

Shop Manager

Version 6.6.3

A component of the Wheel Shop Management Suite (WSMS)

User Guide



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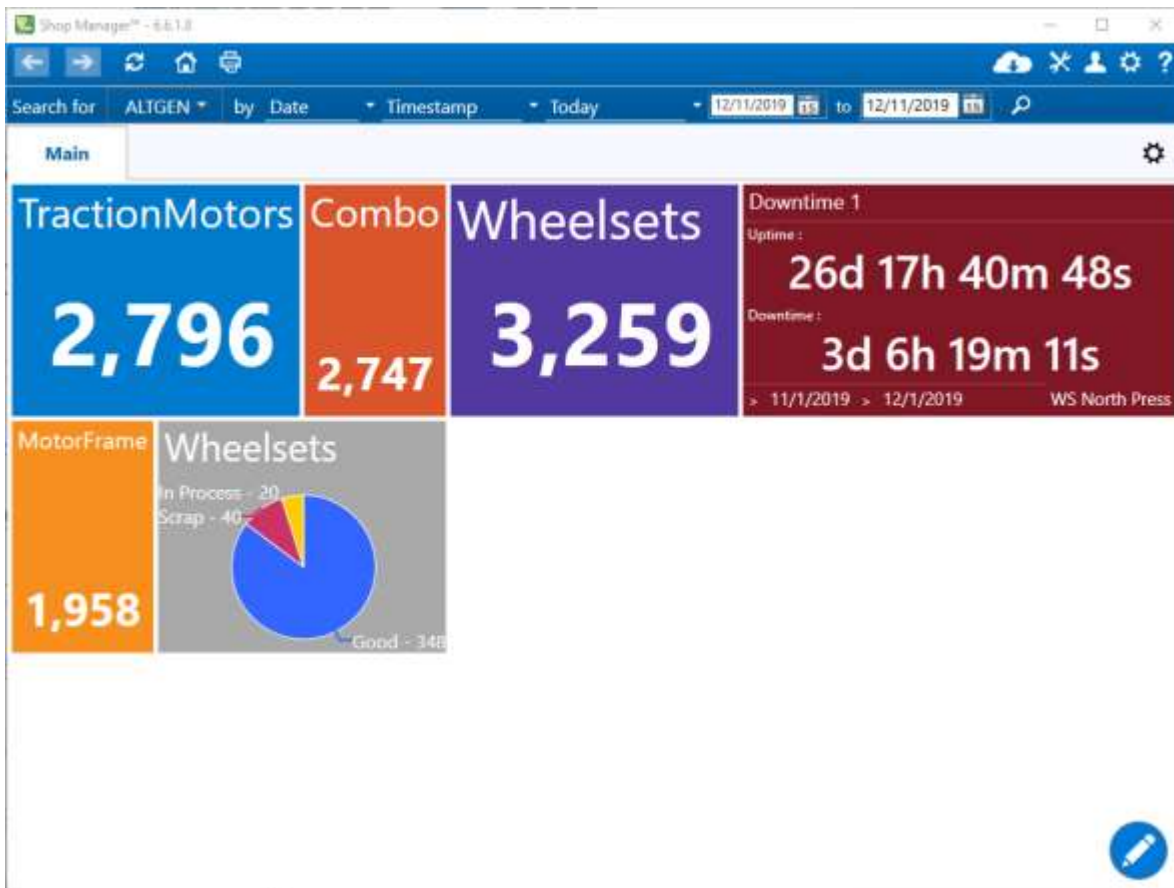
Introduction

Overview

Shop Manager is part of the Wheel Shop Management Suite. It is used to review and edit data collected in the shop, view and approve mounting charts, run reports, and manage system settings. Shop Manager is designed as a Windows desktop application for use in the office.

Layout

Shop Manager contains two main screen areas. The menu bar located across the top of the screen and the client area below the menu bar. The menu bar is used for navigation and searching. For more details see the topic on the Menu Bar. The client area is for displaying data and changes based on the current operation.



System Requirements

This application has minimum system requirements as described below. These requirements must be met for the application to operate as designed.

This application supports the following Microsoft Windows operating systems.

- Windows 8.1 (x86 and x64)¹
- Windows 10 (x86 and x64)¹

The application requires the Microsoft .Net Framework (4.6.2 or later) which can be obtained from <https://dotnet.microsoft.com/download>

The application requires the following hardware at a minimum.

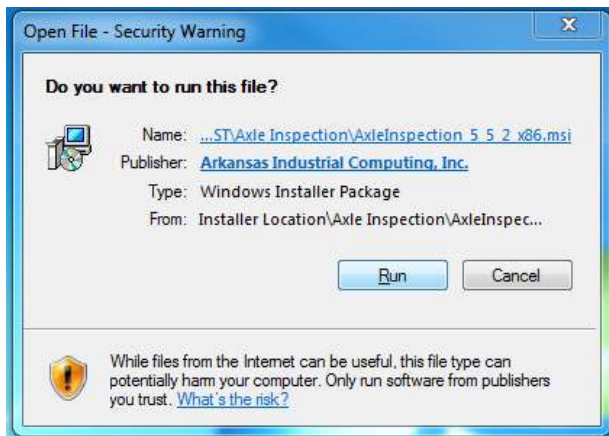
- 2.0 GHz Processor
- 1 GB installed RAM
- 100 MB available disk space
- Ethernet Card

Getting Started

Installing Shop Manager

You will need Administrator rights to install Shop Manager.

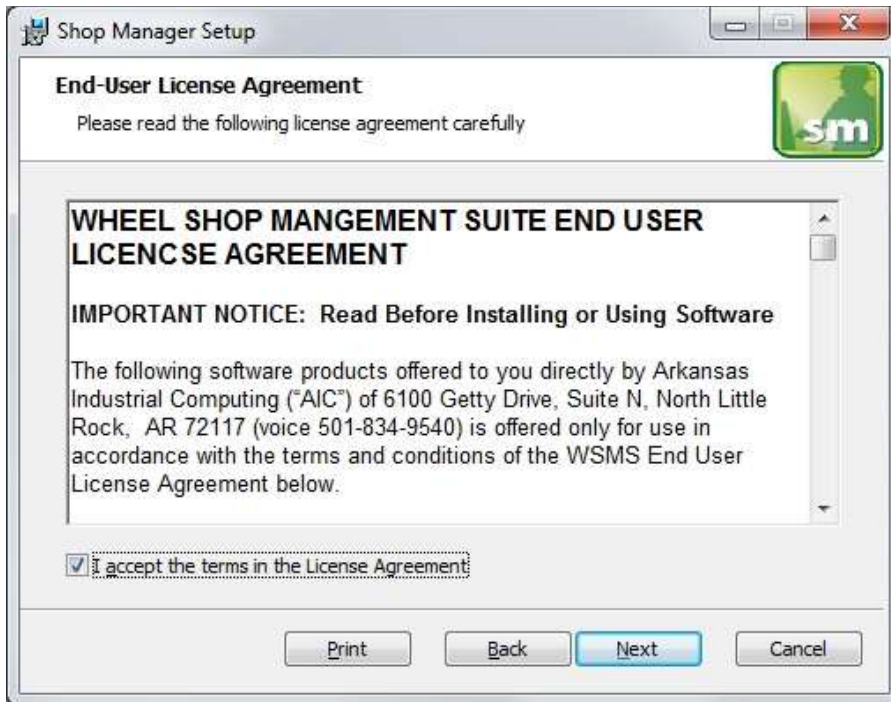
Make sure you have the latest version of our Shop Manager Setup program. [Contact](#) our support team for assistance. To install Shop Manager, run the setup program and follow the on-screen prompts as described below:



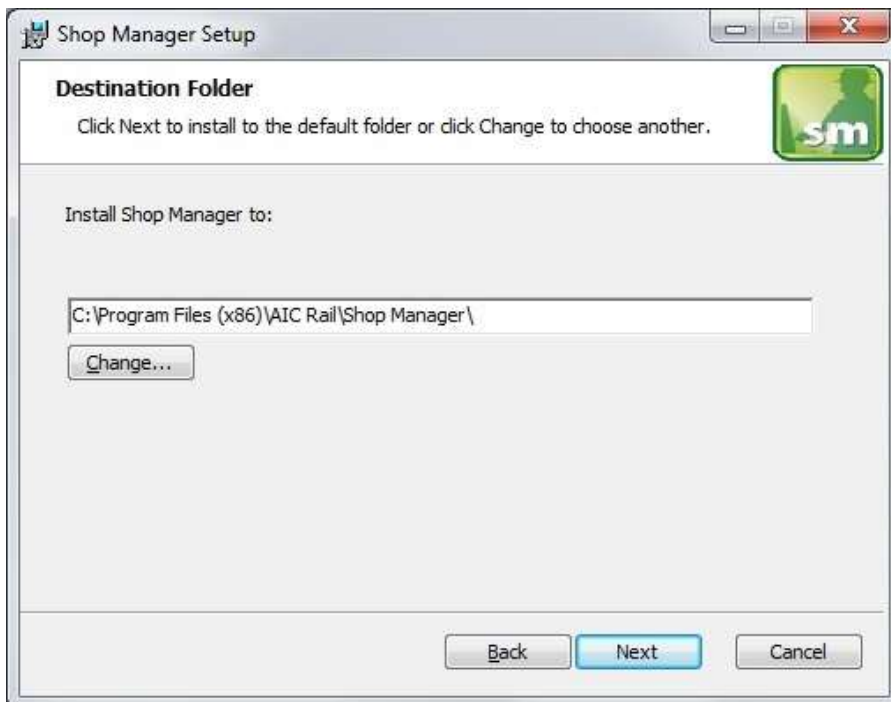
Click Next to continue.



Accept the license agreement and click Next.



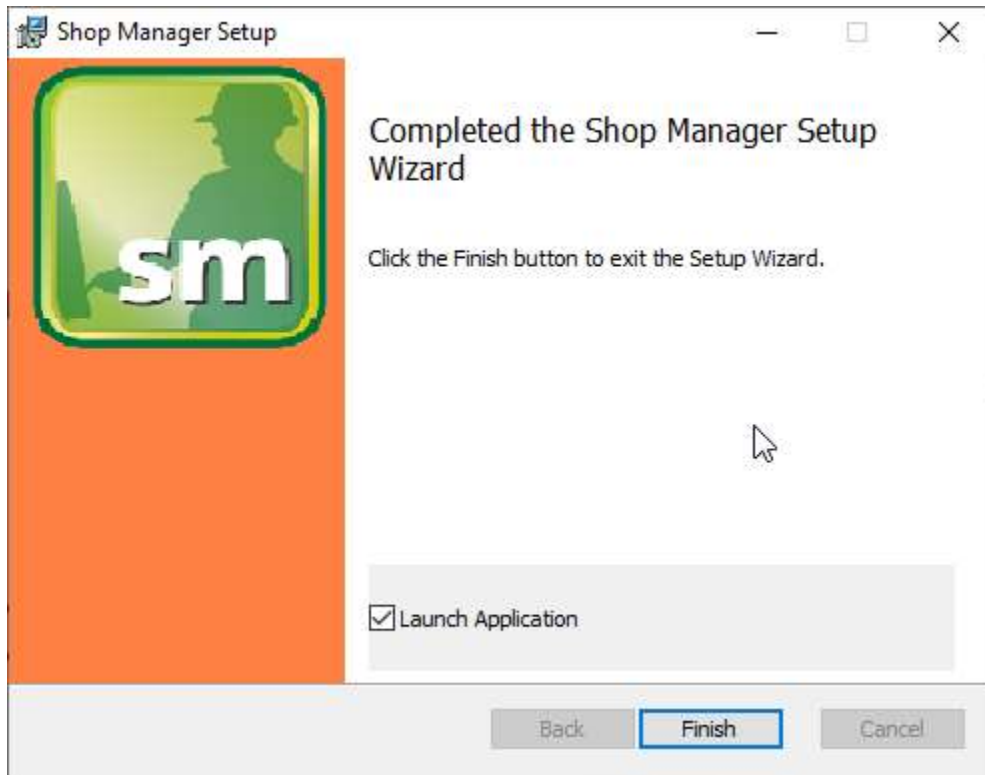
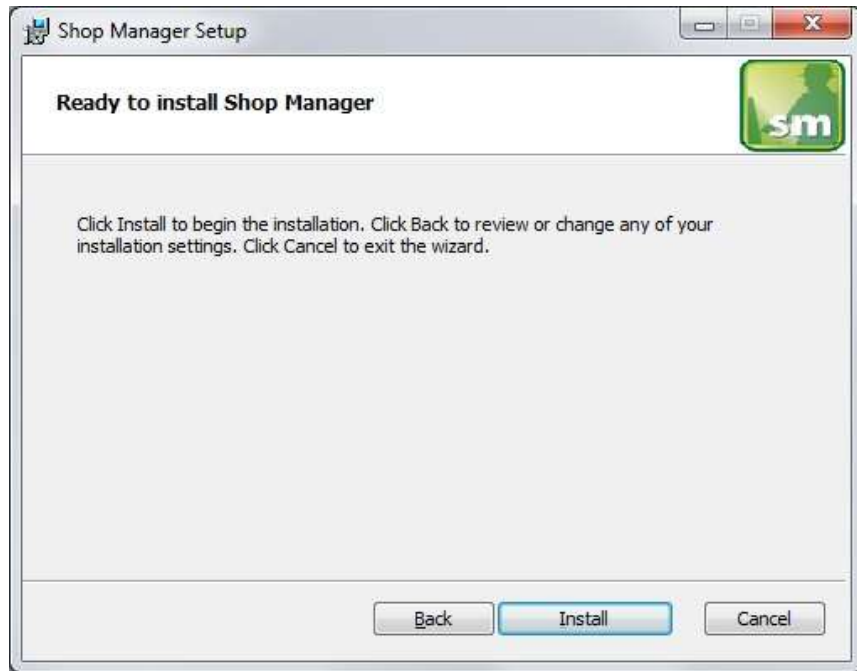
Select the location where you would like to install Shop Manager and click Next.



Click Install to start the installation.

You may be asked to allow the setup program to install Shop Manager on your computer. Select Yes. Wait for the program to install and then Select Next.

When the installation has completed, click Finish to close the setup application.



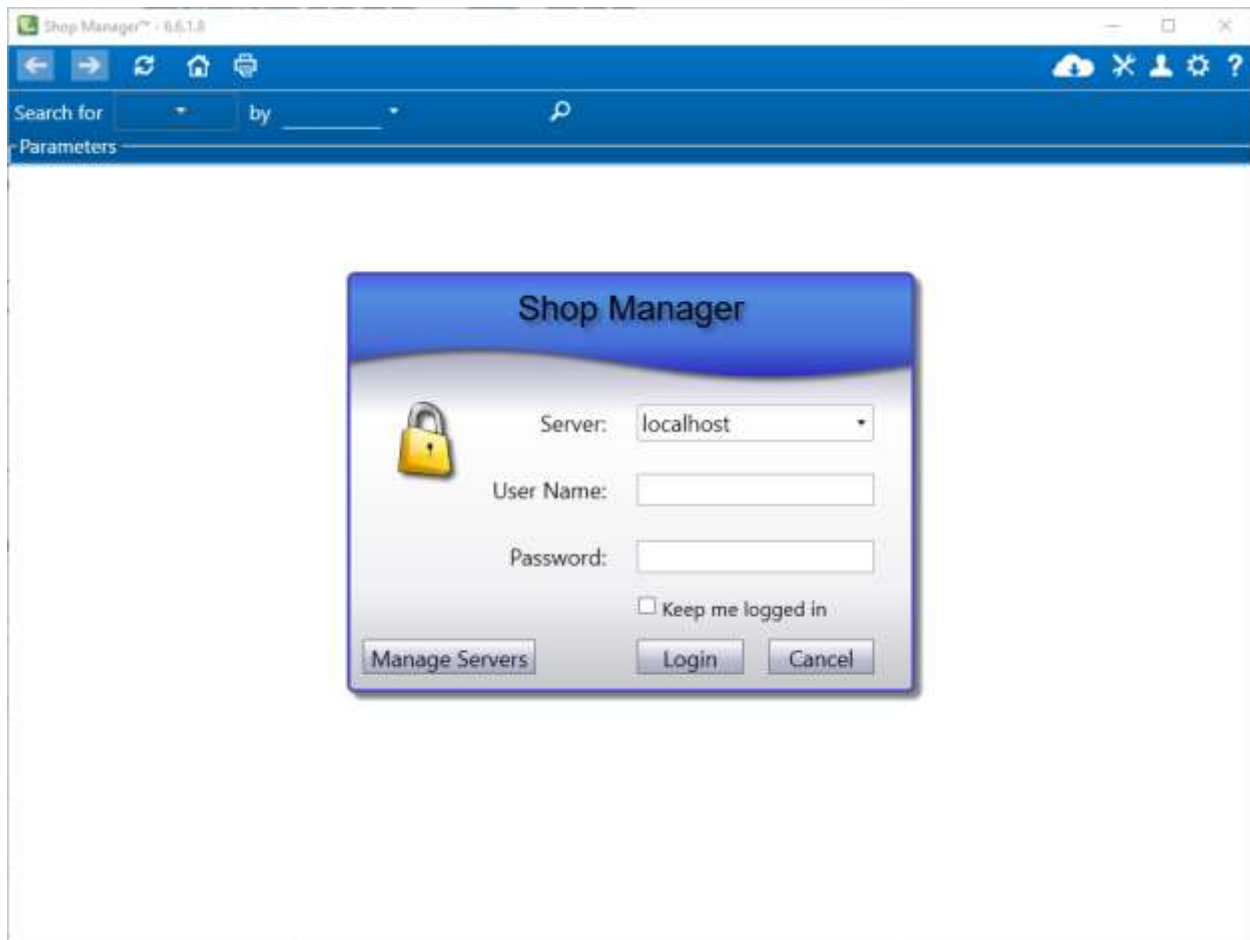
Initial Setup

Once you have installed Shop Manager you can double click the desktop shortcut to start the application.

Database Connection Settings

Shop Manager requires access to an instance of the WSMS6 database which can be installed on the same computer or any computer with network access and the required permissions. The first time you run Shop Manager you need to enter your connection settings to access the database.

Click 'Manage Servers' from the logon window



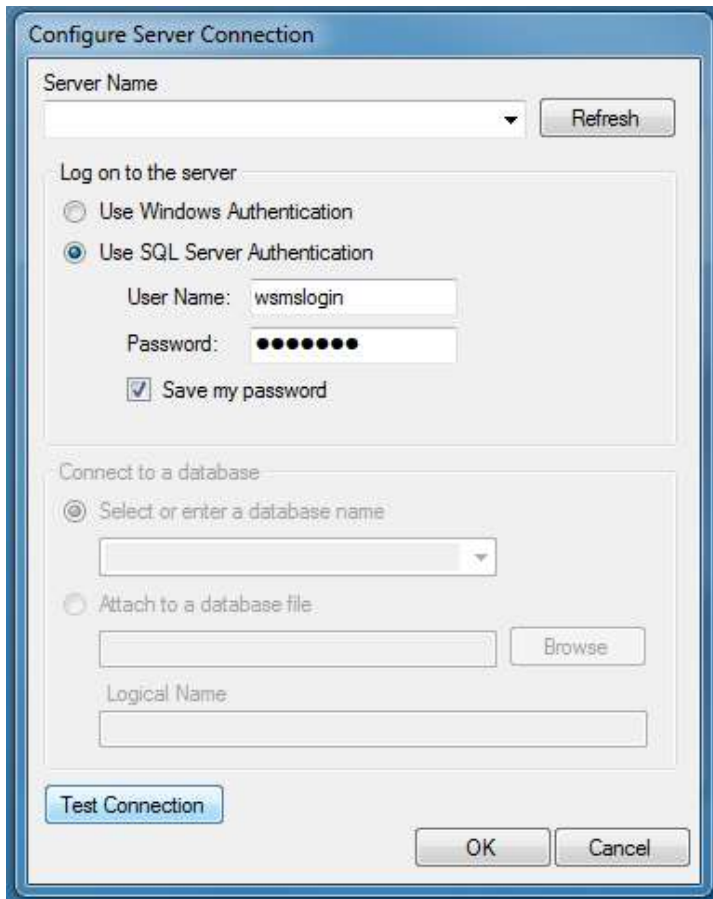
In the Manage Servers dialog, click Add to add a new server or click Edit to edit an existing server.

Some users may be required to connect to more than one server (regional managers, internal auditors, etc.) so Shop Manager allows saving multiple server connections.

The screenshot shows the 'Manage Servers' dialog box. It features a list box on the left with one entry, 'WSMS - AIC'. To the right of the list box are three input fields: 'Name' (containing 'WSMS - AIC'), 'Connection String' (containing 'Data Source=localhost\wsa;Initial Catalog=WSMS6;Integrated Secu'), and 'WSMS6 Service' (containing 'Example: http://myServer:9540'). A 'Build' button is located to the right of the Connection String field. At the bottom left of the dialog are three buttons: 'Add', 'Edit', and 'Remove'. At the bottom right are three buttons: 'Cancel', 'Save', and 'Close'.

Name – This can be whatever you would like to see when you log in to this server. If you will have multiple server connections, you should use a name that helps you identify each database (like the location of the shop). If you will only be connecting to one server, you can use something like WSMS.

Connection String – This is the database connection information the application will need. Click the Build button to enter the connection string using the Configure Server Settings dialog.



Enter the connection settings for the server where the WSMS database is located. If you are unsure contact your IT Department or our [support team](#).

Click Test Connection to verify your settings.

Click OK when you are finished.

WSMS6 Service – Some features in Shop Manager require an additional server connection, in addition to the database server. Most of the time this additional server connection information can be obtained automatically by Shop Manager, but in some cases, it must be specified manually. If required, specify the endpoint for the WSMS6 Service.

Click Save to save the server settings.

Log On

Each user needs a unique username and password for the WSMS system for authentication and accountability. You must provide your use name and password each time Shop Manager starts before you can begin. Your log on determines what functions you have permissions to perform. If you do not have this information, contact your manager or a system administrator to create an account or reset your password.

For more information about permissions and users refer to the sections on [Users](#) and [Groups](#).



