Nautical Systems Enterprise

Maintenance User Manual

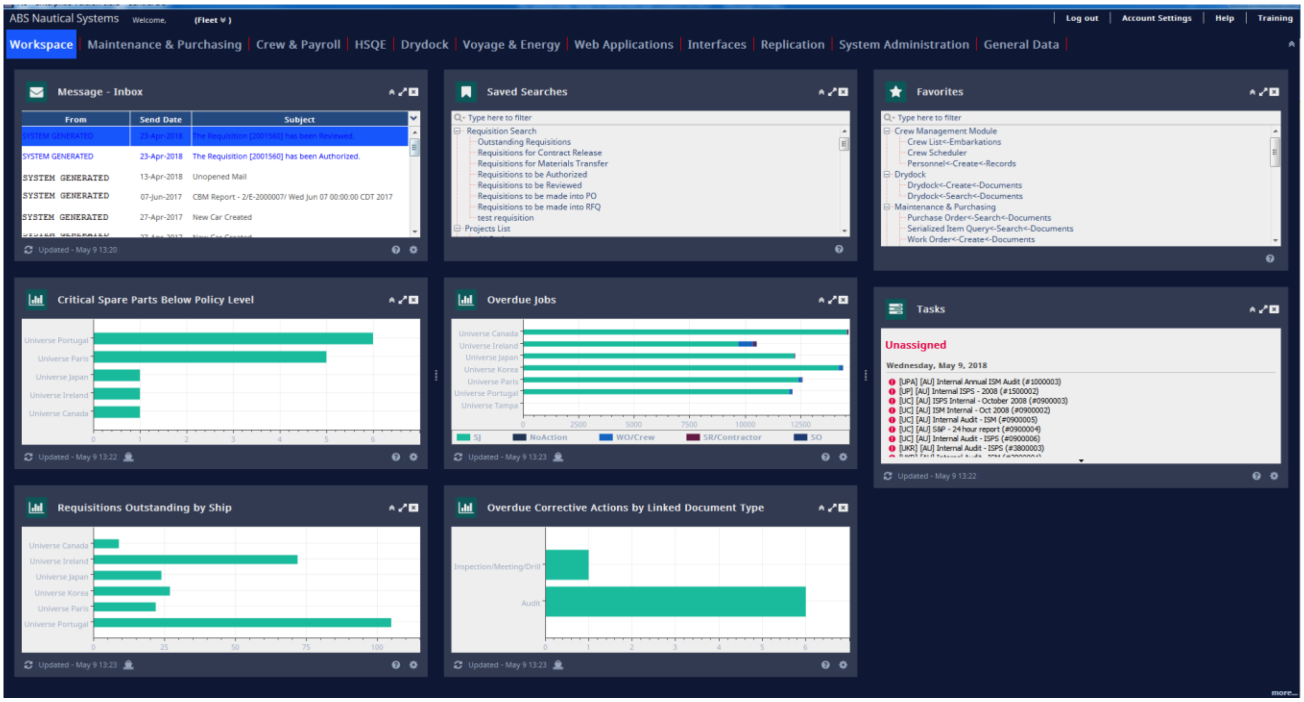
Version 6.5.13

July 2020

Section 1 Notes about this User Manual

1.1 *Example of a Fully Configured Workspace*

In this section you will find a typical Workspace screen for a Superintendent as configured during the implementation process. This workspace contains dashboards, saved searches, and favorites which make navigation and access to the data simple and effective for the Superintendent.



This Superintendent's workspace is divided into multiple panes which are described below:

1. **Message – Inbox** contains internal **NS Enterprise** messages set by other users to the buyer. These messages can be opened, and the associate documents accessed and subsequently processed directly from the message.

2. **Favorites** contains direct links to various task that the buyer does on a repetitive basis some examples are Search Standard Jobs, Create Purchase Orders, and Search Work Orders. These provide the Superintendent with a one-click ability to conduct searches and create documents without using the system menus. Users can utilize a search criteria 'Reschedule Declined' on Work Order Search screen to filter out the Work Orders whose reschedule requests were declined.

3. **Saved Searches** provide a direct link to documents in various stages of the purchasing and maintenance processes. In this example the Superintendent would get lists of various documents in the stages that may require the attention of a Superintendent for example Outstanding Requisitions and Projects to be approved. This allows the user to enter the workflow at any point in the process and process the documents quickly, so they can move to the next process step.

