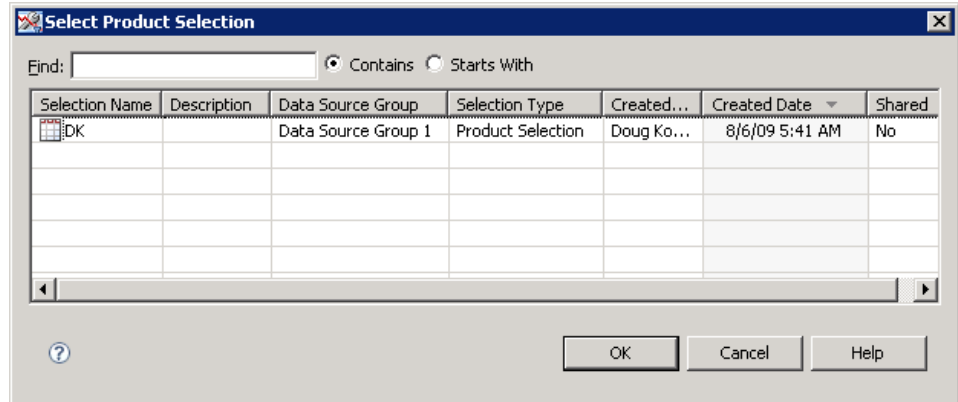
## Replace a Product Selection

To replace a product selection:

1. In the project tree, select a data selection.

2. From the **Data Selection Details** pane menu, select **Replace Product Selection**.

The Select Product Selection dialog box opens.



3. If many product selections are available in your environment, type a word or part of a word in the **Find** field, and select **Contains** to list only the data selections that contain that term, or select **Starts With** to list only the data selections that begin with that term.
4. Select a product selection, and click **OK**.

The product selection replaces the selected product selection.

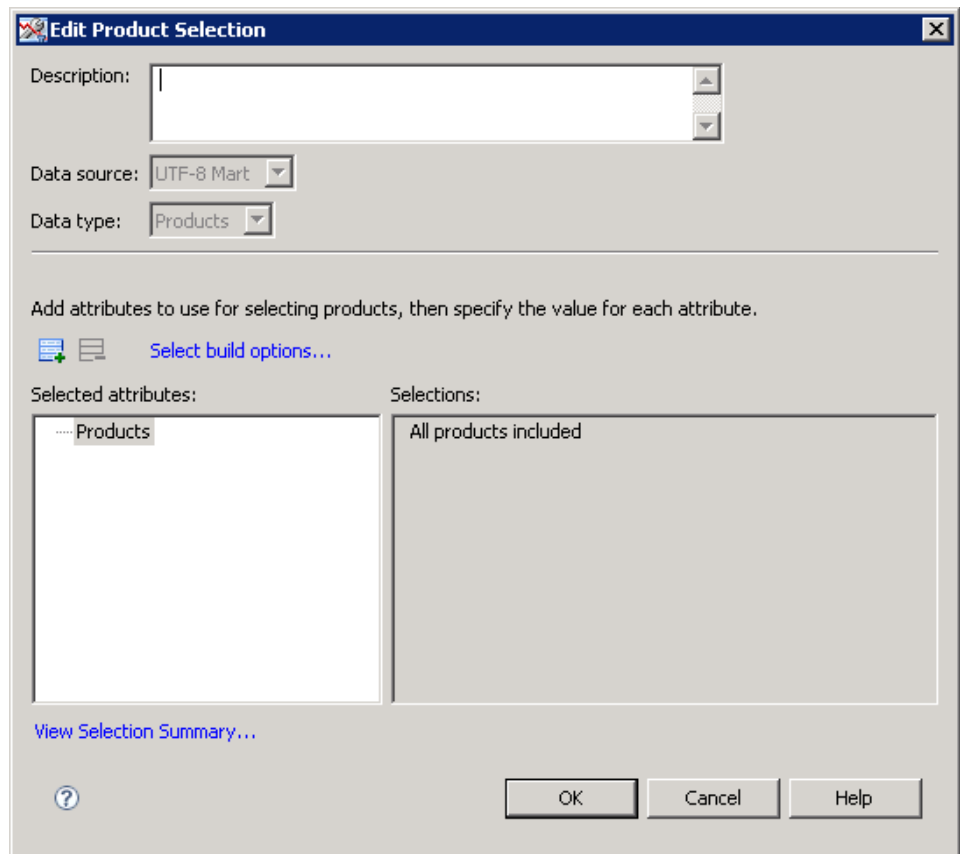
---

## Edit a Product Selection

### *Begin Editing*

1. To edit a product selection from the Data Selections workspace:
  - a. In the **Data Selection Viewer** pane, select **Product and Event Selections** in the **View** list.
  - b. Select a product selection.
  - c. From the **Data Selection Viewer** pane menu, select **Edit**.


The Edit Product Selection dialog box opens.



- d. (Optional) Type a description of the product selection.
2. To edit a product selection from the Projects workspace:
  - a. In the project tree, select a product selection.
  - b. Select **Edit Product Selection** on the **Data Selection Details** pane menu.  
If analyses have already been run against the data selection, then the Edit Data Selection confirmation message is displayed.
  - c. Click **Edit**.  
The Edit Product Selection dialog box opens.
  - d. (Optional) Type a description of the product selection.

### **Add Attributes to the Product selection**

To add attributes to the product selection:

1. Click .  
The Select Attributes dialog box opens.
2. Complete the steps to select attributes.  
For more information, see [“Select Attributes” on page 173](#).
3. In the **Selected attributes** list, select an event attribute and use the controls in the **Selections** pane to define the attribute. (Various kinds of controls appear for different attributes.

For most attributes, the **Selections** pane displays an **Available** list and a **Selected** list, but for some attributes, the **Selections** pane might contain radio buttons, check boxes, or other controls.)

### ***Import Values for an Attribute that Supports Importing Values***

To import values for an attribute that supports importing values:

1. In the **Selected attributes** list, select an attribute.
2. In the **Selections** pane, click **Import**.

The Open dialog box opens.

3. Navigate to the Microsoft Excel file, and open it.


The Import Excel Spreadsheet dialog box opens.

4. Complete the steps to import the Microsoft Excel file.

For more information, see [“Import Values for a Product Selection Attribute” on page 53](#).

### ***Remove Attributes from the Product Selection***

To remove attributes from the product selection:

1. In the **Selected attributes** list, select the attributes.
2. Click .

Either the attribute is removed immediately, or the Select Attributes dialog box opens so that you can remove the attribute. For more information, see [“Select Attributes” on page 173](#).

### ***Change the Definitions of the Product Selection’s Attributes***

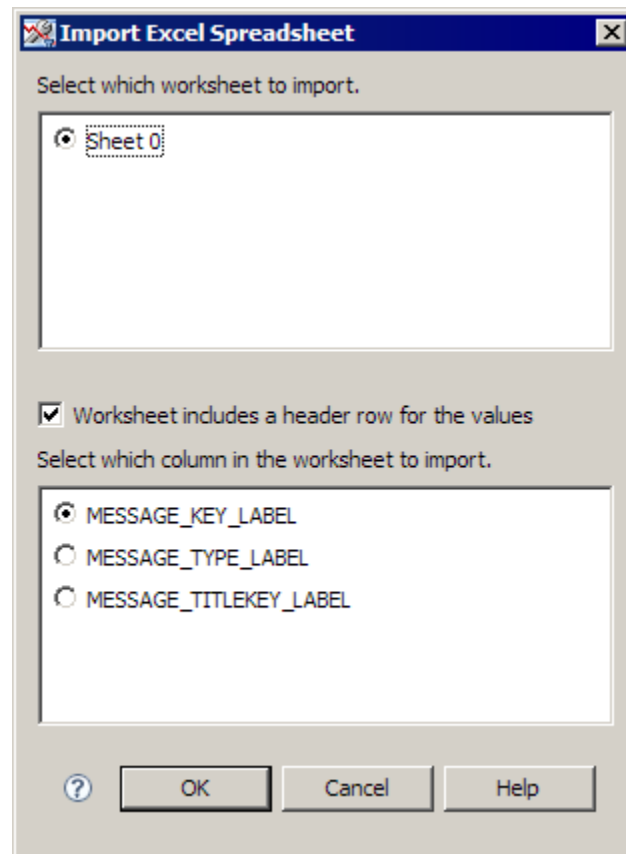
To change the definitions of the product selection’s attributes, in the **Selected Attributes** pane, select a product attribute. Use the controls in the **Selections** pane to change the attribute’s definition.

### ***See Also***

- [“Select Build Options” on page 97](#)
- [“View Selection Summary” on page 98](#)

---

## Import Values for a Product Selection Attribute



To select the values to import from a Microsoft Excel spreadsheet:

1. Select a worksheet.
2. If the worksheet includes a header row, select the **Worksheet includes a header row for values** check box.
3. Select a column.

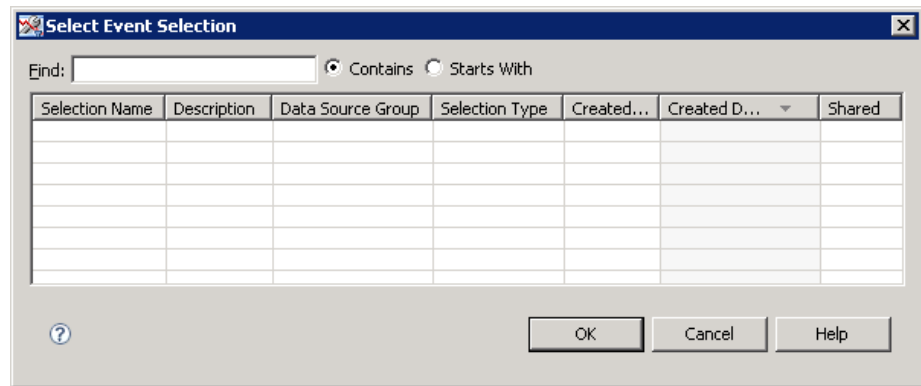
---

## Replace an Event Selection

To replace an event selection:

1. In the project tree, select a data selection.
2. From the **Data Selection Details** pane menu, select **Replace Event Selection**.

The Select Event Selection dialog box opens.



3. If many event selections are available in your environment, type a word or part of a word in the **Find** field, and select **Contains** to list only the event selections that contain that term, or select **Starts With** to list only the event selections that begin with that term.
4. Select an event selection, and click **OK**.  
The event selection replaces the selected event selection.

---

## Edit an Event Selection

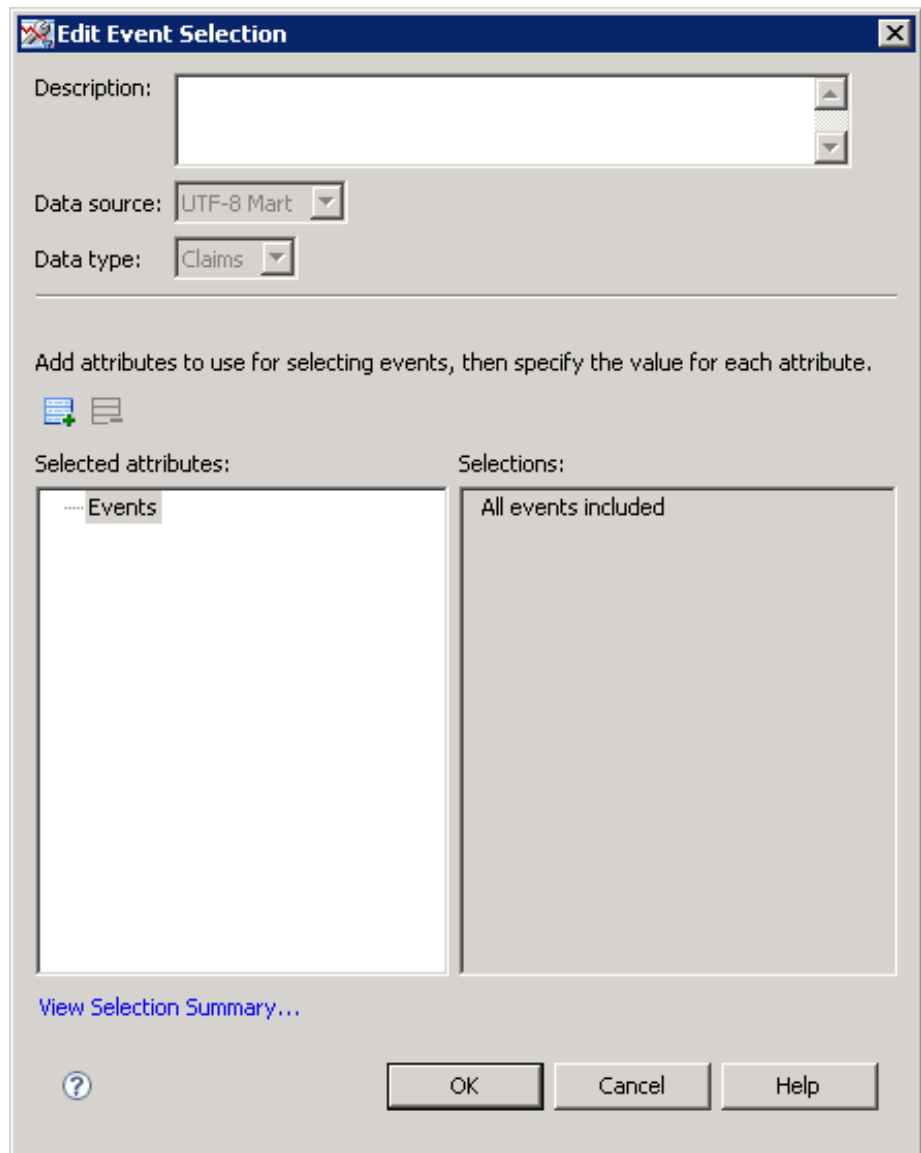
### *Begin Editing*

Do one of the following:

1. To edit an event selection in the Project workspace:
  - a. In the project tree, select the data selection that includes the event selection that you want to edit.
  - b. In the **Data Selection Details** pane, select **Edit**, or from the **Data Selection Details** pane menu, select **Edit Event Selection**.  
If analyses have already been run against the data selection, then the Edit Data Selection confirmation message is displayed.
  - c. Click **Edit**.

The Edit Event Selection dialog box opens.






2. To edit an event selection from the Data Selections workspace:
  - a. In the **Data Selection Viewer** pane, select **Product and Event Selections** in the **View** list.
  - b. From the **Data Selection Viewer** pane menu, select **Edit**.

The Edit Event Selection dialog box opens.

### ***Add Attributes to the Event Selection***

To add attributes to the event selection:


1.
    - Click .
    - The Select Attributes dialog box opens.
  2. Complete the steps to select attributes.
- For more information, see [“Select Attributes” on page 173](#).

3. In the **Selected attributes** pane of the Edit Event Selection dialog box, select an event attribute and use the controls in the **Selections** pane to define the attribute. (Various kinds of controls appear for different attributes.

For most attributes, the **Selections** pane displays an **Available** list and a **Selected** list, but for some attributes, the **Selections** pane might contain radio buttons, check boxes, or other controls.)

### ***Remove Attributes from the Event Selection***

To remove attributes from the event selection:

1. In the **Selected Attributes** pane, select the attributes.
2. Click .

Either the attribute is removed immediately, or the Select Attributes dialog box opens so that you can remove the attribute. For more information, see [“Select Attributes” on page 173](#).

### ***Change the Definitions of the Event Selection’s Attributes***

To change the definitions of the event selection’s attributes, in the **Selected Attributes** pane, select an event attribute. Use the controls in the **Selections** pane to change the attribute’s definition.

### ***See Also***

- [“Select Build Options” on page 97](#)
- [“View Selection Summary” on page 98](#)

## Part 3

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# Analyses

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## Chapter 7

# Analysis Definitions

---

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---

## About Analyses

In the Projects workspace, you can create and submit analysis definitions, and you can interact with the analysis results and export the output for use outside of SAS Warranty Analysis.

There are twelve base analyses that are available in SAS Warranty Analysis.

## The Base Analyses

### Details Table

The details table enables you to view and download detailed product or event records. If you have included one or more comment fields in the table, you can select a specific comment and find comments that are similar to the selected comment. In addition, you can perform keyword searches on comment fields and on other character or numeric fields to retrieve specified records only.

Results Details Messages Menu ▾					
▶ Search Options ◆					
In Service Date	Selling Dealer	Selling Dealer-Description	VIN	VIN-Description	Vehicle
September 1...	00052	Desc of 00052	4...	Desc of 4V4...	A
November 26...	00267	Desc of 00267	4...	Desc of 4V4...	Oc
August 30, 2...	00052	Desc of 00052	4...	Desc of 4V4...	
April 01, 2006	00081	Desc of 00081	4...	Desc of 4V4...	Feb
October 20, ...	00262	Desc of 00262	4...	Desc of 4V4...	Oc
December 10...	00094	Desc of 00094	4...	Desc of 4V4...	Oc
September 1...	00109	Desc of 00109	4...	Desc of 4V4...	A
January 03, ...	00076	Desc of 00076	4...	Desc of 4V4...	Oc
January 10, ...	00125	Desc of 00125	4...	Desc of 4V4...	Dec
October 27, ...	00401	Desc of 00401	4...	Desc of 4V4...	Oc
August 27, 2...	00094	Desc of 00094	4...	Desc of 4V4...	A
January 13, ...	00096	Desc of 00096	4...	Desc of 4V4...	Dec
November 17...	00082	Desc of 00082	4...	Desc of 4V4...	Oc
February 05, ...	00106	Desc of 00106	4...	Desc of 4V4...	Dec
August 02, 2...	00283	Desc of 00283	4...	Desc of 4V4...	
October 28, ...	00049	Desc of 00049	4...	Desc of 4V4...	Sept
September 2...	00106	Desc of 00106	4...	Desc of 4V4...	Sept
August 27, 2...	00109	Desc of 00109	4...	Desc of 4V4...	
November 16...	00026	Desc of 00026	4...	Desc of 4V4...	Nov
October 05, ...	00141	Desc of 00141	4...	Desc of 4V4...	
September 2...	00200	Desc of 00200	4...	Desc of 4V4...	Sept
October 15, ...	00165	Desc of 00165	4...	Desc of 4V4...	Sept
December 22...	00367	Desc of 00367	4...	Desc of 4V4...	Dec
August 31, 2...	00259	Desc of 00259	4...	Desc of 4V4...	A
November 08...	00094	Desc of 00094	4...	Desc of 4V4...	A
December 30...	00386	Desc of 00386	4...	Desc of 4V4...	Dec
May 05, 2006	00082	Desc of 00082	4...	Desc of 4V4...	Ja
August 27, 2...	00094	Desc of 00094	4...	Desc of 4V4...	A
December 23...	00321	Desc of 00321	4...	Desc of 4V4...	Dec
August 12, 2...	00109	Desc of 00109	4...	Desc of 4V4...	
...	...	...	...	...	...

Page: 1 of 1

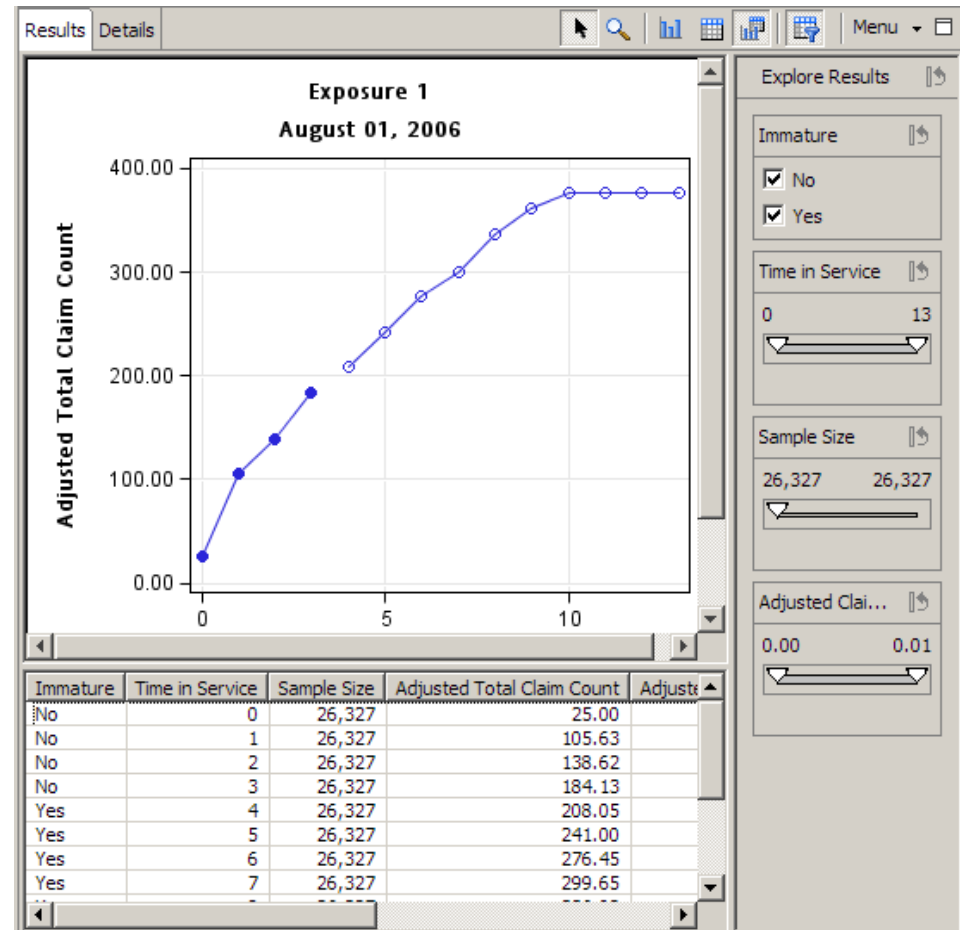
### Exposure Analysis

Exposure analysis enables you to view how warranty event activity varies by product exposure or time in service.

The exposure analysis plots time in service (for example, days in service) on the X axis versus a quantitative value, an analysis variable, on the Y axis. In addition, you can specify a group variable to stratify the exposure analysis in order to visually compare warranty activity at different times in service values across a series of strata. Finally, you might be able to view either incremental or cumulative calculated values of the analysis variable for different time-in-service periods.

Exposure analysis can help you assess whether event activity can be attributed to the amount of time in service a unit has accrued.

*Note:* Immature data points, if enabled, appear as hollow dots. Mature data points appear as filled dots.