The image shows a login dialog box titled "Shop Manager". On the left side, there is a yellow padlock icon. To the right of the icon, the "Server:" label is followed by a dropdown menu showing "localhost". Below this, the "User Name:" label is followed by an empty text input field. The "Password:" label is followed by another empty text input field. Underneath the password field, there is a checkbox labeled "Keep me logged in" which is currently unchecked. At the bottom of the dialog, there are three buttons: "Manage Servers" (disabled), "Login" (active), and "Cancel" (disabled).

Menu Bar

The menu bar is used to navigate in Shop Manager and access tools and options and can be accessed at any time. Navigation controls are on the top left side of the menu bar. Tools and options on the top right side of the menu bar. Search controls are on the bottom and will change based on the selections you make. For more information about the Search controls refer to the [Search](#) section.

Go Back

Returns you to the screen you most recently navigated away from.



Go Forward

Returns you to the screen you were most recently on before going Back



Refresh

Refresh all data for the current screen.



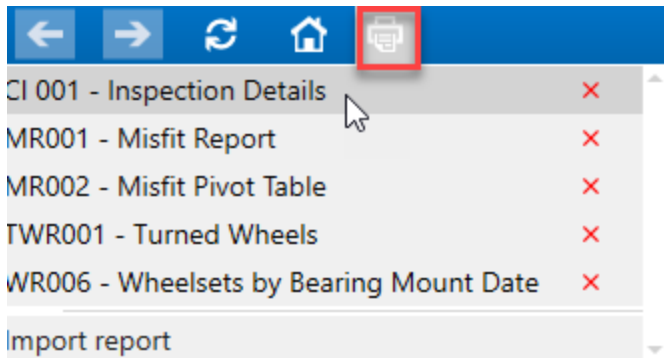
Go Home

Navigate to the Home (Dashboard) screen. For more information on Dashboards refer to the [Dashboards and Widgets](#) section.



Reports Menu

You can access the list of available reports to select a report to run or manage the existing reports by importing a new report or removing existing reports. For more information about reports available and about creating custom reports refer to the [Reports](#) section.



Run a report

Expand the report menu, locate the report you want to run and click on the report name to execute the report. The report will appear in a popup window and allow you to set report parameters, view the report data, export, or print.

Delete a report

Deleting a report requires that the user be assigned to a permission group that has the 'DeleteReport' permission. To delete a report, Expand the report menu, locate the report you want to delete and click on the Delete button to the right of the report name.

Import a report

To add a new report to the WSMS system, expand the report menu and click on the Import Report option at the bottom to open the Import Report dialog.

- Click on the '...' button to browse for the report file.
- Enter a report name if you want it to be different than the name of the report file. Using a report name that already exists will overwrite the existing report and replace it with this new report.

- Enter a category (optional) that allows you to organize your reports into submenus. You can create multiple levels by using a backslash in the Category name. For example, a category of Production\Wheel Press will create a submenu for production and inside that will be another submenu for Wheel Press.
- Enter a description (optional) that will be displayed to the user when they hover over the report in the report menu.
- Click Save to complete the import.

Document Viewer

You can access the list of documents to view a document using our Document Viewer feature. Unlike Document Viewer in the other applications, the list of documents cannot be filtered, so all documents will appear in the Document Viewer menu, organized by Category.

Click on a category to expand the list of documents and subcategories. Click on a document to open it. For more information on configuring documents refer to the [Documents](#) section.



What's New

Shop Manager has an RSS Feed reader for the AIC Rail blog to keep you up to date on what is happening at AIC Rail. To view the most recent blog posts simply click on the News icon in the top right corner of the Menu bar.



Chat

The Chat feature allows you to send and receive messages from other WSMS stations or with other Shop Manager users. This feature requires that you have the WSMS6 Service installed and accessible via the network. To access the Chat feature, select the messaging icon in the top right corner of the Menu bar.



To send a chat, select the station or Shop Manager user you want to message, then enter your message at the bottom and click Send. Your conversation appears in the middle of the screen, however once you close the Chat you will no longer have access to the conversation.



Tool Menu

You can access commonly used functions as well as more advanced features and settings through the Tools menu. Click on the Tool icon in the top right corner of the Menu bar.



The functions and features are described below

Users

Select Users to view the current list of users or to add or modify a user account, including changing the permission Group, enabling/disabling the account, or resetting the password.

Review the current list of users. You can search by username or full name to find a specific user, as well as using the column filter to filter by Group or Shop (if more than one shop is configured).



Click Add to create a new user.

Select a user and click Delete to remove the currently selected user account.

Select a user and click Edit to modify the currently selected user account.

Add/Edit User

When creating a new user, enter a unique username or id. **You cannot modify the Name of an existing user.**

The *Full Name* box allows you to enter the first and last name of the user. This field is optional.

The *Description* box allows you to enter any other information that may pertain to the user. This could be something like the user's job title, department, or employee ID. This field is optional.

The *Password* box allows you to change the user's password. The *Password* and *Confirm Password* must match.

Select '*User must change password on next login*' to require the user to change their password the next time they log on to any WSMS application. After they log on using their current username and password, they will be prompted to enter a new password and will not be allowed to continue until they have done so. This field is automatically disabled once the user has changed their password.

The screenshot shows a 'Users' dialog box with the following fields and options:

- Name: john.doe
- Full Name: john doe
- Description: 1st shift supervisor
- Password: [masked]
- Confirm Password: [masked]
- User must change password on next login
- Account is disabled
- Permissions table:

Default	Shop	Group
<input checked="" type="radio"/>	Canadian Pacific	Supervisor

Buttons: Save, Cancel

Select '*Account is disabled*' to prevent the user from logging on to any WSMS application.

Permissions lets you select which shops the new user will be able to access and what permission group they are assigned to for that shop. Refer to the section on [Managing Groups](#) for more information about groups and permissions. Each user must be assigned a default shop. This is the shop that will be selected automatically when signing in to Shop Manager.

The screenshot shows a close-up of the 'Permissions' table:

Default	Shop	Group
<input checked="" type="radio"/>	Canadian Pacific	Supervisor

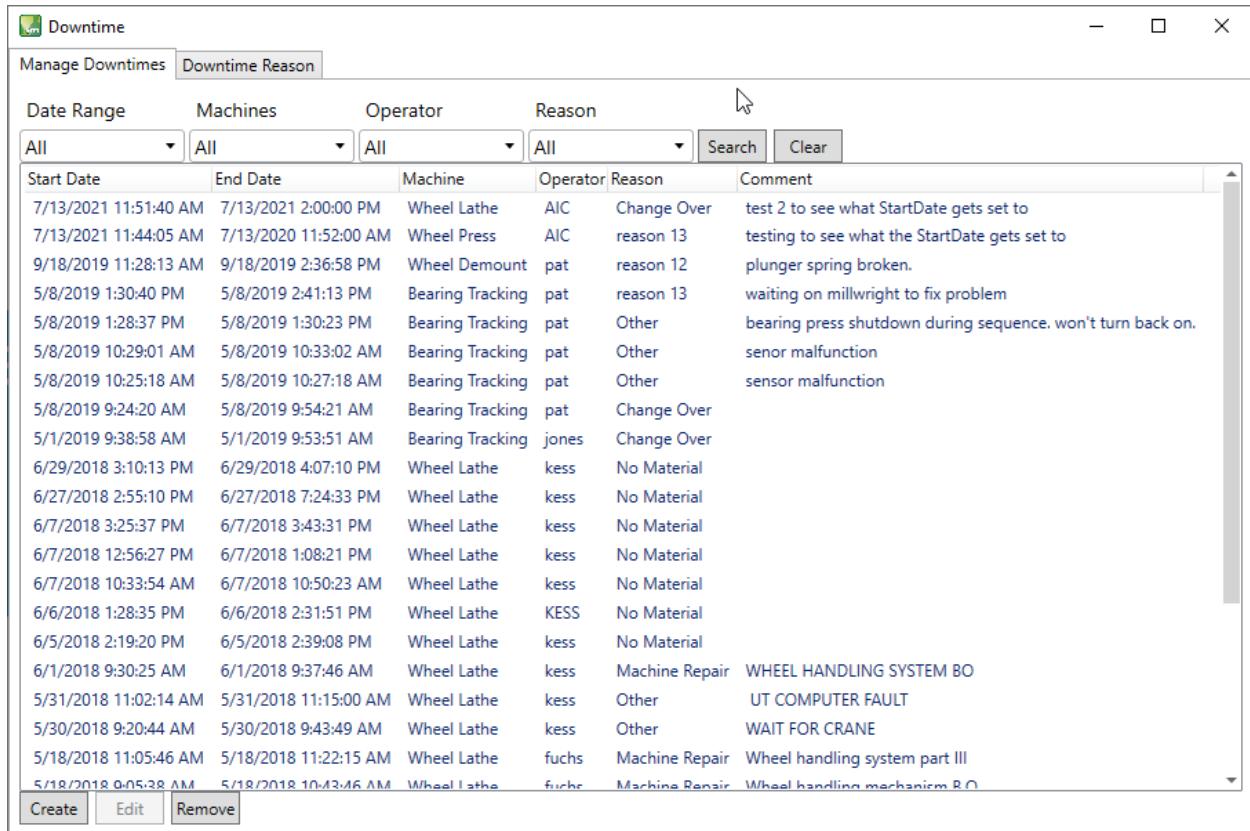
Click Save to save the new user information.

Downtime

The downtime feature allows you to configure, review and manage downtime events for the stations in the shop.

Manage downtime events

You can search for downtime events by date range, machine, operator, and reason.



The screenshot shows the 'Downtime' application window with the 'Downtime Reason' tab selected. It features a search interface with dropdown menus for 'Date Range', 'Machines', 'Operator', and 'Reason', along with 'Search' and 'Clear' buttons. Below the search area is a table of downtime events.

Start Date	End Date	Machine	Operator	Reason	Comment
7/13/2021 11:51:40 AM	7/13/2021 2:00:00 PM	Wheel Lathe	AIC	Change Over	test 2 to see what StartDate gets set to
7/13/2021 11:44:05 AM	7/13/2020 11:52:00 AM	Wheel Press	AIC	reason 13	testing to see what the StartDate gets set to
9/18/2019 11:28:13 AM	9/18/2019 2:36:58 PM	Wheel Demount	pat	reason 12	plunger spring broken.
5/8/2019 1:30:40 PM	5/8/2019 2:41:13 PM	Bearing Tracking	pat	reason 13	waiting on millwright to fix problem
5/8/2019 1:28:37 PM	5/8/2019 1:30:23 PM	Bearing Tracking	pat	Other	bearing press shutdown during sequence. won't turn back on.
5/8/2019 10:29:01 AM	5/8/2019 10:33:02 AM	Bearing Tracking	pat	Other	senor malfunction
5/8/2019 10:25:18 AM	5/8/2019 10:27:18 AM	Bearing Tracking	pat	Other	sensor malfunction
5/8/2019 9:24:20 AM	5/8/2019 9:54:21 AM	Bearing Tracking	pat	Change Over	
5/1/2019 9:38:58 AM	5/1/2019 9:53:51 AM	Bearing Tracking	jones	Change Over	
6/29/2018 3:10:13 PM	6/29/2018 4:07:10 PM	Wheel Lathe	kess	No Material	
6/27/2018 2:55:10 PM	6/27/2018 7:24:33 PM	Wheel Lathe	kess	No Material	
6/7/2018 3:25:37 PM	6/7/2018 3:43:31 PM	Wheel Lathe	kess	No Material	
6/7/2018 12:56:27 PM	6/7/2018 1:08:21 PM	Wheel Lathe	kess	No Material	
6/7/2018 10:33:54 AM	6/7/2018 10:50:23 AM	Wheel Lathe	kess	No Material	
6/6/2018 1:28:35 PM	6/6/2018 2:31:51 PM	Wheel Lathe	KESS	No Material	
6/5/2018 2:19:20 PM	6/5/2018 2:39:08 PM	Wheel Lathe	kess	No Material	
6/1/2018 9:30:25 AM	6/1/2018 9:37:46 AM	Wheel Lathe	kess	Machine Repair	WHEEL HANDLING SYSTEM BO
5/31/2018 11:02:14 AM	5/31/2018 11:15:00 AM	Wheel Lathe	kess	Other	UT COMPUTER FAULT
5/30/2018 9:20:44 AM	5/30/2018 9:43:49 AM	Wheel Lathe	kess	Other	WAIT FOR CRANE
5/18/2018 11:05:46 AM	5/18/2018 11:22:15 AM	Wheel Lathe	fuchs	Machine Repair	Wheel handling system part III
5/18/2018 9:05:38 AM	5/18/2018 10:43:46 AM	Wheel Lathe	fuchs	Machine Repair	Wheel handling mechanism B.O.

At the bottom of the window, there are buttons for 'Create', 'Edit', and 'Remove'.

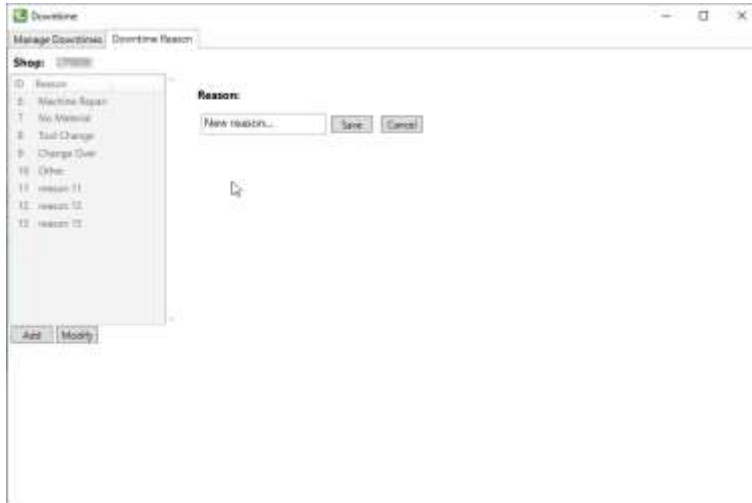
Click Create to create a new downtime event. This will allow you to accurately capture and report on downtime if, for example, the computer at a station is inoperable and the downtime cannot be captured at the station.

Select a downtime event and click Edit to modify a downtime event. You can adjust the start date/time, end date/time, reason, etc. This allows you to accurately capture and report on downtime if the operator failed to properly capture the downtime duration or reason.

To permanently remove a downtime event, select the downtime event and click Remove.

Manage downtime reasons

The list of downtime reasons is configurable for each shop and can be maintained from the 'Downtime Reason' tab.



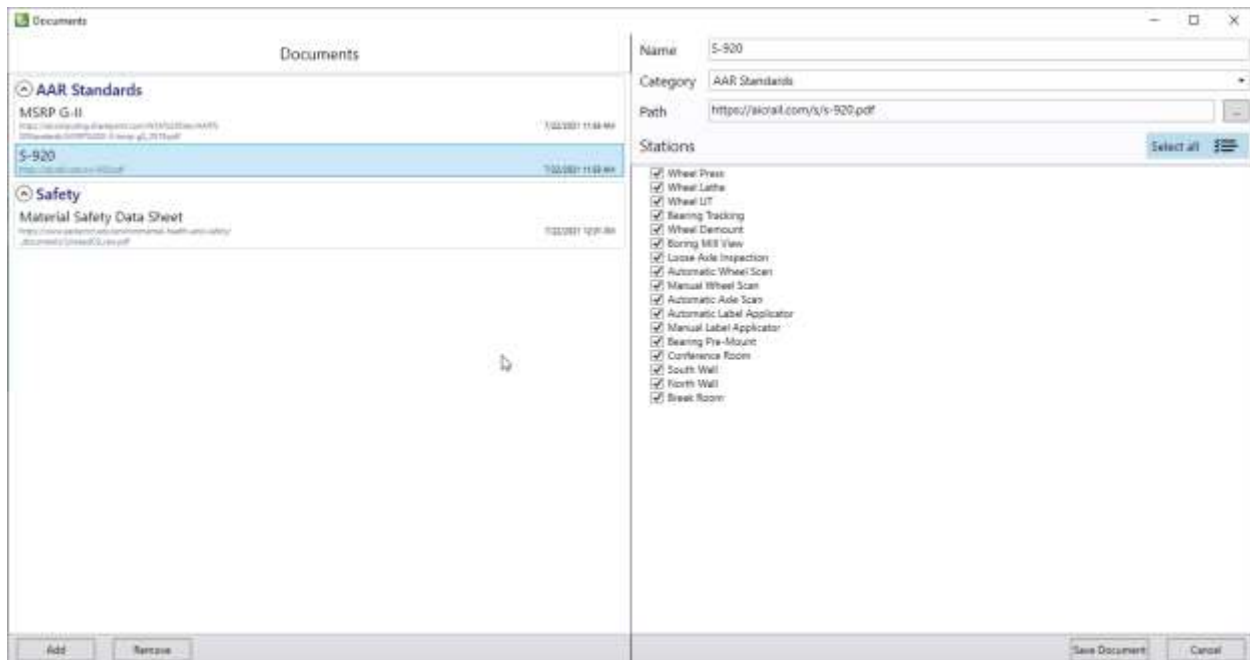
Click Add to add a new downtime reason. Simply enter the reason and click Save.

To modify an existing reason select it from the list and click Modify.

Documents

Most WSMS applications support our Document Viewer feature. This feature enables you to easily access any documents that need to be accessible in the shop. You no longer need to print the documents and post them on the wall or maintain an electronic copy on each machine. They can be quickly and easily accessed from one menu in the WSMS applications. For more information on our Document Viewer feature please see our website at <https://aicrail.com/document-viewer>.

To utilize the Document Viewer feature you must configure the list of documents that you want to include at each station. All customers are allowed to configure 3 documents without a license. To obtain a license for unlimited Document Viewer usage [contact AIC Rail](#) sales team to request a quote.



Manage documents

- To add a new document, click Add.
- To modify an existing document, select it from the list.
- To remove a document, select the document from the list and click Remove.

Configure a document

The document can be stored on any location accessible by all stations that require access to it. This can be a shared network drive or shared folder on a network computer. It can also be a cloud storage provider like Google Drive, Microsoft OneDrive, Dropbox, etc. or a website like Microsoft SharePoint or your company website.

- Enter a descriptive name for the document.
- Enter a category (optional) for organizing documents into logical groups (safety, production, training, etc.). Use a backslash in the category to create subcategories. For example, "Category 1\Subcategory 1" and "Category 1\Subcategory 2".

- Select the stations where you want this document to be accessible. You can select all station by clicking Select All.
- Click Save Document to save your changes.

Import

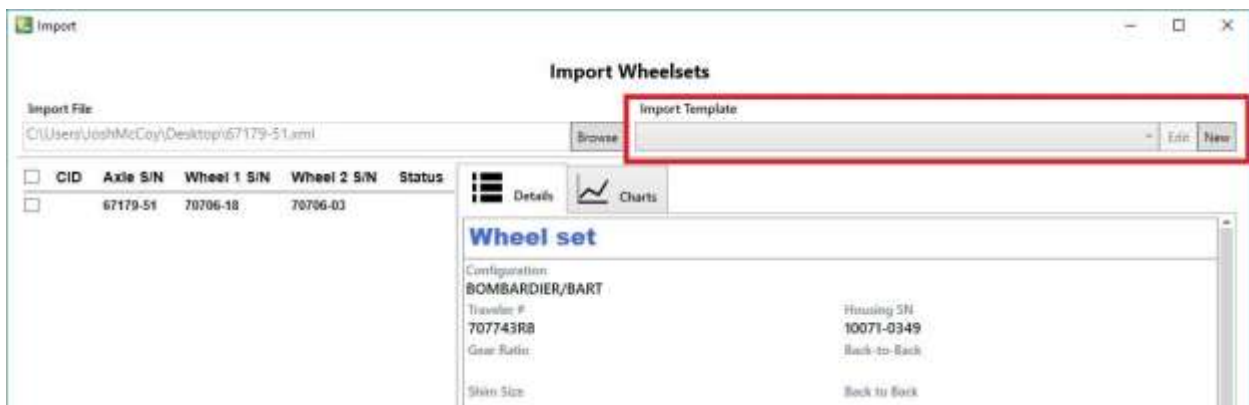
Sometimes it is necessary to transfer components from one system to another. If you are receiving components from another shop or a vendor that also uses the Wheel Shop Management Suite you can import data collected for those components into your system

If importing wheelsets from an older version of WSMS, select Wheelsets from the Import menu. For other component types, select Other Components from the import menu. The import process is similar for both.

Click the “Browse” button to locate the data file for import.



Select an import template or configure the mappings between the data that was exported and your system. In most cases this is the same and you can simply click through the mapping process. In rare cases the exported data will have additional data or different data field IDs that you will need to indicate how you want to handle. For more information [contact AIC Support](#).