4. **Critical Spares below Policy Level** dashboard gives the Superintendent an overview of the number of spaces for each vessel in the fleet that are below the required inventory level and allows the user to drill down to get a list of the spares. From the list the Superintendent may proceed to create requisitions for replenishment to correct inventory levels.

5. **Overdue Jobs by Type** dashboard is a bar chart that shows the number of overdue maintenance jobs by vessel and is subdivided by job type. Superintendent can click to get a list of the overdue job lists for each vessel and take actions appropriate to bring the vessels up to date.

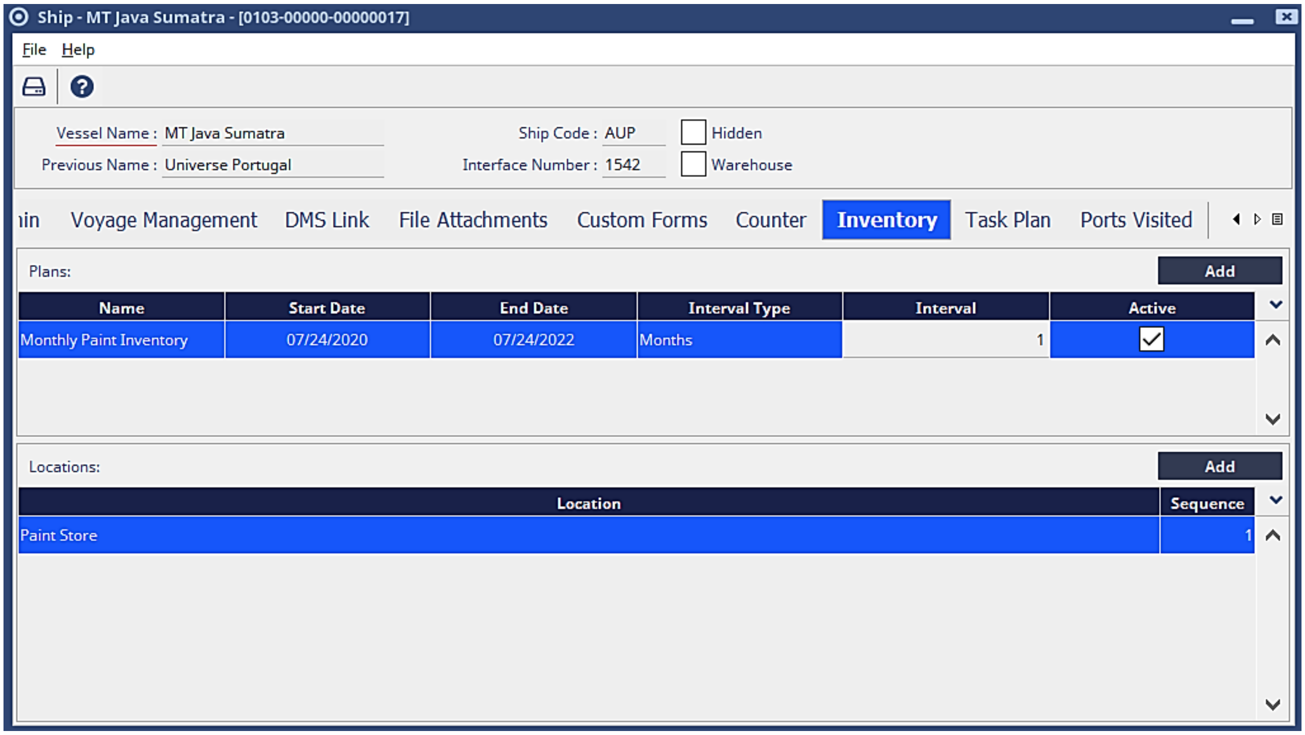
6. **Open Corrective Actions by Status** dashboard provides the Superintendent with a view of the corrective actions created in the HQSE module that remain in a status that needs further processing. The Superintendent can drill down to a list and then process or assign the Corrective Action processing as tasks for other users.

7. **PM Work Orders Pending Defer Request Approval** dashboard allows the Superintendent to see how many PM work order deferral requests are pending approval by vessel. Through this dashboard the Superintendent can get a list and process the approvals directly as appropriate.

8. **Requisitions Outstanding by Ship** dashboard provide the Superintendent with a single click list of the requisitions that have not been fulfilled for the vessel in the Superintendent's fleet. From the list action can be taken to ensure the purchasing process moves forward to provide needed materials and services onboard.