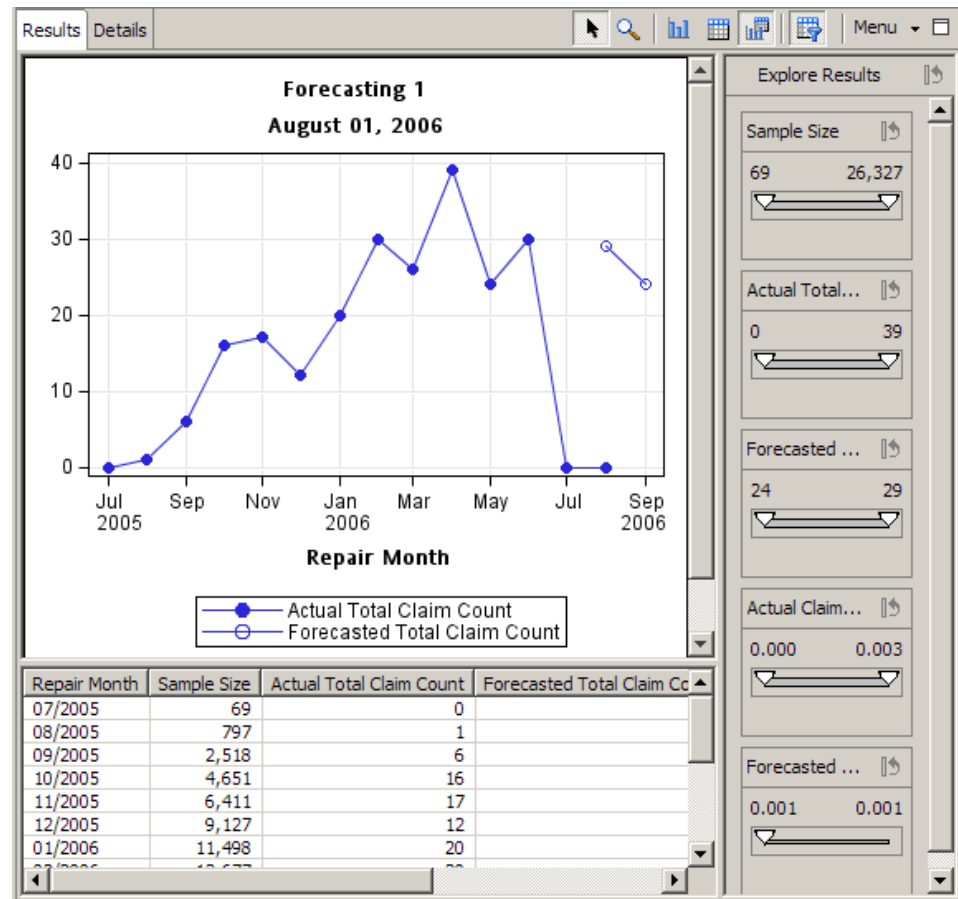
## Forecasting Analysis

Using SAS Warranty Analysis to calculate the magnitude of future warranty issues enables you to make projections about upcoming performance problems and to make plans for handling resulting claims.

Forecasting analysis generates forecasts for the next 12 calendar months for event count or event cost related to a particular warranty issue or concern (for example, a labor code or a part number). Forecast analysis takes the following factors into account:

- historic event rates associated with a warranty issue or concern.
- projected event rates for the warranty issue or concern based on a parametric reliability analysis.

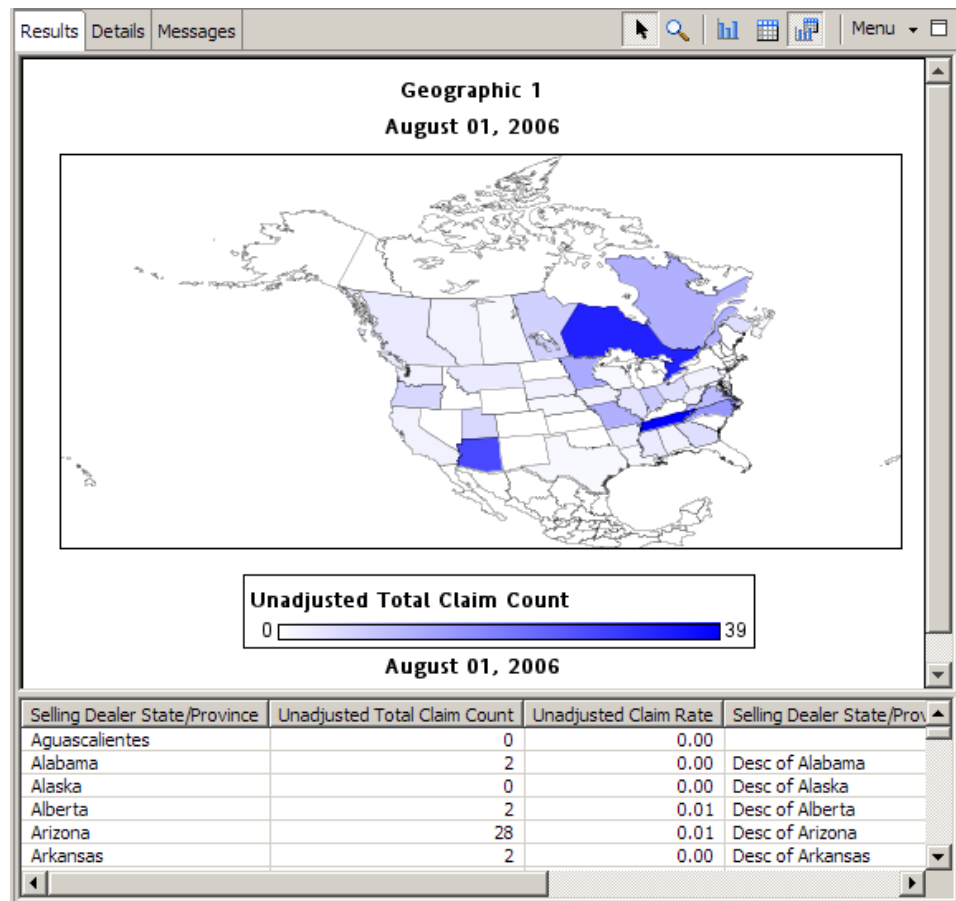
- the current age base of the population of products that are being investigated and how the age base of the population will change over future time periods. (The analysis can also consider future sales estimates that you specify.)



## Geographic Analysis

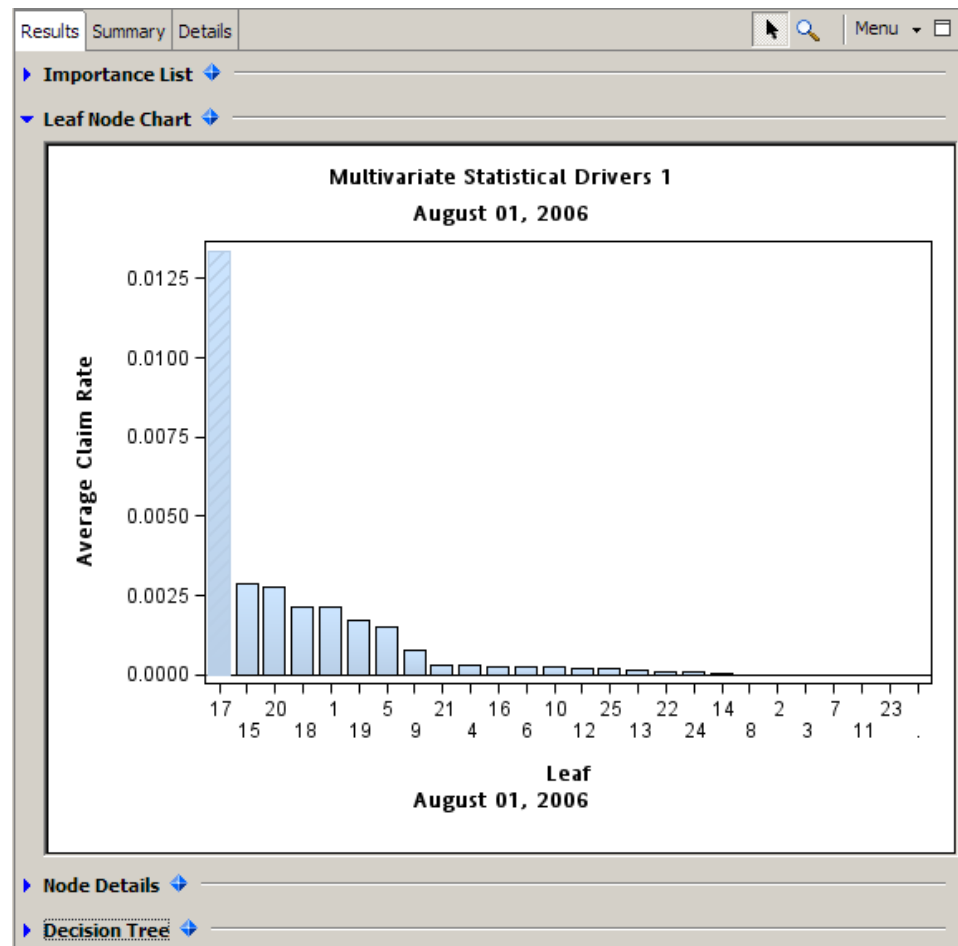
For many products, warranty problems are related to location. It is often beneficial to look at how warranty events are distributed geographically. Using SAS Warranty Analysis, you can perform geographic analysis by plotting a quantitative value, such as total event cost, event count, or event rate on a geographic map of the United States, Canada, and Mexico by state or province. SAS provides various options for customizing geographic mapping.





### Multivariate Statistical Drivers Analysis

Multivariate statistical drivers identify the combinations of attributes that drive failure rates. Individual attributes are scored and ranked based on their importance related to the issue that is being analyzed. All combinations of the attributes are analyzed via a decision tree. The terminal leaves of the decision tree are ranked. Terminal leaves can be selected in the leaf node bar chart and can be further explored through other analyses. Each terminal leaf represents a specific combination of attribute values. The information about the selected terminal leaf is linked and highlighted across the charts and tables. Decision trees can be zoomed to see more detail.

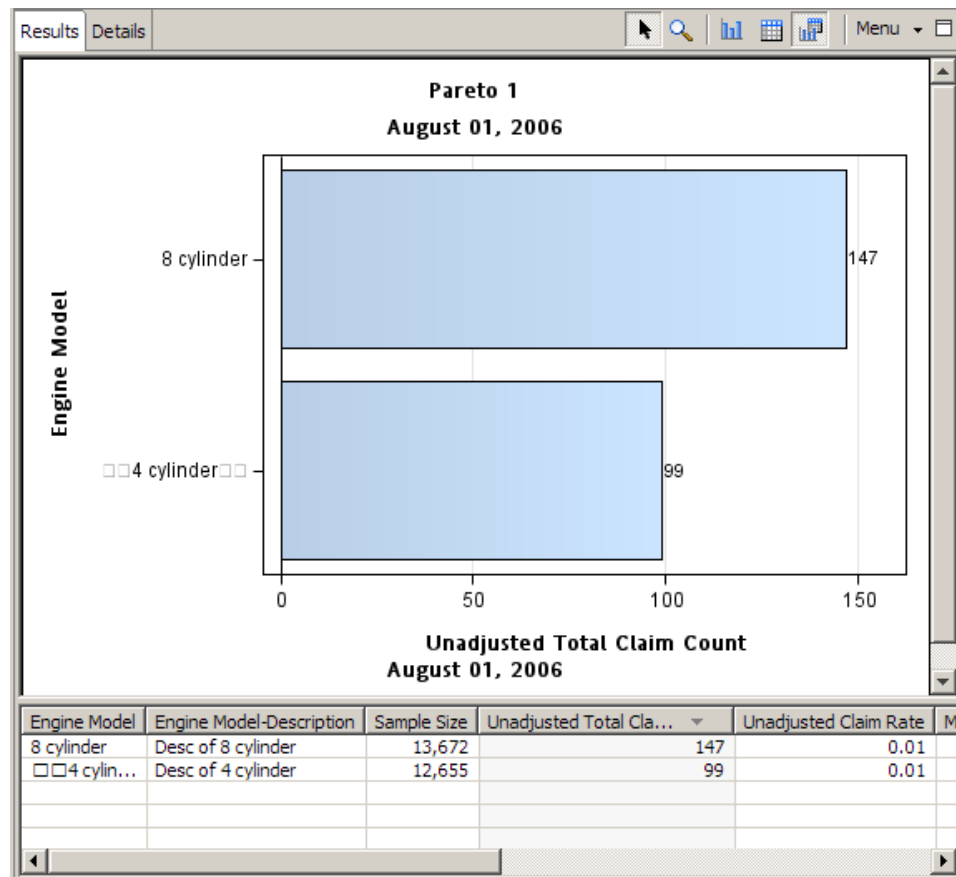


## Pareto Analysis

### Overview

A Pareto chart is a bar chart that displays the classification of quality-related problems arranged in decreasing order of importance. The bars indicate the frequency with which each problem occurs. Pareto charts are used to determine which subset of problems should be examined first, or which problem areas deserve the most attention.

Pareto charts can be used to display warranty counts, warranty count rates, warranty costs, and other information. In addition, comparative charts can be created to compare the Pareto frequencies across levels of classification variables. For example, you can view the top 10 problems for a specific product, and then compare how those problems are distributed across two plants and when the product is produced. Pareto charts often provide a good first step in performing warranty data analysis. They are also often generated for management reports.



### Minimum Sample Size

You can select a minimum sample size to include in the Pareto analysis. The minimum sample size specification operates within time-in-service intervals, within values of the reporting and group variables.

For example, assume that you perform a Pareto analysis using the month in which a product was assembled as the group variable. Within each assembly month, there are several month-in-service intervals. For each month-in-service interval (for each product assembly month), SAS Warranty Analysis counts the number of units at risk within that interval. If the number of units at risk is below the specified minimum sample size, then that month-in-service interval is excluded from the analysis for the value of the month in which the product was assembled.

## Reliability Analysis

Reliability analysis is used to answer questions about the durability of a product and to characterize how a product functions in the field throughout its life. Product life can be defined by time or by usage (for example, by months or by mileage), and the reliability analysis can be generated in terms of either dimension.

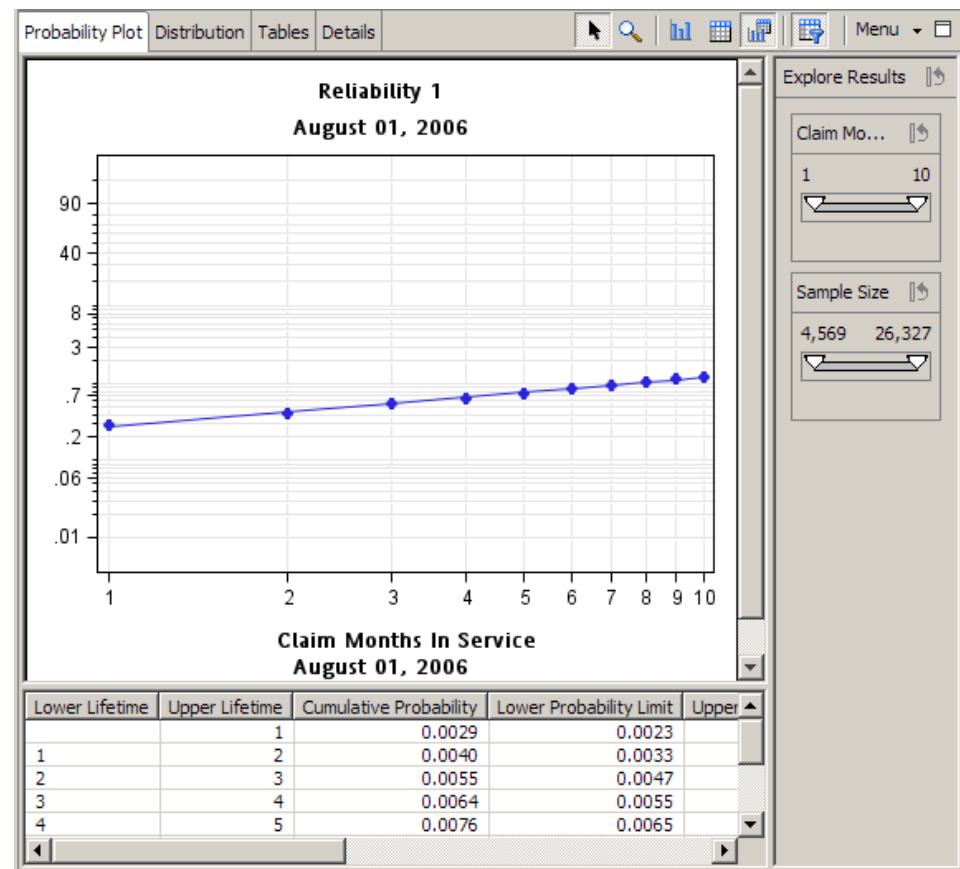
For a specific product, data about items that failed and data about items that did not fail are used to perform a parametric reliability analysis and develop distributions that predict the time when a first failure (or first occurrence of an event) is likely to occur. A lifetime distribution (for example, Weibull, lognormal, and exponential) is fitted to the event and product information. From the fitted distribution, several different kinds of information can be generated, based on the your requests. For example, the analysis can generate a table of projected values, B-life values, and other plots (for example, hazard, failure, and

cumulative failure). In addition, you can specify a group variable to stratify the analysis for comparison purposes.

The distribution most commonly used for reliability analysis is the Weibull distribution. The Weibull distribution can be used in a wide variety of situations. Depending on its shape parameter, the Weibull distribution is equal to or approximates several other distributions. For example:

If...	Then...
shape = 1,	the Weibull distribution is identical to the exponential distribution.
shape = 2,	the Weibull distribution is identical to the Rayleigh distribution.
shape = 2.5,	the Weibull distribution approximates the lognormal distribution.
shape = 3.6,	the Weibull distribution approximates the normal distribution.
shape = 5,	the Weibull distribution approximates the peaked normal distribution.

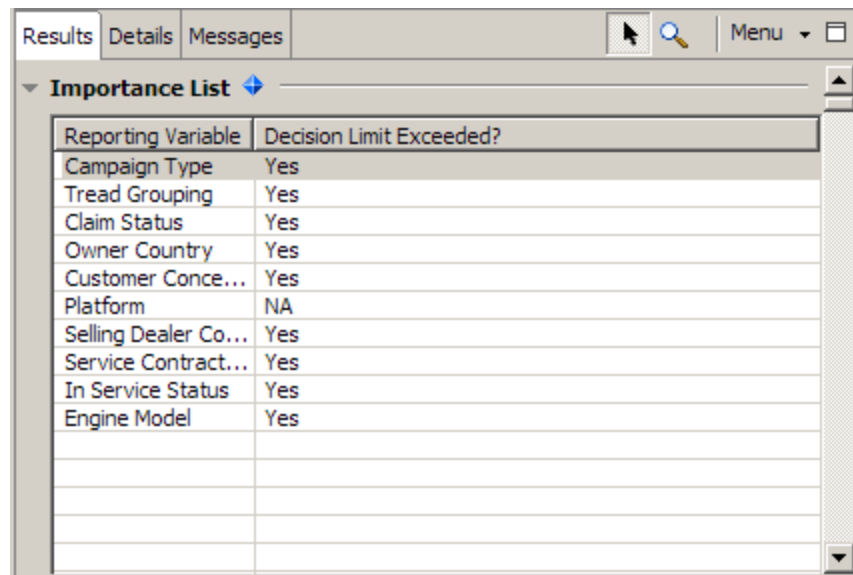
For this reason, the values of the distribution parameters are displayed on the **Distribution** tab.



## Statistical Drivers Analysis

The statistical drivers analysis enables you to identify factors with values with statistically significant differences in event activities. This enables you to determine which factors might influence the occurrence of events.

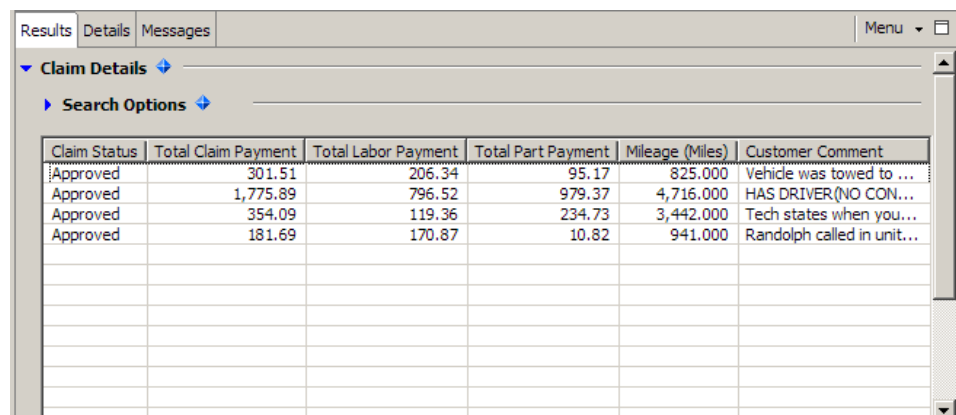
A factor is deemed significant if events do not randomly occur across the values of that factor (that is, events occur disproportionately across the different values of the variable). The analysis determines significance by performing an analysis of means (ANOM) on each variable that you select. For each variable that you select, the process flags any value for which the event rate differs significantly from the event rates of the other values.



Reporting Variable	Decision Limit Exceeded?
Campaign Type	Yes
Tread Grouping	Yes
Claim Status	Yes
Owner Country	Yes
Customer Conce...	Yes
Platform	NA
Selling Dealer Co...	Yes
Service Contract...	Yes
In Service Status	Yes
Engine Model	Yes

## Text Analysis

Text analysis transforms textual data (for example, technician comments or call center comments) into a usable, intelligible format that facilitates clustering comments, profiling comments by using related character or numeric variables, and finding relationships or associations between comments. Text analysis helps you to identify trends and business opportunities, and it generates meaningful insights into warranty issues more efficiently than using structured data alone.

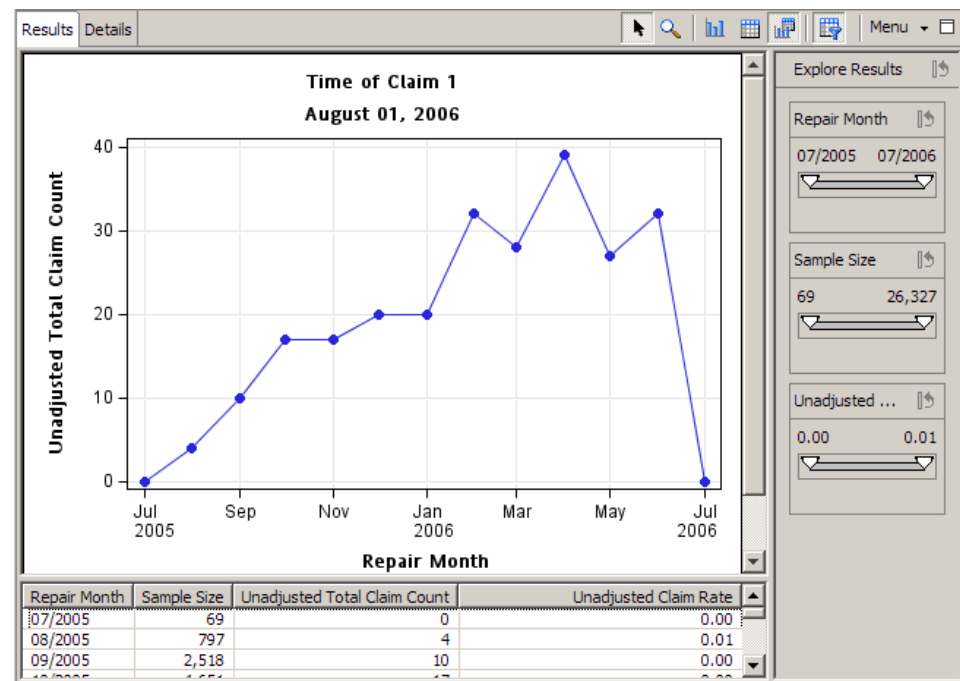


Claim Status	Total Claim Payment	Total Labor Payment	Total Part Payment	Mileage (Miles)	Customer Comment
Approved	301.51	206.34	95.17	825.000	Vehicle was towed to ...
Approved	1,775.89	796.52	979.37	4,716.000	HAS DRIVER(NO CON...
Approved	354.09	119.36	234.73	3,442.000	Tech states when you...
Approved	181.69	170.87	10.82	941.000	Randolph called in unit...