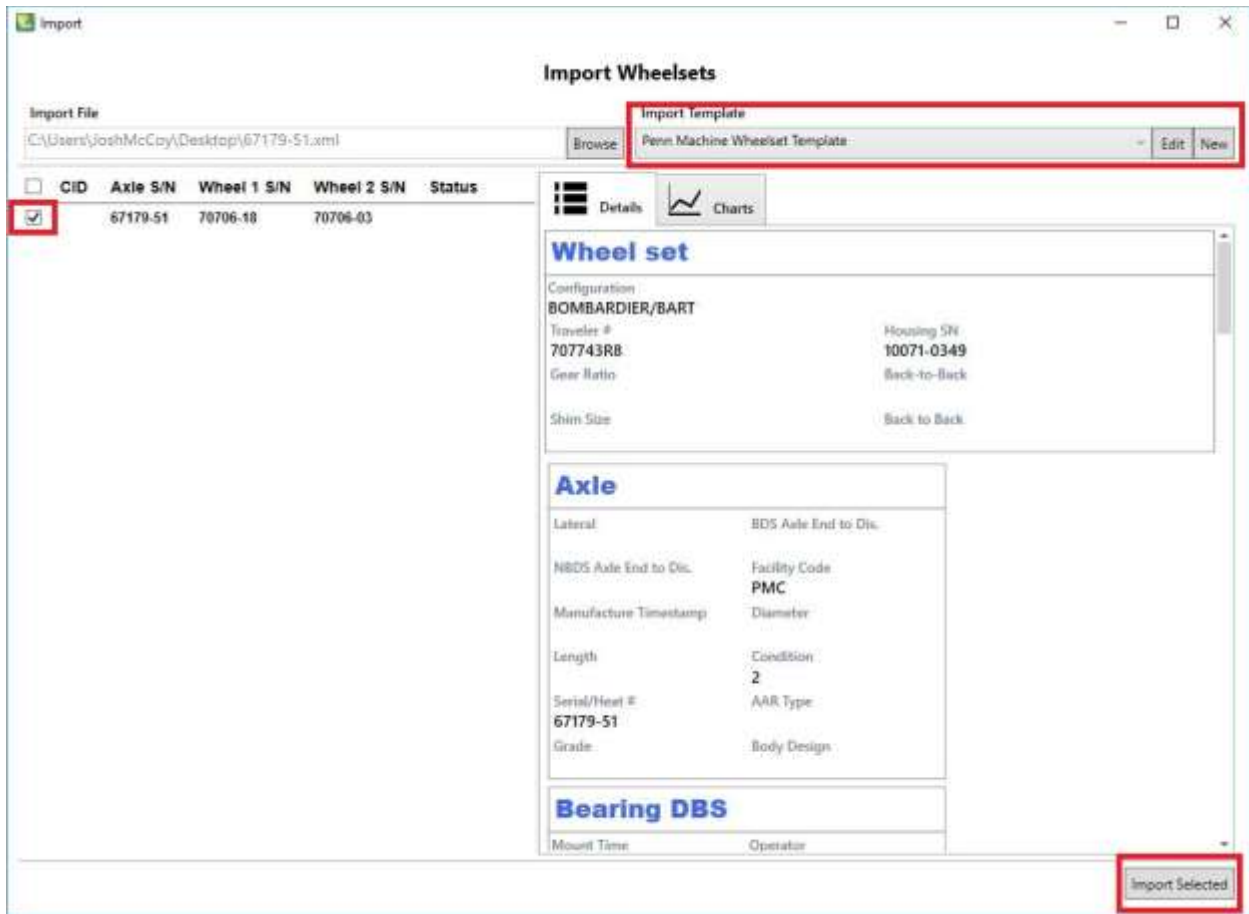




Enter a name for the new template you are creating.

Select the Assembly Configuration that corresponds to the configuration and elements from the import file.

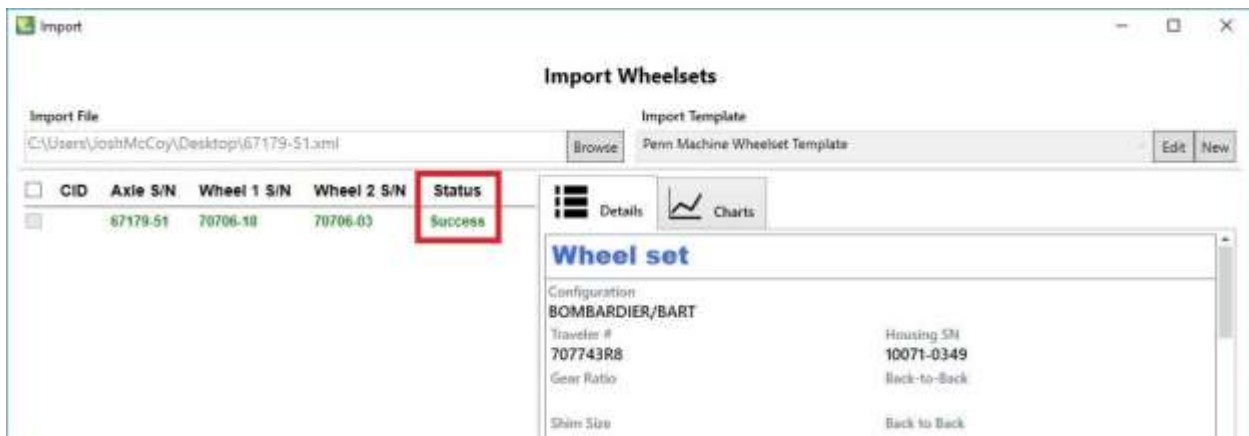
Click "Save".



Select the newly created Import Template from the dropdown list.

Select the checkbox next to the wheelset or component you want to import.

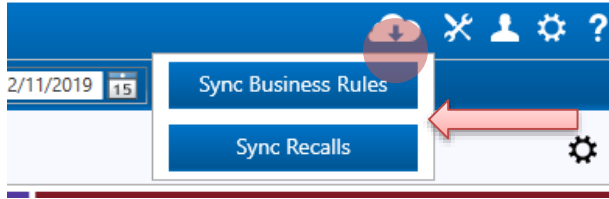
Click “Import Selected”.



If the import was successful, you will see a status of “Success”.

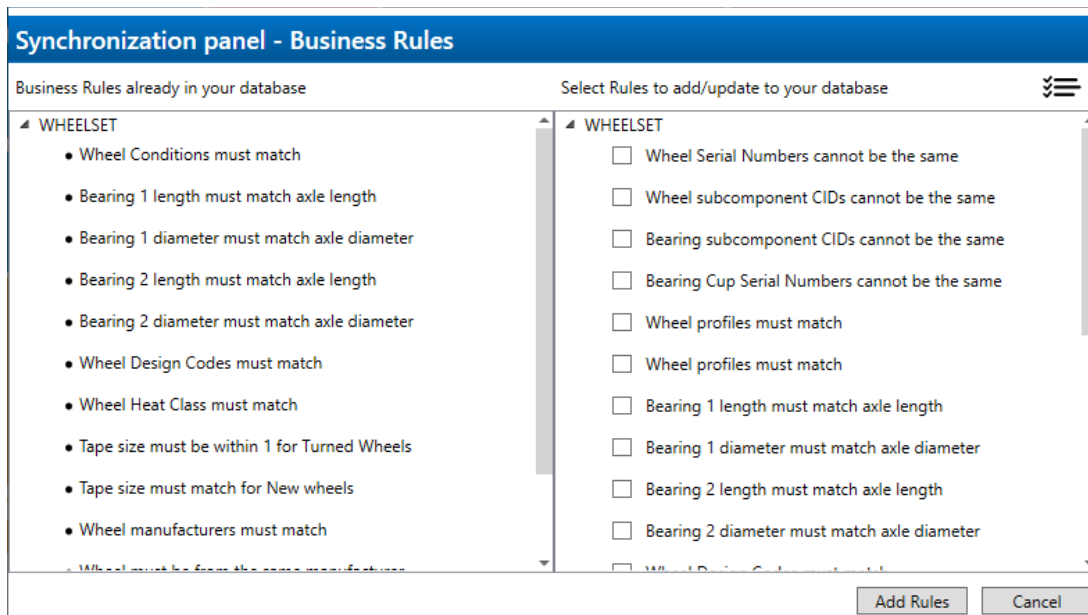
Download

Business Rules



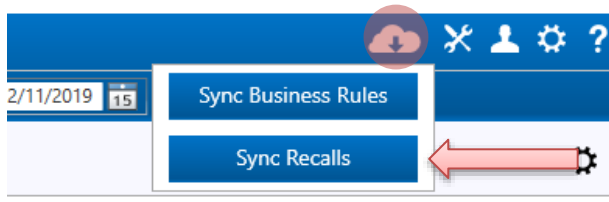
This option allow the user to add AIC (Arkansas Industrial Computing) recommended bussines rules in addition to your existing one.

To add a new bussiness rule, select the checkbox on the left side of each rule you may need, and click the *Add rules* button on the bottom right. If you want to add all the rules, click the list icon on the top left, this will automatically check all the boxes, click *Add rules* button to save changes.



Recalls

The Association of American Railroads, AAR, release periodically lists of components recalls that may have a defect. AIC compile those lists into one service to keep you up to date.



When Clicking *Sync Recalls* button it will show you a list of Recalls to add, if any, to your database.

Synchronization panel - Recalls

Recalls already in your database

- ▷ Quality Hold - Contact Chad Vinglas Immediately
- ▷ EW-5265
- ▷ EW-5280
- ▷ EW-5290
- ▷ EW-5293
- ▷ MA-0157
- ▷ MA-0162
- ▷ MA-144
- ▷ G2: 1.4.7.4.16
- ▷ G2: 1.4.7.4.12
- ▷ G2: 1.4.7.4.13
- ▷ G2: 1.4.7.4.14
- ▷ G2: 1.4.7.4.15
- ▷ G2: 1.4.7.4.17
- ▷ G2: 1.4.7.4.18
- ▷ G2: 1.4.7.4.8

New Recalls to add

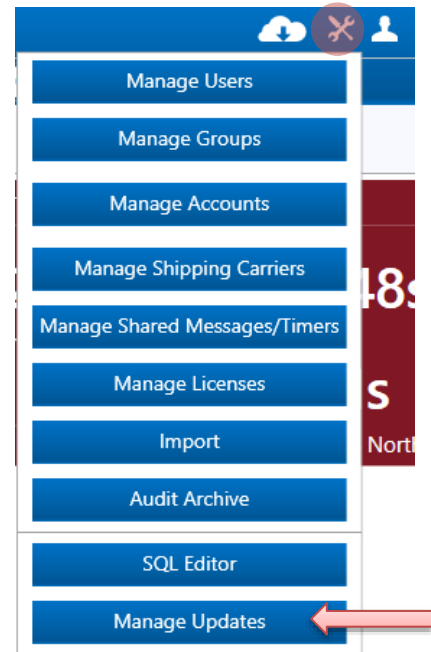
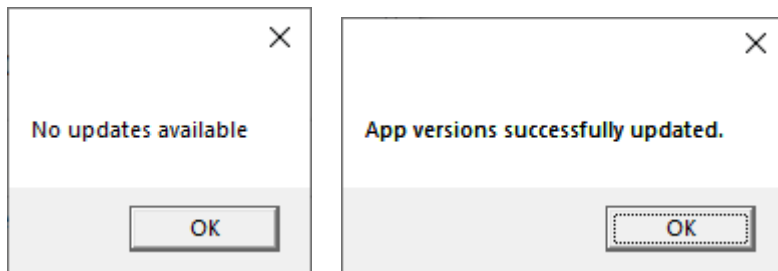
Continue

Cancel

Manage Updates

This button opens AIC Update Manager which contains 2 main sections, *Update Service Settings* and *Stations*.

On top you have *Update Service Settings*, where you can set a time for Auto Update by clicking the checkbox and input a time. If you don't want to set the Auto update, you can click the *Update Now* button. If **Shop Manager** is up to date a 'No updates available' will prompt, differently when an update is available the system will download the necessary files and prompt 'Successfully updated'

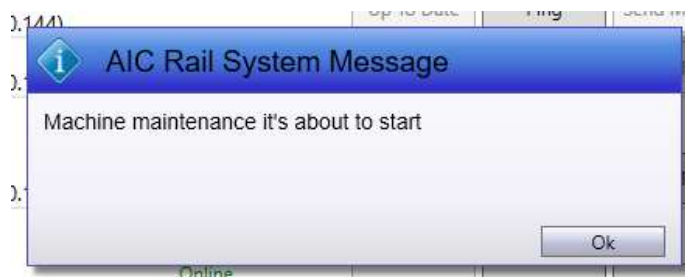
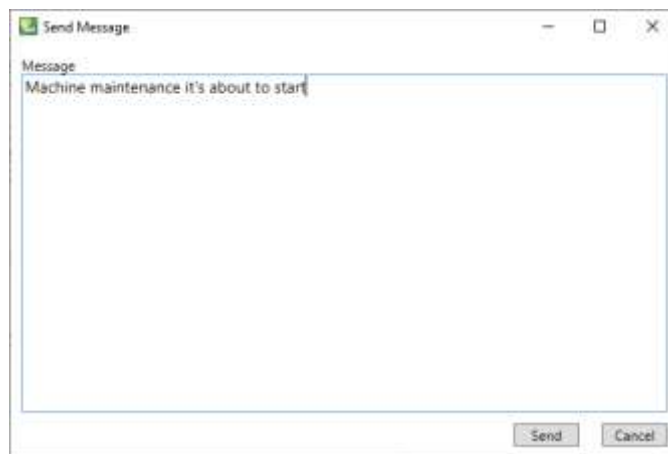
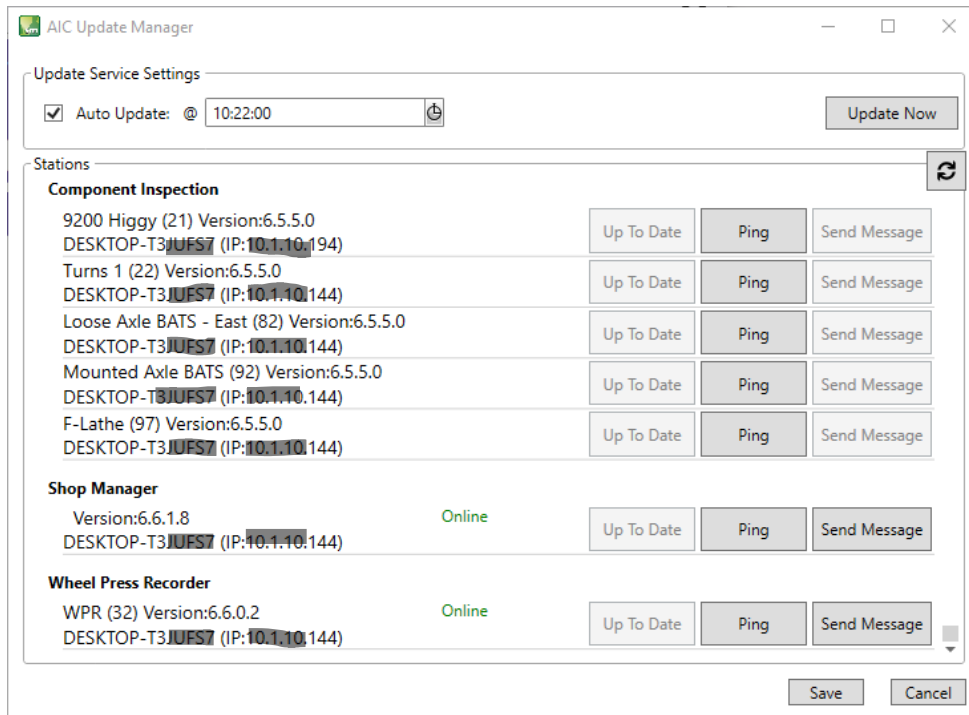


NOTES:

- After an update you may be required to restart **Shop Manager**.
- **Manage Update** require **WSMS Services** to be installed and running.

Below section is *Stations*. Here you can watch all your stations/machines. Stations are grouped by applications and include the Machine Name, version, Desktop Name, and IP address. You can Update a station remotely by clicking the *Up-to-Date* button. The behavior is like the *Update Now* button on *Update Service Settings*. Additionally, you can send a message to stations that are online.

Note: Only machines that are on connected to your network are visible.



Options

You can access the advanced options and system configuration from the Tools->Options menu. Refer to the Options section for more information.

SQL Editor

SQL Editor is an advanced tool for direct query access to the database. You should only use this tool if you are already familiar with how to use it. Only administrators have access to the SQL Editor tool.

Audit Archive

Audit Archives allows you to view the audit history of components that have been deleted. For more information on how to delete components and assemblies refer to the section on Components and Assemblies.

User Menu

The Users menu provides access to functions specific to the current user. To access the Users menu, click the User icon from the top right Menu bar.

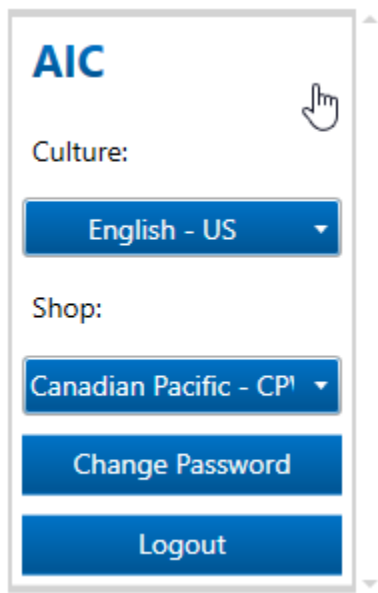


You can specify your preferred culture/language if your shop has been configured with multiple cultures/languages. Simply select your preferred culture from the Culture drop down.

If your system supports multiple shops, you can select which shop you want to access by selecting it from the list. You will only have access to shops that your account has permissions for.

You can change your password using the “Change Password” button.

Use Logout to sign out of Shop Manager and allow a different user to log in.



Help Menu

The help menu provides tools for sending feedback to the AIC developer team, sending help requests to the AIC support team, or getting detailed application information for the current version of Shop Manager

Feedback

We like hearing from our customers, even if it is to receive constructive criticism about how we can improve our WSMS applications. To request a feature or provide comments about Shop Manager or one of the other WSMS applications, Click Feedback from the Help menu. Fill out the form and click Send to send the message to our development team. We may contact you for additional information



The image shows a screenshot of a Windows application window titled "AIC Rail Feedback Form". The window contains the following elements:

- Title Bar:** "AIC Rail Feedback Form" with standard minimize, maximize, and close buttons.
- Instruction:** "Please provide the following information to request a feature."
- Section 1: Tell us who you are**
 - Name***: A text input field.
 - Email***: A text input field.
 - Phone Number (optional)**: A text input field.
- Section 2: Tell us about the feature you would like to see implemented**
 - Station**: A dropdown menu with "All" selected.
 - Description***: A large text area for entering details.
- Section 3: Do you wish to include files to your feature request?**
 - Browse...**: A button to attach files.
- Buttons:** "Send" and "Cancel" buttons at the bottom right.

Support

If you are having a problem with Shop Manager or any of the other WSMS applications, you can submit a support request by clicking Support from the Help menu. Fill out the form and click Send to send the message to our Support team. This will automatically attempt to gather diagnostic information and log files from the station you are contacting us about. We may contact you for additional information.

If you are unable to submit your request due to a networking failure or firewall/security issue, you can choose 'Save Local' to save all the support request information to a ZIP file on your computer. You can use your email client to send an email to Support@aicRail.com and attach the support request file that you save.

Contact AIC Rail Support

Please provide the following information to open a support ticket.

Tell us who you are

Name*

Email*

Phone Number (optional)

Can we notify anyone else?

Emails (separate multiple email addresses using commas)

Tell us about your issue

Station

Description*

We'll grab your logs and settings. Are there any other files you think we need?

Browse...

Save Local Send Cancel

About

To view information about your current version of Shop Manager, click About in the Help menu.



Options

The Options dialog contains advanced setup features to configure the WSMS system. It is organized into three main sections: Search and Dashboard, Shops, and System Settings.

Search and Dashboards

These settings affect the custom search queries and dashboards used in Shop Manager. They are global settings that affect all shops configured in the system.

Queries

Shop Manager allows for creating customized search queries. To manage the available queries, expand 'Queries' from the Search and Dashboards menu.

Queries are divided into the following types: Assemblies, Components, Shipments, Work Orders, Queues, and Machine Inspections. Queries can include parameters that will be provided at the time the query is executed. For more information on Queries and Query parameters refer to the section on [Search](#).

Building custom queries requires specific knowledge of the WSMS6 database structure and Structure Query Language (SQL). [Contact us](#) for more information on creating custom queries

Dashboards

Refer to the section on [Dashboards](#) and [Widgets](#) for more information on how dashboards are used.

Each user can have their own customized dashboard, or they can inherit the dashboard from a group. Dashboards are applied in the following order:

If a user has a custom dashboard applied, the user's dashboard is used.

If a user has no custom dashboard, the users group dashboard is used.

If no group dashboard exists, the Default dashboard is used.

To create or edit dashboards for a user or group, expand Dashboards from the Search and Dashboards menu.

Manage dashboards

To create a new dashboard for a user or group, click the Add button next to User Groups or Users and then select the user/group from the list.

To modify an existing dashboard, expand out the User Groups or Users section, select the user or group you want to modify the dashboard for, and then click the Edit button.

To remove a dashboard, expand out the User Groups or Users section, select the user or group you want to remove the dashboard for, and then click the Remove button.

Edit dashboards

Add a new dashboard or modify an existing one.

- Add one or more dashboards using the Add Dashboard button.
- To share the current dashboard, click Export and select which dashboards and widgets to export. Save the file
- To use an existing dashboard that was previously exported (for example from another user or group), click the Import button and select which widgets to import and which dashboard(s) they should be imported to. By default, they will be imported to a new dashboard.
- Specify the number of rows and columns by editing the row/column size in the selected dashboard tab header.
- Change the name of the dashboard tab by clicking on the selected dashboard tab header and then modifying the text.
- Add widgets to the dashboard using the Add Widget button

Shared Messages and Timers

In addition to the various query and production widgets, there are two widget types intended to share information across multiple users dashboards: [Shared Message widget](#) and [Shared Count Up/Down timers](#). To use a Shared Message widget or Shared Timer widget you must first configure the message or timer.

To add a Shared Message, click Add and enter a Description. You can optionally set the message by clicking the Edit Message icon.

To remove a Shared Message, select the message and click Remove.

To add a Shared Timer, click Add and enter the Description, Date, and whether the date/time is expected to occur in the past (if it is a future event, leave 'In the past' unchecked). You can optionally specify a prefix and suffix as well as a Format String that determines how the date/time will appear in the widget. By default, the timer will be displayed in the form [days].[hours]:[minutes]:[seconds].[milliseconds]. Refer to the help link for more information about Format String options.

Shop settings

These settings affect the corresponding shop under which they are grouped. You can also add new shops or modify some properties of an existing shop. If more than one shop is configured, they will each appear in the Shops section. You must expand the Shop you want to modify to access the shop specific settings.

Manage Shops

New Shop

To add a new shop, click the Add button. Enter the Shop Code (sometimes called Facility Code), along with a descriptive name, address, and Report Name which may be used in the title of some reports.

Edit Shop

To edit a shop, click the Edit button to the right of the shop name. Modify the Name, Address, Report Name and then click Save to save your changes.

Copy Shop

To create a new shop with similar settings to an existing shop, expand out the shop and click the Copy Shop button. You will be able to modify most settings after you have completed the copy operation.

Delete Shop

You can only remove a shop if it is not in use. Typically, this is only needed if you accidentally added or copied a shop. To delete a shop, expand out the shop and click the Delete button.

Licenses

View and manage licenses for WSMS applications and features. Currently only select features like Document Viewer, Machine Inspections, Work Orders, etc. require a license. For more information [contact AIC Rail](#).