9. **Tasks** dashboard provides a list of documents assigned to the logged-in user. Users can open a document and take the necessary action. Documents may have multiple approvers in a chain, but it is assigned to only one user at a given time. Task list includes:

- RFQ(s) to be approved.
- Purchase Order(s) to be approved
- JSA(s) to be approved
- Work Order(s) deferral requests to be approved
- Ship screen – Inventory Tab
    - Users can add location(s) and required inventory to be recorded along with the interval the task will be completed. The task will show up on the NS mobile app task list for the crew to complete.
    - Configuration required on the Ship Details Screen to add the Equipment for which running hours will be captured as part of a task, along with the requested interval (example, weekly). The task will show up on the NS mobile app task list for the crew to complete



GENERAL NOTES:

NS Maintenance Search List Windows

- If any document is edited, the document is marked with a Red color to indicate that it has been edited.
- If any document is edited and that document screen is closed, the row for that document will remain highlighted.
- The edited documents indicator will be reset on Search button click.

Adding File Attachments

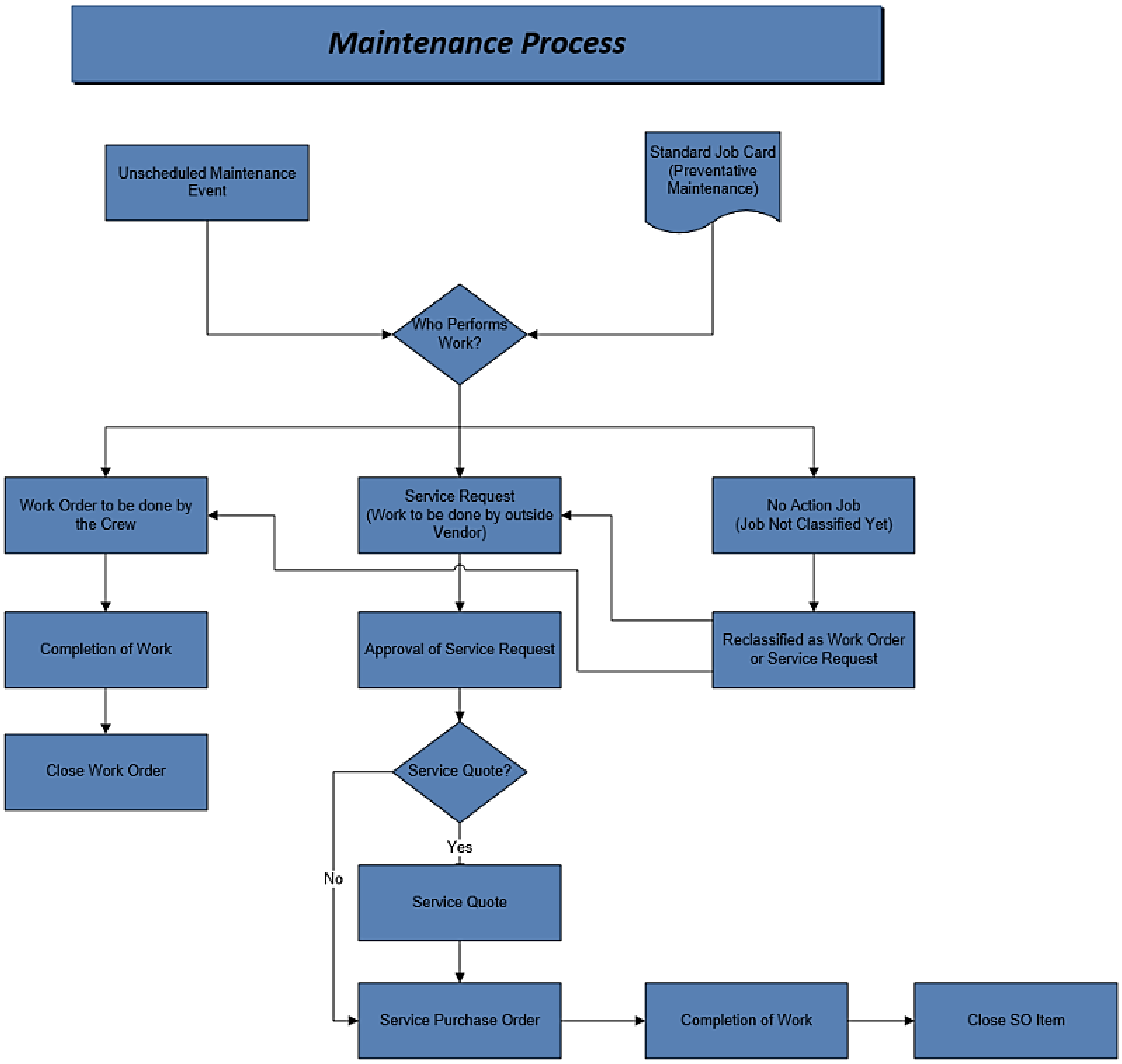
- Users can use a drag and drop functionality on any of the File Attachment Tabs.