### Time of Claim Analysis

The time of claim analysis enables you to view how a quantitative value, such as total event count or cost, varies with respect to calendar points in time. It plots a calculated quantitative count on the Y axis and past calendar periods (months) on the X axis. The calendar periods might represent times when claims are made, times when claims are paid, or any other calendar date associated with claims. In addition, you can specify a BY variable in order to stratify the analysis by the values of some categorical variable for comparison purposes.

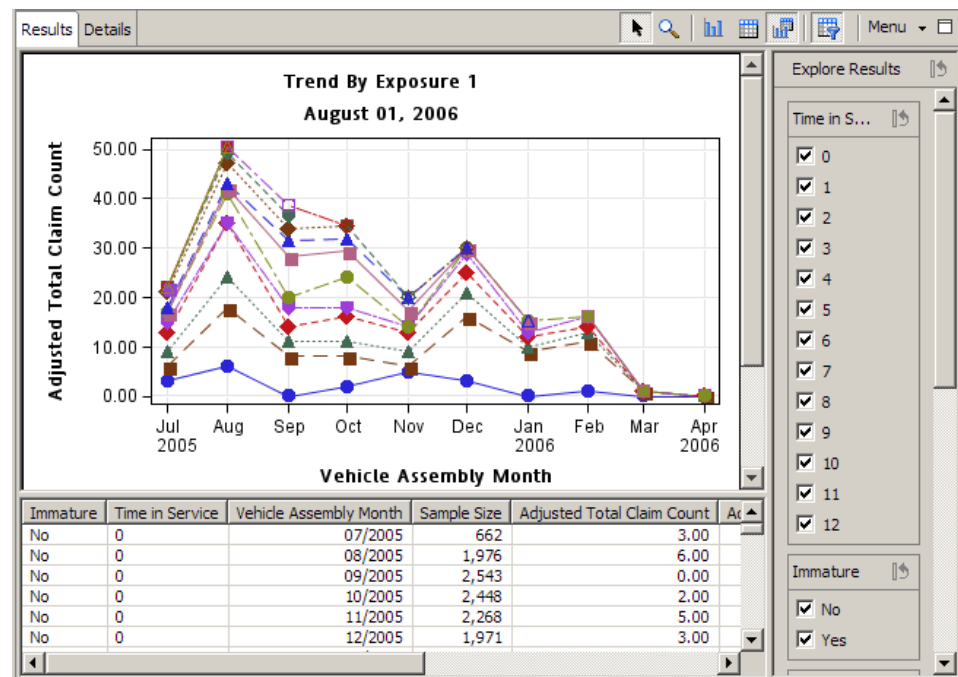
The time of claim analysis can be used to monitor claims activity by calendar periods and to detect seasonal trends in claims activity.



### Trend by Exposure Analysis

The trend by exposure analysis enables you to visualize how warranty event activity varies across production periods at various time-in-service values. It plots the cumulative value of an analysis variable, given a time-in-service value, on the Y axis versus production month on the X axis. A separate line is generated for each of several time-in-service values. This analysis combines traits of the trend analysis and the exposure analysis.

*Note:* Immature data points, if enabled, appear as hollow dots. Mature data points appear as filled dots.

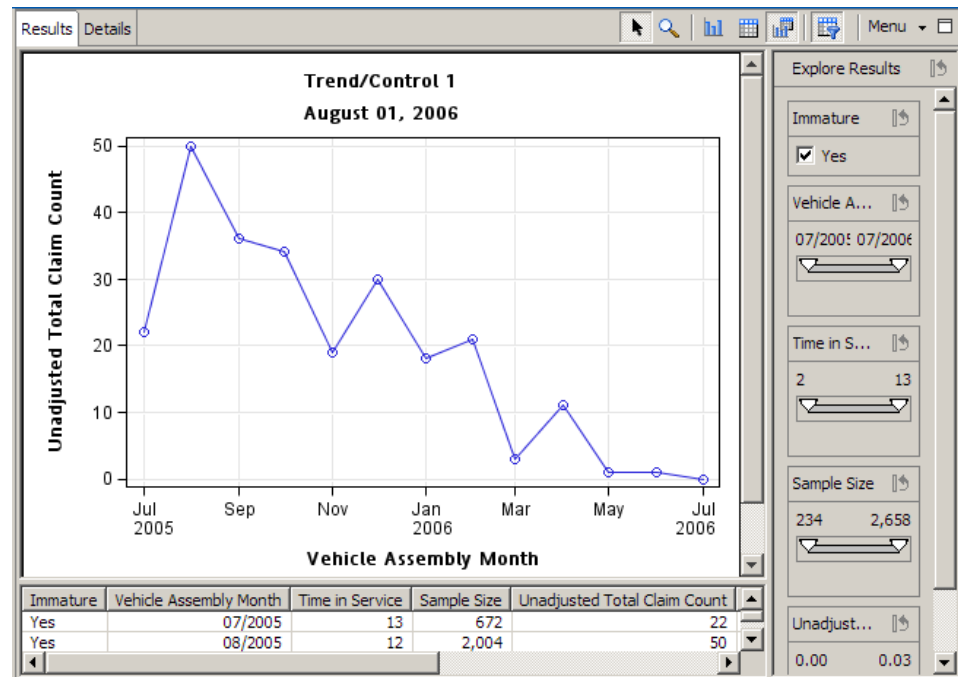


## Trend/Control Analysis

Trend/Control analysis enables you to view warranty event activity from the time-of-build perspective. Specifically, this analysis enables you to plot an analysis variable (such as total event count or cost, event rate, or event cost per unit) versus a reporting variable that is related to a production time period (such as month of production or week of production). The analysis can be generated with respect to a particular time-in-service period, or it can incorporate all time-in-service periods. Also, a group variable can be specified to stratify the analysis. For example, a trend analysis could be generated for two different models to show how the number of reported incidents per 1000 units at 90 days in service varies across the months when the models were produced.

In addition, you can apply control limits to the trend charts in order to create a control chart of the data. Control charting methodology can be used to distinguish normal variation in warranty event activity from statistically significant trends—that is, the methodology differentiates variation that is the result of an assignable cause from random "noise." The control chart helps you to determine whether the event activity for particular months is statistically different from the activity for other production months, suggesting a need for further investigation.

*Note:* Immature data points, if enabled, appear as hollow dots. Mature data points appear as filled dots.



## Create Analysis Definitions

### Overview

To create one or more analysis definitions:

1. Select the types of analyses.  
For more information, see [“Select Analyses” on page 70](#).
2. Accept or change the analysis settings.  
For more information, see [“Select Variables or Options for Analyses” on page 71](#).
3. Submit the analyses.  
For more information, see [“Submit an Analysis” on page 77](#).

You can submit a single analysis, or you can select multiple analyses and submit them simultaneously. If you select more than one analysis to submit at the same time, it is recommended that you select an analysis other than multivariate statistical drivers, text analysis, or details table to run first.

### Select Analyses

You must select analyses when you perform the following tasks:

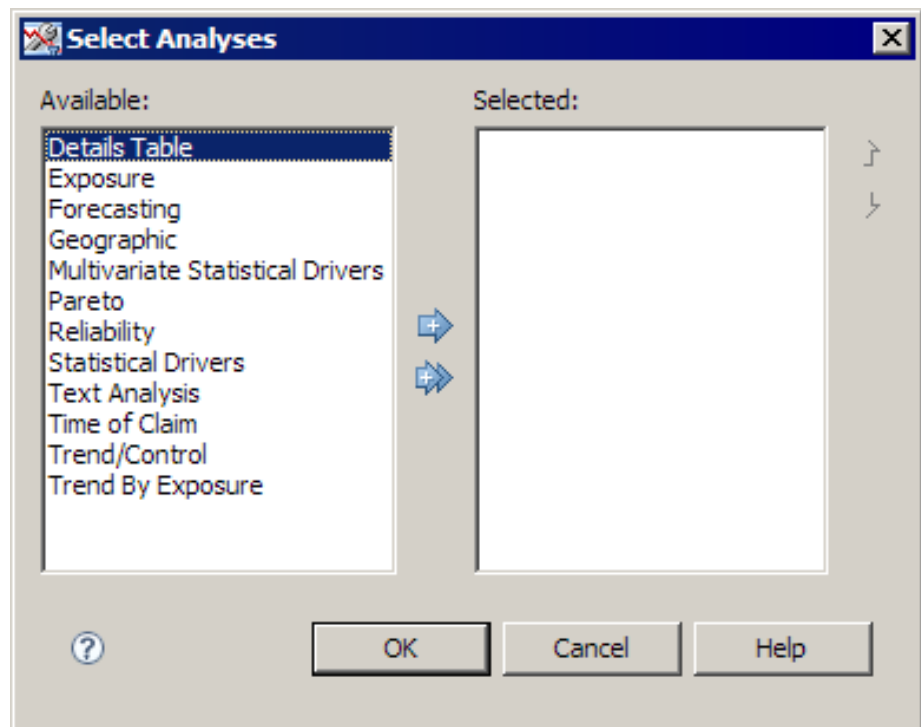
- analyze a subset  
For more information, see [“Analyze a Subset” on page 85](#).
- create analysis definitions  
For more information, see [“Create Analysis Definitions” on page 70](#).




To select analysis types:

1. From the project tree menu, select **New** ⇒ **Analysis**.

The Select Analyses dialog box opens.



2. In the **Available** list, select one or more analyses, and click  to move the selected analyses to the **Selected** list.

## Select Variables or Options for Analyses

You can specify the variables and options for the analyses that you want to perform.

The **Analysis Settings** pane displays the default variables and options for the currently selected analysis type. You can accept the defaults, or you can select alternate settings for the analysis that you are defining.

To change analysis settings:

1. For each variable or option, select an alternate setting in one of the following ways:
  - Click and select an alternate setting.
  - Click or to scroll through available settings and select one.
  - Click **Select** to open a separate dialog box where you can select additional settings.

See the following sections for additional instructions:

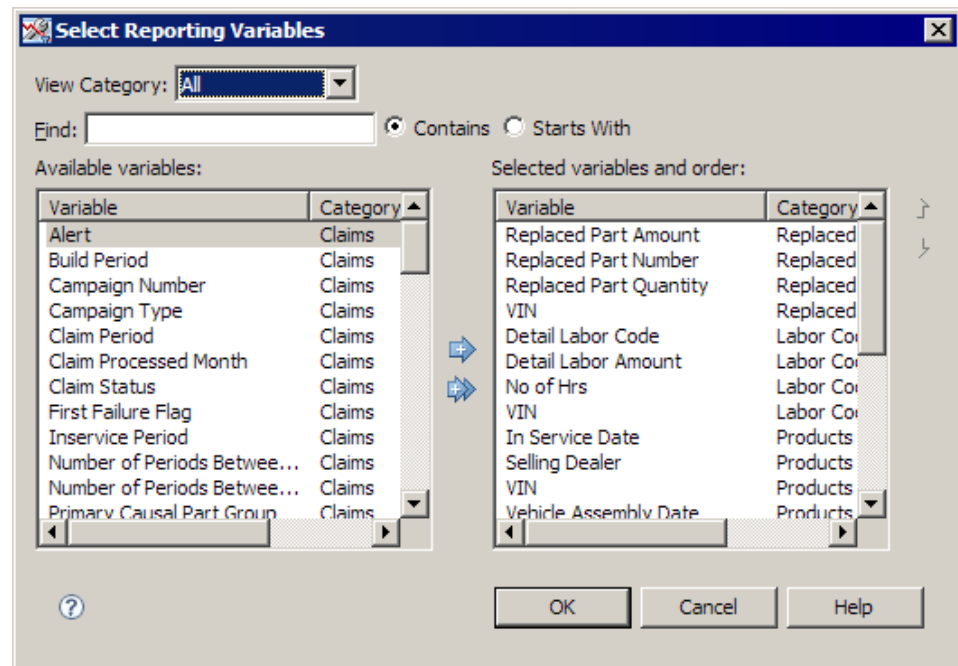
  - [“Select Multiple Variables or Options” on page 73](#)
  - [“Select an Optional Variable or Option” on page 73](#)
  - [“Select a Required Variable or Option” on page 74](#)
2. Select one of the following options:
  - **Submit Now** to apply the analysis immediately
  - **Submit Later** to submit the analysis for processing later in batch mode
  - **Save Only** to save the revised settings without submitting the analysis

*Note:* The variables and options that appear in the **Analysis Settings** section are determined during the installation and configuration of SAS Warranty Analysis. For this reason, the variables and options that you see might not be identical to those described here.

## Select Multiple Variables or Options

You can change the default variables or options that appear when you create or edit an analysis. For more information, see [“Select Variables or Options for Analyses”](#) on page 71 and [“Edit an Analysis Definition”](#) on page 75.

*Note:* The name of the dialog box changes based on the selected variable or option.



The available controls depend on the type of variables or options.

To specify the variables or options:

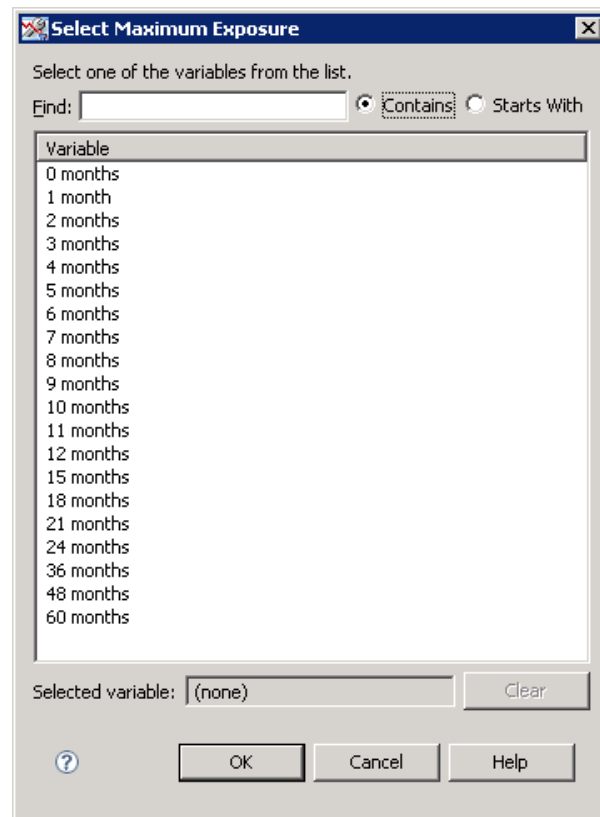
1. If a **View Category** field appears in the dialog box, select a category from the list to display only variables in the specified category.
2. If a **Find** field appears in the dialog box, you can use it to limit the variables that are listed.

For example, type a word or part of a word and select **Contains** to list only variables that contain that word, or select **Starts With** to list variables that begin with that word.

3. Use the **Available variables** and **Selected variables and order** lists to specify which variables to use in the analysis.
4. Move variables between the **Available variables** list and the **Selected variables and order** list by selecting a variable and clicking the arrows between the lists.
5. To change the order of a variable in the **Selected variables and order** list, select a variable and click the up and down arrows.

## Select an Optional Variable or Option

You can change the default variables or options that appear when you create or edit an analysis. For more information, see [“Select Variables or Options for Analyses”](#) on page 71 and [“Edit an Analysis Definition”](#) on page 75.



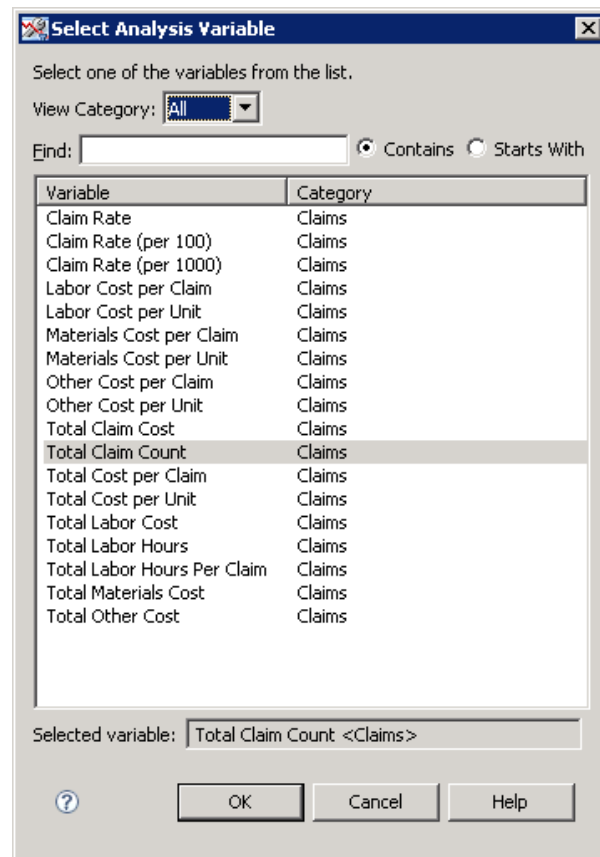
If a **View Category** field appears in the dialog box, select a category from the list to display only variables in the specified category.

If a **Find** field appears in the dialog box, you can use it to limit the variables that are listed. For example, type a word or part of a word and select **Contains** to list only variables that contain that word, or select **Starts With** to list variables that begin with that word.

Click a variable or option to use in the analysis.

### Select a Required Variable or Option

You can change the default variables or options that appear when you create or edit an analysis. For more information, see [“Select Variables or Options for Analyses” on page 71](#) and [“Edit an Analysis Definition” on page 75](#).



If a **View Category** field appears in the dialog box, select a category from the list to list only variables in the specified category.

If a **Find** field appears in the dialog box, you can use it to limit the variables that are listed. For example, type a word or part of a word and select **Contains** to list only variables that contain that word, or select **Starts With** to list variables that begin with that word.

Click a variable or option to use in the analysis.

---

## Edit an Analysis Definition

You can change the analysis options of a specified analysis node.

To edit an analysis node:

1. Select an analysis.
2. From the project tree menu, select **Edit Analysis**.

The Edit Analysis dialog box opens.

**Edit Analysis**

Analysis name: Exposure 1

**Variables**

Group variable: (none) [Select...](#)

Analysis variable: Total Claim Count <Claims> [Select...](#)

**Analysis Options**

Exposure type: Time in Service

Calculation method: Adjusted

Apply usage profiles: No

Warranty program usage limitation: (none)

Claims per unit to include: All

Minimum sample size type: (none)

Minimum sample size (greater than zero): (none)

**Filtering Options**

Include pre-delivery claims: Yes

Locale: English (US)

☒ Submit Now ☐ Submit Later ☐ Save Only

? OK Cancel Help

3. For each variable or option, select an alternate setting in one of the following ways:
  - Click and select an alternate setting.
  - Click or to scroll through available settings and select one.
  - Click **Select** to open a separate dialog box where you can select additional settings.

See the following sections for additional instructions:

  - [“Select Multiple Variables or Options” on page 73](#)
  - [“Select an Optional Variable or Option” on page 73](#)
  - [“Select a Required Variable or Option” on page 74](#)
4. Select one of the following options:
  - **Submit Now** to apply the analysis immediately
  - **Submit Later** to submit the analysis for processing later in batch mode
  - **Save Only** to save the revised settings without submitting the analysis

*Note:* The variables and options that appear in the **Analysis Settings** section are determined during the installation and configuration of SAS Warranty Analysis. For

this reason, the variables and options that you see might not be identical to those described here.

---

## Rename an Analysis Definition

To rename an analysis:

1. In the project tree, select an analysis.
2. From the project tree menu, select **Rename Analysis**.
3. Type a new name.

*Note:* Renaming the analysis definition does not change the titles of the output of the renamed analysis.

---

## Copy Analysis Options

You can create a copy of the details of the selected analysis node. Then, you can make changes to the original analysis options, run the altered analysis, and compare it to the original analysis.

To create a copy of an analysis:

1. Select an analysis node.
2. From the project tree menu, select **Copy Analysis Options**.

The copy is created and added to the project tree. **Copy of** is prefixed to the name of the copy to differentiate it from the original analysis node.

---

## Submit an Analysis

To submit an analysis definition:

1. In the project tree, select an analysis.
2. From the project tree menu, select **Submit Analysis**.

When you create an analysis definition, you can choose when you want to submit the analysis. For more information, see [“Select Variables or Options for Analyses” on page 71](#).

---

## Delete an Analysis Definition

To delete an analysis node:

1. In the project tree, select an analysis node.

2. From the project tree menu, select **Delete Analysis**.



## Chapter 8

# Analysis Output

---

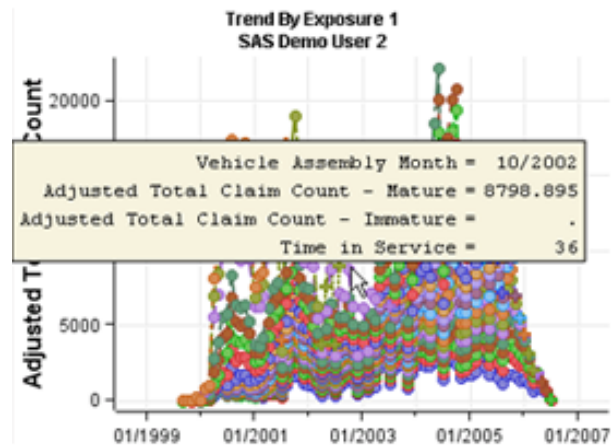
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---

## View Analysis Results

### Overview


After you have submitted an analysis, the results are displayed on the **Results** tab in the content display area of the Projects workspace. You can view and interact with the results in a number of ways. For most graphic results, you can position the mouse pointer over an element in the graphic to display a summary of information about the bar, a plot point, or other selected element.



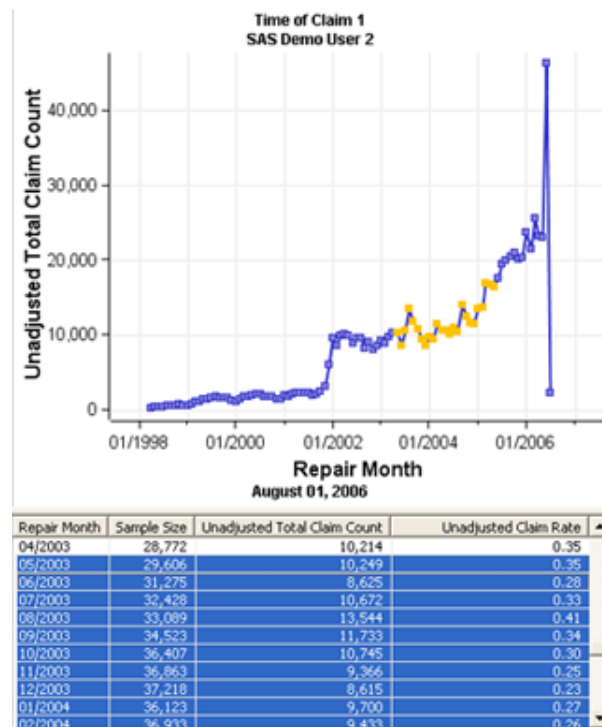
### Select Data Points in Results

The results of most analyses include at least one graphic and a summary table. The graphics and the tables are linked so that when you select data points on a graphic, the related information is highlighted in the related table. If you select rows in a table, then the related areas of the graphic are highlighted.