Shifts

Some features require knowledge of the days and times of the shifts your employee's work. Click Shifts to review and manage your shift information

When configuring a shift, provide a description, the shift number (1-3) along with the time of day the shift starts and ends, along with the days of the week this shift applies to. It is possible to have multiple shifts per day as well as different shifts on different days of the week (for example weekday shifts vs weekend shifts).

Machines

Expand Machines to view the list of all stations configured in the WSMS system.

Manage Machines

New Machine - To add a new machine to the specified shop, click the Add button. Enter a descriptive name for the station, a unique number to identify the machine, and select the type of application that the machine will be used for.

Edit Machine - To edit a machine, select it from the list and click the Edit button. Modify the Name, number, and application type.

Delete Machine - You can only remove a machine if it is not in use. Typically, this is only needed if you accidentally added a machine. To delete a machine, select the machine and click the Delete button.

Quotas

You can specify your expected production goal for a machine during each shift. This information will be used by the OEE feature to report the production progress during each shift. Simply enter the expected number of components to be entered during the specified shift as the Goal.

Run Rates

You can specify the expected production rate for a machine during each shift. This information will be used by the OEE feature to determine when production goals may be missed.

Inspections

Configure the different inspections that will be performed on components or machines by specifying what data to collect. There are three different types of inspections: Component Inspections, Assembly Inspections, and Machine Inspections.

Manage inspections

To create a new inspection, expand out the Inspections section and click the Add button to the right of the inspection type.

To modify an existing inspection, expand out the Inspections section and the inspection type and select the inspection you want to modify. Then click the Edit button.

To remove an inspection, expand out the Inspections section and the inspection type and select the inspection you want to delete. Then click the Remove button.

Component Inspections

To perform an inspection on a component you must first define the inspection. Add a new inspection or modify an existing inspection and specify the following information:

- Component Type – the type of component that is being inspected
- Inspection Name – a descriptive name of the inspection that will be performed.
- Elements – Configure the data elements that will be collected during this inspection. You can specify the same data elements for multiple inspections. Select elements from the 'Available Elements' list and click Add Element or click New Element to define a new data element.

Assembly Inspections

To perform an inspection on an assembly that consists of multiple components, you must first define an assembly inspection. Add a new inspection or modify an existing inspection and specify the following information:

- Inspection Name – a descriptive name of the inspection that will be performed.
- Description – additional information that can help identify the purpose for this inspection.
- Assembly Type – the component type of the assembly that is being inspected.
- Subcomponent Inspections – Assign a Component Inspection to each subcomponent type that makes up the assembly. You can select an existing component inspection or create a new one.

Machine Inspections

To perform an inspection on a machine, you must first define the inspection. Add a new inspection or modify an existing inspection and specify the following information:

- Machine – the machine that will be inspected
- Inspection Name – a descriptive name of the inspection that will be performed.
- Elements – Configure the data elements that will be collected during this inspection. You can specify the same data elements for multiple inspections. Select elements from the

'Available Elements' list and click Add Element or click New Element to define a new data element.

Custom Views

A 'custom view' describes user interface that will be used at a station for collecting data. Because WSMS allows you to configure the types of components and the types of data to collect, you must also specify what data to collect at each station. Custom Views allow us to not only customize what data appears on the users' data entry screen but also the placement, colors, etc. for those screens.

Expand the Custom Views section to see all the Custom Views currently configured. You can also use the Search box to filter the list to locate a specific custom view.

Manage Custom Views

To create a new custom view, click the Add button.

To modify an existing custom view, expand out the Custom Views section, select the custom view you want to modify, and then click the Edit button.

To remove a custom view, expand out the Custom Views section, select the custom view you want to remove, and then click the Remove button.

Edit a custom view

Add a new custom view or modify an existing one.

- Enter a descriptive Name for the custom view
- Select the application type where it will be used.
- If the data entry includes an Assembly Inspection or Component Inspection, select the name of the inspection that will be performed as part of the data collection.

Define the user interface for this custom view by clicking 'Generate from Template'. The template generator creates a basic layout based on your answers to a few questions about the data that should be collected.

You can also import a custom view using the 'Import from File' option. Advanced users may be able to manually create or modify the custom view using the 'Edit Manually' option. This is not recommended for most users.

Locations

Components can be assigned to a specific location to help ensure it follows the proper workflow. Each station is set up with one or more locations it will accept, and each component must be assigned the 'Next Location' when it is saved at a station. This can be done automatically if the process requires no decision to determine the next location, otherwise the operator must select the location.

Components assigned to a location can only be entered at a station configured for that location. This ensures a station is not skipped and the component is not accidentally sent to the wrong place.

Before you can assign a component to a location you must first define the possible locations.

Manage Locations

To create a new location, click the Add button.

To modify an existing location, expand out the Locations section, select the location you want to modify, and then click the Edit button.

To remove a location, expand out the Locations section, select the location you want to remove, and then click the Remove button.

Editing a location

Add a new location or edit an existing one.

- Enter a descriptive Name for the location
- Optionally you can enter a more detailed Description for the location.
- If you would like to temporarily disable a location to prevent components from being assigned to the location, check Inactive.
- Optionally you can enter one or more Status values that can be set when the component is assigned to that location.
- Under 'Component Types' select one or more types of components that can be assigned to this location.
- Under 'Machines' select all stations that are allowed to send components to this location.

Manage Shipping Carriers

Inbound Tracking and Outbound Tracking allow you to record the truck or railcar shipping carrier. To select a shipping carrier, you must first define your list of carriers.

Manage carriers

To create a new carrier, click the Add button.

To modify an existing location, expand out the Shipping Carriers section, select the carrier you want to modify, and then click the Edit button.

To remove a carrier, expand out the Shipping Carriers section, select the carrier you want to remove, and then click the Remove button.

Editing a shipping carrier

Add a new carrier or edit an existing one.

- Enter a descriptive Name for the carrier
- Select the shipping method (truck or rail)

Accounts

Assemblies, components, shipments, and work orders can each be assigned to a specific Vendor or Customer account. Each account can have one or more Locations. To select an account and/or location you must first define the list of available accounts and locations.

Manage accounts

To create a new account, click the Add button.

To modify an existing account, expand out the Accounts section, select the account you want to modify, and then click the Edit button.

To remove an account, expand out the Accounts section, select the account you want to remove, and then click the Remove button.

Manage account locations

To create a new location, click the Add button to the right of the account.

To modify an existing location, expand out the account, select the location you want to modify, and then click the Edit button.

To remove a location, expand out the accounts, select the location you want to remove, and then click the Remove button.

Editing an account

Add a new account or edit an existing one.

- Select the account type (customer or vendor)
- Enter the account number
- Enter a descriptive Name for the account
- The remaining fields (address, city, state, zip code, phone, contact, email) are all optional.
- To disable an account so it cannot be used by future components, shipments, etc. you can uncheck the Enabled box.

Editing a location

Add a new location or edit an existing one.

- Enter a descriptive Name for the account
- The remaining fields (address, city, state, zip code, phone, contact, email) are all optional.
- To disable an account so it cannot be used by future components, shipments, etc. you can uncheck the Enabled box.

System settings

These settings define the configuration of the system and apply for all shops configured in the database.

Components

Configure the types of components that you would like the WSMS system to record. This includes individual components like wheels, axles, armatures, bolsters, sideframes, couplers, etc. It also includes assemblies such as wheelsets, trucks, railcars, traction motors, etc.

Manage components

To create a new component type, click the Add button.

To modify an existing component type, expand out the Components section, select the component type you want to modify, and then click the Edit button.

To remove a component type, expand out the Components section, select the component type you want to remove, and then click the Remove button. You can only remove a component type if it is not being used.

Editing a component

Add a new component type or edit an existing one.

General

Define the basic properties for the component type

WHEELSET* X

General

Elements

Assembly Configurations

Business Rules

Recalls

Scrap Reasons

Dispositions


Change name, data type, and other options.

Name: WHEELSET

Description: Wheel set

Mounted:

Enable Registration

Image:  Configuration_2

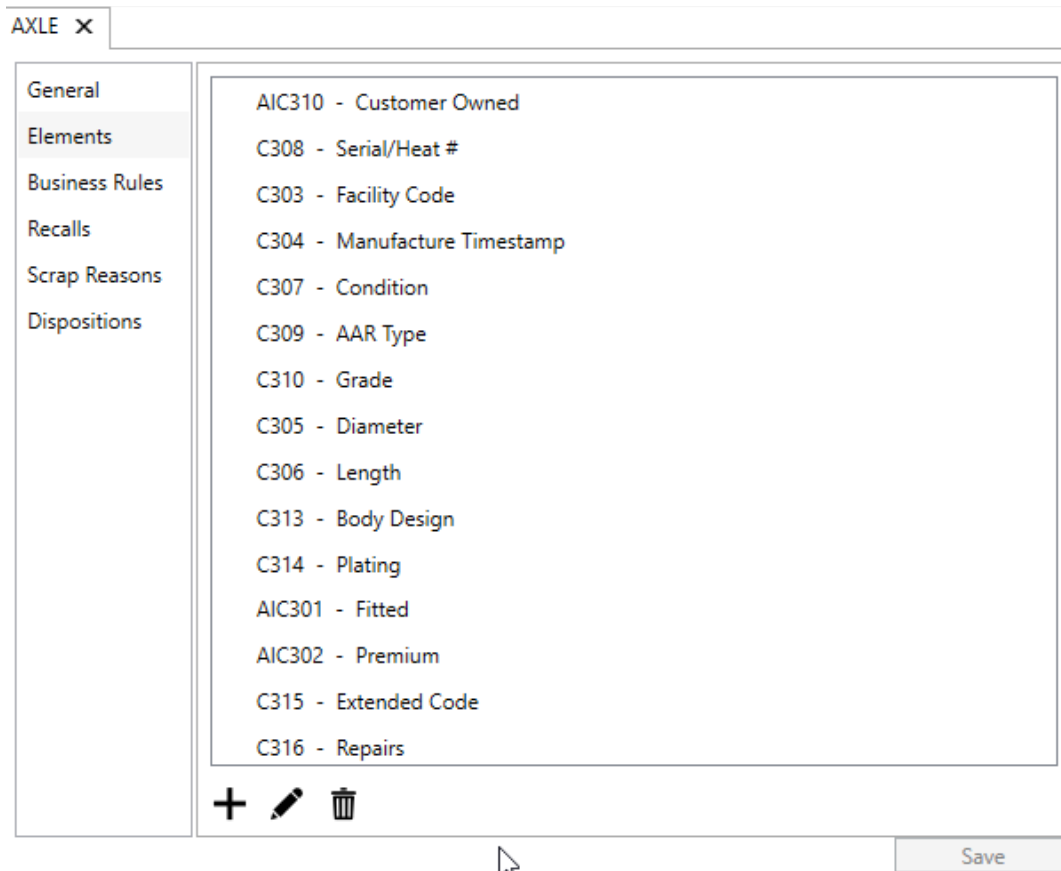
Subcomponents: AXLE
 BEARING
 BEARINGCORE
 WHEEL
 WHEELSET

Save

- Name – The name of the component type. Typically, all uppercase without spaces.
- Description – A descriptive name for the component type. This is typically what is displayed with the WSMS applications.
- Mounted – Check this if the component type could have a mounting chart associated (such as a wheel or bearing which is mounted onto an axle).
- Enable Registration – Check this if the component type is part of the AAR Component Tracking initiative and is expected to be registered by your shop.
- Image – An image that is used to represent this component type. Used by some WSMS application and reports.
- Subcomponents – If this component type is an assembly made up of other component types, select the which types of components make up this assembly.

Elements

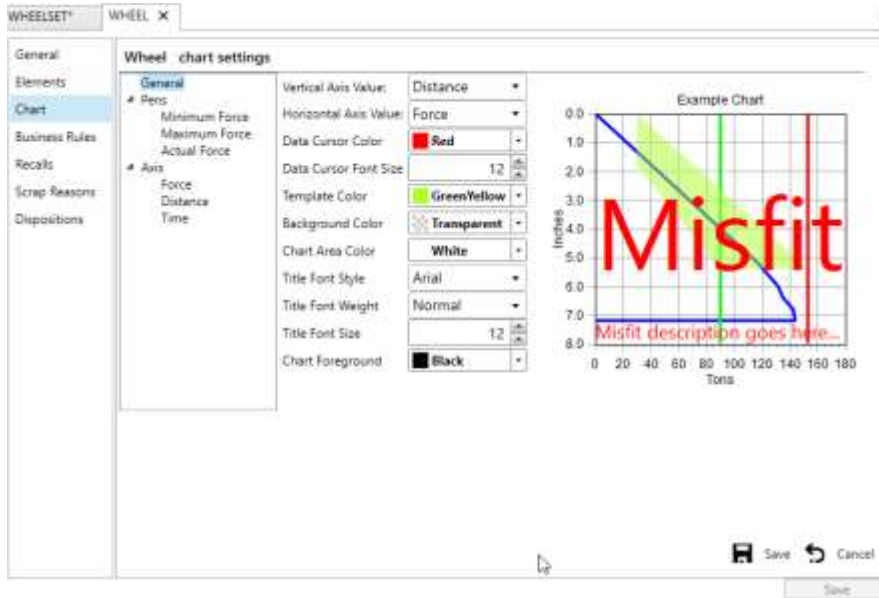
Define the data elements that will be collected for this component type. Refer to the section on [Editing an Element](#) for more information.



- To add a new element, click the Add button
- To edit an existing element, select the element from the list and click the Edit button.
- To remove an element, select the element from the list and click the Remove button. You cannot remove an element once it is in use.

Charts

Component types that are selected as 'Mounted' may be recorded by one of the press recorder applications that are part of the WSMS suite. These applications record a data points of force, distance, and time of the mounting operation which is represented by a linear chart. The default settings used to display the chart can be configured for each different component type.

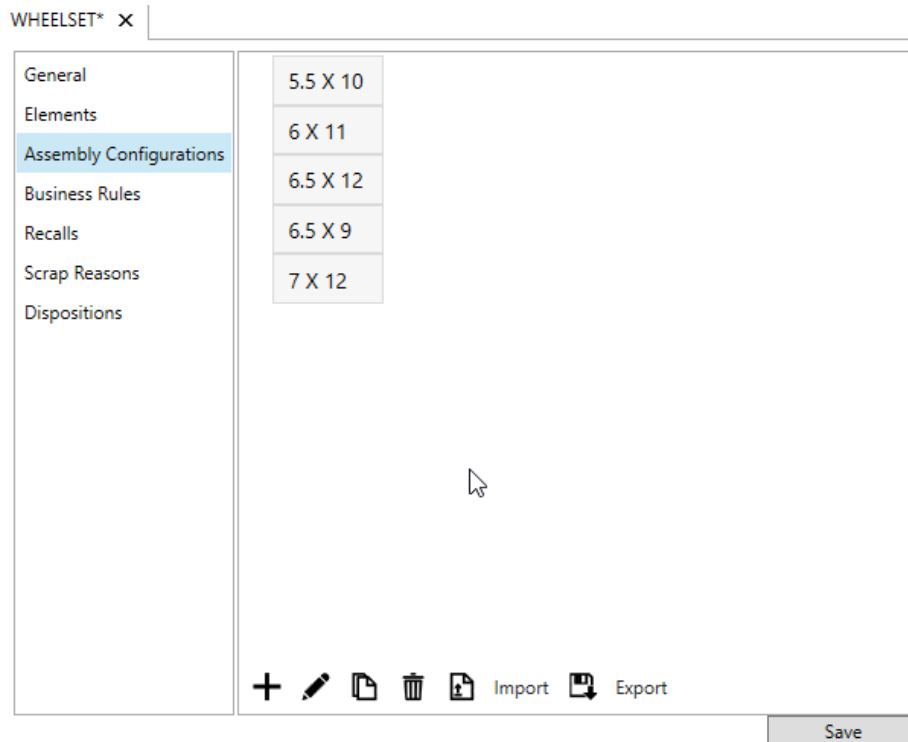


The chart settings are grouped into three categories:

- General – customize the way the chart is displayed.
- Pens – customize the way the force lines are displayed.
- Axis – customize the way the axes are displayed.

Assembly Configurations

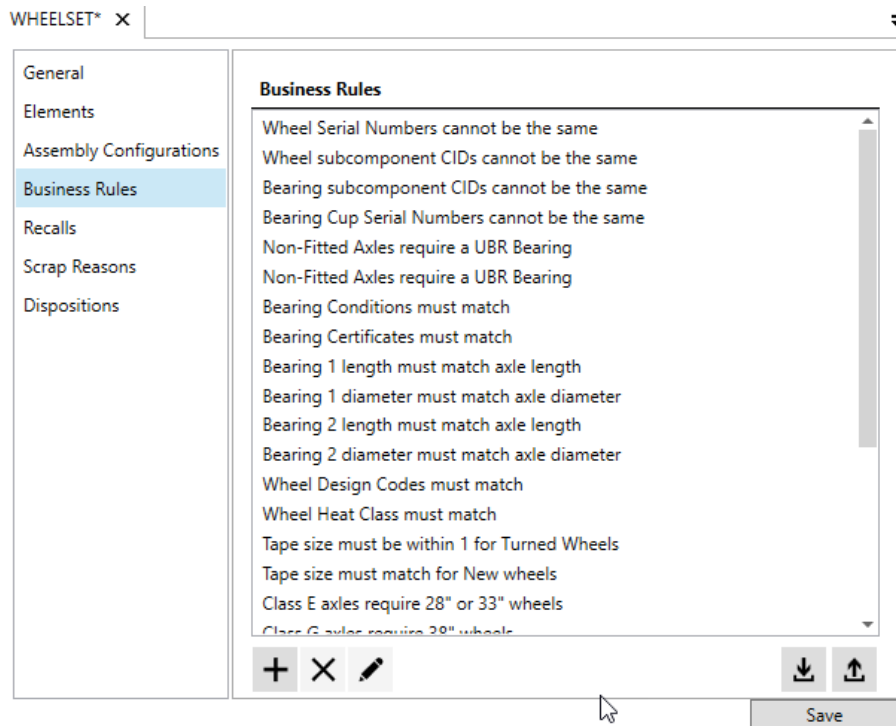
Assembly configurations only apply to component types that are assemblies (have one or more subcomponent types). For more information about editing an assembly configuration refer to the section on [Editing an assembly configuration](#).



- To add a new configuration, click the 'Add button.
- To copy a configuration, select the configuration from the list and click the Copy button.
- To edit a configuration, select the configuration from the list and click the Edit button.
- To delete a configuration, select the configuration from the list and click the Delete button. Only configurations not in use can be deleted.
- To import one or more configurations, click the Import button and browse for the file. Follow the prompts on the screen.
- To export the assembly configurations for this component type, select one or more configurations from the list and click the Export button. Select a location and enter a file name and then click Save.

Business Rules

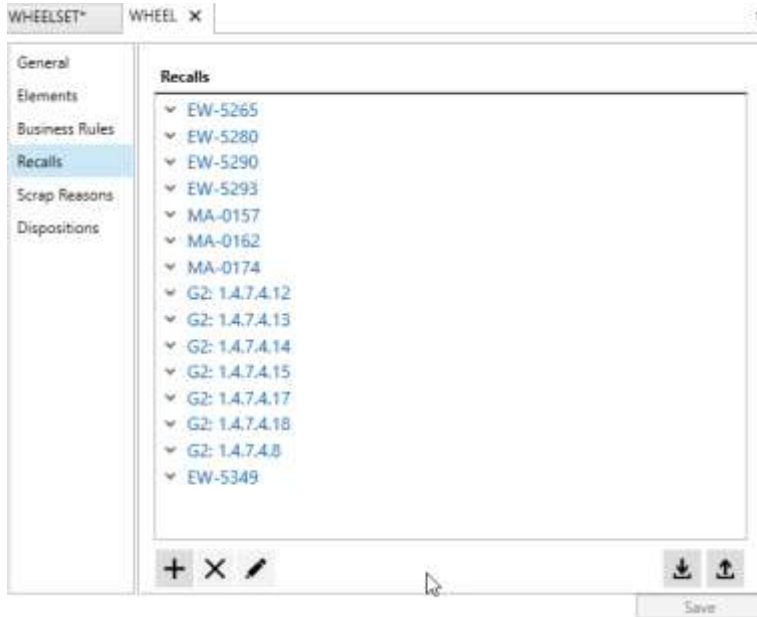
Create custom criteria to evaluate the validity of the data entered for each component. These rules allow validating the value of one element against the value of another element, on the same component or on another component that is part of the same assembly.



- To add a new business rule, click the 'Add button.
- To edit a business rule, select the business rule from the list and click the Edit button.
- To delete a business rule, select the business rule from the list and click the Delete button
- To import one or more business rules, click the Import button and browse for the file. Check the box next to any business rule you want to add to your system and then click 'Add Rules'.
- To export the business rule for this component type, click the Export button. Select a location and enter a file name and then click Save.

Recalls

Components that need to be recalled due to manufacturer defects, improper assembly procedures from the previous repair shop, etc. can be flagged by the software if it meets the criteria defined as part of a recall.



- To add a new recall, click the 'Add button.
- To edit a recall, select the recall from the list and click the Edit button.
- To delete a recall, select the recall from the list and click the Delete button
- To import one or more recalls, click the Import button and browse for the file.
- To export the recalls for this component type, click the Export button. Select a location and enter a file name and then click Save.

Scrap Reasons

Components can be recorded as scrap if they are no longer able to continue the production process. There can be numerous reasons a component may need to be scrapped. Being able to track the reason a component is scrapped can help to analyze the workflow and process components may go through in the shop.



To categorize the reason a component gets scrapped you must create a list of scrap reasons.

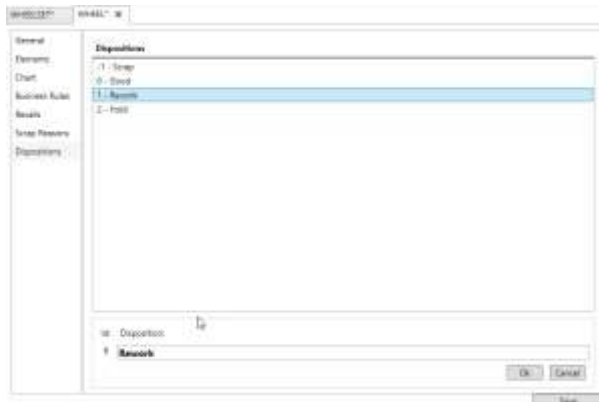
- To add a new scrap reason, click the 'Add button.
- To edit a scrap reason, select the scrap reason from the list and click the Edit button.
- To delete a scrap reason, select the scrap reason from the list and click the Delete button.