Messages

- If the message was sent to multiple users, the message window has a “Reply to All” option.

Section 2 Introduction

The two main concepts in maintenance are planned and corrective maintenance.



Planned maintenance can be scheduled in consideration of calendar dates or accumulation of running hours. By using **NS Enterprise**, sea staff can consolidate all the planning and record-keeping related to planned maintenance with all interrelated information linked and accessible.

Corrective maintenance can be considered repairs. **NS Enterprise** provides the ability to schedule and record information related to corrective maintenance. More importantly, it provides a mechanism to record and analyze failures at both the vessel and fleet levels to make informed decisions about maintenance intervals and equipment manufacturers, as well as vessel and process design.

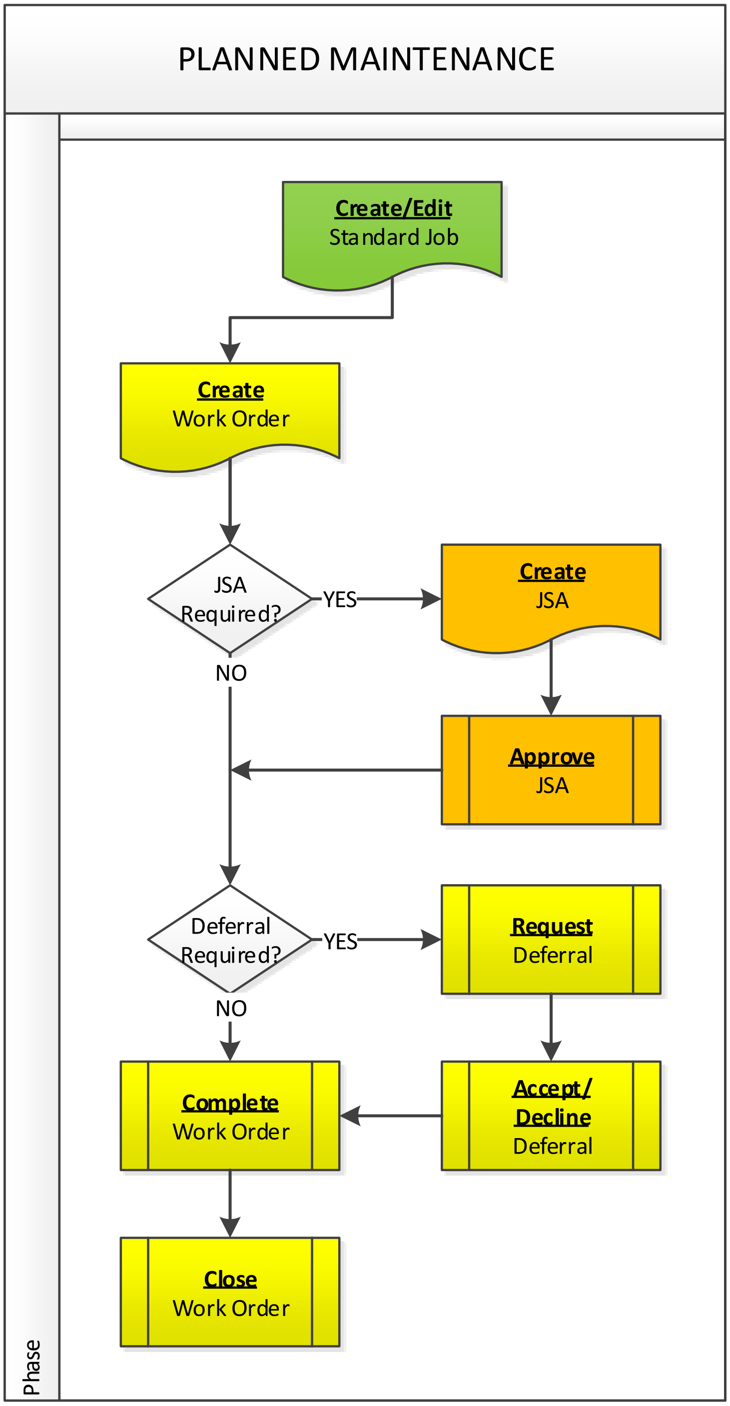
Event based maintenance consists of standard jobs that are neither calendar nor counter based, but must be carried out when certain operations occur, such as port calls.