To select points on a graphic:

1. Click  on the Results toolbar.
2. Click a single element of the graphic, or click and drag to select multiple elements.

The related rows in the summary table are highlighted.



Note that you cannot select elements in a magnified graphic; however, you can position the mouse over a graphic element to display a data tip.


To select a single row in a table, click anywhere in the row.

To select multiple contiguous rows, click the first row, hold down the Shift key, and click the last row to include in the selection.


To select multiple noncontiguous rows, press the Control key and click each row to include in the selection.

## Adjust the View


### View Graph Only

To hide the table and display only the graphic, click  on the Results toolbar.

### View Table Only


To hide the graphic and display only the table, click  on the Results toolbar.

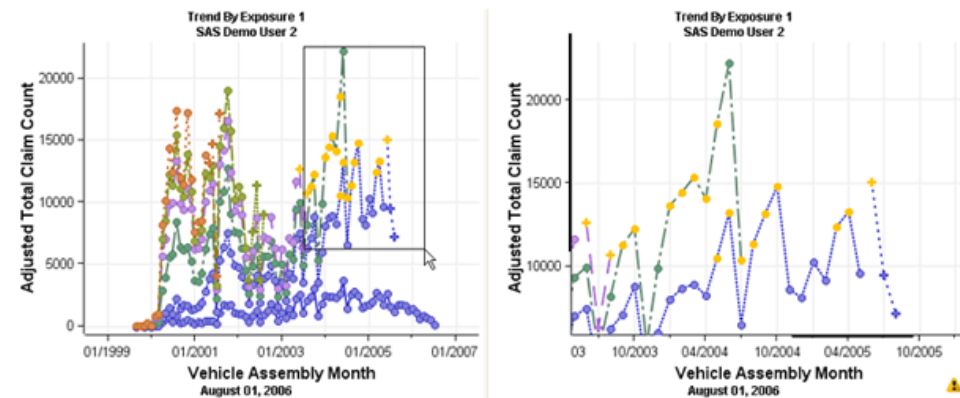
### View Graph and Table


To display both the graphic and the summary table, click  on the Results toolbar.

### Magnify Part of a Graphic


To magnify part of a graphic:


1. Click  on the Results toolbar.
2. Drag to draw a rectangle on a section of the graphic.



To restore the graphic to the normal view, click  at the bottom right of the graphic display.

### Adjust the Size of the Content Display Area

To hide the project tree and expand the size of the **Results** tab, click  on the Results toolbar.

To restore the project tree and the original size of the **Results** tab, click  on the Results toolbar.

---

## Detach an Analysis and Display It in a Separate Window

To open a separate window that displays analysis results:

1. Select an analysis.
2. Click **Detach in Window** from the project tree menu.

---

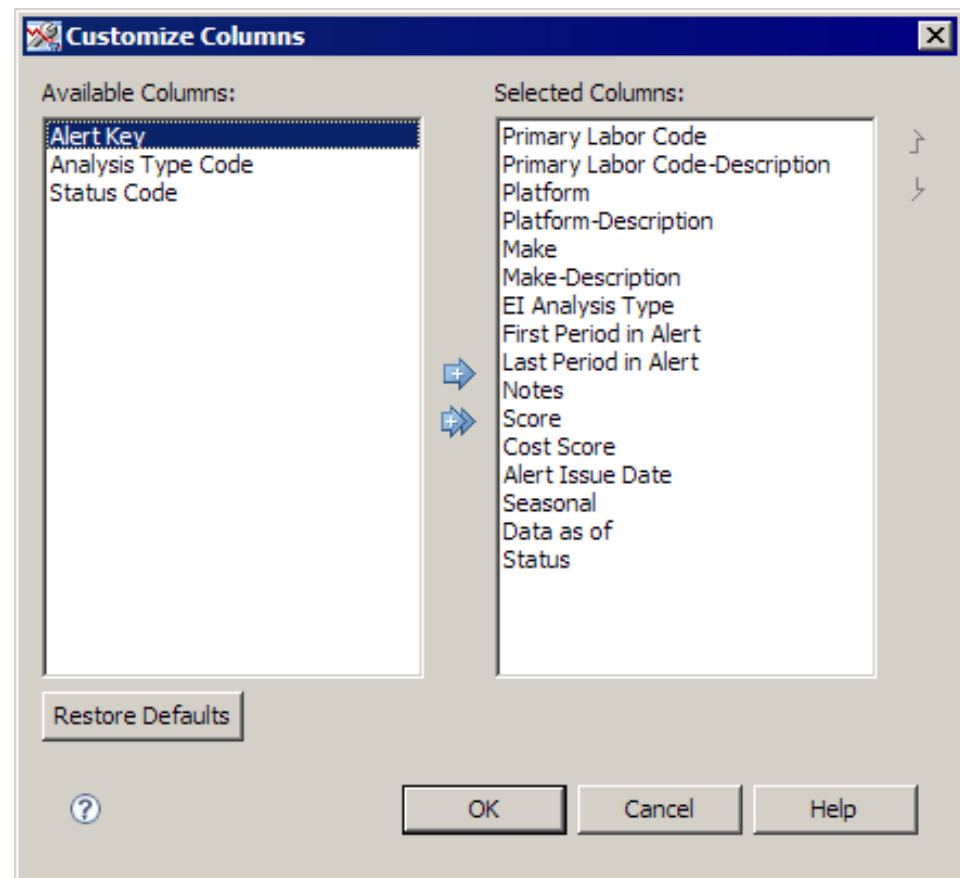
## Sort a Table

To sort a table column, right-click in a column and select **Sort Ascending** or **Sort Descending** on the pop-up menu.

---

## Customize Table Columns

You can select which table columns to display and specify the order in which they are displayed.



To customize a column, right-click anywhere in a table, and select **Customize Columns** from the pop-up menu.

Move items between the **Available Columns** list and the **Selected Columns** list by selecting items and clicking the arrow buttons between the lists.

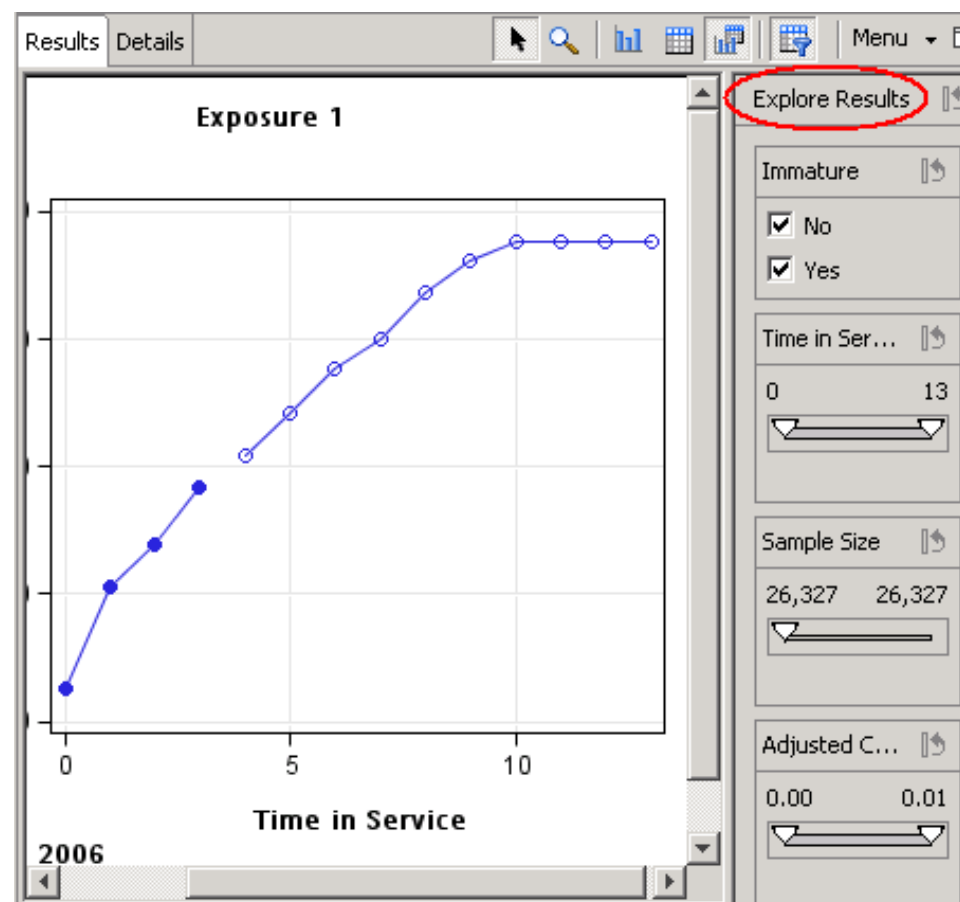
To change the order in which the columns are displayed, select a column name in the **Selected Columns** list and click the up arrow or the down arrow buttons.

To reset the column selection and placement to the default setting, click **Restore Defaults**.

## Explore Results

### The Explore Results Pane

After you run certain analysis types, the **Explore Results** pane is available. The **Explore Results** pane enables you to change the values of certain variables and immediately see the impact of the change on the results graph.




The following analysis types provide the **Explore Results** pane:

- Forecasting
- Reliability
- Time of Claim

- Trend by Exposure
- Trend/Control

### **Show or Hide the Explore Results Pane**

To show or hide the **Explore Results** pane, click  on the Results toolbar.

## **Slider Bars**

### **Overview**


For some analysis types, slider bars are available that enable you to change the values of some of the analysis variables.

Move the indicators at each end of the slider bar to specify a range of values for a variable in an analysis. By default, slider bars represent the minimum and maximum values for the corresponding variable. Examples of the variables that are surfaced as slider bars include the following:

- mileage intervals
- unadjusted total claim count
- unadjusted average parts cost per claim
- maximum age in days
- average age in days

You can also double-click a slider to open the Slider Properties dialog box, where you can type new range values for the variable.

When you change the minimum or maximum values, the graphic image displays the results of the change, and the color of the slider bar changes to indicate that the default values have been modified.

Click  to return the slider bar to the original value range.

### **The Slider Properties**

To change the minimum value, the maximum value, or both for a variable, type the minimum possible value in the **From (including)** field or type the maximum possible value in the **To (including)** field, respectively.

**Slider Properties**

Time in Service

	Minimum	Maximum
Entire Range:	0	13
Filtered Range:	0	13

Enter desired range values for this variable.

From (including):


To (including):

? OK Cancel Help

### Check Boxes

If you have included a group variable in your analysis or if the analysis automatically includes a group variable, then the group variable is represented by check boxes in the **Explore Results** pane.

You can select and clear check boxes to display or hide, respectively, the lines and rows in the table that correspond to the values of the group variable. This is useful when an analysis has many lines in the graph and the graph can be simplified by hiding certain groups. Check a box beside each value to include in an analysis.

Click  to select all check boxes (the default).

---

## Analyze a Subset

After you have submitted an analysis and viewed the output, you can select a specific point or value of a group variable (in the case of most line charts) in the graphic output to further subset the data of the current analysis and perform another one or more of the base analyses.

To analyze a subset:

1. Select one or more points or values in the graphic output, or select one or more rows in the summary table.
2. On the **Results** tab menu, select **Analyze Subset**.

The Select Analyses dialog box opens. For more information, see [“Select Analyses” on page 70](#).

After you select the analyses, the New Analysis dialog box opens. For more information, see [“Select Variables or Options for Analyses” on page 71](#).

3. Select the options and variables for the analysis, and select when to submit the analysis.

Note that when you analyze a subset from a multivariate statistical drivers analysis, you might notice what seem to be superfluous commas in the **Additional Subset Criteria** section of the **Data Selection Details** pane for the subset data. For example, you might see something like this:

- Customer Country = , CANADA, USA
- Customer Country = CANADA, , USA
- Customer Country = CANADA, USA, ,

The extra commas indicate missing values for variables in the subset data. In the example, the subset data contained some records in which the Customer Country variable contained the values CANADA and USA, and other records in which there was no value for the y variable. This missing value is represented by a comma.

---

## Analyze Multiple Points as Separate Data Sets

To analyze multiple points as separate data sets:

1. Select multiple points or values in the graphic output, or select multiple rows in the summary table.
2. On the **Results** tab menu, select **Analyze Separately**.

The Select Analyses dialog box opens. For more information, see [“Select Analyses” on page 70](#).

After you select the analyses, the New Analysis dialog box opens. For more information, see [“Select Variables or Options for Analyses” on page 71](#).

3. Select the options and variables for the analysis, and select when to submit the analysis.

---

## Change the Analysis Variable for a Graphic

To change the analysis variable for a graphic, right-click a graphic, select **Analysis Variable**, and then select a new analysis variable.

The graphic is immediately updated to reflect the change.

---

## Save an Analysis as a Report

### Overview

Reports are analyses that have been promoted, named, and added to the Reports workspace. Reports must be named. You can view your own reports and reports that other users have shared with you.

You can create reports only in the Projects workspace and only by using the Save as Report function. Before you can save an analysis as a report, you must save the related data



selection. You can save a static version of a completed analysis for archival purposes, or you can share the report with others as a published report. For more information, see [“Save a Data Selection” on page 45](#).

In order to access and work with the reports that you save, you must go to the Reports workspace.

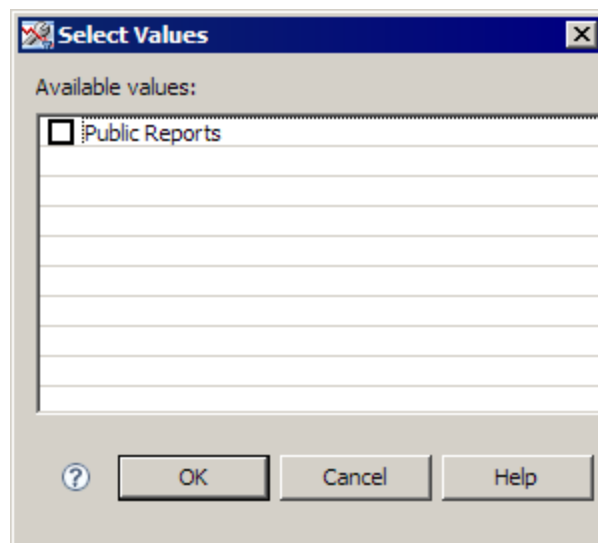
To save an analysis as a report:

1. Select an analysis.
2. From the project tree menu, select **Save as Report**.
3. If the Save Subset Data Selection As dialog box or the Save Simple Data Selection As dialog box opens, name the data selection, and click **OK**.
4. Complete the steps to create a new report in the New Report dialog box.

For more information, see [“Create a Report” on page 115](#).

## Select Values

You select a report category for an analysis when you create a new report. For more information, see [“Create a Report” on page 115](#).



Select the check box next to the category that you want to use.

---

## Export an Analysis to PDF

To export an analysis to a PDF file:

1. Select an analysis.
2. On the project tree menu, select **Export to PDF**.

The Export to PDF dialog box opens. For more information, see [“Export Information to a PDF File” on page 177](#).

---

## Export Results Table to Spreadsheet

To export a results table to an external spreadsheet file, on the **Results** tab menu, select **Export Results Table to Spreadsheet**.

The Export to Spreadsheet dialog box opens. For more information, see [“Export a Table to a Spreadsheet”](#) on page 169.

---

## Copy a Graphic to an External Document

To copy a graphic to an external document:

1. Right-click an image.
2. Select **Copy Image** on the pop-up menu.

The image is copied to the Windows clipboard.

3. Paste the image into an external document.

## **Part 4**

---

# Data Selections

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### *Chapter 10*

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## Chapter 9

# Overview of the Data Selections Workspace

---

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---

## About Data Selections

A data selection describes the criteria to use to create a subset of data for analysis. After you create a data selection, you can save it for future reuse.

When you define a data selection, you specify the data to include in a product or event subset (in other words, what to analyze). A data selection is not the physical subset of data.

The following statements are true of data selections:

- They can be used with any analysis.
- They can be reapplied.
- They can be copied from other users.


---


## The Data Selections Workspace

The Data Selections workspace enables you to manage your saved data selections. You can also create new data selections (simple or combined), and you can create new product and event selections from this page.

The Data Selections workspace also provides an easy way for you to view basic information about a data selection without entering edit mode. You can view information such as the data selection name, description, component type, data source, and the date when the data selection was last updated.

You can access the Data Selections workspace in any of the following ways:

- Select **Workspaces** ⇒ **Data Selections** from the main menu.
- Click  in the main toolbar.



**Data**  
Selections

Click **Data Selections** in the **Workspaces** pane.

## The Data Selection Viewer



### Overview

The Data Selection Viewer displays a table of data selections that you specify by selecting a type from the **View** list.

Data Selection Viewer



Menu

View: Product and Event Selections



Find:

☒ Contains ☐ Starts With

Selection Name	Description	Data Source	Data Type	Selection Type
 Product Sample Data		UTF-8 Mart	Products	Product Selection
 Top Issues		UTF-8 Mart	Products	Product Selection

Product selection name: Top Issues

Edit...


Used by: Projects (0)... Reports (0)... Other data selections (0)... Emerging Issues (0)...


Attribute	Selections
Front Tires	(all)
Cab Type	(all)
Passenger Seat	(all)
Windows	(all)

You can type search terms in the **Find** field to reduce the number of data selections that are displayed for selection.

The table's columns contain the following information for each data selection:

- selection name
- description
- data source group
- data source
- data type
- selection type
- subsetting
- created by
- created date
- share

Click  to delete a data selection of the type you select from the **View** list.

Click  to create a new data selection of the type you select from the **View** list:

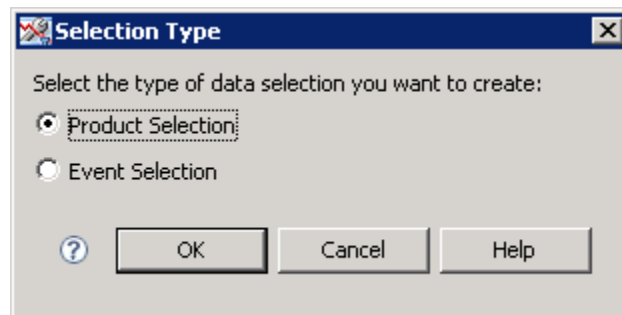
- **Product and Event Selections.** For more information, see [“The Selection Type Dialog Box” on page 93](#).
- **Simple Data Selection.** For more information, see [“Create a Simple Data Selection” on page 100](#).
- **Combined Data Selection.** For more information, see [“Create a Combined Data Selection” on page 101](#).

The lower half of the Data Selection Viewer displays the components that were used to create the data selection.

For example, if you select a simple data selection in the table, the lower part of the Data Selection Viewer displays the names of the product selection and the event selection that make up the simple data selection.

### ***The Selection Type Dialog Box***

Choose whether to create a product selection or an event selection.



Select **Product Selection** or **Event Selection**.





## Chapter 10

# Managing Data Selections

---

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Select Build Options .....	97
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<b>Create an Event Selection</b> .....	<b>98</b>
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---

## Create a Product Selection

### General Information

To create a product selection:

1. From the **Data Selection Viewer** pane menu, select **New** ⇨ **Product Selection**.  
The New Product Selection dialog box opens.

2. In the **Product selection name** field, type a name for the new product selection.
3. (Optional) Type a description of the product selection.
4. In the **Data source** field, select a data source for the product selection from the list. (If only one data source is available, then the list is unavailable.)
5. In the **Data type** field, select a data type for the product selection from the list.  
If only one data type is available, then the list is unavailable.
6. To add attributes to the product selection:
  - a. Click .  
The Select Attributes dialog box opens.
  - b. Complete the steps to select attributes.  
For more information, see [“Select Attributes” on page 173](#).
  - c. In the **Selected attributes** list of the New Product Selection dialog box, select an event attribute and use the controls in the **Selections** pane to define the attribute. (Various kinds of controls appear for different attributes.  
  
For most attributes, the **Selections** pane displays an **Available** list and a **Selected** list, but for some attributes, the **Selections** pane might contain radio buttons, check boxes, or other controls.)
7. (Optional) Select the build options and view the selection summary. For more information, see [“Select Build Options” on page 97](#) and [“View Selection Summary” on page 98](#).
8. Click **OK**.

9. To see the new product selection is displayed in the **Data Selection Viewer** pane, select **Product and Event Selections** from the **View** list.

## Select Build Options

You can specify build options for a product selection. Build options are available when you edit a product selection. For more information, see [“Begin Editing” on page 50](#).

**Select Build Options**

▼ **Search Options** ◆

Display items that match the settings below: [Edit search attributes...](#)

Product Build Option Code	Contains any of the words		<input type="button" value="Apply"/> <input type="button" value="Clear"/>
Product Build Option Description	Contains any of the words		
Locale	Contains any of the words		

Select one or more values from the list below.  
Values for build option groups: UTF-8 Mart

Product Build Option Code	Product Build Option Description	Locale
<input type="checkbox"/> 001	Front Tires	en_US
<input type="checkbox"/> 002	Cab Type	en_US
<input type="checkbox"/> 003	Passenger Seat	en_US
<input type="checkbox"/> 004	Windows	en_US
<input type="checkbox"/> 005	Steering	en_US
<input type="checkbox"/> 006	Driver Seating	en_US

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▼ **Items Selected (None)** ◆

Click the blue triangle to collapse (▼) or expand (◆) the **Search Options** pane or the **Items Selected** pane.

Double-click the blue diamond (◆) to fully expand either the **Search Options** area or the **Items Selected** area and hide whichever of these areas is not fully expanded.

The **Search Options** area enables you to apply search terms to build-option codes or other values to limit the number of values that are listed for selection. To customize the fields that appear in the **Search Options** area, click **Edit search attributes**. For information, see [“Edit Search Attributes” on page 131](#).

To specify search options settings:

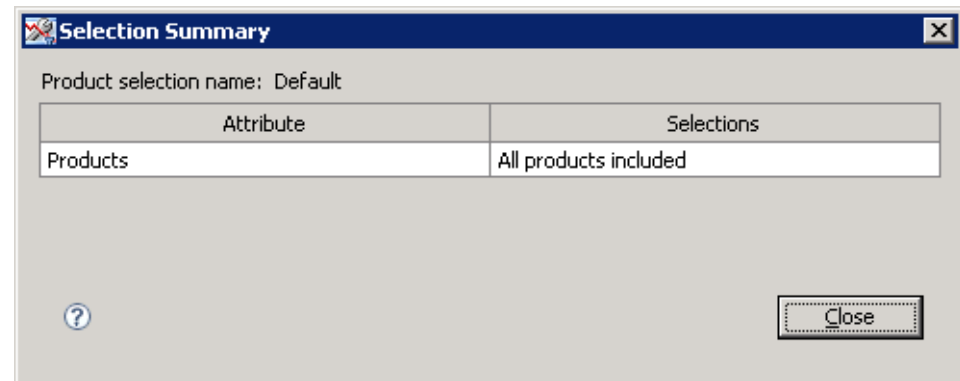
1. In the **Search Options** area, select the type of search from the first drop-down list:
2. Type search terms in the field to the right of the list.
3. To apply the search criteria, click **Apply**. Or to clear the search terms that you typed, click **Clear**.

To select build option values, select the check box beside a value to move the value to the **Items Selected** area.

In the **Items Selected** area, you can customize the list by sorting the list, removing an item from the list, or by removing all items from the list.