You can also order the list of scrap reasons, so they appear in a particular order.

- Click the 'Sort by frequency of use' button to put the most selected scrap reason at the top and least used at the bottom.
- Click the 'Sort alphabetically' button to arrange the scrap reasons from A to Z.
- Select a scrap reason from the list and use the 'Move to top' button to make it be the first in the list.
- Select a scrap reason from the list and use the 'Move to bottom' button to make it be the last in the list.
- Select a scrap reason from the list and use the 'Move up' button to move it before the scrap reason that is currently above it.
- Select a scrap reason from the list and use the 'Move to top' button to move it after the scrap reason that is currently below it.

Dispositions

Each component has four possible dispositions that determine how it can be handled. These dispositions are represented internally by an integer number (-1, 0, 1, 2). The value displayed for each of these dispositions can be customized by for each system.



- Scrap (-1): the component is bad and should not continue its workflow.
- Good (0): the component has completed its workflow and is ready to use.
- Rework (1): the component requires additional work before it is ready to use.
- Hold (2): the component should be held and not continue its workflow until a decision can be made about the future of the component.

Editing an Element

Add a new element or edit an existing one.

General

These properties are common to all Component Elements and are required to properly define an element.

The screenshot shows a software interface window titled 'C107'. On the left is a vertical navigation pane with the following tabs: 'General' (selected), 'Advanced', 'Lookups', 'Requirement', and 'Validation'. The main area of the window is titled 'Change name, data type, and other options.' and contains the following fields and controls:

- Shop Code: [Empty dropdown menu]
- Element ID: C107
- Data type: TXT
- Display Name: Mfg.
- Description: Stamped Manufacturer Code
- Component Type: WHEEL
- Property Name: Manufacturer
- Req. for Unique:
- Include in Registration:

- Component Type – An element is defined for a specific type of component. If adding a new element, you must select which component type you are adding it for. If editing an existing element this property is read only.
- Data Type – This property tells the system what type of data this element is intended to hold. The options are currently TXT for text, DAT for Date/Time, NUM for a number, or BIT for a true/false (binary) value. If adding a new element, you must select the data type. If editing an existing element this property is read only.
- Element ID - A unique identifier that distinguishes this element other elements.
- Display Name – A descriptive name used to identify the element
- Description – A description of what the type of data this field will record.
- Property Name – A common name for this element used to associate it with other elements that serve a similar purpose. For example, all component types that have a Serial Number element should all use this same property name “SerialNumber”. **To search for a component by serial number, this Property Name must be set to “SerialNumber” for any serial number fields.**
- Req. for Unique – All elements where Req. for Unique is selected will be used to determine if a component already exists with the same values as the component being tested. This is used to prevent duplicate data entry.
- Include in Registration – If selected the value of this element will be included in the registration information if the component type is part of the AAR Component Tracking.

Advanced

These properties are optional and may not be applicable in all uses of the element.

The screenshot shows a configuration window with a sidebar on the left containing the following menu items: General, Advanced (highlighted), Lookups, Requirement, and Validation. The main area is titled "Change advanced options." and contains five input fields:

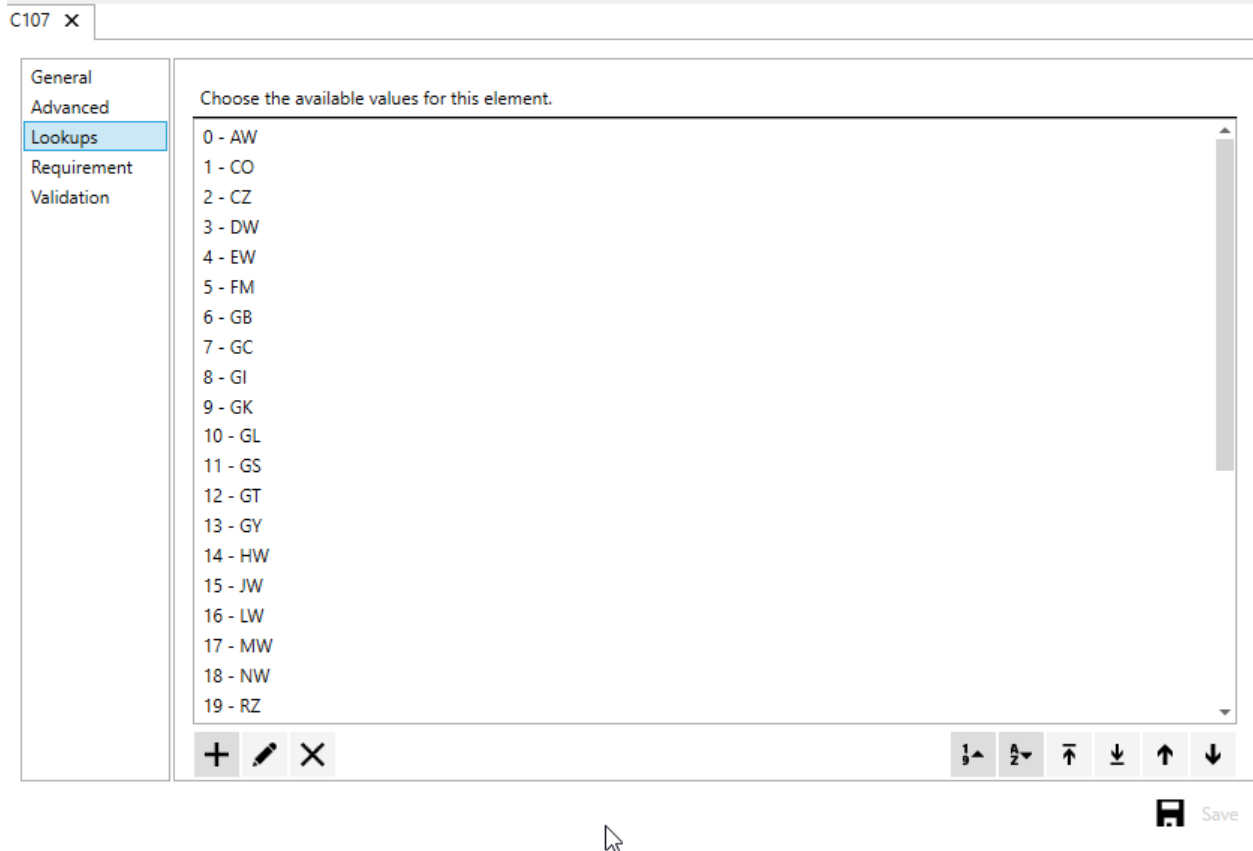
- Group:
- Order:
- Format:
- Calculation:
- Hidden:

A mouse cursor is visible over the main area. At the bottom right of the window, there is a "Save" button with a floppy disk icon.

- Group – a descriptive name used to group similar elements together when viewed in a list with other elements
- Order – a numerical value used to sort elements when viewed in a list with other elements
- Format – a string format specifier that can be used to transform how the value of an element is displayed. For example, a bit field can be displayed as Yes or No instead of true or false or a decimal number can be specified to only show a certain number of decimal places.
- Calculation – the value of this element will be calculated using the specified formula, rather than the user entering the value.
- Hidden – determines whether this element is included when viewed in a list with other elements.

Lookups

A list of valid values for the element. These values can be displayed in a list for the user to select instead of requiring the user to type the value into the system. A lookup consists of a Name and a Value. The Name is what is shown to the user when viewed in a list. The Value is what is recorded for the element.



You can manage the list of lookups by adding, editing, or removing a lookup.

- To add a new lookup, click the 'Add' button.
- To edit a lookup, select the lookup from the list and click the Edit button.
- To delete a lookup, select the lookup from the list and click the Delete button.

When adding or editing a lookup, a popup dialog is displayed.



- Name – This is how the lookup item is displayed in drop-down lists
- Value – This is the actual value that is stored for the component when this lookup item is selected.
- Condition – This is an optional ‘condition expression’ that can be used to filter lookup items based on the value of another element. For more information about Condition expressions contact AIC.
- Image – This is an optional reference to an Image resource. The image is typically displayed in the drop-down list along with the Name.

You can order the list of lookups, so they appear in a particular order.


- Click the ‘Sort by frequency of use’ button to put the most selected lookup at the top and least used at the bottom.
- Click the ‘Sort alphabetically’ button to arrange the lookups from A to Z using the Name field.
- Select a lookup from the list and use the ‘Move to top’ button to make it be the first in the list.
- Select a lookup from the list and use the ‘Move to bottom’ button to make it be the last in the list.
- Select a lookup from the list and use the ‘Move up’ button to move it before the lookup that is currently above it.
- Select a lookup from the list and use the ‘Move to top’ button to move it after the lookup that is currently below it.

Requirements

When recording the data for a component, some elements are always optional while other may be required to complete the data entry. Each element can be configured to be always optional, always required, or only required in certain circumstances.

C107 x

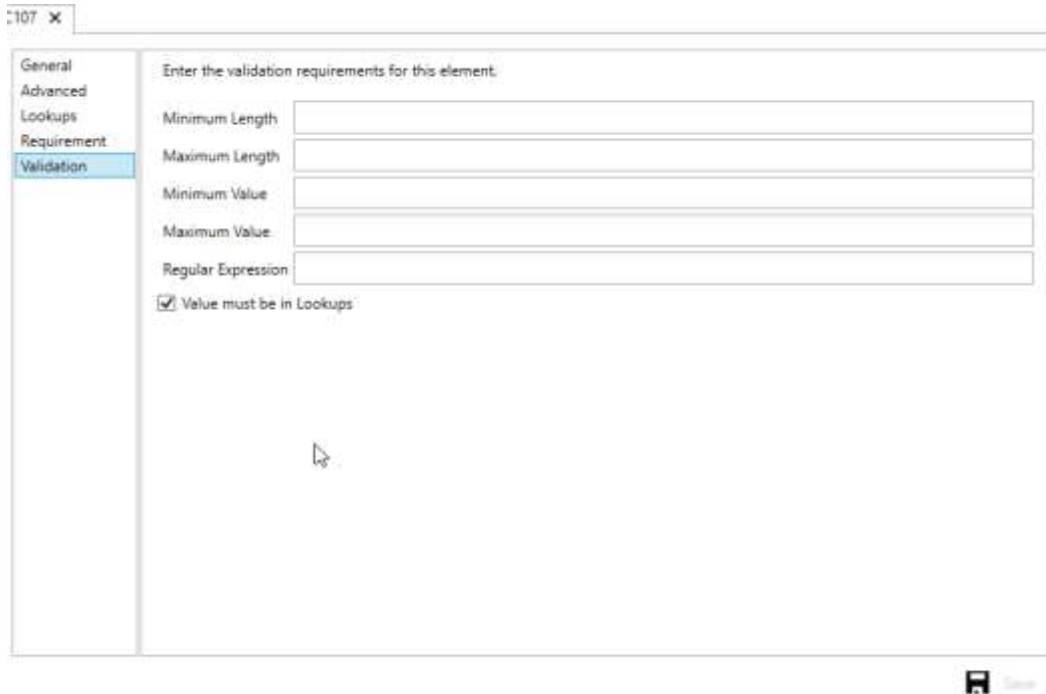
General	Condition:
Advanced	true
Lookups	Error Message:
Requirement	Manufacturer Code is required
Validation	

 Save

- Condition –Set this to ‘true’ if the element should be always required. For conditional requirements, you use a specific syntax to define what conditions make the element required. [Contact AIC](#) for help setting a conditional requirement.
- Error Message – This is the message that will be displayed to the user if the element is required, and the value has not been entered yet.

Validations

The data that a user enters for an element might have to meet certain criteria before it is considered valid. For example, serial numbers may need to be between 3 and 5 characters. Validations ensure that the data entered meets these requirements before it can be saved.

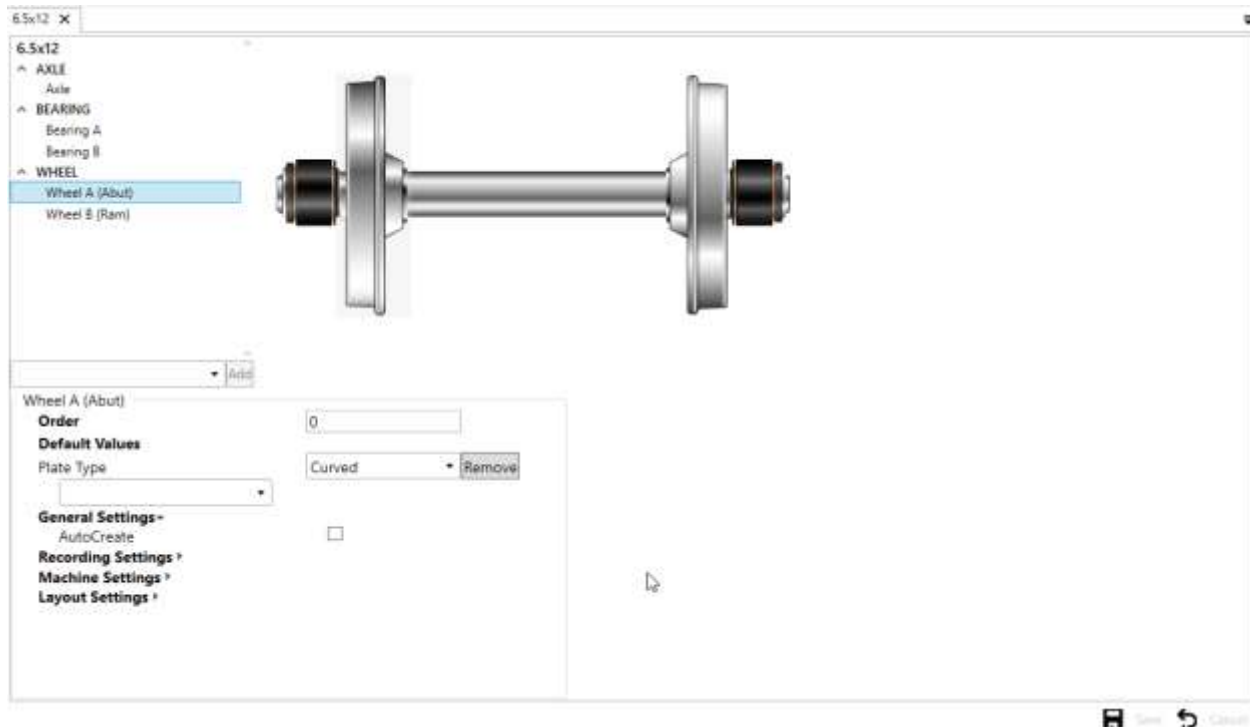


The screenshot shows a software interface with a sidebar on the left containing the following menu items: General, Advanced, Lookups, Requirement, and Validation (which is currently selected). The main area is titled "Enter the validation requirements for this element." and contains five input fields: "Minimum Length", "Maximum Length", "Minimum Value", "Maximum Value", and "Regular Expression". Below these fields is a checkbox labeled "Value must be in Lookups" which is checked. A mouse cursor is visible over the "Value must be in Lookups" checkbox. At the bottom right of the main area, there is a small icon of a house.

- Minimum Length – The minimum number of characters required
- Maximum Length – The maximum number of characters allowed
- Minimum Value – The data must have a value greater than or equal to this. The element Data Type determines how this value is compared to the data entered.
- Maximum Value – The data must have a value less than or equal to this. The element Data Type determines how this value is compared to the data entered.
- Regular Expression – The data must match a .NET Regular Expression pattern. For more information about .NET Regular Expressions please go to [https://msdn.microsoft.com/en-us/library/hs600312\(v=vs.110\).aspx](https://msdn.microsoft.com/en-us/library/hs600312(v=vs.110).aspx)
- Value must be in lookups – If this is checked the data must match the Value property of one of the element Lookups (see [Lookups](#) above for more information on Lookups).

Editing an assembly configuration

Add a new assembly configuration or edit an existing one.



Managing subcomponents

To add a new subcomponent, select it from the drop-down list and click Add. If an image is specified for that component type you should see the new subcomponent displayed in the assembly image.

To reposition a subcomponent, click the subcomponent in the assembly image and drag it to its new location. You can resize the image by clicking the subcomponent in the assembly image and using the resize grips.

Select multiple subcomponents by pressing Ctrl key while clicking on the subcomponents. When more than one subcomponent is selected a panel will appear with options for aligning the selected subcomponents

To rotate a subcomponent, right-click on the subcomponent and click Rotate Clockwise or Rotate Counterclockwise. To position a subcomponent above or behind another subcomponent, right-click and select Send to Back or Send to Front.

To remove a subcomponent, right-click on the subcomponent in the image and select 'Remove Component'.

To modify the settings for a subcomponent, select the subcomponent from the list in the top left, or by clicking on the component in the image. Once selected, you can click on the Name to modify it, or modify the settings for the component as described below:

Recording Settings

Recording Settings are used by the press recorder applications to analyze the chart after it is recorded to detect misfit conditions as specified in these settings. These settings are unique to each assembly configuration as well as each subcomponent so please be aware that making changes for one component will not automatically apply those changes to any other components or configurations.

- **Min Force:** the minimum mounting force required for this subcomponent.
- **Max Force:** the maximum mounting force allowed for this subcomponent.
- **Detect High\Low Force:** when enabled, the mounting chart is analyzed using the Min Force and Max Force to determine if the mount is a Misfit.
- **Detect High Distance:** when enabled, the mounting chart is analyzed using the HighDistanceValue to determine if the mount is a Misfit.
- **High Distance Value:** the maximum mounting distance allowed for this subcomponent.
- **Detect Low Distance:** when enabled, the mounting chart is analyzed using the LowDistanceValue to determine if the mount is a Misfit.
- **Low Distance Value:** the minimum mounting distance allowed for this subcomponent.
- **Detect Distance Variation:** when enabled, the mounting distance is compared to the other subcomponent of this type to determine if the mount is a Misfit.
- **Distance Variation Amount:** the maximum allowed difference in the distance of two mounting charts.
- **Detect Entry Spike (G-II 1.4.1.3.4):** The “entry spike” at the beginning of the mount must not exceed the EntrySpikeForceLimit or three times the tonnage after the drop-off, whichever is less.
- **Entry Spike Force Limit:** the force at which we stop checking for entry spike Misfits
- **Detect Pressure Dip (G-II Fig. 4.22):** When enabled, the mounting chart is analyzed to determine if the force fluctuates(dips) more than the AllowedFluctuation amount during the press.
- **PressureDipExclusionStart:** Used to exclude a part of the mounting chart to account for expected anomalies like oil grooves. Set this value to the distance from the start of the chart where you want to ignore anomalies (dips) in force.
- **Pressure Dip Exclusion End:** Used to exclude a part of the mounting chart to account for expected anomalies like oil grooves. Set this value to the distance from the start of the chart where you want to resume looking for anomalies (dips) in force.
- **Allowed Fluctuation:** The amount of fluctuation in force that is acceptable.
- **Detect Abnormal Mounts:** When enabled, the mounting chart is broken down into multiple zones and analyzed using an R-squared statistical algorithm to detect a nonlinear mounting chart. Sometimes this is referred to as an “ugly chart detector”.
- **Detect Build Force to 75% (G-II 1.4.1.3.2):** When enabled, the mounting chart is analyzed to ensure the force continues to increase in the first 75% of the chart.
- **Detect Drop of After Min Force (G-II 1.4.1.3.3):** When enabled, the mounting chart is analyzed to detect if the force drops back below the Min Force value after it has gone above that value and before the mount is complete.
- **Detect Excessive Dropoff:** When enabled, the mounting chart is analyzed to detect if the force drops more than the ‘ExcessiveDropoffAmount’ at the end of the chart.

- **Excessive Dropoff Amount:** The amount of force that is allowed to drop at the end of the mount before being considered a misfit.
- **Template Type:** The type of mounting template to apply to this component (None, AAR, or EN13260)
- **Template Settings:** Settings required to generate the mounting template, based on the Template Type selected.
- **Detect Template Misfit (G-II Fig. 4.20):** When enabled, mounting charts that fall outside of the template will be flagged as a misfit
- **Minimum Spike Force:** The minimum spike force required at the end of the mount. This is in addition to the mounting force.
- **Maximum Spike Force:** The maximum spike force allowed at the end of the mount. This is in addition to the mounting force
- **Detect Spike:** When enabled, any force above the mounting force will be considered a spike.
- **Spike Control Enabled:** When enabled, the press recorder will try to control the force spike at the end of the mount to be within the Minimum Spike Force and Maximum Spike Force. Currently, only Universal Press Recorder is capable of spike control
- **False Spike Distance:** The maximum distance the press can travel after it detects a spike. Once this distance is exceeding the controller resets the spike value and continues the press until a new spike is detected. Only used when Spike Control is enabled.
- **Spike Start Force:** The minimum force required before the controller starts detecting a spike. Only used when Spike Control is enabled.
- **Spike Detection Slopes to Average:** Determines how many data points are used when evaluating the chart data to determine the start of a spike.
- **Spike Detection Slope Setpoint:** Determines the 'steepness' a spike must have before it is detected as a spike.

Machine Settings

Machine Settings are used by the press recorder applications to record a mounting chart and are unique to each press. These settings must be configured for every machine where this assembly type will be used. You must specify the Machine Settings for each component separately.

- **Starting Distance:** The minimum distance the ram must extend before recording a chart.
- **Starting Force:** The minimum force required before recording a chart.
- **False Start Distance:** If the distance of the chart is less than this amount, the chart will reset if the force drops back below Starting Force.
- **Spike Coast:** Adjusts the target spike force to stop the press earlier when a spike is detected. This should be the amount of force the press continues to build after the stop command is enabled and before the press stops.
- **End Force Drop:** The amount of force that must be lost to end the chart recording.
- **End Distance Drop:** The amount of distance that must be lost to end the chart recording.
- **Force Tag Index:** Indicates which force sensor should be used for this component.
- **Distance Tag Index:** Indicated which distance sensor should be used for this component.
- **RamTagIndex:** Indicated which set of digital inputs and outputs should be used for spike control (if so enabled).