The maintenance module records, schedules, and manages the data pertaining to the work performed on a vessel by the crew or outside contractors. It includes maintenance management facilities to handle:

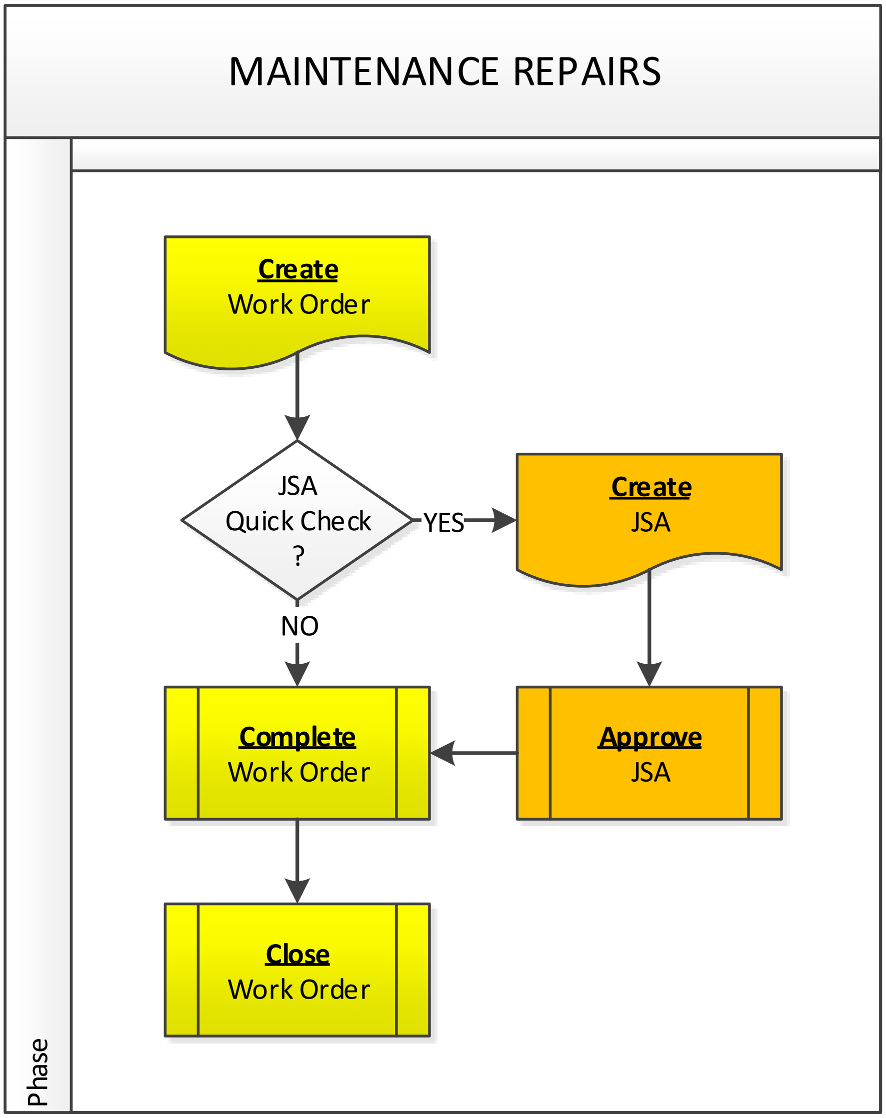
- Order processing
- Maintenance plans
- Projects and claims
- Planned and unplanned maintenance events
- Maintenance history
- Contractors
- Cost analysis
- Preventive maintenance standard job processing
- Machinery running hour tracking
- Reliability Centered Maintenance
- Condition Based Monitoring
- Serialized Inventory
- Landing Orders

The hierarchy system used by **NS Enterprise** is an organized way to view and categorize equipment and parts. Creating the hierarchy by setting up the equipment and parts is covered in the **Hierarchy** section of this manual. Equipment and parts can be created in **NS Enterprise** from the fleet level or the ship level.