### View Selection Summary

You can view the selection summary when you specify information about a new product selection or a new event selection. For more information, see [“Create a Product Selection” on page 95](#) and [“Create an Event Selection” on page 98](#).



---

## Create an Event Selection

To create an event selection:

1. In the **Data Selection Viewer** pane menu, select **New** ⇒ **Event Selection**.

The New Event Selection dialog box opens.

**New Event Selection**

Event selection name:

Description:

Data source:

Data type:

Add attributes to use for selecting events, then specify the value for each attribute.

Selected attributes:

Selections:

[View Selection Summary...](#)

2. In the **Event selection name** field, type a name for the new event selection.
3. (Optional) In the **Description** field, type a detailed description of the event selection.
4. In the **Data source** field, select a data source for the event selection from the list. (If only one data source is available, then the list is unavailable.)
5. In the **Data type** field, select a data type for the event selection from the list. (If only one data type is available, then the list is unavailable.)
6. To add attributes to the event selection:
  - a. Click .  
The Select Attributes dialog box opens.
  - b. Complete the steps to select attributes.  
For more information, see [“Select Attributes” on page 173](#).
  - c. In the **Selected attributes** pane of the New Event Selection dialog box, select an event attribute and use the controls in the **Selections** pane to define the attribute. (Various kinds of controls appear for different attributes.  
  
For most attributes, the **Selections** pane displays an **Available** list and a **Selected** list, but for some attributes, the **Selections** pane might contain radio buttons, check boxes, or other controls.)
7. (Optional) View the selection summary.  
For more information, see [“View Selection Summary” on page 98](#).

8. Click **OK**.
9. In the Data Selections workspace, select **Product and Event Selections** from the **View** list.

The new event selection is displayed in the **Data Selection Viewer** pane.

## Create a Simple Data Selection

To create a simple data selection:

1. In the **Data Selection Viewer** pane menu, select **New** ⇒ **Simple Data Selection**.

The New Simple Data Selection dialog box opens.

Simple data selection name:

Description:

Data Source:

Select one product selection and one event selection.

Products Events

Find:  ☒ Contains ☐ Starts With

Selection Name	Description	Data Source Group	Selection Type
<input type="checkbox"/> DK		Data Source Group 1	Product Selection

Product selection name: <none>

? OK Cancel Help

2. In the **Simple data selection name** field, type a name for the new simple data selection.
3. (Optional) In the **Description** field, type a detailed description of the simple data selection.
4. In the **Data source** field, select a data source for the event selection from the list.  
All of the product and event selections for the selected data source are displayed. (If only one data source is available, then the list is unavailable.)
5. On the **Products** tab, select one product selection to be a component of the new simple data selection.

6. On the **Events** tab, select one event selection to be a component of the new simple data selection.
7. Click **OK**.
8. In the Data Selections workspace, select **Simple Data Selection** from the **View** list.  
The new simple data selection is displayed in the **Data Selection Viewer** pane.

## Create a Combined Data Selection

1. In the **Data Selection Viewer** pane menu, select **New** ⇒ **Combined Data Selection**.  
The New Combined Data Selection dialog box opens.

Combined data selection name:

Description:

Select at least two data selections to combine.

Find:  ☒ Contains ☐ Starts With

Selection Name	Description	Data Source Group	Selection Type

2. In the **Combined data selection name** field, type a name for the new combined data selection.
3. (Optional) In the **Description** field, type a detailed description of the combined data selection.
4. You can type search terms in the **Find** field to reduce the number of data selections that are displayed for selection.
5. Select the check boxes of the data selections to combine.
6. Click **OK**.
7. In the Data Selections workspace, select **Combined Data Selection** from the **View** list.  
The new combined data selection is displayed in the **Data Selection Viewer** pane.

---

## Edit a Product Selection

For information, see [“Begin Editing” on page 50](#).

---

## Edit an Event Selection

For information, see [“Begin Editing” on page 54](#).

---

## Edit a Simple Data Selection

To edit a simple data selection:

1. In the **Data Selection Viewer** pane, select **Simple Data Selection** from the **View** drop-down list.
2. Select a simple data selection.
3. From the **Data Selection Viewer** pane menu, select **Edit**.

The Edit Simple Data Selection dialog box opens.

Simple data selection name: Simple DS

Description:

Data Source: UTF-8 Mart

Select one product selection and one event selection.

Products Events

Find: Contains Starts With

Selection Name	Description	Data Source Group	Selection Ty
<input checked="" type="checkbox"/> Default		Data Source Group 1	Product Sele
<input type="checkbox"/> DK		Data Source Group 1	Product Sele

Product selection name: <none>

? OK Cancel Help



4. Type any desired changes in the **Simple data selection name**, **Description**, and **Data Source** fields.
5. Click the **Products** tab to select a different product selection to be a component of the simple data selection.
6. Click the **Events** tab to select a different event selection to be the other component of the simple data selection.

## Edit a Combined Data Selection

To edit a combined data selection:

1. In the **Data Selection Viewer** pane, select **Combined Data Selection** from the **View** drop-down list.
2. Select a data selection.
3. From the **Data Selection Viewer** pane menu, select **Edit**.

The Combined Data Selection dialog box opens.

Combined data selection name:

Description:

Select at least two data selections to combine.

Find:  ☒ Contains ☐ Starts With

Selection Name	Description	Data Source Group	Selection Type
<input checked="" type="checkbox"/> Simple DS 2		Data Source Group 1	Simple Data Selection
<input checked="" type="checkbox"/> Simple DS		Data Source Group 1	Simple Data Selection

Tree View:

- Simple DS 2
  - Default
  - Repair Date
- Simple DS
  - Default
  - Repair Date

Buttons: ? OK Cancel Help

4. Type any desired changes in the **Combined data Selection name** and **Description** fields.

5. Select or clear items in the list of data selections to change the data selections to combine.

---

## Export a Table to a Spreadsheet

To export a table to a spreadsheet, from the **Data Selection Viewer** pane menu, select **Export to Spreadsheet**.

For more information, see [“Export Information to a Spreadsheet” on page 176](#).

---

## Customize Columns

To customize the table columns, in the **Data Selection Viewer** pane menu, select **Customize Columns**.

The Customize Columns dialog box opens. For more information, see [“Customize Table Columns” on page 82](#).

---

## Copy a Data Selection

To copy a data selection:

1. From the **View** drop-down list, select the type of data selection.
2. In the **Data Selection Viewer** pane, select a data selection.
3. From the **Data Selection Viewer** pane menu, select **Copy**.

**Copy of** is prefixed to the name of the duplicate data selection. The copy is available for selection in the **Data Selection Viewer** pane.

---

## Delete a Data Selection

Data selections can be deleted only if they are not currently being used in a project.

To delete a data selection:

1. From the **View** drop-down list, select the type of data selection.
2. In the **Data Selection Viewer** pane, select a data selection.
3. From the **Data Selection Viewer** pane menu, select **Delete**.

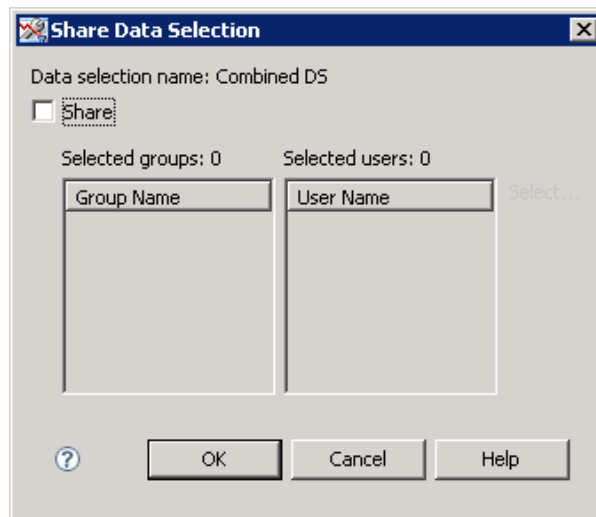
---

## Share a Data Selection

To share a data selection:

1. From the **View** drop-down list, select the type of data selection.
2. In the **Data Selection Viewer** pane, select a data selection.
3. From the **Data Selection Viewer** pane menu, select **Share**.

The Share Data Selection dialog box opens.



4. Select the **Share** check box.
5. Click **Select**.

For more information, see [“Select Users and User Groups” on page 175](#).

### See Also

[“Import a Shared Data Selection” on page 105](#)

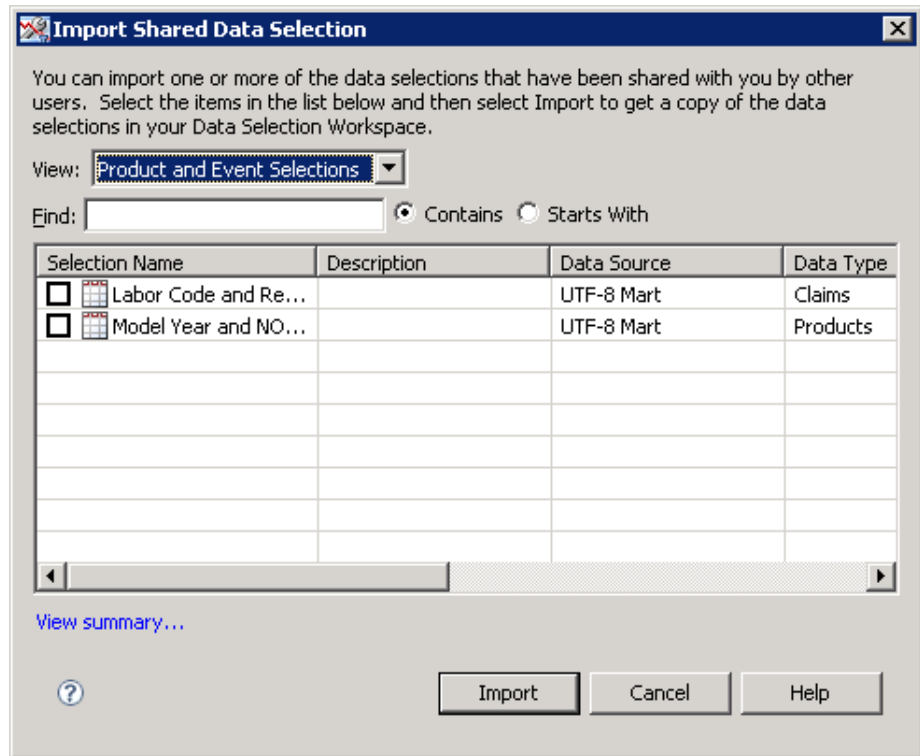
---

## Import a Shared Data Selection

To import a data selection that someone else has shared with you:

1. From the **Data Selection Viewer** pane menu, select **Import**.

The Import Shared Data Selection dialog box opens.



2. From the **View** list, select a type of data selection.
3. You can type search terms in the **Find** field to reduce the number of data selections that are displayed for selection.
4. Select data selections.
5. (Optional) View the summary.  
For more information, see [“View Selection Summary” on page 98](#).
6. Click **Import** to import the selected data selections.

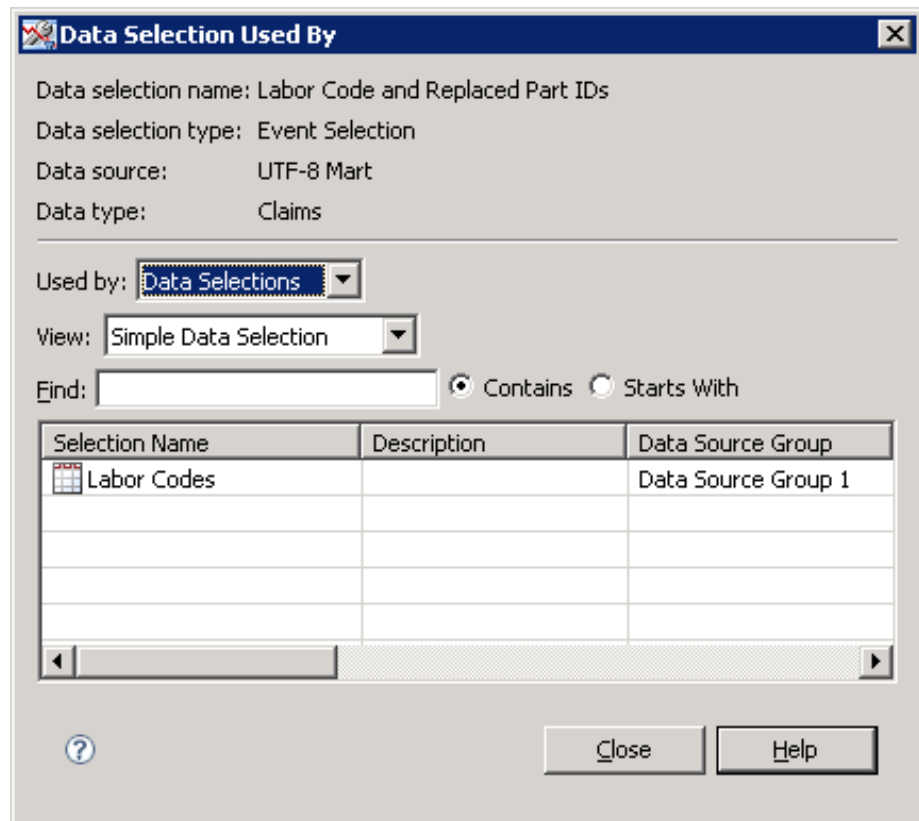
## See Also

[“Share a Data Selection” on page 105](#)

---

## Verify How a Data Selection Is Being Used

Links in the **Data Selection Viewer** pane indicate whether a selected data selection has been used in projects, reports, or other data selections. Click a link to open the Data Selection Used By dialog box.




**Data Selection Used By**

Data selection name: Labor Code and Replaced Part IDs  
 Data selection type: Event Selection  
 Data source: UTF-8 Mart  
 Data type: Claims

Used by: **Data Selections**

View: Simple Data Selection

Find:  ☒ Contains ☐ Starts With

Selection Name	Description	Data Source Group
 Labor Codes		Data Source Group 1

Close Help

The Data Selection Used By dialog box displays a table with details about each project, report, or data selection that uses the selected data selection.

In the **Used by** drop-down list, select **Projects**, **Reports**, or **Data Selections** to view related details.

If you select **Data Selections** in the **Used by** field, then select **Simple Data Selection** or **Combined Data Selection** from the **View** list.

If the list of projects, reports, or data selections is long, then you can use the **Find** field to limit the number of items displayed.



## Part 5

---

# Reports

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## Chapter 11

# Overview of the Reports Workspace

---

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---

## The Reports Workspace


The Reports Workspace is the part of the application where you can access and work with reports that are based on analyses that you have previously run and saved as reports. You can keep the reports for archival purposes, and you can make them available to other users. You must go to the Projects workspace to actually save an analysis as a report.

The Reports workspace enables you to perform the following actions:

- view and search personal and published reports
- delete personal reports
- publish personal reports
- add and edit report categories
- drill into a report's data or subset of data with other analyses
- see when a report has become outdated, either because the data selection definition has been changed in the Data Selections workspace, or because the data warehouse has been refreshed
- manually update a report (retrieve any changes to the data selection definition and new warehouse data)
- set a report to automatically update so that it gets run in batch after an extract, transform, and load process runs (for administrators only)
- export a report as a PDF file
- export most report tables to a spreadsheet (Excel) or comma-separated values (CSV) file
- zoom into and dynamically filter graphs

- copy graphs to paste into Microsoft PowerPoint or other applications

To access the Reports workspace, use any of the following methods:

- Select **Workspaces** ⇌ **Reports** on the main menu.
- Click  on the main toolbar.



Click **Reports** in the Workspaces pane.

## The Reports Workspace Content Display Area

### The Report Viewer

The **Report Viewer** pane of the Reports workspace provides several methods of locating and working with reports.

The screenshot shows the **Report Viewer** pane with a **View** dropdown set to **Published Reports**. Below it is a **Find** text box and two radio buttons: **Contains** (selected) and **Starts With**. A table lists several reports with columns for **Report Name**, **Report ID**, **Description**, and **Categories**.

Report Name	Report ID	Description	Categories
Multivariate Statistical ...	RG0FLDQ0Y		
Text Analysis 1	RG0FLG4KK		
Statistical Drivers 1	RG0FLEZ91		
SWA_Project_2_Pub_R...	RFZZS927W		
swa_project_1_pub_rp...	RFZZQDRHR		
Enterprise - Analytic Gr...	RFZZSGYAK		
Multivariate Statistical ...	RG0FM0WYE		

Below the report list is a tabbed interface with **Results**, **Summary**, and **Details** tabs. The **Importance List** is expanded, showing a table with columns for **Reporting Variable**, **Number of Splitting Rules**, and **Relative Importance**.

Reporting Variable	Number of Splitting Rules	Relative Importance
Tread Grouping	5	1
Campaign Type	4	0.863
Owner Country	1	0.85
Claim Status	1	0.723
Service Contrac...	4	0.649
Platform	1	0.592
Selling Dealer C...	0	0
Engine Model	0	0
In Service Status	0	0
Customer Conc...	0	0

Use the **View** list to specify whether to view published reports or only your own reports.

You can scroll through the list of reports that is displayed in the **Report Viewer** pane to find the report that you want to view, or you can use the **Find** box.

The **Find** box enables to you type a few letters and then search for all reports with names that contain the specified sequence of letters or for all reports with names that begin with the specified sequence of letters.

You can right-click inside the list of reports to display a pop-up menu. This menu enables you to sort any column in the table by ascending or descending order. You can also select **Customize Columns** to open the Customize Columns dialog box, where you can specify the columns of descriptive information that you want to display for each report in the list. For more information, see [“Customize Table Columns” on page 82](#).

### ***The Report Viewer Find Function***

By default, the **Report Viewer** pane lists all the reports that you have saved. Use the **Find** field to dynamically filter the reports that are listed. For example, if the report that you want to view is named First Quarter Claims, then you can type **First Quarter Claims** to list only that report, or you can type part of the title as described in step 3.

To find an existing report:

1. In the **View** list, select **My Reports** to list reports that you have saved for your own use, or select **Published Reports** to list reports that any user has saved as published reports.
2. To reduce the number of reports that are listed, type a term in the **Find** field. (Search is not case-sensitive.)
3. Select **Contains** to filter by a term that is part of the report’s name. Select **Starts With** to filter by one or more letters that the report’s name begins with. As you type the text, the list of reports is dynamically filtered, and the only reports that are listed are those with matching text in the **Name** field.
4. Select a report’s name to display the report in the Reports workspace.

### ***The Reports Workspace Results Tab***

When you select a report in the **Report Viewer** pane, relevant content tabs are displayed in the Reports content area. By default, the **Results** tab is displayed initially. The **Results** tab contains the graphics and related tables for the selected report.

### ***The Reports Workspace Details Tab***

The **Details** tab displays data selection and analysis details for the selected report.

### ***The Reports Workspace Messages Tab***

The **Messages** tab displays any messages related to the selected report.

### ***The Reports Workspace Explore Results Pane***

The appearance of the **Explore Results** pane is based on the type of analysis that was saved to create the selected report.

When you select a report, the **Explore Results** pane, if it is available, enables you to manipulate the report’s results. The controls on the **Explore Results** pane provide an easy way to alter the results quickly. For more information, see [“Slider Bars” on page 84](#) and [“Check Boxes” on page 85](#).



## Chapter 12

# Managing Reports

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---

## About Reports

After you select and submit an analysis in the Projects workspace, you can then save the analysis output as a report. This enables you not only to delete, update, or export the report to PDF, but also to edit the properties of the report and even to drill into the report—that is, perform additional analyses of the subset data that the report is based on.

## Create a Report

Reports are created in the Projects workspace from data in an analysis. For more information, see [“Save an Analysis as a Report” on page 86](#).

To create a report:

1. Accept the default name, or click **Edit** to change the name.  
The Choose Report Name dialog box opens.
2. Complete the steps to choose a report name.  
For more information, see [“Name a Report” on page 119](#).
3. (Optional) Type a description for the report.
4. (Optional) If **Edit** is available next to **Data selection**, click **Edit**, and then rename the data selection.
5. Click **Select** adjacent to the **Categories** list.  
For more information, see [“Select Values” on page 87](#).
6. (Optional) To update the report whenever the data base is refreshed:
  - a. Select the **Auto update** check box.
  - b. Choose to replace the existing report or create a new report and keep the existing report when an update occurs.



3. Click **Select** adjacent to the **Categories** list.  
For more information, see [“Select Values ” on page 87.](#)
4. (Optional) To update the report whenever the data base is refreshed:
  - a. Select the **Auto update** check box.
  - b. Choose to replace the existing report or create a new report and keep the existing report when an update occurs.
5. (Optional) To publish the report to selected users and user groups:
  - a. Select the **Publish report** check box.
  - b. To select the recipients, click **Select**.  
For more information, see [“Select Users and User Groups” on page 175.](#)

---


## Delete a Report

To delete a report:

1. In the **Report Viewer** pane, select a report.
2. In the **Report Viewer** pane menu, click **Delete Report**.

---

## Update a Report

If a report is associated with an outdated data selection, then the report is marked as outdated (). You can update the report by rerunning the original analysis against the updated data.

To update a report:

1. In the **Report Viewer** pane, select a report.
2. In the **Report Viewer** pane menu, click **Update Report**.  
The Update Reports Now dialog box opens.
3. Choose whether to replace the selected report with the updated version or create a new, updated report and keep the old report.

---

## Analyze in a Project

To further analyze a report:

1. Select a report.
2. In the **Report Viewer** pane menu, select **Analyze in Project**.  
The Open Project dialog box opens.
3. Complete the steps to open a project.



For more information, see [“Open a Project” on page 38](#).

The data node shows the attributes of the data selection definition that the report was based on. The subset of data associated with the data selection is present in the system. In the project tree, under the node, an analysis node is created, and the analysis results are displayed, along with the details and messages that the original report has. You can now use the same data selection subset to perform additional analyses. You can also drill down on a point on the graph, or even update the data selection (which submits the analysis again).

---

## Export a Report to PDF

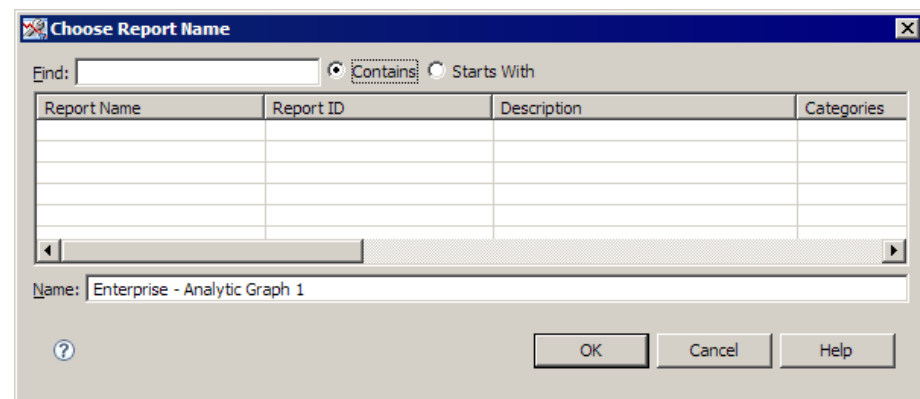
### Overview

To export a report to a PDF file, select a report, and select **Export to PDF** from the **Report Viewer** pane menu. Then, complete the Export to PDF dialog box. For more information, see [“Export Information to a PDF File” on page 177](#).