- **Order:** Specifies the order of this subcomponent in the overall mounting sequence, as compared to the other subcomponents.
- **Wait for Press Ready:** mainly used on automated presses and should be enabled if there is a hard wire input from the press to indicate to the controller that the press is ready.
- **Wait for Wheelset Present:** mainly used on automated presses and should be enabled if there is a hard wire input from the press to indicate that there is a wheelset present in the press.

Layout Settings

These settings affect the placement, size, and rotation of the subcomponent on the assembly image. Refer to the section on [Managing subcomponents](#) for further options for adjusting the layout.

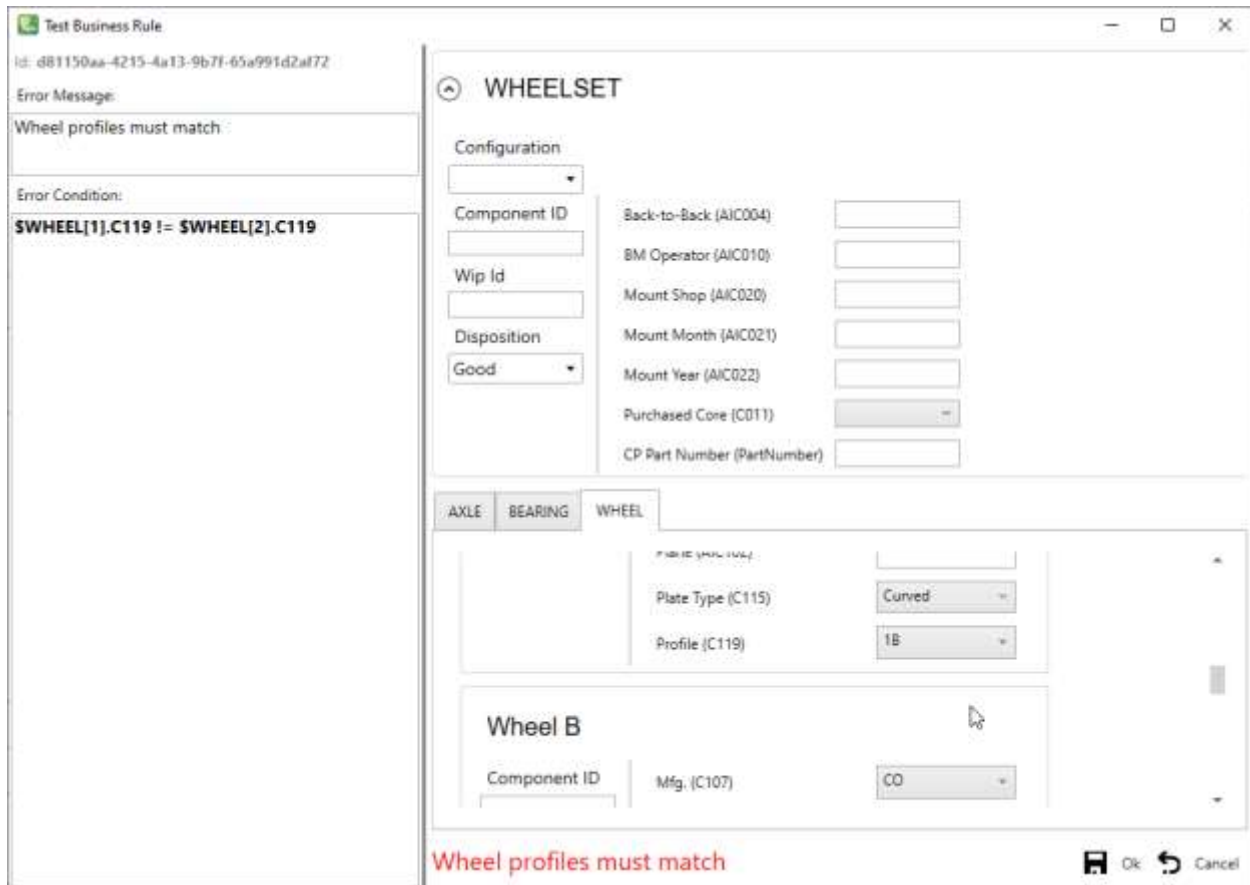
Editing a business rule

Add a new business rule or edit an existing one.

Business Rules require two properties: The Error Message which is the message displayed to the user when the business rule is violated, and the Error Condition which defines the conditions that cause the business rule to be violated.

Currently, only advanced users can create or modify the Error Condition as it requires syntax that may not be familiar to a layperson. For more information about Error Condition syntax please contact AIC Support.

To test an existing business rule, use the component editor on the right side of the screen to enter data. If the data you enter violates the business rule Error Condition, the Error Message will be displayed at the bottom



Editing a component recall

Add a new recall or edit an existing one.

Recalls require two properties: The Reference used to identify the recall, and the Criteria which defines the conditions that cause the component to be flagged as a recall

Currently, only advanced users can create or modify the Criteria as it requires syntax that may not be familiar to a layperson. For more information about Criteria syntax please contact AIC Support.

To test an existing recall, use the component editor on the right side of the screen to enter data. If the data you enter matches the recall criteria, an error message will be displayed at the bottom indicating the component matches the recall.

Component Recall

Id: 1

Reference: EW-5265

Expiration Date:

Select a date [13]

Criteria:

SC117 == "T" && SC106 == 1 && SC105 == 08 && Contains["32499,32832", SC111]

WHEEL

Component ID

Wip Id

Disposition: Good

Mfg (C107)

Serial # (C111): 32499

Month (C106): 1

Year (C105): 8

Class (C108)

Heat # (C112)

Design Code (C114)

Diameter (C113)

Facility Code (C103)

Manufacture Timestamp (C104): Select a date [13]

Condition (C117): Turned

Tape Size (C116)

Rough Bore (C120)

Rim Type (C118)

Flange Thickness (C110)

Rim Thickness (C109)

Radial (AK101)

Rims (AK107)

Recall by reference: EW-5265

Save Cancel

Images

WSMS allows storing images directly in the database so they may be used by reports, custom views, component types, etc.

Manage images

To create a new image, click the Add button.

To modify an existing image, expand out the Images section, select the image you want to modify, and then click the Edit button.

To copy an existing image, expand out the Images section, select the image you want to copy, and then click the Copy button.

To remove an image, expand out the Images section, select the image you want to remove, and then click the Remove button.

Editing an image

Add a new image or edit an existing one.

- Enter a descriptive Name for the image. *Caution: Some applications reference an image by Name. Changing the name of the image after it has been saved might prevent some applications or reports from working correctly.*
- Click Select Image to browse for the image file you want to store.

- Click Export to export an image from the database and save it to a file.

Shipment Types

Shipments are a way to group components that come into your shop or leave your shop. Shipments are grouped into two main categories (Inbound and Outbound) of which there can be multiple types. For example, you can track shipments of assemblies such as wheelsets, or of loose components such axles. Each of these different shipment types must first be configured.

Manage shipment types

To create a new shipment type, click the Add button.

To modify an existing shipment type, expand out the Shipment Types section, select the shipment type you want to modify, and then click the Edit button.

To remove a shipment type, expand out the Shipment Types section, select the shipment type you want to remove, and then click the Remove button.

Editing a shipment type

Add a new shipment type or edit an existing one.

- Enter a descriptive Name for the shipment type.
- Select the direction (Inbound or Outbound)
- Select the type of items that will be shipped (Assemblies or loose components).
- Default type (optional) is the type of component or assembly for this shipment. Leave it blank if it should allow multiple types.
- Select whether to print a report after the shipment is reviewed from Shop Manager, and if yes select the name of the report to print.
- On the Display Properties tab, select which fields to display when viewing a list of the components in the shipment.
- On the Plugins tab, select any custom plugins that should be executed for shipments of this type.
- Additional properties will be dependent on the Direction selected. For Outbound shipments, this includes whether to register the components on the shipment (see [Component Registration](#) for more information), and whether to export the data for the components on the shipment so the data can be transferred to another shop.
- Additional Inbound properties include
 - The expected component types
 - If you will use a custom view for your Inbound Tracking device, select the view name.
 - On the Component Scan Order tab, select the order that subcomponents will be scanned, if you will be utilizing a barcode scanner to capture data about the inbound assemblies.
 - On the Data Entry Configuration tab, specify any default values and requirements for the fields of the assembly and components that will be inbounded. Requires that the component type be selected in the Components list on the options tab.

Permission Groups

Each user must be assigned to exactly one permission Group. Each group can be assigned a different combination of permissions. You can create as many groups as required. For example, you may want user 'Bob' to have view only access, but user 'Dave' needs permission to calibrate machines. To accomplish this, you can create a 'view only users' group that does not have any permissions. Assigning

'Bob' to this group will allow them to log in and view/search data but they won't be able to make any changes. Creating a second group with the 'Calibrate Machines' permission and assign 'Dave' to that group will allow them to calibrate machines.

Manage groups

To create a new group, click the Add button.

To modify an existing group, expand out the Permission Groups section, select the group you want to modify, and then click the Edit button.

To copy an existing group, expand out the Permission Groups section, select the group you want to copy, and then click the Copy button.

To remove a group, expand out the Permission Groups section, select the group you want to remove, and then click the Remove button.

Editing a group

Add a new carrier or edit an existing one.

- Enter a descriptive Name for the group (cannot be changed after the group is saved).
- Select the permissions for the group.

Language Resources

Most WSMS applications can display text in a language other than English. They do this by using a resource table for the text used in the applications. Before selecting another language, the resource table must be updated with the translation information.

The value that is associated with each Resource ID must be specified for each culture. If no value exists for a Resource ID in the currently selected culture the value from the default culture (en-us) will be displayed.

Managing language resources

To modify the resources for an existing culture, expand out the Language Resources section, select the culture you want to modify, and then click the Edit button.

To import a new culture or to update the translations for an existing culture, click the Import button, browse for the file containing the language resources.

To export all existing culture and resource information, click the Export button, select a location, enter a file name, and click Save.

Editing a language resource

Select an existing culture and click Edit.

en-us pt-BR X

Culture: pt-BR Show only untranslated Search...

Id	Default Value	Selected Culture Value
About	About	
Add	Add	
AIC001_Description	Back To Back	
AIC001_DisplayName	Back-to-Back	
AIC002_Description	Housing Serial Number	
AIC002_DisplayName	Housing SN	
AIC003_Description	Gear Ratio	
AIC003_DisplayName	Gear Ratio	
AIC004_Description	Back To Back	
AIC004_DisplayName	Back-to-Back	
AIC005_Description	Shim Size	
AIC005_DisplayName	Shim Size	
AIC010_Description	Customer Serial Number	
AIC010_DisplayName	Customer Serial Number	
AIC011_Description	Customer Part Number	
AIC011_DisplayName	Customer Part Number	
AIC012_Description	Back To Back 2	
AIC012_DisplayName	Back-to-Back 2	
AIC013_Description	Back To Back 3	
AIC013_DisplayName	Back-to-Back 3	
AIC014_Description	Wheel Seat Diameter 1	
AIC014_DisplayName	Wheel Seat Diameter 1	
AIC015_Description	Interference 1	
AIC015_DisplayName	Interference 1	
AIC016_Description	Wheel Seat Diameter 2	
AIC016_DisplayName	Wheel Seat Diameter 2	
AIC017_Description	Interference 2	
AIC017_DisplayName	Interference 2	

Click the column header to sort the list of resources alphabetically by that column.

Use the 'Show only untranslated' filter to find missing language resources for the selected culture.

Use the search box to filter by the resource ID or by the default culture text or current culture text

Click in the 'Selected Culture Value' cell to enter or change the text that should display for the associated Resource ID.

Queues

To facilitate the component workflow, most WSMS applications are capable of loading data from and inserting data into one or more data Queues. Before you can configure a station to load from or insert data to a queue you must first define your queues.

Manage queues

To create a new queue, click the Add button.

To modify an existing queue, expand out the Queues section, select the queue you want to modify, and then click the Edit button.

To remove a queue, expand out the Queues section, select the queue you want to remove, and then click the Remove button.

Editing a queue

Add a new carrier or edit an existing one.

- Enter a descriptive Name for the queue.
- Enter a more detailed Description of what the queue will be used for.
- Select the type of component that will assigned to the queue.

Report Settings

Reports are an integral part of the WSMS. Certain report types are integrated into Shop Manager and can be triggered contextually. Because WSMS also allows for custom reports there are some settings required to instruct the system where to locate the reports and which reports to use in certain contexts.

Report Settings

Report Server

Use Report Server

Report Server URL

Data Source Name

Reports

Assembly Report: [Dropdown]

Press Report: [Dropdown]

Inbound Shipping Report: [Dropdown]

Outbound Shipping Report: [Dropdown]

Save Cancel

Reporting in WSMS is handled either by an instance of the Microsoft SQL Server Reporting Services or by directly storing the report files into the WSMS database. When using a Microsoft SQL Server Reporting Service, you must enable the 'Use Report Server' checkbox and enter the Report Server URL and Data Source Name.

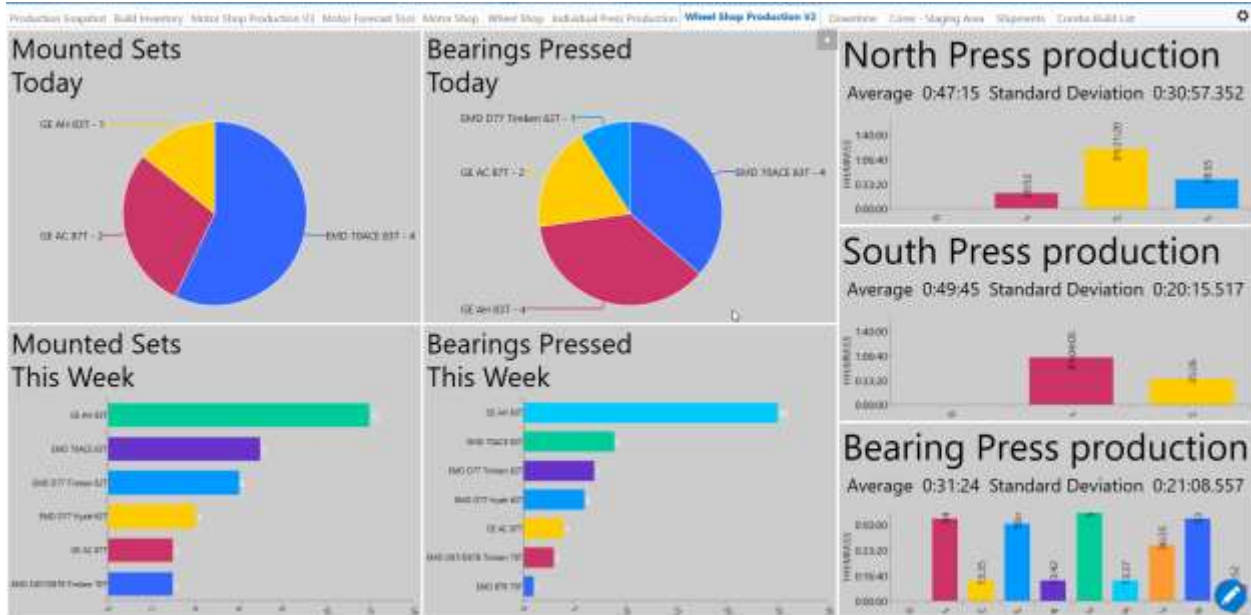
To enable contextual report selection, you must assign the report that you want to use for each of the following contexts:

- Assembly Report – this report provides detailed information about a specific assembly
- Press Report – this report typically includes a mounting chart and information about the press mounting of a specific component.
- Inbound Shipping Report – this report displays information about an inbound shipment, including details of the items that were received.
- Outbound Shipping Report – this report displays information about an outbound shipment, including details of the items that were shipped.

Dashboards and Widgets

Available for Shop Metrix and Shop Manager

Dashboards allow you to gain visibility into your production and process by adding one or more widgets or charts to your dashboard. Customizable, configurable dashboards provide you and your team with the flexibility to share information, monitor progress and trends, and improve your workflow processes. Each user can tailor their dashboards to share information and monitor their progress. And with our Shop Metrix application you can visualize this information on the big screen around your shop.



Key concepts

- Dashboards are customizable interactive signboards that provide real-time information. Dashboards are associated with a group or a user and display configurable charts and widgets.
- Widgets display configurable information and charts on dashboards. The widget catalog provides brief descriptions of those widgets available to you.

Managing dashboards

Users with custom dashboards can manage their dashboards directly from the home screen or from the Options dialog. Shop Metrix and Group dashboards must be managed from the Options dialog. Refer to the [Dashboards](#) section of [Options](#) for more information about managing Shop Metrix and Group dashboards.

To manage dashboards for the current user, click the Gear icon in the top right corner of the dashboards.

New Dashboard [Set as Default](#) [Add Default Tabs](#) [Restore Default](#) [Import](#) [Export](#)

Name	Auto Size	Rows and Columns				
Motor Shop	<input type="checkbox"/> Auto	Rows 4	Columns 9	↑	↓	🗑️
Wheel Shop	<input type="checkbox"/> Auto	Rows 4	Columns 8	↑	↓	🗑️
Individual Press Production	<input type="checkbox"/> Auto	Rows 6	Columns 9	↑	↓	🗑️
Wheel Shop Production	<input type="checkbox"/> Auto	Rows 6	Columns 9	↑	↓	🗑️
Downtime	<input type="checkbox"/> Auto	Rows 6	Columns 12	↑	↓	🗑️
Cores - Staging Area	<input type="checkbox"/> Auto	Rows 4	Columns 12	↑	↓	🗑️
Shipments	<input type="checkbox"/> Auto	Rows 4	Columns 6	↑	↓	🗑️
Combo Build List	<input type="checkbox"/> Auto	Rows 4	Columns 12	↑	↓	🗑️

- To add a new dashboard, click New Dashboard in the top left corner.
- To remove a dashboard, click the Delete icon to the far right of the dashboard in the list.
- To reposition a dashboard, click the Up or Down arrows.
- To adjust the number of rows and columns on a dashboard, click in box and change the number. Selecting Auto will disable the Rows and Columns and will automatically size the dashboard based on the number and position of the widgets currently configured for that dashboard.
- If the current user has Manage Dashboards permission, they choose to make their dashboard the default for one or more groups by clicking Set as Default. They will be prompted to select which dashboards they want to include as well as which groups they want this to be the default for.
- If the current user has a custom dashboard instead of inheriting a default dashboard from their Group, the user can choose to add all of the default dashboards from their group to their existing list of dashboards by clicking 'Add Default Tabs'.
- If the current user has a custom dashboard and wants to return to using the default dashboard for their group, click 'Restore Default'.
- To import dashboards or widgets that were exported by another user, click Import and browse for the data file that contains the dashboards. Select the widget(s) you want to import by selecting a dashboard to import them to. Leave the dashboard selection blank if you do not wish to import certain widgets.
- To export your current dashboard either to back up your settings or to transfer them to another user, click Export. Select the dashboards and widgets you want to export and click Save. Select a location and enter a file name and then click Save to complete the export.

Widget Catalog

Widgets display information and charts on dashboards. Most widgets are configurable and require configuration.

To add a widget to a dashboard or copy a widget from one dashboard to another, see [Manage widgets on a dashboard](#).

- [Query Tile](#)
- [Bar Chart](#)
- [Pie Chart](#)
- [Column Chart](#)
- [Count up/down](#)
- [Web Page](#)
- [Text](#)
- [Image](#)
- [Downtime](#)
- [Production Totals](#)
- [Takt Time](#)
- [Work Orders](#)
- [Location Map](#)
- [OEE Dashboard](#)
- [Shared Messages](#)
- [Shared Count Up/Down](#)
- [Reports \(Shop Manager only\)](#)

Query Tile



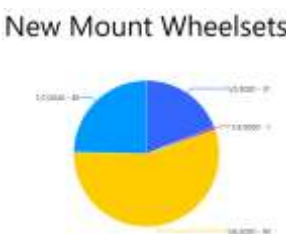
Displays the total number of results for a query. From the configuration dialog, select a query and specify a date range and other optional parameters. You can optionally specify the query tile color and size. To create a query, refer to the Shop Manager user guide.

Bar Chart



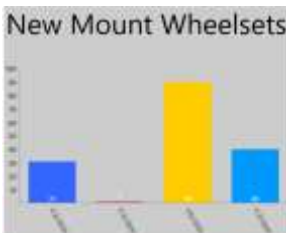
Displays the number of results for a query in a bar chart format grouped by date or result field. From the configuration dialog, select a query and specify a date range and other optional parameters. Specify a field to group by. If that field is a date field you can select to group by day, week, month, or year. You can optionally specify the query tile color and size. To create a query, refer to the Shop Manager user guide.

Pie Chart



Displays the number of results for a query in a pie chart format grouped by date or result field. From the configuration dialog, select a query and specify a date range and other optional parameters. Specify a field to group by. If that field is a date field you can select to group by day, week, month, or year. You can optionally specify the query tile color and size. To create a query, refer to the Shop Manager user guide.

Column Chart



Displays the number of results for a query in a column chart format grouped by date or result field. From the configuration dialog, select a query and specify a date range and other optional parameters. Specify a field to group by. If that field is a date field you can select to group by day, week, month, or year. You can optionally specify the query tile color and size. To create a query, refer to the Shop Manager user guide.

Count up/down



Display the amount of time since or until a specified date. For example, it can be used to calculate the days until retirement or vacation.

Web Page



Embeds a web page into the dashboard. This could be used to show weather information or stock tickers, or the company homepage.

Text



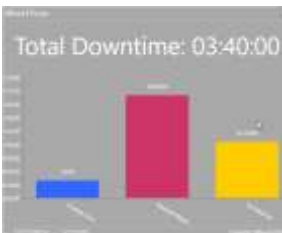
Displays static text that the user can specify. This is not shared among other dashboards and can only be updated by users with permissions to change the dashboard where this widget is used.

Image



Displays a static image, for example a company logo or motivational poster. This is not shared among other dashboards and can only be updated by users with permissions to change the dashboard where this widget is used.