2.1 *Planned Maintenance*



2.2 *Repairs*

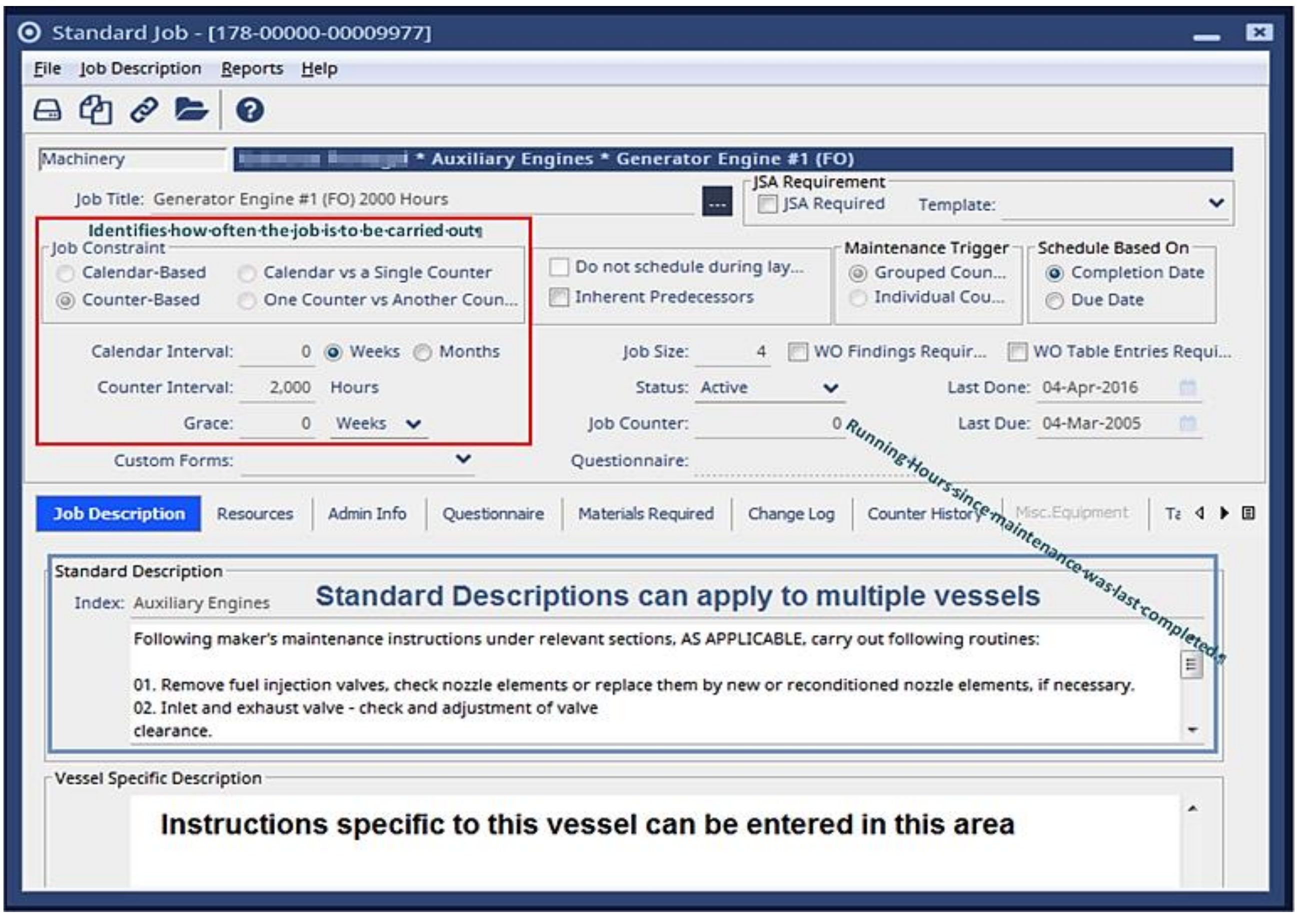

MAINTENANCE REPAIRS
Create
Work Order
JSA
Quick Check
?
YES
Create
JSA
NO
Complete
Work Order
Approve
JSA
Close
Work Order
Phase

2.3 *Standard Jobs*

2.3.1 *Overview*

NS uses the **Standard Job** for planned maintenance. Each Standard Job behaves just like a pop-up reminder in a calendar. When considered collectively at ship level, the Standard Jobs are the maintenance plan. Maintenance plan philosophy may vary some between managing companies but plans typically will be on a five-year repeating cycle.

There are three primary sources for Standard Jobs, The ship's Survey Status Report, the equipment manufacturer's recommendations, and the technical department of the managing company. When developing a maintenance plan, it is good practice to load level the effort reacquired over the five years by avoiding periods with fluctuating levels of effort. The level of effort should be designed to be as constant as possible month to month. And keep in mind a straight job count does not determine the level of effort.



A standard job is composed of several elements:

- A job description
- A maintenance interval, either calendar or counter based
- A job size (is a category used to describe machinery jobs using a Job Size Index and Job Size indicator.)