---

## Name a Report

You name a report when you create or edit a report. For more information, see [“Create a Report” on page 115](#) and [“Edit the Properties of a Report” on page 117](#).





## **Part 6**

---

# Emerging Issues

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## Chapter 13

# Overview of the Emerging Issues Workspace

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---

## About Emerging Issues

SAS Warranty Analysis emerging issues processes analyze your data to determine whether warranty issues are currently developing.

Emerging issues processes perform the following functions:

- The Enterprise-Analytic process and the Ad Hoc - Analytic process detect statistically significant upward shifts in claims or other warranty event activity and flag these events for investigation.
- The Ad Hoc - Threshold process notifies you when claim counts or other metrics surpass specified thresholds.

These processes display alerts and related graphics for you to review in the Emerging Issues workspace.

---

## The Emerging Issues Workspace

The alerts that result from enterprise and ad hoc processes for emerging issues are organized in the Emerging Issues workspace. This workspace enables you to manage and explore the results of the emerging issues processes that run after the extraction, transfer, and loading of data.


*Note:* Only users with Administrator access permissions or Emerging Issues Administrator access permissions can set up an emerging issues analysis, and they can do so only from the Administration workspace.


You can use the Emerging Issues workspace for the following purposes:

- search and sort the alerts (multiple column sort is supported)

- view the alerts for enterprise and ad hoc types
- sort the projected alerts by run group
- export an emerging issues alert as a PDF file
- export alert tables to spreadsheet or comma-separated value (CSV) format
- zoom into graphs
- copy graphs to paste into other applications
- for emerging issues Enterprise-Analytic alerts, change status (for example, Unassigned, Assigned, In Progress, Completed, Closed) and type and track notes

To access the Emerging Issues workspace, use any of the following methods:

- Select **Workspaces** ⇨ **Emerging Issues** on the main menu.
- Click  on the main toolbar.

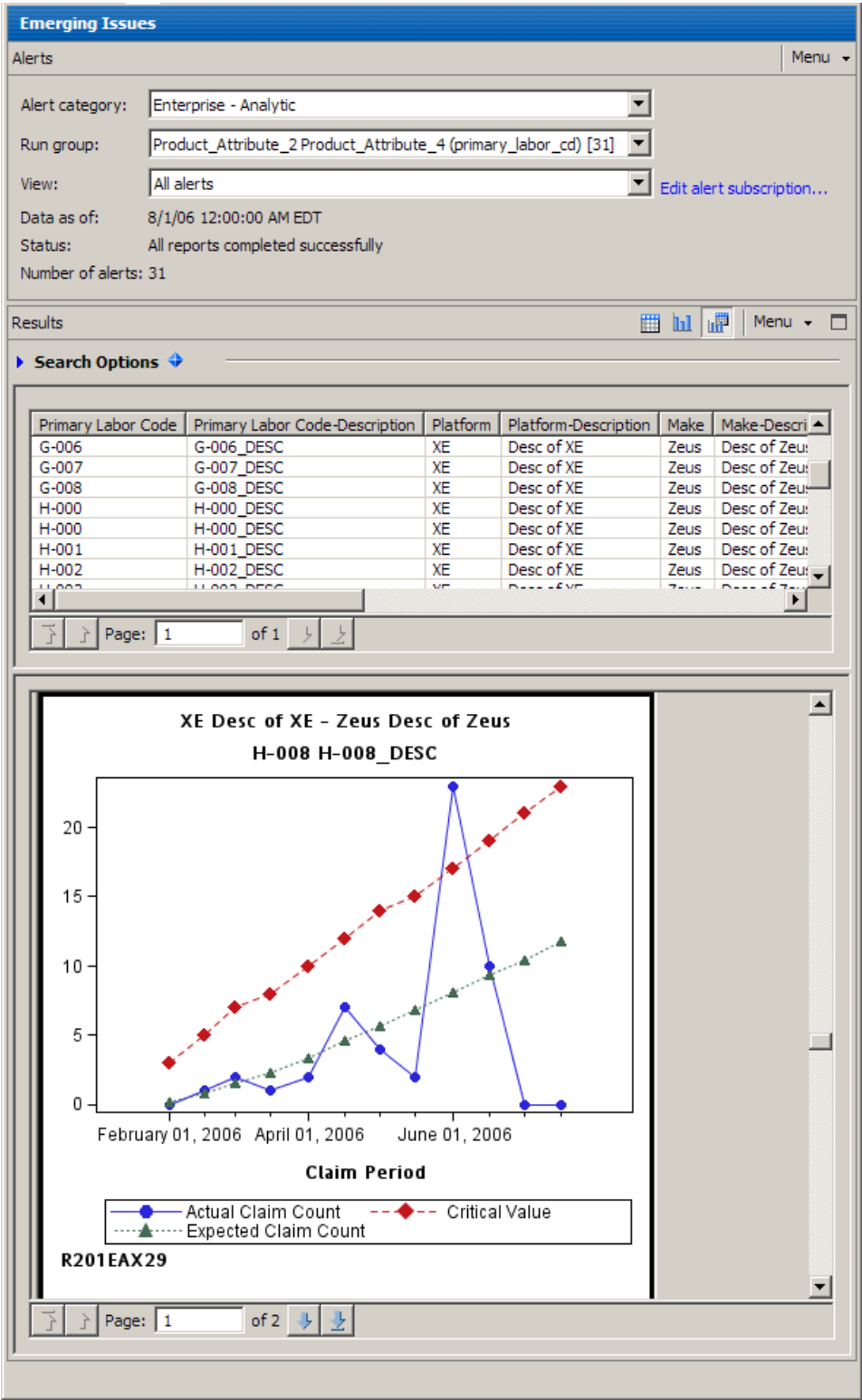
-   
Emerging  
Issues  
Click **Issues** in the **Workspaces** pane.

---

## The Emerging Issues Content Display Areas

### Overview

The Emerging Issues content display area contains an **Alerts** pane, where you can select the kind of alerts to investigate, and the **Results** pane, where you can view tables and graphics that display details of emerging issues alerts.



**The Alerts Pane**

Use the **Alerts** pane to control what is displayed in the **Results** pane.

The screenshot shows the 'Emerging Issues' workspace. The top pane is labeled 'Alerts' and contains the following controls:

- Alert category:** A drop-down menu currently set to 'Ad Hoc - Threshold'.
- View:** A drop-down menu currently set to 'All alerts', with a link 'Edit alert subscription...' next to it.
- Status:** A text label indicating 'All alerts completed successfully'.
- Number of alerts:** A text label indicating '2'.

The bottom pane is labeled 'Results' and contains a 'Search Options' section with a table of results. The table has five columns: 'Data as of', 'Analysis Name', 'Analysis Description', 'Reporting Variable', and 'Set Threshold'.

Data as of	Analysis Name	Analysis Description	Reporting Variable	Set Threshold
8/1/06	Atina Thres...		Engine Model	1.000
8/1/06	bryhen th		Engine Model	1.000

Below the table, there is a pagination control showing 'Page: 1 of 1'.

To specify which alerts to display in the **Results** pane:

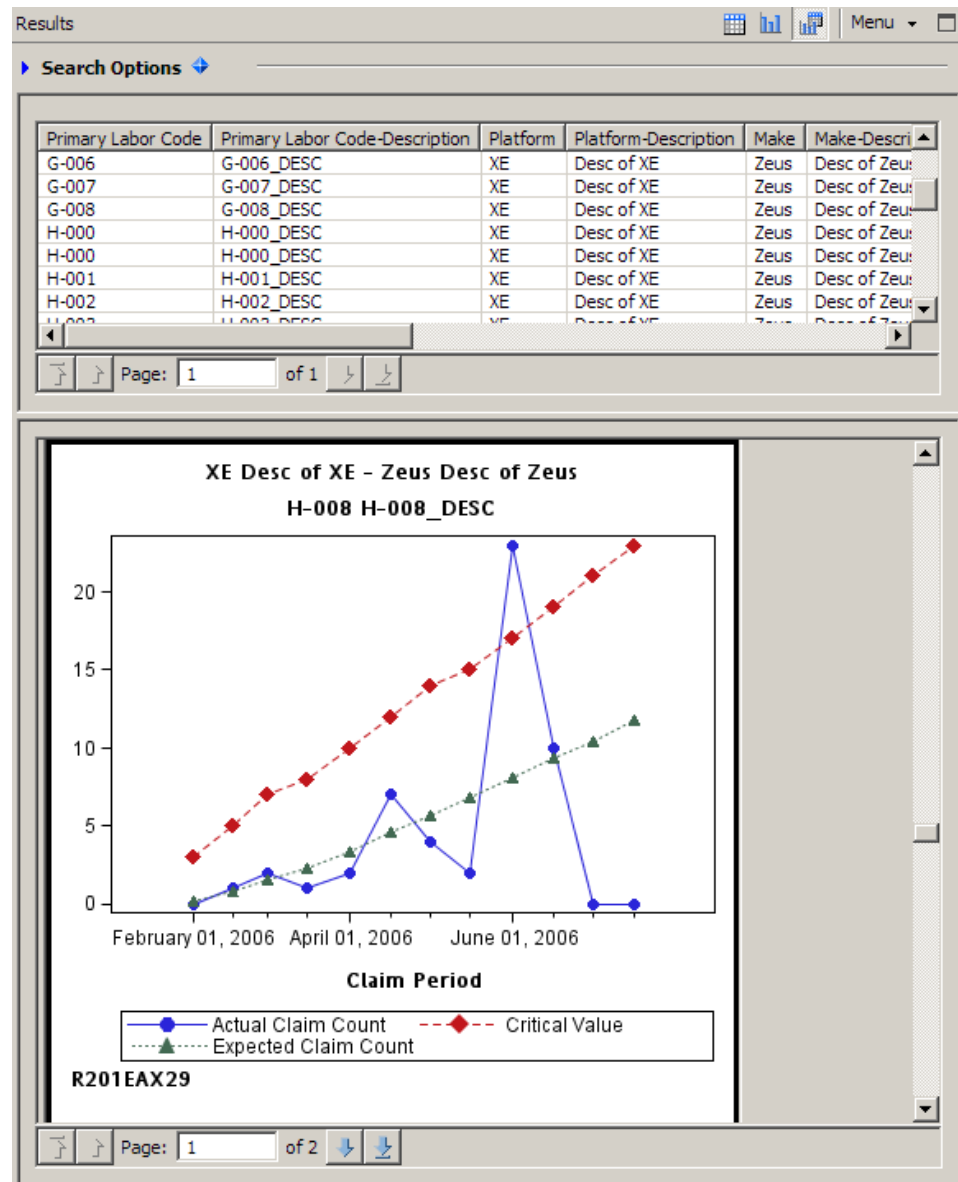
1. Click in the **Alert category** drop-down list and select a type of emerging issues alert.
2. For Analytic and Projected alert categories, select a run group.  
Text below the **View** drop-down list indicates when the data was most recently refreshed, the current status, and how many alerts were displayed when the process ran.
3. Select what to view from the **View** drop-down list.
4. (Optional) Click **Edit alert subscription**.  
For more information, see [“Subscribe to an Emerging Issue Alert” on page 130](#).
5. Use the **Search Options** area of the **Results** pane to limit the number of alerts that are listed by specifying values to search for in alert table columns.

Click **Edit search attributes** to specify which alert table columns can be searched. For more information, see [“Edit Search Attributes” on page 131](#).

## The Results Pane

All of the alerts that match the specifications that you typed in the **Alerts** pane are displayed in the **Results** pane.





You can use the Results toolbar to display a table that lists all the specified alerts, a set of graphs that illustrate the alerts, or both.

If you display both the table and the graphs, you can select an alert in the table to display its related graph.



## Chapter 14

# Managing Emerging Issues Alerts and Graphics

---

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---

## View Emerging Issues Alerts

To specify the category of emerging issues alerts to view, select **View Enterprise — Analytic Alerts**, **View Enterprise — Projected Alerts**, **View Ad Hoc — Analytic Alerts**, or **View Ad Hoc — Threshold Alerts** from the **Alerts** pane menu.

## Subscribe to an Emerging Issue Alert

To subscribe to an emerging issue alert:

1. In the **Results** pane, click **Edit alert subscription**, which is adjacent to the **View** drop-down list.

The Emerging Issues Subscriptions dialog box opens.

Number of subscriptions: 9 (0 active)

Find:  ☒ Contains ☐ Starts With

Active	Name	Description	Alert Category	Subscription Modification Date
<input type="checkbox"/>	Product_Attrib...	Product_Attribute_...	Enterprise - Analytic	
<input type="checkbox"/>	Atina [21]	Atina [21]	Enterprise - Analytic	
<input type="checkbox"/>	Atina 2 (Augus...		Ad Hoc - Analytic	
<input type="checkbox"/>	wei_analytic1 (...)		Ad Hoc - Analytic	
<input type="checkbox"/>	Atina		Ad Hoc - Threshold	
<input type="checkbox"/>	wei_threshold1		Ad Hoc - Threshold	
<input type="checkbox"/>	wei_test_auto...	wei_test_auto1 [21]	Enterprise - Analytic	

Subscription to: Atina

Subscription components:

- Atina
  - Component 1
    - Engine Model

Component settings: Engine Model <Products>

☒ Subscribe to all values  
☐ Subscribe to only selected values

☒ Include ☐ Exclude

☐ Send me e-mail notification for alerts in this subscription

2. (Optional) Search for a subscription.
3. In the list of subscriptions, select the check box in the **Active** column adjacent to a subscription.

*Note:* You can select more than one subscription.

4. To view the settings for a subscription, select the subscription row in the table.

The controls at the bottom of the dialog box are enabled.

5. From the list of subscription components, select a component.
6. From the **Component settings** area, choose the values to which to subscribe.

You can add more components for an Enterprise–Analytic emerging issue alert. Within one component the relationship is AND, and the relationship between components is OR.

7. (Optional) View the data selection summary.
8. To receive e-mail notification alerts, select the **Send me e-mail notification for alerts in this subscription** check box.

---

## Specify Search Values

In the **Search Options** area, for each column of the **Results** table that is available for searching, you can type search terms to reduce the number of alerts that are displayed.

For numeric values, you can type a number and select from the following options:

- is equal to
- is greater than
- is less than
- is greater than or equal to
- is less than or equal to

For text values, you can type one or more words and select from the following options:

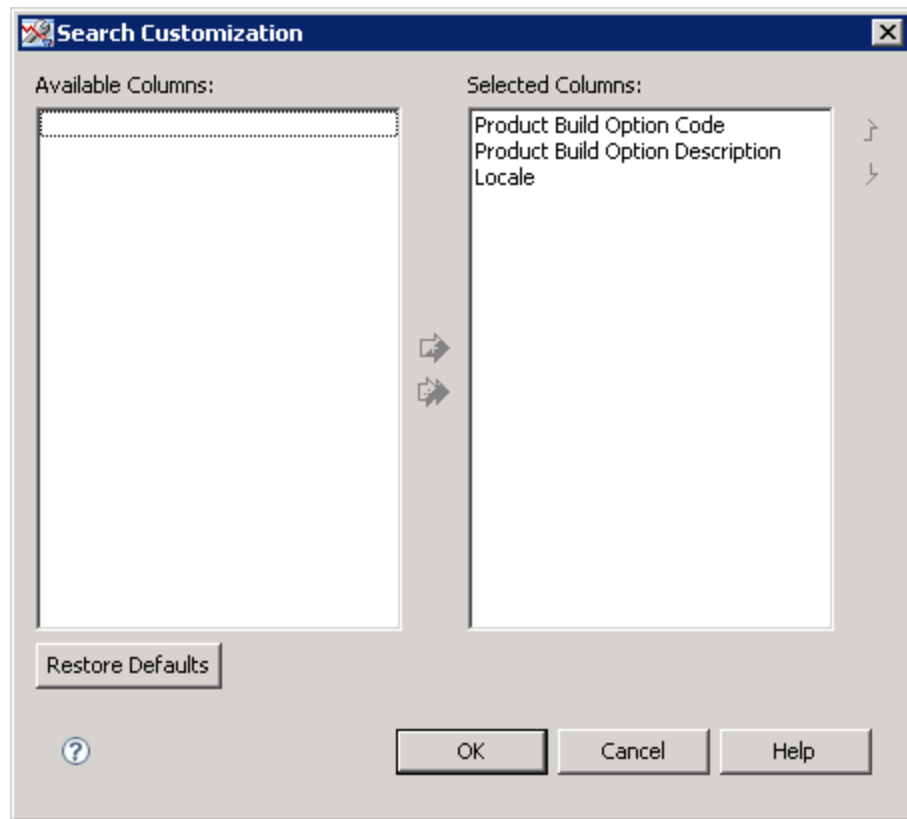
- contains any of the words
- contains all of the words
- contains exact match
- starts with any of the words
- starts with exact match

To change the items that are listed and available for searching in the **Search Options** area, click **Edit search attributes**. For more information, see [“Edit Search Attributes” on page 131](#).

---

## Edit Search Attributes

Use the Search Customization dialog box to specify items to be listed and available for searching.



To complete the Search Customization dialog box, move items between the **Available Columns** list and the **Selected Columns** list by selecting items and clicking the arrows between the lists.

The items in the **Available Columns** list are available in the **Search Options** area of the **Alerts** pane. The items in the **Selected Columns** list are not available in the **Search Options** area of the **Alerts** pane.

---

## Analyze an Emerging Issues Alert in a Project

To analyze an emerging issues alert in a project:

1. In the **Results** pane, select an alert.
2. From the **Results** pane menu, select **Analyze in Project**.

The Open Project dialog box opens. For more information, see [“Open a Project” on page 38](#).

3. Analyze the data.

For more information, see [“View Analysis Results” on page 79](#).

---

## View a Baseline Chart

To view the baseline chart of an emerging issues alert:

1. In the **Results** pane, select an alert.
2. From the **Results** pane menu, select **View Baseline Chart**.

A new window opens that contains the baseline chart.

---

## View a Detail Chart

To view the detail chart of an emerging issues alert:

1. In the **Results** pane, select a cell in a Production Period graph.
2. From the **Results** pane menu, select **View Detail Chart**.

A new window opens that contains the detail chart.

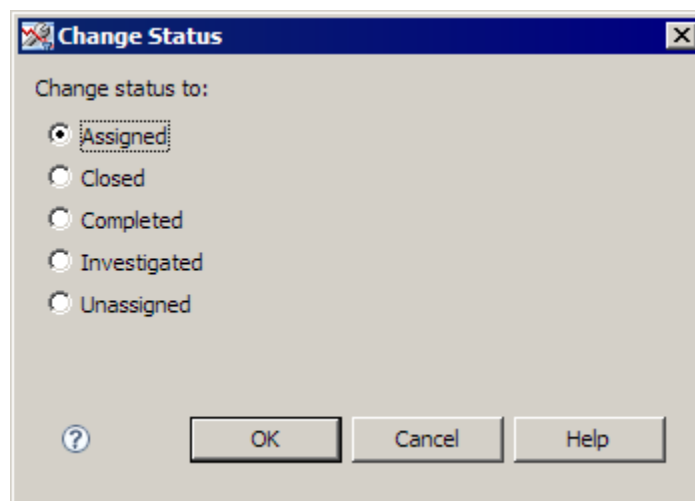
---

## Change the Status of an Emerging Issues Alert

To change the status of an emerging issues alert:

1. In the **Results** pane, select an alert.
2. From the **Results** pane menu, select **Change Status**.

The Change Status dialog box opens.



3. Select the new status for the alert.

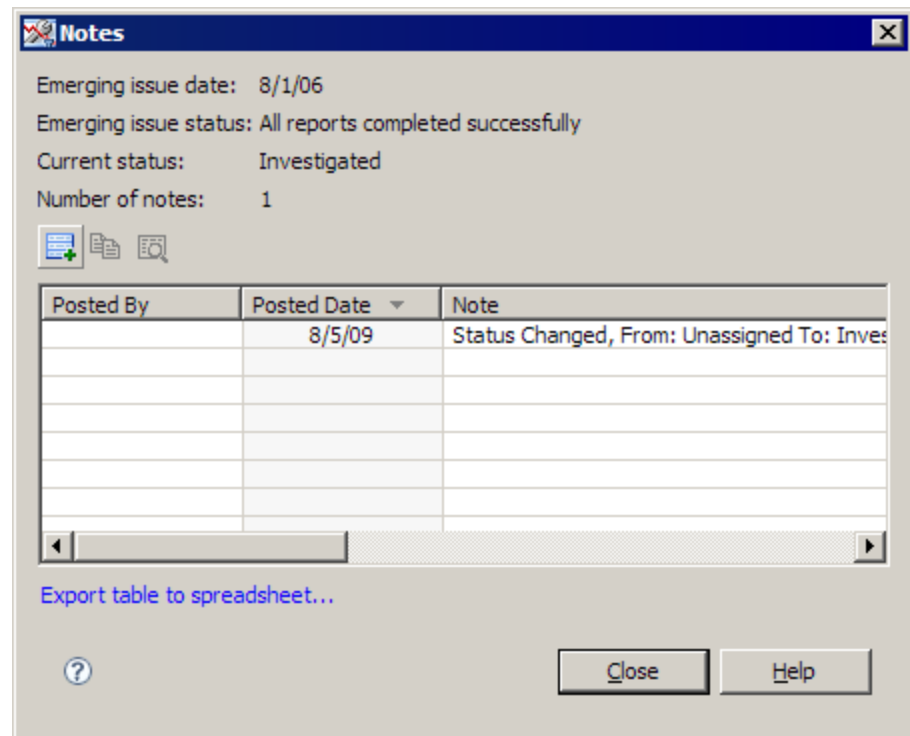
---

## View Notes

To view notes related to an emerging issues alert:

1. In the **Results** table, select an alert.
2. In the **Results** pane menu, select **View Notes**.

The Notes dialog box opens, showing summaries of any notes related to the emerging issues alert.



### See Also

- “Add a Note to an Emerging Issues Alert” on page 134
- “Export Notes Related to Emerging Issues Alerts” on page 135

---

## Add a Note to an Emerging Issues Alert

To add a note to an emerging issues alert:

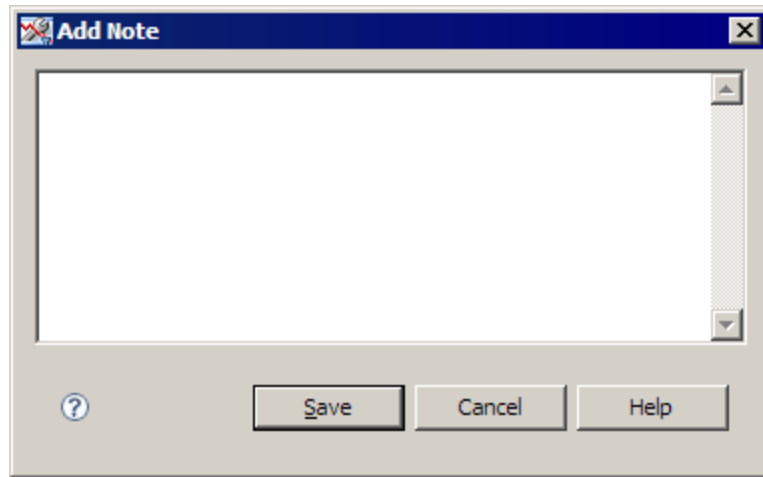
1. View the notes.