Downtime



Displays the summary of downtime events for the specified machine. There are several formats to choose from:

- Total time down grouped by reason displayed as a bar chart, pie chart, or column chart
- Time down vs uptime displayed as a pie chart or in days, hours, minutes.

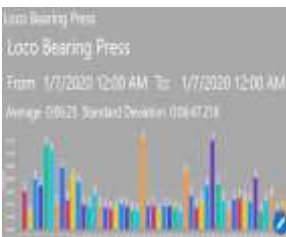
Production Totals



Displays the number of components produced for the specified machine(s) or machine groups during the period specified.

- Total production for all stations selected
- Production totals by machine or machine group displayed as a bar chart, pie chart or column chart.
- Group multiple machines together to get total production for a process (wheel lathes, wheel presses, etc.).

Takt Time



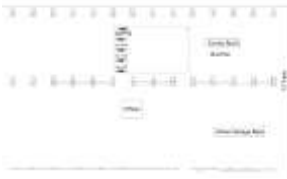
Displays a column chart representing the time to complete each component for the specified machine/process in the specified date range. The average time and standard deviations are calculated and all components that take longer than the standard deviation to complete are filtered out as outlier data. This is to compensate for breaks, lunches, shift changes, etc.

Work Orders



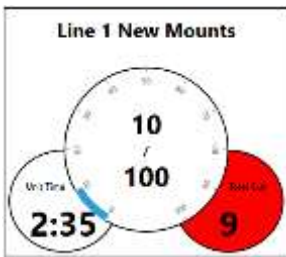
Displays a list of the most recent work orders. In Shop Manager this can be used as a shortcut to view a work order details, edit, or create a new work order.

Location Map



Overlays a customizable visual onto a selected image. One or more 'map areas' can be defined using the X/Y coordinates of the image and can be used to display information about the components assigned to a particular location. For example, you can view the CID or WIP ID of all components queued for a process. This widget requires that the location tracking feature be implemented in the shop.

OEE Dashboard



Displays real time information about a single process.

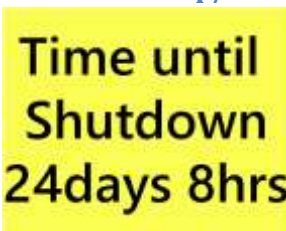
- Center gauge represents current number of components vs specified quota
- Left gauge displays estimated time left to complete the next component.
- Right gauge displays predicted total based on the current production rate. The gauge will be red if it is expected to miss the quota.

Shared Messages



Displays a rich text message that is shared across all widgets configured with the same message id. Multiple shared messages can be created but only one message can be displayed per widget. Users with access can modify the message from Shop manager.

Shared Count Up/Down



Display the amount of time since or until a specified date. For example, it can be used to calculate the days until a shutdown, or the time since the last reportable accident. Multiple shared timers can be created but only one timer can be displayed per widget. Users with access can set the target date/time from Shop manager.

Reports (Shop Manager only)







Displays a list of reports, grouped by category. Users can click on the report title to launch the report.

Plugin Widgets

WSMS dashboards allow for custom dashboards to be created using a plugin architecture. If you would like more information on a custom dashboard widget, please [contact us](#).

Managing widgets on a dashboard

To add widgets to the current dashboard, hover your mouse over the  Edit in the bottom right corner of the dashboard. Click  Add once it appears. Alternatively, you can put the dashboard in Edit mode by clicking  Edit. Then just click on an empty square to add a new widget to that location.

When you are done editing the dashboard click  to exit Edit mode.

To copy a widget to another dashboard, right-click on the widget and expand out the 'Copy to Dashboard' menu and then select the destination dashboard.

To Delete a widget, right-click on the widget and click Delete.

To Move a widget, Hover the mouse over the widget and click and hold the left mouse button until the dashboard enters Edit mode. Then drag the widget to an empty location and release the mouse button.

To Resize or Configure a widget, right-click on the widget and click Configure. Refer to the section on [Configuring Widgets](#) for more information

Configuring Widgets

Most widgets support configuration, which may include the title, widget size, and other widget-specific settings.

You must complete the widget configuration when adding a new widget. You can modify the configuration of a widget at any time by right clicking the widget and selecting Configure.

The following sections describe configuration for some of the types of widgets.

Configuring Query widgets

Query widgets include the Query Tile, Bar Chart, Pie Chart, and Column Chart widgets. Each of these widgets displays data from a customized search Query and are all configured similarly.

- Specify the widget Size to determine the number of rows and columns the widget will occupy on the dashboard.
- Select the query that will be used to retrieve the data that will be displayed. If the query requires any parameters, specify those as well.
- Select the date field that will be used to filter the query along with the date range.
- Enter the Title that will be displayed at the top of the widget.
- Select a background color for the widget
- For chart widgets:
 - Select a field to Group By. If the Group By field is a date field, specify whether to group by day, week, month, or year.
 - When displaying a lot of data, groups that have a small number of data points can overwhelm the chart and make it difficult to visualize the data. Specify a Minimum Percent Displayed as a percentage of the total. Groups with fewer data points will be lumped together into an 'other' category.
 - Select the font size for the data labels that appear on the chart.

Configuring Shared widgets

Shared Message and Shared Count Up/Down widgets require that you first configure the available timers or messages. Refer to the [Shared Messages and timers](#) section for more information.

Once you have a Shared Message or Shared Timer set up, you can configure the widget with the following options:

- Specify the widget Size to determine the number of rows and columns the widget will occupy on the dashboard.
- Specify the Shared Message or Shared Timer to display.
- Select a background color for the widget.
- Specify whether to align the text to the left, right, or center of the widget.

Configure Machine widgets

The Downtime and Takt Time widgets present data for a single station.

- Specify the widget Size to determine the number of rows and columns the widget will occupy on the dashboard.
- Select the Machine/Station to display data for.
- Select the date range for the data you want to display
- Enter a Title that will be displayed at the top of the widget along with the font size of the Title
- Select a background color for the widget
- Specify any other widget specific settings

Configure Production Totals widgets

The Production Totals widget uses machine groups to present data about a group in comparison to the other groups. To configure a machine group widget:

- Specify the widget Size to determine the number of rows and columns the widget will occupy on the dashboard.
- Specify how the data should be displayed (chart form or combined into one Count).
- Specify the station group(s) by clicking Configure Station.
 - Select one or more stations and click Add to create a group.
 - Select a group and click Remove to remove the group.
 - Explode a group into multiple groups or merge selected groups into one group.
 - Reposition the groups using Move up and Move down
 - Enter a name for each group
- Select the date range for the data you want to display
- Enter a Title that will be displayed at the top of the widget.
- Select a background color.

Search


Shop Manager lets you review data collected from the other WSMS applications throughout the shop. To access that data, Shop Manager utilizes a search system that separates the data into several categories:

- Assemblies
- Components
- Shipments
- Work Orders
- Queues
- Machine Inspections

Key concepts

- **Queries** are preconfigured requests for information. Queries can be modified, and new queries can be added from the [Search and Dashboards](#) section of the Options dialog.
- **Parameters** are pieces of information you provide to the query as you run it. Parameters are used to further filter the data requested by the query.
- **Query Groups** are different categories for queries that determine the type of data that will be returned. Current options include Assemblies, Components, Shipments, Work Orders, Queues, and Machine Inspections. Refer to the section on the specific Query Group for more information
- **Search Contexts** are the primary filter for the query that determines what data should be returned by the query. Refer to the sections on Search Contexts for each Query Group.
- **Search Results** are the list of data fields that you have specified to select for all records that match the selected Query, parameters, and Search Contexts.
- **Result Details** are the detailed information for the selected search result object.

Layout

Result details can be viewed beside the list of search results, below the list of search results, or full screen. Use the  layout selection to select Horizontal Split (side by side), Vertical Split (top and bottom), or No Split (full screen).

You can drag the horizontal or vertical bar to the left/right or top/bottom to adjust the amount of space designated for the search results and result details.

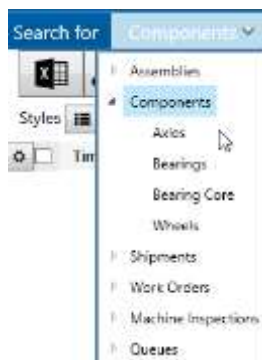
Search Controls

To initiate a search, use the search controls in the Menu bar.



The search controls are contextual and will change based on your selections. But the general steps are as follows:

- Select what you want to 'Search for' by selecting the Query Type or sub-query that you want to search.



- If the query you select is configured with one or more Parameters, they will appear below the query. Select the query parameters that will be passed to the query when it executes.



- Select the search context you will be searching ‘by’. The search contexts available are determined by the Query Type you selected.



- Select the additional search context parameters. For a Date search this would be date field to search by and the starting and ending dates, for a CID search it would be the component CID, etc.



- To execute the search, click the search button. The search results will be returned and displayed.

Search Results

Users can configure which data fields to return as well as how the data is displayed. Click the Gear icon in the top left corner of the search results grid to configure the search results fields and styles.

Fields

Expand out the list of Available Fields to locate the data fields you want to include in the query results. Select the field and click the Add button to include that field. Click on a field from the Selected Fields list and click the Remove button to exclude that field. You can also specify the column header, width, and an optional format value for each selected field. To change the order of the fields, select a field from the Selected Fields list and use the Move Up and Move Down buttons to arrange the columns that are returned. The first field (the one at the top) determines the field that orders the search results. Results are ordered in descending order.

Styles

Define style rules to determine how a row of data is displayed. The style applies to all columns in a row. Styles are applied in the order they are declared and can be arranged or removed using the Move Up and Move down options in the ... menu.


To create a new rule, use the Styling Rule button. Specify a Name, the foreground and background colors, font, etc. that will be applied when the data for a row matches the Rule Criteria specified. The Rule Criteria consists of one or more data fields along with a conditional operator (equals, not equals, less than, greater than, etc.) and a test value.

Navigation

Search results are paged to improve performance and make navigation easier. You can use the << < > >> navigation buttons to scroll forward/back one page at a time or jump to the start/end of the results.

Click on one a row to select it and navigate to Result Details for the selected row. Select multiple rows by clicking on the checkmark at the left edge of the search results. Additional

Export to CSV

Results of the query/search can be exported to a Comma Separated Values file which can be opened with a spreadsheet application such as Microsoft Excel. To Export the Search Results, click on the  Export button at the top of the Search Results

Additional Functions

In addition to the Export to CSV, most query types also have other additional functions available to operate on the search results and/or selected results. Refer to the Additional Functions section of each Query Type for more information

Result Details

Click on a row in the Search Results to view the details of that object. The data included in the details depends on the Query Type you searched for. Refer to the Details section of each Query Type for more information.

Assemblies

Assemblies are any component type that has subcomponents. Examples include wheelsets, railcars, trucks, traction motors, etc.

Default Queries

By default, the system will generate a query for each assembly type defined in the system. Subqueries can be defined from the Options dialog. Refer to the section on [Queries](#) in the Options dialog for more information about defining sub-queries.

Search Contexts

Assembly queries accept the following search contexts

- Date – Return only query results where the value of the specified date field is within the specified date range.
- CID – Return only query results where the CID of the assembly or one of its subcomponents equals or partially matches the supplied CID parameter.
- WIP ID – Return only query results where the Work in Progress ID (WIP ID) of the assembly or one of its subcomponents equals or partially matches the supplied WIP parameter.
- Serial Number – Return only query results where the selected Serial Number element equals or partially matches the supplied Serial Number parameter. For more information on defining an element as a Serial Number element, refer to the section on [Property Names](#).
- Location – Return only query results where the assembly Location equals the specified Location. Refer to the section on [Locations](#) for more information.
- Shipment – Return only query results where the assemblies is assigned to the specified inbound or outbound shipment.
- Advanced Search – Create a custom filter using one or more fields and common equality operators like equal (==), not equal (!=), greater than (>), less than (<), contains, does not contain, between, etc.

Additional Functions

In addition to the 'Export to CSV' option the Assembly search includes the following additional functions.



Register Selected



Select one or more assemblies by checking the box next to each result. Click the Register Selected button to register all selected assemblies. Refer to the section on [Component Registration](#) for more information.

Add Selected to shipment



Select one or more assemblies by checking the box next to each result. Click the Add Selected to shipment button and then select an active Outbound Shipment. All selected assemblies will be associated to that shipment.

If there are no active outbound shipments you can add one by clicking the outbound shipment type and following the prompts.

Exporting data for transfer to another shop



You can transfer the data for one or more assemblies to another shop by searching for the assemblies you want to transfer and selecting them from the search results. Click the 'Export data button' and specify the folder location and file name you want to use.

After you have exported the data and saved it to a file, you can electronically send that file to the recipient, and they can import it into their WSMS system. For more information about importing data from another shop, refer to the [Import](#) section

Add new assembly



In most cases assembly and component records will be generated by the stations in the shop. However, it is sometimes desirable to generate the assembly records ahead of time. To create a new assembly record, click the New Assembly button and follow the prompts in the Add New Assembly popup to create one or more assemblies.

Assembly Details


The details for an assembly record are grouped into the following tabs:


Details

Displays information about the assembly and its subcomponents including any Inbound or Outbound shipments, Work Orders, registration, or association status (if applicable), the current Location (if applicable), and the value of all data elements. You may have to expand out the Elements section to see the element data for the assembly or its subcomponents.



In addition to reviewing data, you can also Demount or undo a demount for a subcomponent. Demounting a subcomponent records the component removal, including the user, component

disposition, and date/time the component was removed. Undo demount will remove the record and re-apply the component. It should only be used if the component was accidentally demounted.

To edit an assembly or subcomponent use the  Edit button next to the assembly or subcomponent name that you want to edit. Make the necessary changes in the popup dialog and then Save your changes. The assembly will be refreshed to reflect all changes.

At the top right corner of the Details tab is a  delete button. If you choose to delete an assembly, you must re-enter your username and password as verification that you are sure of your decision. Deleting an assembly cannot be undone. In addition to the assembly record, all inspections, mount and demount, attachments, etc. will be deleted. You will be prompted to delete the subcomponents as well, or to leave them as unassociated components.

Split/Merge


Subcomponents can be split and merged using the two icons   next to the Edit button. Splitting a component will create an editable copy of the component saved to the current assembly. Merging will allow the user to search for another component record and will merge any new data from the second component into the first.

Charts

Displays mounting chart information and history for any subcomponents that were mounted on the assembly with one of the WSMS Press Recorder applications.

Users with the 'ReviewChart' permission can mark one or all mounting charts as reviewed or 'unreview' a chart if the chart was accidentally marked as reviewed.

Subcomponents that have charts can be Demounted from the Charts tab or from the Details tab.


Most of the mount information cannot be changed, but you can modify the Misfit Type to change it from a Misfit to Good (no misfit) or from Good to a Misfit of a specified type. You can also adjust the Min/Max force, and Remount status for each mount. To edit one of these values, click the  Edit button next to the component name to open the Edit Mount Data window. Make any changes and then click Save.

In addition to the mounting charts for the current subcomponents, you can see a complete mount history for the assembly, including when it was demounted (if the demount was recorded). To review the mounting chart and information for a previous mount, double click it from the list.

History


The history tab displays an approximate timeline for the assembly by combining mounting, demounting, and inspection records. Mount and demount records provide links to the subcomponents that were mounted or demounted, or if this assembly was the subcomponent for a parent assembly, it will provide a link to the parent assembly as well. Click on the link to view the parent assembly or subcomponent.

Inspections

The inspections tab displays a list of inspections performed to either the assembly or one of its current subcomponents. Each row includes the inspection name, date it was performed, machine where it was performed, and the operator. Expand the record to view the sub-inspections (if the inspection was performed on the assembly) or to view the data collected during the inspection. Click the  Edit button next to the inspection name to edit the data collected. This should only be used to modify data entry errors, and not as a way to re-inspect a component or assembly.

Attachments

Attachments are electronic documents that can be linked to a specific assembly or component. These could include pictures of the component, electronic copies of a paper form, or any other document type that pertains to the selected assembly or component.

To add a new attachment, click the  Upload button at the top left and then browse for the file. It will automatically be stored in the database and associated to the selected assembly.

The list of current attachments will be displayed including the document name, date it was uploaded, and the user that attached it. You can click the document name to open it, or use the context menu to Open, Download, or Remove the attachment.

Modifying the document after opening or downloading it, does not automatically save the changes back to the WSMS system. You will need to re-upload the document to overwrite the current attachment with any changes.

Audit History

Audit history displays a record of each time the assembly or one of its current subcomponents was modified in the system. The list of audits includes the date and time the assembly or component was modified as well as the username of the user that made the change. Expand out an audit record to view the assembly or subcomponent and whether it was created, modified, or deleted as part of this transaction. Expand out each of those records to view the data that was modified, including the old value (if any) and the new value.

Registration

The AAR requires wheelset registration for most freight wheelsets. To register a single wheelset, select the “Register Now” button in the Wheelset details window. If the wheelset is successfully registered, the Registration Status will change to “Registering” and then “Success”. If the wheelset fails registration, the Registration Status will display “Error”. You can click on “Error” to open a pop-up window displaying the wheelset errors that will need to be corrected.

To register multiple wheelsets at one time, select the wheelsets from the results list and click “Register Selected” button in the top of the window.

The screenshot displays the Shop Manager software interface. On the left, a list of wheelsets is shown with columns for 'Last Modified' and 'Configuration'. The first wheelset is selected, and a callout box labeled 'Register Multiple Wheelsets' points to the 'Register Selected' button at the top of the list. On the right, the details view for the selected wheelset is shown, including fields for 'Configuration', 'Date/Time', 'Customer', 'Stock', and 'Registration Status'. The 'Registration Status' is currently 'Not Registered', and a callout box labeled 'Register single wheelset' points to the 'Register Now' button in this view. The interface also shows a 'Registration Server: Connection Failed' message and various navigation and search options.

Components

Components include any component type that does not have subcomponents. Examples include wheels, axles, bearings, sideframes, bolsters, etc.

Default Queries

By default, the system will generate a query for each component type defined in the system. Subqueries can be defined from the Options dialog. Refer to the section on [Queries](#) in the Options dialog.

Search Contexts

Component queries accept the following search contexts

- Date – Return only query results where the value of the specified date field is within the specified date range.
- CID – Return only query results where the CID of the component equals or partially matches the supplied CID parameter.
- WIP ID – Return only query results where the Work in Progress ID (WIP ID) of the component equals or partially matches the supplied WIP parameter.
- Serial Number – Return only query results where the selected Serial Number element equals or partially matches the supplied Serial Number parameter. For more information on defining an element as a Serial Number element, refer to the section on [Property Names](#).
- Shipment – Return only query results where the component is assigned to the specified inbound or outbound shipment. Advanced Search – Create a custom filter using one or more fields and common equality operators like equal (==), not equal (!=), greater than (>), less than (<), contains, does not contain, between, etc.
- Advanced Search – Create a custom filter using one or more fields and common equality operators like equal (==), not equal (!=), greater than (>), less than (<), contains, does not contain, between, etc.

Additional Functions

In addition to the 'Export to CSV' option the Component search includes the following additional functions.



Register Selected



Select one or more components by checking the box next to each result. Click the Register Selected button to register all selected components. Refer to the section on [Component Registration](#) for more information.

Add Selected to shipment



Select one or more components by checking the box next to each result. Click the Add Selected to shipment button and then select an active Outbound Shipment. All selected assemblies will be associated to that shipment.

If there are no active outbound shipments you can add one by clicking the outbound shipment type and following the prompts.

Exporting data for transfer to another shop



You can transfer the data for one or more components to another shop by searching for the components you want to transfer and selecting them from the search results. Click the 'Export data button' and specify the folder location and file name you want to use.


After you have exported the data and saved it to a file, you can electronically send that file to the recipient, and they can import it into their WSMS system. For more information about importing data from another shop, refer to the [Import](#) section


Component Details

The details for an assembly record are grouped into the following tabs:

Details

Displays information about the selected component including any Inbound or Outbound shipments, Work Orders, registration, or association status (if applicable), the current Location (if applicable), and the value of all data elements. You may have to expand out the Elements section to see the element data for the assembly or its subcomponents.


To edit the component, use the  Edit button next to the component name. Make the necessary changes in the popup dialog and then Save your changes. The component will be refreshed to reflect all changes.

At the top right corner of the Details tab is a  delete button. If you choose to delete a component, you must re-enter your username and password as verification that you are sure of your decision. Deleting a component cannot be undone. In addition to the component record, all inspections, mount and demount, attachments, etc. will be deleted.

History


The history tab displays an approximate timeline for the component by combining mounting, demounting, and inspection records. Mount and demount records provide links to the assembly the component was mounted or demounted from. Click on the link to view the parent assembly.

Inspections

The inspections tab displays a list of inspections performed on the component. Each row includes the inspection name, date it was performed, machine where it was performed, and the operator. Expand the record to view the data collected during the inspection. Click the  Edit button next to the inspection name to edit the data collected. This should only be used to modify data entry errors, and not as a way to re-inspect a component.

Attachments

Attachments are electronic documents that can be linked to a specific component. These could include pictures of the component, electronic copies of a paper form, or any other document type that pertains to the selected component.

To add a new attachment, click the  Upload button at the top left and then browse for the file. It will automatically be stored in the database and associated to the selected component.

The list of current attachments will be displayed including the document name, date it was uploaded, and the user that attached it. You can click the document name to open it, or use the context menu to Open, Download, or Remove the attachment.

Modifying the document after opening or downloading it, does not automatically save the changes back to the WSMS system. You will need to re-upload the document to overwrite the current attachment with any changes.

Audit History

Audit history displays a record of each time the component was modified in the system. The list of audits includes the date and time the component was modified as well as the username of the user that made the change. Expand out an audit record to view the component and whether it was created, modified, or deleted as part of this transaction. Expand out each of those records to view the data that was modified, including the old value (if any) and the new value.

Shipments

Shipments group and track components sent to or received from a customer or vendor.

Default Queries

By default, the system will generate a query for Inbound shipments and for Outbound shipments. Subqueries can be defined from the Options dialog. Refer to the section on [Queries](#) in the Options dialog.

Search Contexts

Shipment queries accept the following search contexts

- Date – Return only query results where the value of the specified date field is within the specified date range.
- Customer– the query will return shipments assigned to the specified customer
- Load Number – the query will return shipments with the specified load number.
- Advanced Search – Create a custom filter using one or more fields and common equality operators like equal (==), not equal (!=), greater than (>), less than (<), contains, does not contain, between, etc.