The standard job has resources defined (who should perform the work), materials required, and various other information connected. Ships are not authorized to create standard jobs, but an understanding of the philosophy behind them will help maintain the vessel.

The standard job is linked to equipment and appears in the maintenance schedule. Users can create a work order based on the standard job and record the maintenance performed. The work order is connected to the maintenance history of both the equipment and the standard job.

2.3.2 *Creating/Edit Standard Jobs*

There are seven (7) different types of Standard Jobs:

1. **Machinery Jobs**
   These jobs are based on the ship's-maintained machinery equipment contained on the ship's hierarchy. The machinery equipment PM standard job combines the equipment name with an index term indicating the job size. The job schedule is based on either a calendar or running hour interval.

2. **Spaces Jobs**
   Spaces on the ship that are listed in the classification society and other regulatory body requirements need to be maintained. These spaces include cargo holds, service tanks and cabins. A standard job is created to perform this maintenance. The standard job name is a combination of the space name and an index term indicating the job size. The job schedule can only be based on a calendar interval.

3. **Surveys/Certificates Jobs**
   Regulatory requirements defined by organizations such as government agencies, coast guard and classification societies are another job type for standard jobs. These jobs are based on a survey index term and the job schedule can only be based on a calendar interval.

4. **Services Jobs**
   These are services provided to the ship to facilitate other work. For example, dry-dock services such as compressed air, shore power, tugs, dry-dock days and others. The dry-dock services are a significant portion of the overall dry-dock cost. The job schedule can only be based on a calendar interval.

5. **Condition Monitoring Jobs**
   These are jobs that monitor the condition of selected equipment according the condition monitoring types associated with the equipment. The job schedule is based on either a calendar or running hour interval.

6. **Miscellaneous Jobs**
   This is work of a general nature such as painting, sandblasting or anode replacement that is not associated with a specifically identifiable item on the ship like a piece of equipment or space. However, miscellaneous work can be cross-referenced with multiple items such as equipment or space so that when the standard job is completed these areas are automatically updated with maintenance history. The job schedule can only be based on calendar interval.

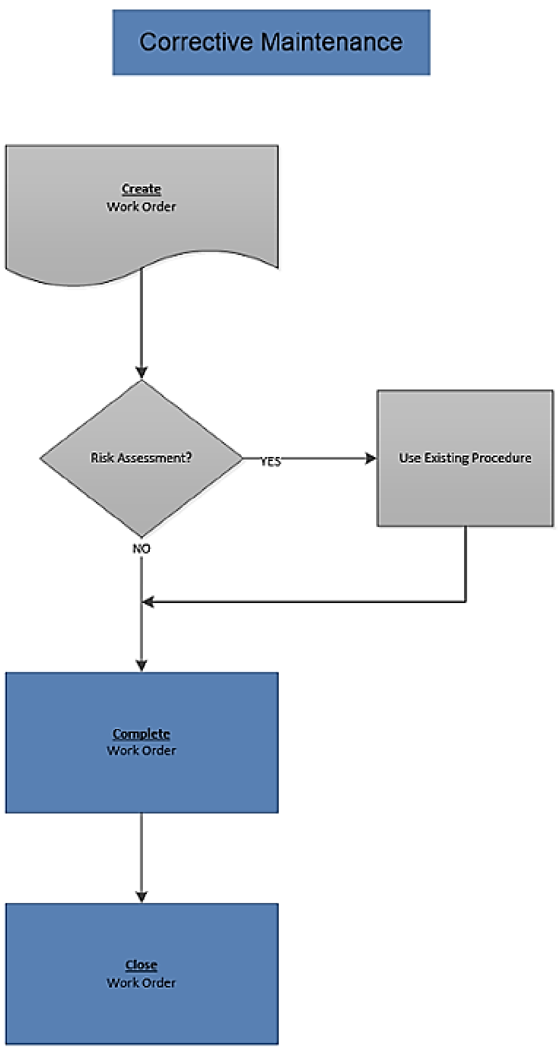
2.4 *Structures Jobs*

Structures within compartments on the ship that are listed in the classification society and other regulatory body requirements need to be maintained. These structures include girders, brackets, and stiffeners. A standard job is created to perform this maintenance. The standard job name is a combination of the structure name and an index term indicating the job size. The job schedule can only be based on a calendar interval.

2.5 *Corrective Maintenance*

Corrective maintenance is additional work performed to prevent / mitigate failures or breakdowns during operation; or when an unanticipated breakdown or failure occurs. Sometimes the work can be performed immediately; often it must wait for a suitable time or for a spare part to be received, or it might be outside of the resources of the crew.