For more information, see “[View Notes](#)” on page 134.

2. Click .

The Add Note dialog box opens.





3. Type the text of the note.

### See Also

[“Export Notes Related to Emerging Issues Alerts” on page 135](#)

---

## Export Notes Related to Emerging Issues Alerts

To export notes related to an emerging issues alert:

1. View the notes.  
For more information, see [“View Notes” on page 134](#).
2. Click **Export table to spreadsheet**.  
The Export to Spreadsheet dialog box opens.
3. Complete the steps to export the notes.  
For more information, see [“Export a Table to a Spreadsheet” on page 169](#).

---

## View Emerging Issues Graphs and Charts

To view a graph or chart for an emerging issues alert:

1. In the **Results** table, select an alert.  
The related graphic is displayed below the table.
2. In the **Results** pane menu, you can select to view a baseline or detail chart (if available) in a separate window.

If many values are included in a chart or graph, the labels for these values might not be visible in the initial display. If you do not see the labels, detach the chart or graph and make it larger and the labels will become visible. For more information, see [“Detach a Chart” on page 137](#).

## Export Alert Table to Spreadsheet

To export an alert table to a spreadsheet, in the **Results** pane menu, select **Export Alert Table to Spreadsheet**.

The Export to Spreadsheet dialog box opens. For more information, see [“Export a Table to a Spreadsheet” on page 169](#).

---

## Export Alert to PDF

To export an alert to a PDF file:

1. In the **Results** pane, select an alert.
2. In the **Results** pane menu, select **Export Alert to PDF**.

For more information, see [“Export Information to a PDF File” on page 177](#).

---

## Customize Columns

To customize the table columns, in the **Results** pane menu, select **Customize Columns**.

The Customize Columns dialog box opens. For more information, see [“Customize Table Columns” on page 82](#).

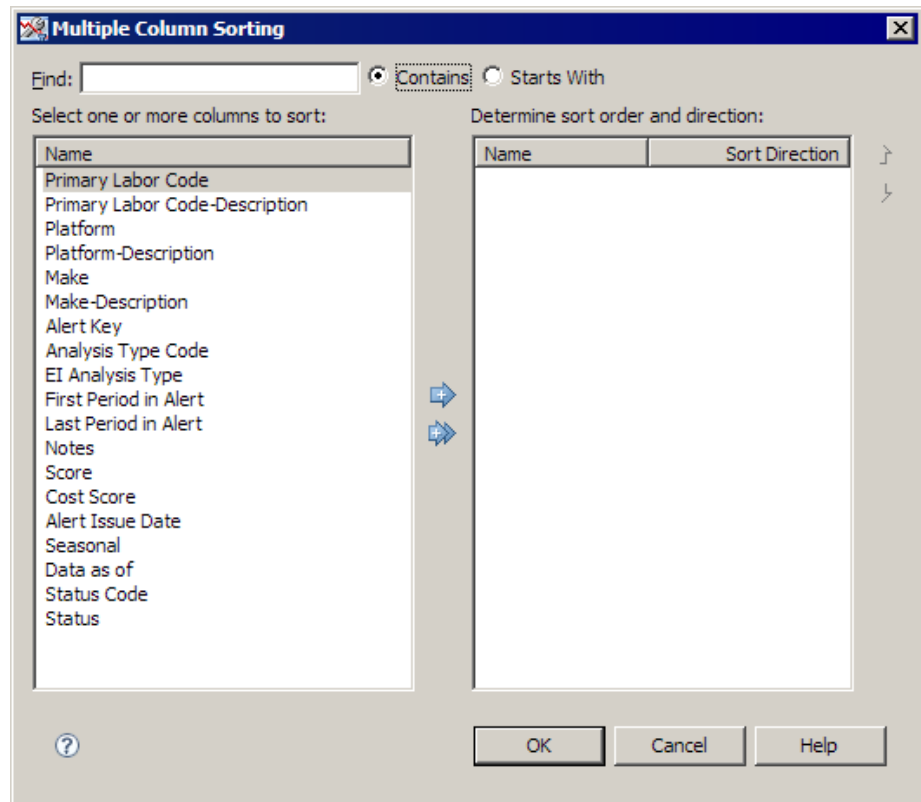
---

## Sort Multiple Columns

To sort a table by more than one column:

1. Right-click on the table and select **Sort**.

The Multiple Column Sorting dialog box opens.



2. Move items between the lists using the arrows that are between the lists.
3. To change the order of the columns that are sorted, select an item in the **Determine sort order and direction** list, and then click the arrows that are adjacent to the list.

---

## Detach a Chart

To display a chart in a separate window:

1. In the **Results** pane, select an alert.
2. In the **Results** pane menu, select **Detach Chart**.

---

## Select What to Display

You can limit what is displayed in the **Results** pane by selecting one of the following options from the **Results** pane menu:

- To hide graphs and view only tables in the **Results** pane, select **View Table Only**.
- To hide tables and view only graphs in the **Results** pane, select **View Graphs Only**.
- To view both table and graphs in the **Results** pane, select **View Table and Graphs**.

## Copy an Image

To copy an image from the Emerging Issues workspace into an external document, use the steps described in [“Copy a Graphic to an External Document”](#) on page 88.

## Part 7

---

# Administration

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## Chapter 15

# Overview of the Administration Workspace

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---

## The Administration Workspace


Users with administrative rights have access to the Administration workspace.

The Administration workspace enables administrative users to modify the default settings. This enables administrators to adapt the application to changes in product lines and corporate best practices for analyzing warranty data.

If you have administrative rights, you can use the Administration workspace to accomplish the following tasks:

- edit the default settings for each analysis for each warranty type that is configured in the application.
- edit the product and event selection defaults for each data source and product or event type that is configured in the application. If configuration does not customize the defaults, the out-of-the box default is All Products and All Events.
- create and manage messages and URL links that users can see in the application and in the Web client.
- create and manage report categories, which users can assign to reports that they create and publish.
- view and access emerging issues analyses (if administrative access to emerging issues analyses has been assigned).

You can access the Administration workspace in any of the following ways:

- Select **Workspaces** ⇒ **Administration** from the main menu bar.
- Click  on the main toolbar.

- 



Click **Administration** in the **Workspaces** pane.





## Chapter 16

# Analysis Option Defaults

---

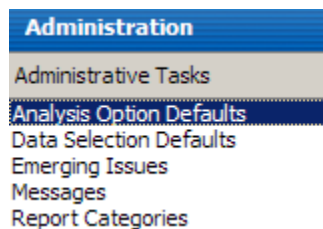
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---

## Open Analysis Option Defaults Administration

*Note:* To administer analysis option defaults, you must have Administrator user permissions.

To change the analysis option defaults, select **Analysis Option Defaults** in the **Administrative Tasks** pane.



The **Analysis Option Defaults** pane opens.

Analysis Option Defaults Menu ▾

Select an analysis to view and edit its options for each warranty program type supported.

Analysis Name
Details Table
Exposure
Forecasting
Geographic
Multivariate Statistical Drivers
Pareto
Reliability
Statistical Drivers
Text Analysis
Time of Claim
Trend/Control
Trend By Exposure
Enterprise - Analytic
Enterprise - Projected
Ad Hoc - Analytic

**Analysis options for Details Table:**

Warranty program type: Time and usage based warranty ▾ [Edit Options...](#)

Analysis Option	Setting
<input type="checkbox"/> <b>Variables</b>	
Data type	Claims
Reporting variables	Replaced Part Amount, Replaced Part Number, Replace...
<input type="checkbox"/> <b>Filtering Options</b>	
Claims per unit to include	All
Maximum exposure	
Maturity level	
Include pre-delivery claims	Yes

## Edit Analysis Options

*Note:* This feature is available only to users who have Administrator user permissions.

To edit the analysis option defaults:

1. In the **Analysis Option Defaults** pane, select an analysis.
2. On the **Analysis Option Defaults** pane menu, select **Edit Analysis Options**.  
A confirmation message is displayed.
3. Click **Edit**.

The Edit Analysis Options dialog box opens.

**Edit Analysis Options**

**Variables**

Data type: Claims <Claims> Select...

Reporting variables: Replaced Part Amount <Replac Select...  
Replaced Part Number <Replac Select...  
Replaced Part Quantity <Replac Select...

**Filtering Options**

Claims per unit to include: All

Maximum exposure: (none) Select...

Maturity level: (none) Select...

Include pre-delivery claims: Yes

? OK Cancel Help

4. Change the options.

*Note:* The available options depend on the analysis that you selected. Also, some options are controlled by the interactions with other options, so you cannot set those defaults here.



## Chapter 17

# Data Selection Default Settings

---

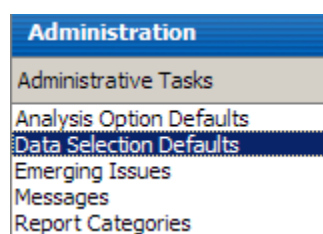
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Add Attributes to the Event Selection . . . . .	151
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---

## Open Data Selection Default Administration

*Note:* To administer data selection defaults, you must have Administrator user permissions.

To change the defaults for product and event selections, select **Data Selection Defaults** in the **Tasks** pane.



The **Data Selection Defaults** pane opens.

Data Selection Defaults
Menu

Data source: UTF-8 Mart

**Product selection defaults**  
Last Modified:  
Product type: Products Edit...

Attribute	Selections
Products	All products included

**Event selection defaults**  
Last Modified:  
Event type: Claims Edit...

Attribute	Selections
Events	All events included

## Edit the Product Selection Default Settings

### Overview

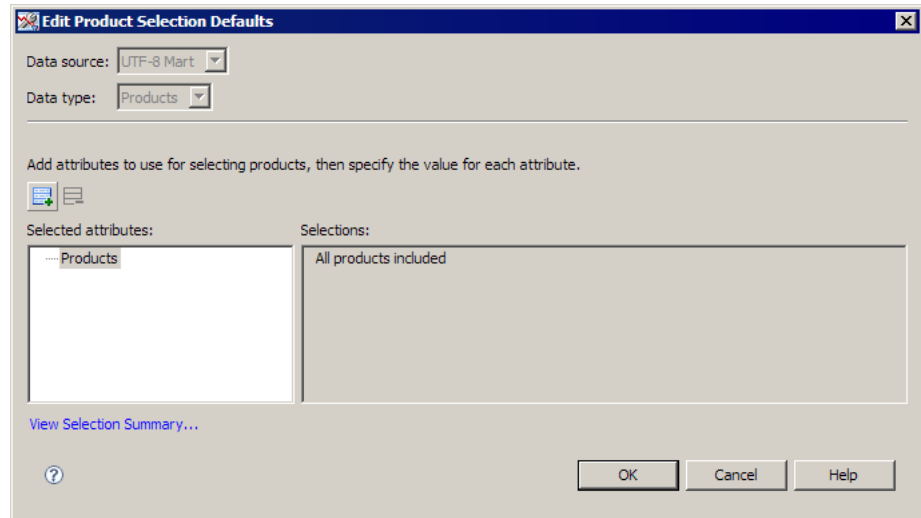
*Note:* To edit product selection default settings, you must have Administrator user permissions.

You can add attributes to a product selection, remove attributes from a product selection, and change the definitions of a product selection's attributes.

To edit the default settings of a product selection:

1. In the **Product selection defaults** area of the **Data Selection Defaults** pane, select a product type, and click **Edit**.  
A confirmation message is displayed.
2. Click **Edit**.

The Edit Product Selection Defaults dialog box opens.



### Add Attributes from the Product Selection

To add attributes to the product selection:

1.

Click .

The Select Attributes dialog box opens.

2. Complete the steps to select attributes.

For more information, see [“Select Attributes” on page 173](#).

3. In the **Selected attributes** list of the Edit Product Selection Defaults dialog box, select an attribute and use the controls in the **Selections** pane to define the attribute.

The controls that appear depend on the attribute that you select. For most attributes, the **Selections** pane displays an **Available** list and a **Selected** list, but for some attributes, the **Selections** pane might contain radio buttons, check boxes, or other controls.

### Remove Attributes from the Product Selection

To remove attributes from the product selection:

1. In the **Selected attributes** list, select the attributes.

2. Click .

Either the attribute is removed immediately, or the Select Attributes dialog box opens so that you can remove the attribute. For more information, see [“Select Attributes” on page 173](#).

### Change the Definitions of a Product Selection's Attributes

To change the definitions of a product selection's attributes:

1. In the **Selected attributes** list, select an attribute.

2. Use the controls in the **Selections** pane to change the definition of the selected attribute.

---

## Edit the Event Selection Default Settings

### Overview

*Note:* To edit event selection default settings, you must have Administrator user permissions.

You can add attributes to an event selection, remove attributes from an event selection, and change the definitions of an event selection's attributes.

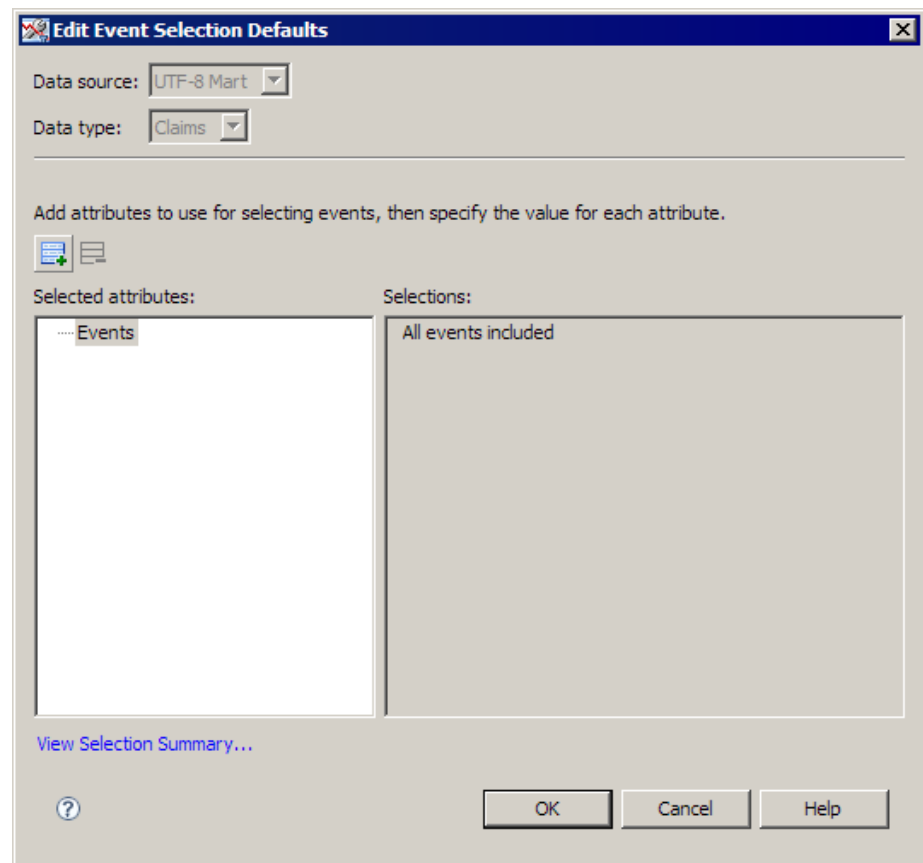
To edit the default settings of an event selection:

1. In the **Event selection defaults** area of the **Data Selection Defaults** pane, select an event type, and click **Edit**.

A confirmation message is displayed.

2. Click **Edit**.

The Edit Event Selection Defaults dialog box opens.





### **Add Attributes to the Event Selection**

To add attributes to the event selection:

1.

Click .

The Select Attributes dialog box opens. For more information, see [“Select Attributes” on page 173](#).

2. In the **Selected attributes** list of the Edit Event Selection Defaults dialog box, select an attribute and use the controls in the **Selections** pane to define the attribute.

The controls that appear depend on the attribute that you select. For most attributes, the **Selections** pane displays an **Available** list and a **Selected** list, but for some attributes, the **Selections** pane might contain radio buttons, check boxes, or other controls.

### **Remove Attributes from the Event Selection**

To remove attributes from the event selection:

1. In the **Selected attributes** list, select the attributes.

2. Click .

Either the attribute is removed immediately, or the Select Attributes dialog box opens so that you can remove the attribute. For more information, see [“Select Attributes” on page 173](#).

### **Change the Definitions of an Event Selection's Attributes**

To change the definitions of an event selection's attributes:

1. In the **Selected attributes** list, select an attribute.

2. Use the controls in the **Selections** pane to change the definition of the selected attribute.



## Chapter 18

# Emerging Issues Settings

---

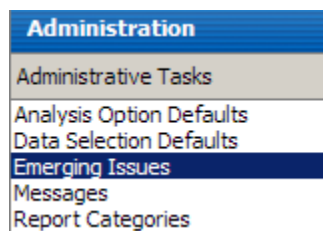
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---

## Open Emerging Issues Administration

*Note:* To administer emerging issues, you must have Administrator user permissions.

To change the settings for emerging issues analyses, select **Emerging Issues** in the **Administrative Tasks** pane.



The **Emerging Issues** pane opens.

Emerging Issues Menu ▾

Enterprise - Analytic Enterprise - Projected Ad Hoc - Analytic Ad Hoc - Threshold

Find:  ☒ Contains ☐ Starts With

Name	Description	Created	Modified
tina		8/27/09	8/27/09
wei		9/3/09	10/28/09
Max		11/6/09	11/9/09
S0624358		11/11/09	11/11/09

▼ Analysis Settings ◆

Analysis Option	Setting

## Create an Emerging Issues Analysis

*Note:* To create an emerging issue analysis, you must have Administrator access permissions or Emerging Issues Administrator access permissions.

To create an emerging issues analysis:

1. Select **Emerging Issues** in the **Administrative Tasks** pane.
2. Select the tab for the kind of analysis that you want to create.
3. Select **New** from the **Emerging Issues** pane menu.

The New Emerging Issues dialog box opens.

**New Emerging Issues Analysis**

Name:  
[Text Box]

Description:  
[Text Box with scrollbar]

▼ Data Selection Details ▸

[Replace data selection...](#)

▼ Analysis Settings ▸

[Large empty text area]

Locale: English (US)

[?] [OK] [Cancel] [Help]

4. Type a name.
5. (Optional) Type a description.
6. To replace the data selection for an analytic or threshold analysis, click **Replace data selection**.  
The Select Data Selection dialog box opens.
7. Complete the steps to select a data selection.  
For more information, see [“Select a Data Selection” on page 174](#).
8. Use the fields in the **Analysis Settings** area to define the variables and options for the emerging issues analysis.

## Edit an Emerging Issues Analysis

*Note:* To edit an emerging issues analysis, you must have Administrator user permissions or Emerging Issues user permissions.

You can change the definition of an existing emerging issues analysis.

To change an emerging issues analysis:

1. Select **Emerging Issues** in the **Administrative Tasks** pane.
2. Select the tab for the kind of analysis that you want to edit.
3. Select an analysis.
4. Select **Edit** from the **Emerging Issues** pane menu.

The Edit Emerging Issues dialog box opens.

**Edit Emerging Issues Analysis**

Name: EI Analysis Q1

Description:

▼ **Data Selection Details** ▸

[Replace data selection...](#)

Data selection name: 68Cyl  
Product selection name: 68Cyl

Attribute	Selections
Engine Model (2)	Desc of 6 cylinder, Desc of 8 cylinder

Event selection name: All

Attribute	Selections
Events	All events included

▼ **Analysis Settings** ▸

**Variables**

Segments: In Service Year Code Select... Clear

**Analysis Options**

Assigned to: Atina Brooks Select... Clear

? OK Cancel Help

5. Use the fields in the dialog box to change the name, the description, or the variables and options for the selected emerging issues analysis.
6. To replace the data selection for an analytic or threshold analysis, click **Replace data selection**.

The Select Data Selection dialog box opens.

7. Complete the steps to select a data selection.

For more information, see [“Select a Data Selection” on page 174](#).

## Delete an Emerging Issues Analysis

*Note:* To delete an emerging issues analysis, you must have Administrator user permissions or Emerging Issues user permissions.

To delete an emerging issues analysis:

1. Select **Emerging Issues** in the **Administrative Tasks** pane.
2. Select the tab for the kind of analysis that you want to delete.
3. Select an analysis.
4. Select **Delete** from the **Emerging Issues** pane menu.



## Chapter 19

# Messages

---

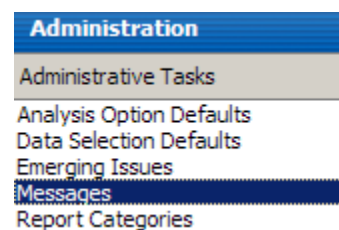
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---

## Open Messages Administration

*Note:* To administer messages, you must have Administrator user permissions.

Select **Messages** in the **Administrative Tasks** pane to work with links and news items.



The **Messages** pane opens.

The screenshot shows a web-based administration interface for messages. It has a title bar 'Messages' with a 'Menu' dropdown. Below the title bar, there are two main sections: 'News' and 'Links'. Each section has a 'Manage...' link in the top right corner. The 'News' section contains a table with four columns: 'Title', 'Creator', 'Date Created', and 'Expiration Date'. The 'Links' section contains a table with four columns: 'Text', 'Tooltip', 'Link', and 'Createo'. Both tables are currently empty. At the bottom of the interface, there is a horizontal scrollbar.

Title	Creator	Date Created	Expiration Date

Text	Tooltip	Link	Createo

## News

### Manage News

*Note:* To manage news, you must have Administrator user permissions.

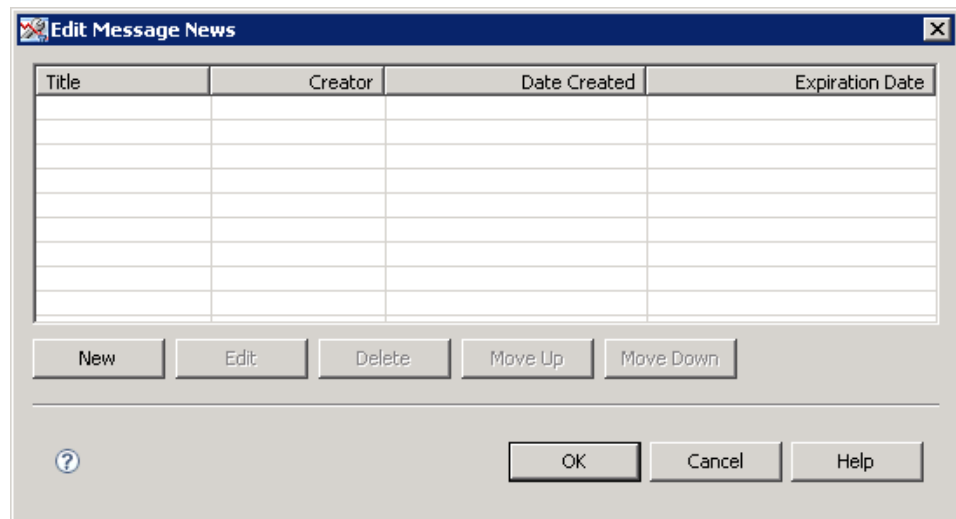
To edit message news:

1. Open messages administration.

For more information, see “[Open Messages Administration](#)” on page 159.

2. Click **Manage** in the **News** pane.

The Edit Message News dialog box opens.



## Add a News Item

*Note:* To add a news item, you must have Administrator user permissions.