Additional Functions

In addition to the 'Export to CSV' option the Shipment search includes the following additional functions.



Add new shipment



Click the Add New Shipment button and then select the type of shipment you want to create. The shipment types available depend on the shipment types defined in WSMS. Refer to the section on [Shipment Types](#) in the Options dialog for information on configuring shipment types.


After you select the shipment type, the load number will be auto generated by incrementing the last load number. You can modify it at this time if you prefer to use a different number. Fill out all other fields about the shipment, including the customer or vendor Account and location, the shipping method and carrier, and the trailer number, and any order number or bill of lading number that you would like to associate with the shipment.

Shipment Details

The details for a shipment are grouped into the following tabs

Details

Displays information about the shipment including the load number, Shipment Type, Bill of Lading, Order Number, customer or vendor account and location, and shipping method, carrier, and trailer number.

To edit the shipment, use the  Edit button next to the load number at the top. Make the necessary changes in the popup dialog and then Save your changes. The shipment will be refreshed to reflect all changes.

Each shipment is assigned a Status that is one of the following values:

- Incomplete – the shipment has been created but has not been loaded/unloaded
- Complete – the shipment has been loaded/unloaded and is ready for review
- Reviewed – the shipment has been reviewed and requires no further action.


You can advance the shipment to the next status by using the ‘Click to Complete’ or ‘Click to Review’ buttons.

You can see the current number of items on the shipment at the bottom of the Details tab. Click the link to search for all components in the selected shipment.

Click the Add button to add additional items to the shipment


If the shipment direction is Outbound, you will be prompted to search for an existing component by CID, WIP ID, or Serial Number.

If the shipment direction is Inbound, a popup dialog will let you review the current components on the shipment as well as add new components. You can modify existing components, and remove components from the shipment, or enter all required data to add new components.

At the top right corner of the Details tab is a  delete button. You cannot delete a shipment that has items associated to it and the status must be set to Incomplete. Deleting a shipment cannot be undone.

Attachments

Attachments are electronic documents that can be linked to a specific shipment. These could include pictures of the components on the shipment, electronic copies of a paper form, or any other document type that pertains to the selected shipment.

To add a new attachment, click the  Upload button at the top left and then browse for the file. It will automatically be stored in the database and associated to the selected shipment.

The list of current attachments will be displayed including the document name, date it was uploaded, and the user that attached it. You can click the document name to open it, or use the context menu to Open, Download, or Remove the attachment.

Modifying the document after opening or downloading it, does not automatically save the changes back to the WSMS system. You will need to re-upload the document to overwrite the current attachment with any changes.

Work Orders

Work orders group components being built for a customer and associate it with an order number.

Default Queries

By default, the system will generate a query for each work order status: new, active, complete, closed. Subqueries can be defined from the Options dialog. Refer to the section on [Queries](#) in the Options dialog.

Search Contexts

Work Order queries accept the following search contexts

- Date – Return only query results where the value of the specified date field is within the specified date range.
- Work Order Number - the query will return load numbers with the specified work order number.
- Advanced Search – Create a custom filter using one or more fields and common equality operators like equal (==), not equal (!=), greater than (>), less than (<), contains, does not contain, between, etc.

Additional Functions

In addition to the 'Export to CSV' option the Work Orders search includes the following additional functions.




New work order



Click the New Work Order button top open the New Work Order dialog. Enter a Description, select a customer or vendor account to associate with the work order, and enter the number of components to be created as part of this work order. You can optionally specify a Part #, set the Status, and the Start, Due, and End dates.

Work Order Details

Displays information about the work order including the description, customer or vendor account, part number, expected quantity, and status.

To edit the work order, use the  Edit button next to the description at the top. Make the necessary changes in the popup dialog and then Save your changes. The work order will be refreshed to reflect all changes.

Each work order is assigned a Status that is one of the following values:

- New – the work order has been created work has not yet started
- Active – Components are being built for the work order.
- Completed – The work order has been fulfilled and is awaiting review
- Closed – The work order has been reviewed and verified that all work is complete.

You can see the current number of items on the work order at the bottom of the Details tab. Click the link to search for all components in the selected work order.

Machine Inspections

Machine Inspections document maintenance and testing of machines in electronic format and can be retrieved and reviewed by searching with Machine Inspection queries.

Default Queries

By default, the system will generate a query for each machine inspection definition. Subqueries can be defined from the Options dialog. Refer to the section on [Queries](#) in the Options dialog.

Search Contexts

Machine Inspection queries accept the following search contexts

- Date – Return only query results where the value of the specified date field is within the specified date range.
- Advanced Search – Create a custom filter using one or more fields and common equality operators like equal (=), not equal (!=), greater than (>), less than (<), contains, does not contain, between, etc.


Additional Functions

Machine inspections currently have no additional functions besides the 'Export to CSV'.

Machine Inspection Details

Displays information about the machine inspection the date/time the inspection was performed, the machine name where the inspection was performed, and the user that performed the inspection. The list of data elements and corresponding values collected during the inspection appear below the header information.

Users with 'Approve Inspections' permission can review the data and mark the inspection as approved by clicking the Approve button. Once an inspection is approved it cannot be modified at the station. To undo the approval, click the Un-Approve button.

To edit the machine inspection, use the  Edit button next to the inspection name. Make the necessary changes in the popup dialog and then Save your changes. The inspection will be refreshed to reflect all changes. Only the data element values can be changed. You cannot modify the machine, username, or date/time of the inspection.

Queues

Queues facilitate component workflow using a first-in-first-out list to track components.

Default Queries

By default, the system will generate a query for each Queue definition. Subqueries can be defined from the Options dialog. Refer to the section on [Queries](#) in the Options dialog.

Search Contexts

Queue queries do not currently support search context filters.

Additional Functions

In addition to the 'Export to CSV' option, the Queues search includes the following additional functions.

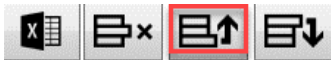


Remove from queue



Removes the selected component from the specified queue.

Move Up



Moves the selected component forward in the queue by one position. If the component is already at the top, the Move Up button will be disabled.

Move Down



Moves the selected component back in the queue by one position. If the component is already at the bottom, the Move Down button will be disabled.

Queue Details

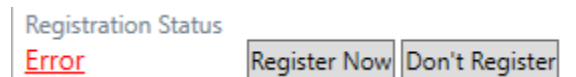
Queues contain assemblies or components assigned to the specified queue, so the selected result represents an assembly or component and therefore the result details are the same as for an assembly or component search. Refer to the sections on [Assembly Details](#) and [Component Details](#) for more information.

Component Registration

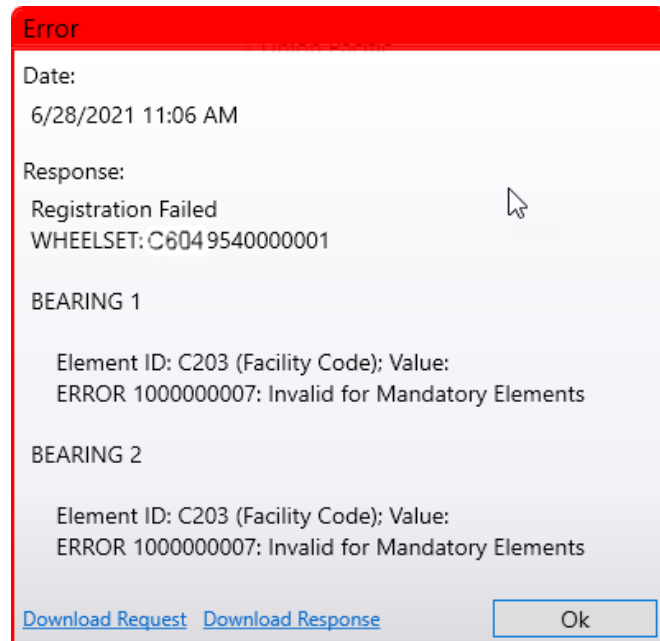
Component Registration is a part of the AAR Component Tracking initiative for freight railcars. All tracked components must have their data electronically submitted to Railinc along with a valid Component ID (CID) number that uniquely identifies the component being manufactured or reconditioned. For more information on Component Tracking and the Component Registration process refer to Railinc's website: <https://public.railinc.com/products-services/component-tracking>.

WSMS facilitates the component registration process by transmitting the data that is collected about the component through the component workflow in real time to Railinc. This is done using the WSMS6 Service application, although most users do not need to know any details of this process. If there are problems, your IT department or AIC Support can verify the status and configuration of the WSMS6 Service application as needed.

The registration response (successful or error) can be displayed, reported on, and stored indefinitely. Submission of the registration data to Railinc can be triggered automatically by WSMS applications in the shop (such as Component Inspection or Bearing Press Recorder). If the data is modified, or if an error must be corrected, users can re-submit the data manually using the Register controls in the [Assembly Details](#) or [Component Details](#) of the respective searches.



By clicking the registration status for an assembly or component, you can view detailed information about the registration status, including the date it was submitted, any errors returned from Railinc, and a link to download the electronic (XML) Request and Response files for troubleshooting.



Request files are the data send to Railinc. Response files are the data returned from Railinc back to the WSMS system. The information in these files is determined by Railinc and is too complex for most uses.

However, when contacting Railinc with a problem they may request this information. Use the 'Download Request' and 'Download Response' links to obtain the files from the WSMS6 Service so you can forward them to Railinc (csc@Railinc.com) if you have questions about a registration error.

Reports

There is a lot of data recorded by the WSMS system and sometimes the best way to organize and display the data is using a Report. WSMS allows custom Reports to be created for each shop, although we do have some standard 'canned' reports as well. See below for a description of the 'canned' reports currently available.

Reports can be executed from the Dashboard or from the Search Results screen. While you can execute all reports from the Dashboard, executing reports from the Search Results automatically passes information to the report that might be required. For example, the Assembly Report (see below) requires a unique id of the selected assembly, which is typically not known to the user.

Also, some reports can accept multiple IDs, in which case all search results that are selected will get sent to the Report.

Canned Reports

Below is a description of the 'canned' reports available to all users.

Assembly Report

The Assembly Report is a detailed report for all the components on a wheelset. Select the assembly records by clicking the check box from the query result grid and then click the Assembly Report link to generate the report.

Assembly Report

Wheelset

Configuration	Traveler	House S/N
WABTEC 1 Pc.		

Axle

Serial Number	Mfg.	Date (MM-YY)	Size
0108M	PRX		

WHEEL 1

	Date/Time: 7/24/2015 2:26 PM	Operator: 116898
Mount Force: 196	Status: Good	Spike Force: 39
Class	Tape Size: 0	Reviewer: Mfg. E
Rough Bore	Serial #: 106840	Condition: N

WHEEL 2

	Date/Time: 7/24/2015 2:35 PM	Operator: 116898
Mount Force: 101	Status: Good	Spike Force: 32
Class	Tape Size: 0	Reviewer: Mfg. E
Rough Bore	Serial #: 106940	Condition: N

BEARING 1

	Date/Time: 7/24/2015 2:20 PM	Operator: 116898
Mount Force: 33	Status: Good	Spike Force:
Serial #: 226648	Reviewer:	Facility Code
Condition: N		

BEARING 2

	Date/Time: 7/24/2015 2:29 PM	Operator: 116898
Mount Force: 33	Status: Good	Spike Force:
Serial #: 227430	Reviewer:	Facility Code
Condition: N		

DISC 1

	Date/Time: 7/22/2015 10:23 AM	Operator: 116898
Mount Force: 48	Status: Good	Spike Force:
Serial #: 2215263	Reviewer:	Facility Code
Condition: N		

DISC 2

	Date/Time: 7/22/2015 10:26 AM	Operator: 116898
Mount Force: 41	Status: Good	Spike Force:
Serial #: 2215262	Reviewer:	Facility Code
Condition: N		

AR 001
REV 150921

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10/9/2015 12:15 PM

Demount Report

The Demount Report can be started from the report link on the Home Screen or from a query window by selecting the drop-down arrow on the printer icon. Adjust the date ranges for the report and click the “Apply” button.

Demount Report

8/30/2015 thru 10/1/2015

Date/Time	Operator	Item Name	Serial #	Disposition	Comment
9/14/2015 2:06 PM	AJC	Wheel B	001	REMOUNT	text001
9/14/2015 5:02 PM	AJC	Wheel B	001		
9/14/2015 5:06 PM	AJC	Wheel B	001	REMOUNT	
9/14/2015 5:22 PM	AJC	Wheel B	001	REMOUNT	
9/14/2015 5:24 PM	AJC	Wheel B	001	REMOUNT	
9/14/2015 5:24 PM	AJC	Wheel B	001	REMOUNT	
9/14/2015 5:31 PM	AJC	Wheel B	001	REMOUNT	
9/14/2015 5:33 PM	AJC	Wheel B	001	REMOUNT	
9/15/2015 10:22 AM	AJC	Wheel A	0001	REMOUNT	
9/15/2015 12:18 PM	AJC	Wheel A	0001	REMOUNT	
9/15/2015 12:28 PM	AJC	Wheel A	0001	REMOUNT	
9/15/2015 1:23 PM	AJC	Wheel A	0001	REMOUNT	
9/15/2015 1:28 PM	AJC	Wheel A	0001	REMOUNT	
9/15/2015 1:31 PM	AJC	Wheel A	0001	REMOUNT	
9/15/2015 1:34 PM	AJC	Wheel A	0001	REMOUNT	
9/15/2015 2:43 PM	AJC	Wheel A	0001	REMOUNT	
9/15/2015 2:50 PM	AJC	Wheel A	0001	REMOUNT	
9/15/2015 3:20 PM	AJC	Wheel A	0001	REMOUNT	
9/15/2015 3:22 PM	AJC	Wheel A	0001	REMOUNT	
9/15/2015 3:26 PM	AJC	Wheel A	0001	REMOUNT	
9/15/2015 3:29 PM	AJC	Wheel A	0001	REMOUNT	
9/15/2015 3:36 PM	AJC	Wheel A	0001	REMOUNT	
9/15/2015 3:37 PM	AJC	Wheel A	0001	REMOUNT	
9/15/2015 3:39 PM	AJC	Wheel A	0001	REMOUNT	
9/15/2015 3:40 PM	AJC	Wheel A	0001	REMOUNT	
9/15/2015 3:41 PM	AJC	Wheel A	0001	REMOUNT	
9/15/2015 3:42 PM	AJC	Wheel A	0001	REMOUNT	
9/15/2015 3:43 PM	AJC	Wheel A	0001	REMOUNT	

Start Date: 8/30/2015

End Date: 10/1/2015

Apply

Date Range

Misfit Log Report

The Misfit Log Report can be started from the report link on the Home Screen or from a query window by selecting the drop-down arrow on the printer icon. Adjust the date ranges and apply filter settings for the Machine and Demount Status for the report and click the “Apply” button.

Misfit Log
9/1/2015 - 10/1/2015 Machine: -1 Demount Status: All

Item Name	Serial #	Mount Date/Time	Operator	Force	Status	Demount Date/Time	Demount Operator
Wheel B	001	9/14/2015 4:33 PM	AJC	31	Min force not reached	9/14/2015 5:32 PM	AJC
Wheel B	001	9/14/2015 5:06 PM	AJC	43	Min force not reached	9/14/2015 5:06 PM	AJC
Wheel A		9/14/2015 5:10 PM	AJC	63	Min force not reached	9/14/2015 5:10 PM	AJC
Wheel A		9/14/2015 5:14 PM	AJC	48	Min force not reached	9/14/2015 5:14 PM	AJC
Wheel A		9/14/2015 5:15 PM	AJC	42	Min force not reached	9/14/2015 5:16 PM	AJC
Wheel A		9/14/2015 5:17 PM	AJC	62	Min force not reached	9/14/2015 5:17 PM	AJC
Wheel A		9/14/2015 5:18 PM	AJC	65	Min force not reached	9/14/2015 5:18 PM	AJC
Wheel A		9/14/2015 6:27 PM	AJC	154	Max Force Exceeded	9/14/2015 6:38 PM	AJC
Wheel A		9/14/2015 6:28 PM	AJC	163	Max Force Exceeded	9/14/2015 6:34 PM	AJC
Wheel A		9/14/2015 6:34 PM	AJC	177	Max Force Exceeded	9/14/2015 6:35 PM	AJC
Wheel A		9/14/2015 6:39 PM	AJC	155	Max Force Exceeded	9/14/2015 6:40 PM	AJC
Wheel A		9/15/2015 10:22 AM	AJC	136	Max Force Exceeded	9/15/2015 10:22 AM	AJC
Wheel A		9/15/2015 12:18 PM	AJC	150	Max Force Exceeded	9/15/2015 12:18 PM	AJC
Wheel A	0001	9/13/2015 1:18 PM	AJC	169	Max spike force exceeded	9/15/2015 1:23 PM	AJC
Wheel A	0001	9/13/2015 1:24 PM	AJC	188	Max spike force exceeded	9/15/2015 1:28 PM	AJC
Wheel A	0001	9/13/2015 1:29 PM	AJC	167	Max spike force exceeded	9/15/2015 1:31 PM	AJC
Wheel A	0001	9/13/2015 1:31 PM	AJC	132	Max spike force exceeded	9/15/2015 1:34 PM	AJC
Wheel A	0001	9/13/2015 1:34 PM	AJC	122	Min force not reached	9/15/2015 2:43 PM	AJC
Wheel A	0001	9/15/2015 3:20 PM	AJC	140	Min spike force not reached	9/15/2015 3:32 PM	AJC
Wheel A	0001	9/15/2015 3:32 PM	AJC	150	Max spike force exceeded	9/15/2015 3:36 PM	AJC
Wheel A	0001	9/15/2015 3:37 PM	AJC	149	Max spike force exceeded	9/15/2015 3:37 PM	AJC
Wheel A	0001	9/15/2015 3:38 PM	AJC	149	Max spike force exceeded	9/15/2015 3:39 PM	AJC
Wheel A	0001	9/15/2015 3:39 PM	AJC	152	Max spike force exceeded	9/15/2015 3:40 PM	AJC
Wheel A	0001	9/15/2015 3:41 PM	AJC	150	Max spike force exceeded	9/15/2015 3:41 PM	AJC
Wheel A	0001	9/15/2015 3:41 PM	AJC	150	Max spike force exceeded	9/15/2015 3:42 PM	AJC
Wheel A	0001	9/15/2015 3:42 PM	AJC	150	Max spike force exceeded	9/15/2015 3:43 PM	AJC
Wheel A	0001	9/15/2015 3:44 PM	AJC	150	Max spike force exceeded	9/15/2015 3:45 PM	AJC
Wheel A	0001	9/15/2015 3:45 PM	AJC	151	Max spike force exceeded	9/15/2015 3:46 PM	AJC
Wheel A	0001	9/15/2015 3:47 PM	AJC	150	Min spike force not reached	9/15/2015 3:49 PM	AJC
Wheel A	0001	9/15/2015 3:49 PM	AJC	150	Max spike force exceeded	9/15/2015 3:51 PM	AJC
Wheel A	0001	9/15/2015 3:52 PM	AJC	151	Max spike force exceeded	9/15/2015 3:53 PM	AJC

Production Report

The Production Report can be started from the report link on the Home Screen or from a query window by selecting the drop-down arrow on the printer icon. Adjust the date ranges and apply the filter for the Configuration and click the “Apply” button.

14 of 27
100%
Find Next

Production Report

9/1/2015 - 10/1/2015 Configuration: ALL

Start Date
9/ 1/2015

End Date
10/ 1/2015

Configuration
ALL

Item Name	Serial #	Mount Date/Time	Operator	Mount Force	Status
Axle S/N: 111 Config: M-2 Status: Incomplete					
GEAR		9/14/2015 2:01 PM	AIC	32	Good
Bearing B	001	9/14/2015 2:03 PM	AIC	38	Good
Wheel B	001	9/14/2015 5:32 PM	AIC	86	Good
Wheel A		9/14/2015 5:34 PM	AIC	86	Good
Axle S/N: Config: M-2 Status: Incomplete					
Item Name Serial # Mount Date/Time Operator Mount Force Status					
Wheel A		9/14/2015 6:38 PM	AIC	155	Max Force Exceeded
Axle S/N: 001 Config: M-2 Status: Incomplete					
Item Name Serial # Mount Date/Time Operator Mount Force Status					
Wheel A	0001	9/16/2015 10:29 AM	AIC	94	
Axle S/N: 00101 Config: M-2 Status: Complete					
Item Name Serial # Mount Date/Time Operator Mount Force Status					
GEAR		9/16/2015 10:32 AM	AIC	81	Good
Bearing A	00101	9/16/2015 10:39 AM	AIC	38	Good
Bearing B	00102	9/16/2015 10:40 AM	AIC	38	Good
Wheel A	0010222	9/16/2015 4:05 PM	AIC	120	Good
Wheel B	00102	9/16/2015 4:07 PM	AIC	104	Good
Axle S/N: 002 Config: M-3A Status: Complete					
Item Name Serial # Mount Date/Time Operator Mount Force Status					
GEAR	00201	9/16/2015 11:01 AM	AIC	80	Good
Bearing A	002001	9/16/2015 11:02 AM	AIC	41	Good
Bearing B	00202	9/16/2015 11:03 AM	AIC	40	Good
Wheel B	00202	9/16/2015 4:08 PM	AIC	105	Good
Wheel A	00201	9/16/2015 4:08 PM	AIC	131	Good
Axle S/N: 004 Config: M-4 Status: Complete					
Item Name Serial # Mount Date/Time Operator Mount Force Status					

Custom Reports

Custom reports can be created by anyone who has knowledge of Microsoft SSRS reports and access to SQL Server Report Builder 3.0. The report writer would also need to understand relational databases and have a firm understanding of the WSMS database structure.

AIC offers custom report writing services for a nominal fee. Please [contact us](#) to discuss your reporting needs and to request a quote.

Appendix A: License

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Appendix B: Contact Information

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Sherwood, AR 72117

Online Support

Visit our website at www.aicRail.com/WSMS for 24/7 technical information and available downloads
Email us at support@aicRail.com

Phone Support (Existing support contract or credit card required)

Call 1-501-834-9540 or 1-877-834-9540 (toll free)