To add a news item:

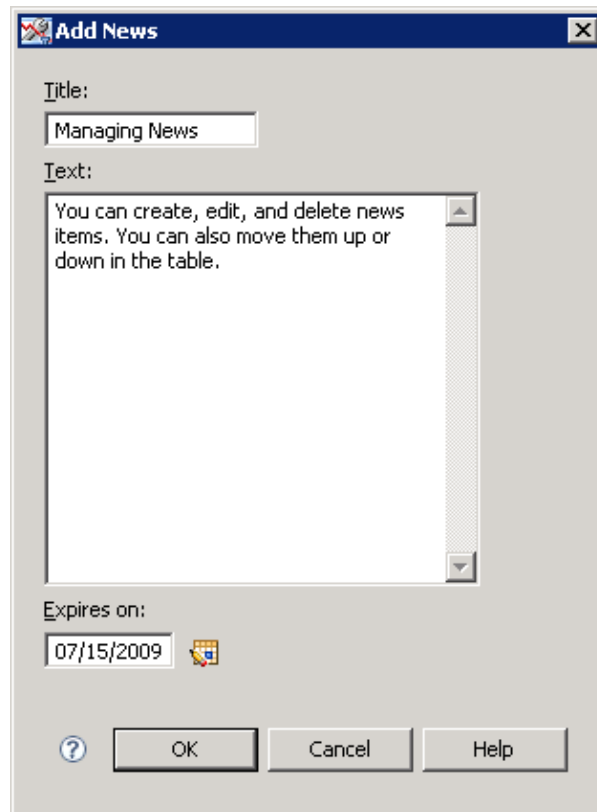
1. Manage the news.


For more information, see [“Manage News” on page 160](#).

The Edit Message News dialog box opens.

2. Click **New**.

The Add News dialog box opens.



3. In the **Title** field, type a descriptive title for the news item.
4. In the **Text** field, type the text of the news item.
5. Type a date or click  to select an expiration date for the item.

### **Edit a News Item**

*Note:* To edit a news item, you must have Administrator user permissions.

To edit a news item:

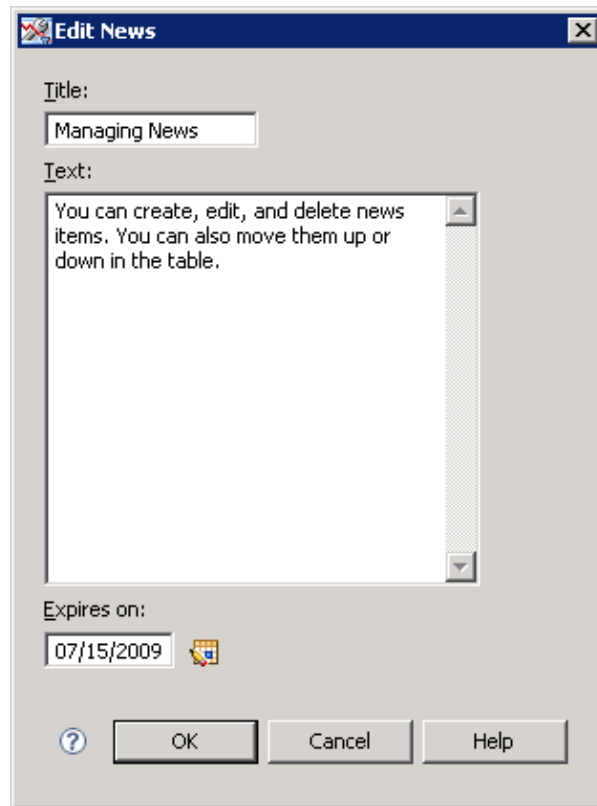
1. Manage the news.

For more information, see [“Manage News” on page 160](#).

The Edit Message News dialog box opens.

2. Select a news item, and click **Edit**.

The Edit News dialog box opens.



3. Make changes.

### **Delete News Items**

To delete news items:

1. Manage the news.

For more information, see [“Manage News” on page 160](#).

The Edit Message News dialog box opens.

2. Select news items, and click **Delete**.

### **Rearrange News Items**

To rearrange news items:

1. Manage the news.

For more information, see [“Manage News” on page 160](#).

The Edit Message News dialog box opens.

2. Select a news item, and then click **Move Up** or **Move Down**.

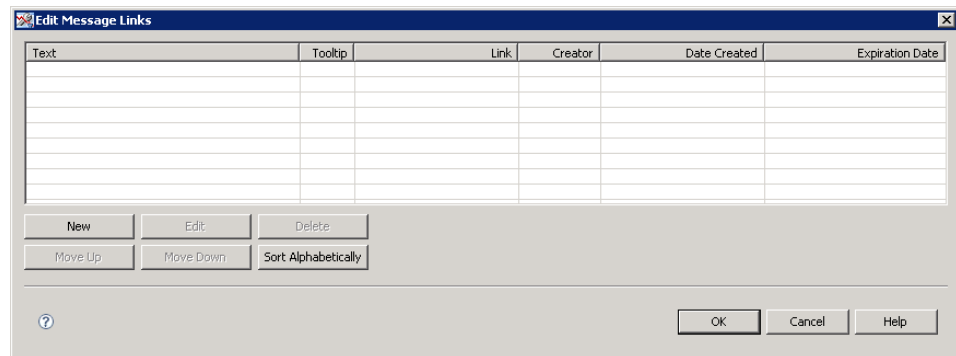
## Links

### Manage Links

*Note:* To manage links, you must have Administrator user permissions.

To edit message links, click **Manage** in the **Links** pane.

The Edit Message Links dialog box opens.



### Add a Link

*Note:* To add a link, you must have Administrator user permissions.

To add a link:

1. Manage the links.

For more information, see [“Manage Links” on page 164](#).

The Edit Message Links dialog box opens.

2. Click **New**.

The Add Link dialog box opens.

3. In the **Text** field, type text to describe the link.
4. In the **Tooltip** field, add a short description of the link.
5. In the **Link** field, add the URL for the link.
6. Type a date or click to select an expiration date for the link.

## Edit a Link

*Note:* To edit a link, you must have Administrator user permissions.

To edit a link:

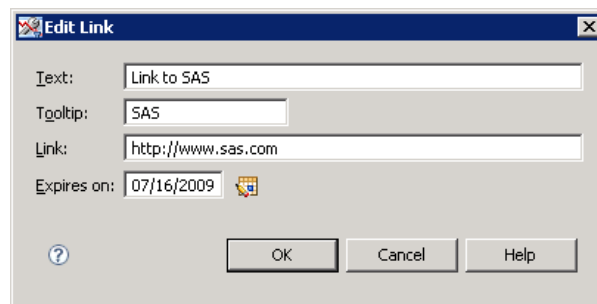
1. Manage the links.

For more information, see [“Manage Links” on page 164](#).

The Edit Message Links dialog box opens.

2. Select a link, and click **Edit**.

The Edit Link dialog box opens.



3. Make changes.

## Delete Links

To delete links:

1. Manage the links.

For more information, see [“Manage Links” on page 164](#).

The Edit Message Links dialog box opens.

2. Select links, and click **Delete**.

## Rearrange Links

To rearrange a link:

1. Manage the links.

For more information, see [“Manage Links” on page 164](#).

The Edit Message Links dialog box opens.

2. Select a link, and then click **Move Up** or **Move Down**.

## Sort Links Alphabetically

To sort links alphabetically:

1. Manage the links.

For more information, see [“Manage Links” on page 164](#).

The Edit Message Links dialog box opens.

2. Click **Sort Alphabetically**.



## Chapter 20

# Report Categories

---

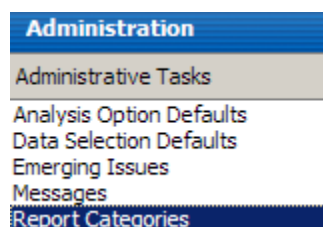
Open Report Categories Administration .....	167
Create a Report Category .....	167
Edit a Report Category .....	168
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Export a Table to a Spreadsheet .....	169

---

## Open Report Categories Administration

*Note:* To administer the report categories, you must have Administrator user permissions.

Select **Report Categories** in the **Administrative Tasks** pane to add, edit, or delete categories for reports or to export a report table to an Excel spreadsheet.




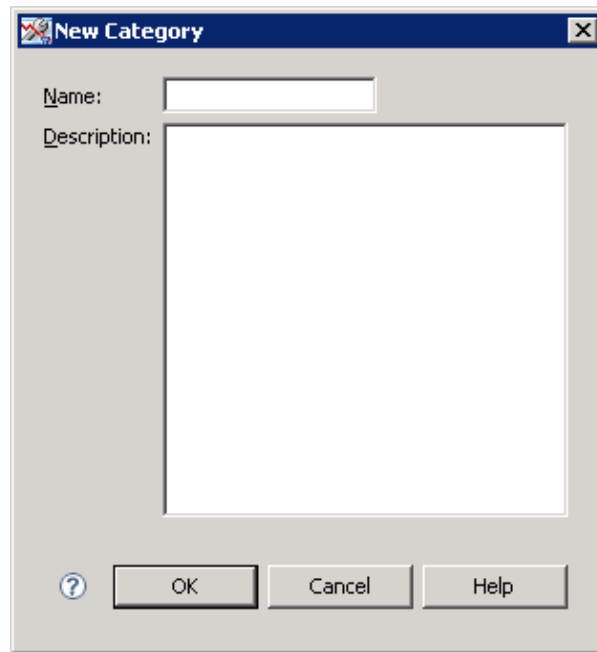

---

## Create a Report Category

*Note:* To create a report category, you must have Administrator user permissions.

To create a report category:

1. In the **Report Categories** pane, click . The New Category dialog box opens.



2. Type a name for the category.
3. (Optional) Type a description for the category.

---

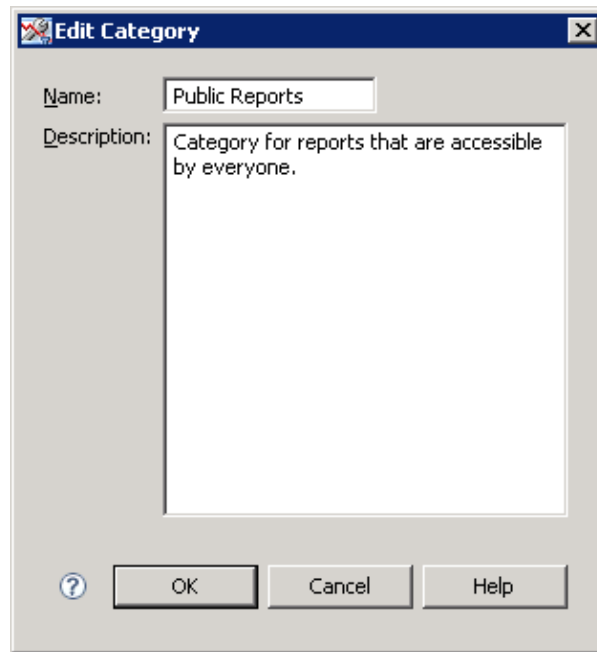
## Edit a Report Category

*Note:* To edit a report category, you must have Administrator user permissions.

To edit a report category:

1. In the **Report Categories** pane, right-click a report category.
2. Select **Edit Category**.

The Edit Category dialog box opens.




3. Make changes.

---

## Delete Report Categories

*Note:* To delete report categories, you must have Administrator user permissions.

To delete a report category:

1. In the **Report Categories** pane, select a report category.
2. Click .

---

## Export a Table to a Spreadsheet

*Note:* To export a table to a spreadsheet, you must have Administrator user permissions.

To export a table to a spreadsheet:

1. Right-click a report category, and select **Export to Spreadsheet** from the pop-up menu.  
The Export to Spreadsheet dialog box opens.
2. Complete the steps to export the table.

For more information, see [“Export Information to a Spreadsheet” on page 176](#).



## **Part 8**

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# Appendix

### *Appendix 1*

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## Appendix 1

# Common Tasks

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## Overview

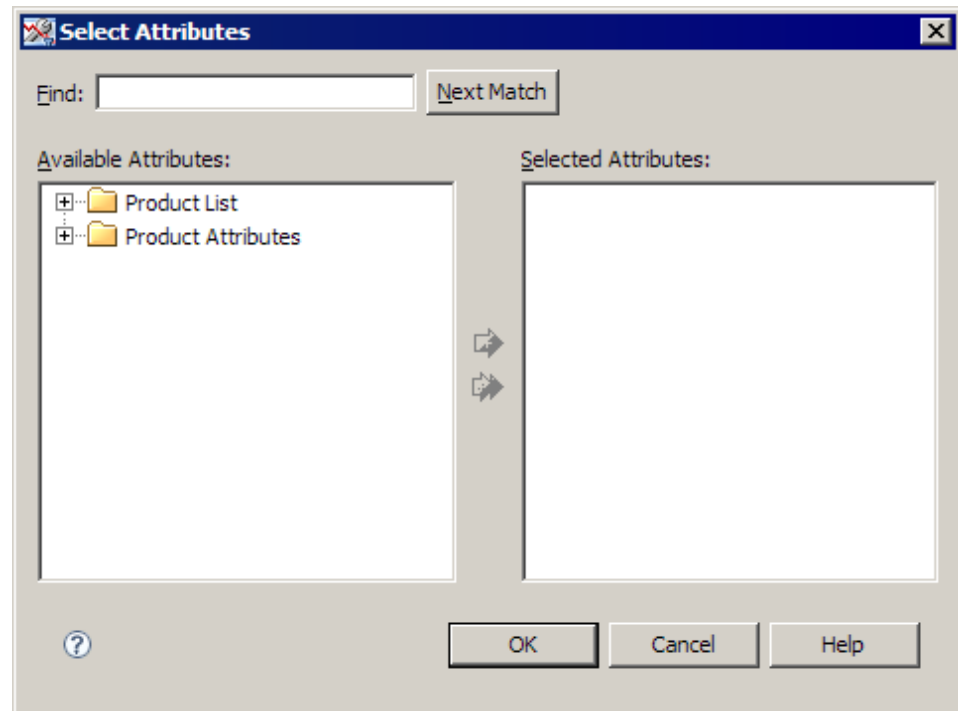
This section documents common tasks that you perform in different places in SAS Warranty Analysis.

---

## Select Attributes

You select attributes when you perform the following tasks:

- “Edit an Event Selection” on page 102
- “Edit a Product Selection ” on page 102
- “General Information” on page 95
- “Create an Event Selection” on page 98
- “Overview” on page 150
- “Overview” on page 148



To select attributes:

1. (Optional) Type search terms in the **Find** field to quickly locate an attribute. To find the terms again, click **Next Match**.
2. Move items between the **Available Attributes** list and the **Selected Attributes** list by selecting an item and then clicking the arrows between the lists.

---

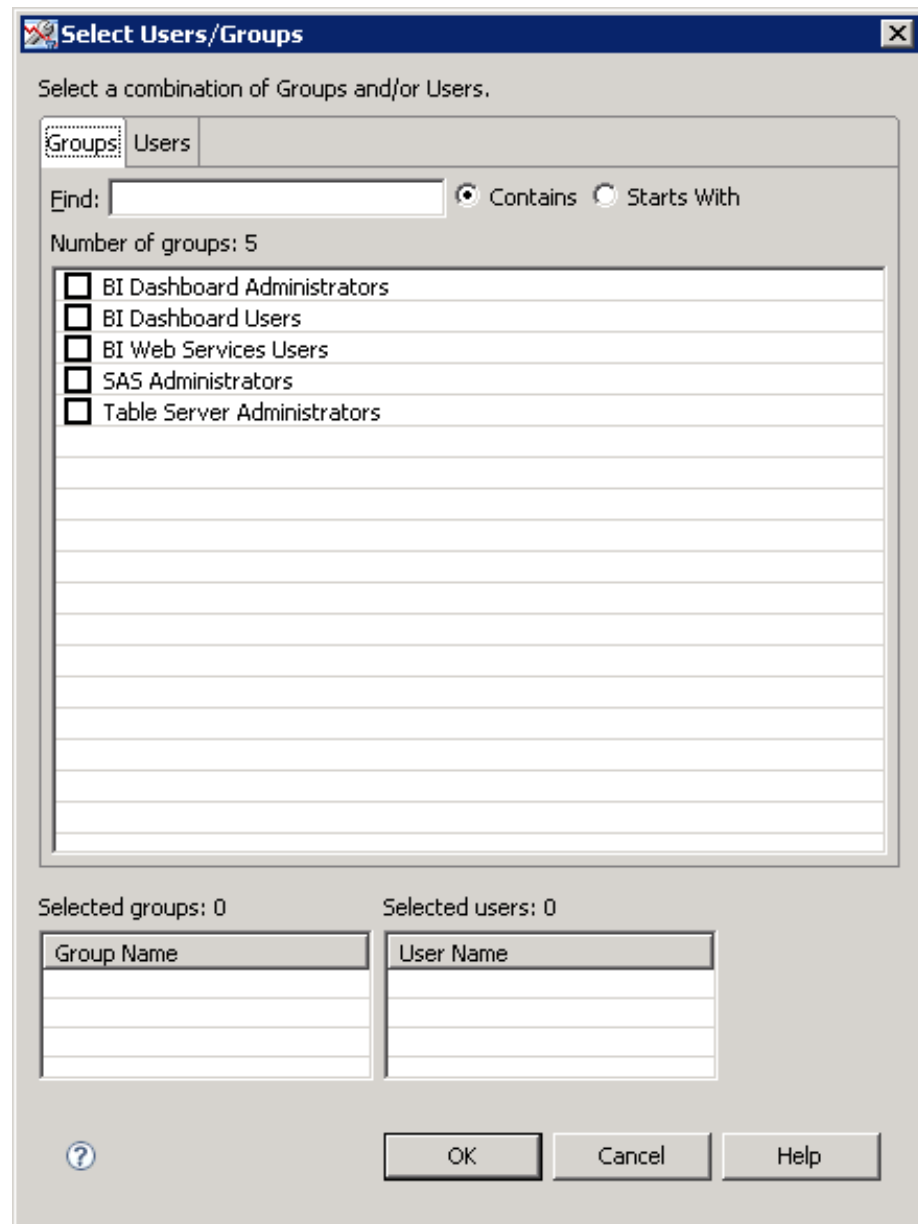
## Select a Data Selection

You must select a data selection when you perform the following tasks:

- “Replace a Data Selection” on page 49
- “Edit an Emerging Issues Analysis” on page 156
- “Create an Emerging Issues Analysis” on page 154







To select users and user groups, click the **Groups** or **Users** tab and select the check box next to an item in the list.

---

## Export Information to a Spreadsheet

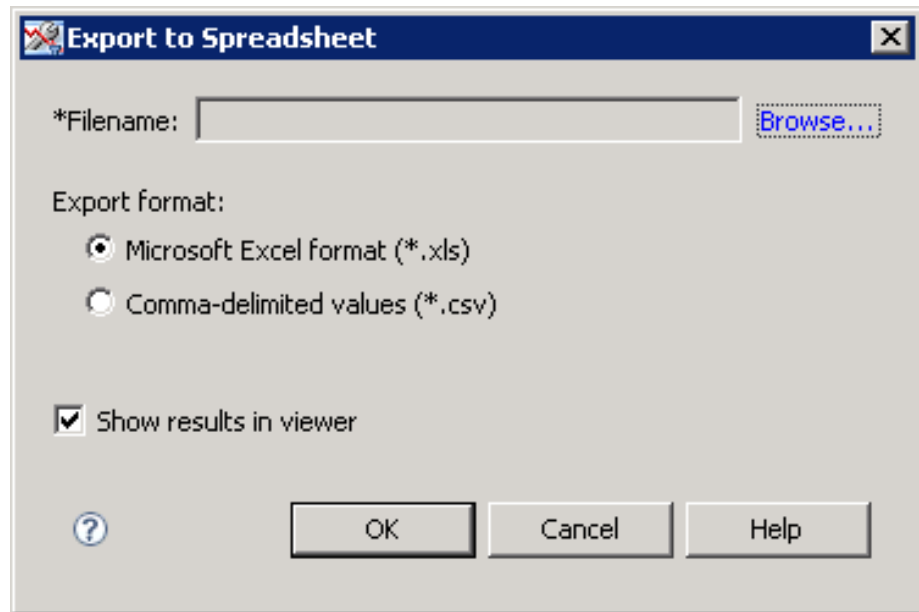
You can export the following information to a spreadsheet:

- a table

For more information, see [“Export a Table to a Spreadsheet” on page 169](#).

- a results table

For more information, see [“Export Results Table to Spreadsheet” on page 88](#).



To export information to a spreadsheet:

1. To specify the file name, click **Browse** and, in the Save As dialog box, select a file or type a name.  
The file name is typed in the **Filename** field.
2. Select **Microsoft Excel format (\*.xls)** or **Comma-delimited values (\*.csv)**.
3. To open the external file after the list is exported, select the **Show results in viewer** check box.

---

## Export Information to a PDF File

You can export the following information to a PDF file:

- an analysis

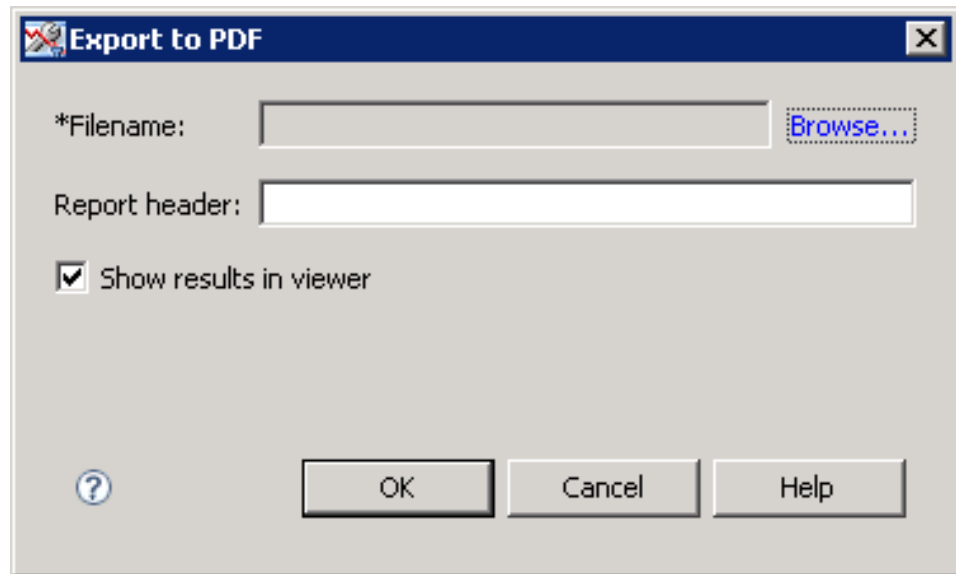
For more information, see [“Export an Analysis to PDF” on page 87](#).

- an alert

For more information, see [“Export Alert to PDF” on page 136](#).

- a report

For more information, see [“Overview” on page 119](#).



Perform the following steps:

1. Click **Browse** to select an existing file, or type a name for the PDF file.
2. (Optional) Type a header for the report.
3. To immediately view the PDF, click **Show results in viewer**.

*Note:* A graphic image is exported to PDF exactly as it appears on the monitor. If you alter the appearance of the image and then export it, then the PDF version of the image appears altered in the same way. For example, if you zoom in, then the magnified image is exported to PDF. If you select points on a chart, then the points are also highlighted in the PDF image.

---

## Your Turn

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