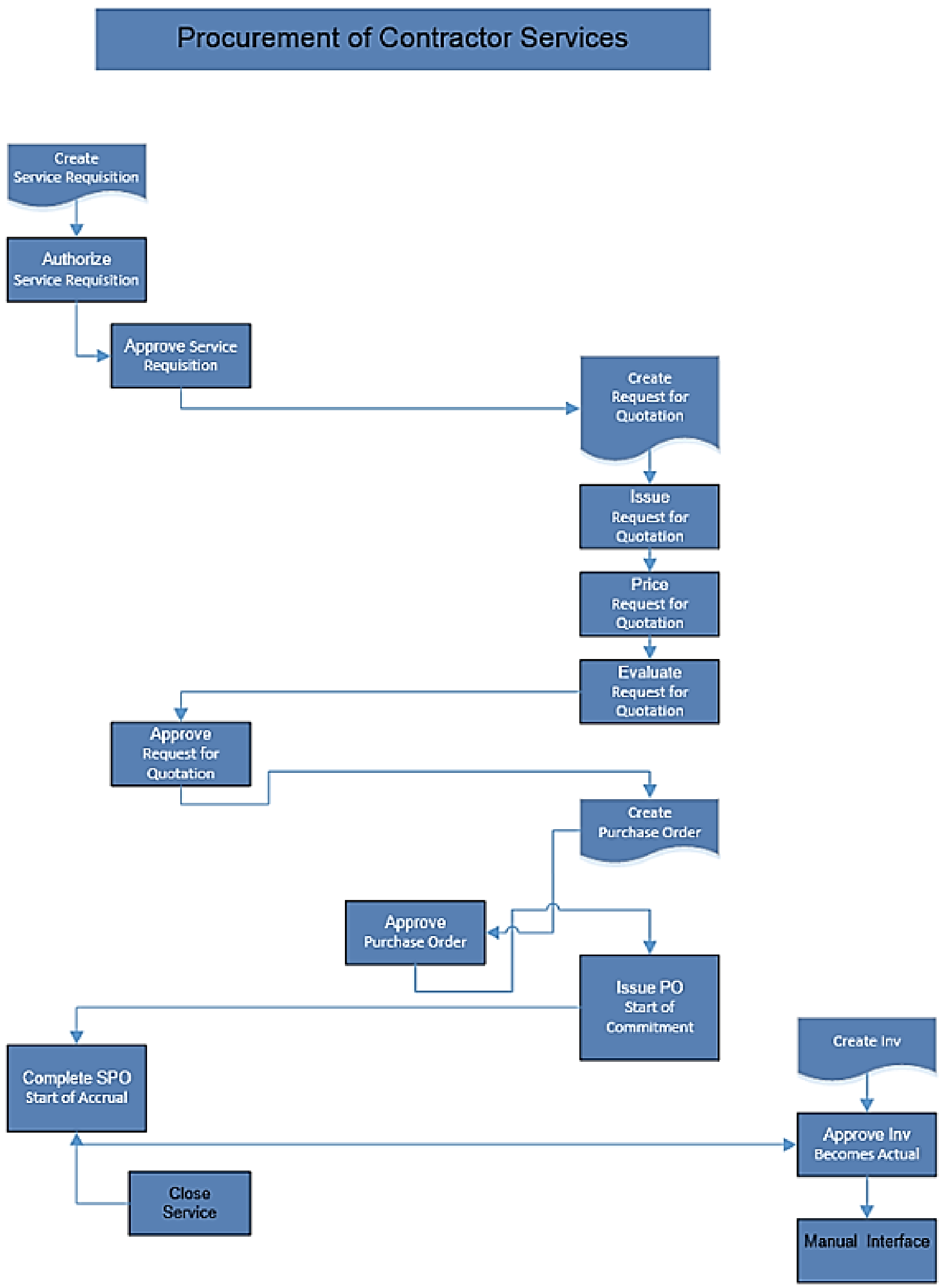
NS Enterprise uses the **Work Order** to capture what maintenance must be performed, what materials are required and allows crewmen to schedule the work at a suitable time. This will ensure that, despite changes in personnel and/or the passing of time, important work does not get lost or fall through the cracks.



2.6 *Service Contractors*

Some work must be done by service contractors. This may be due to specialized skill requirements, knowledge or equipment, regulatory requirements, for warranty service or for some other reason. There are also surveys and inspections which must be carried out by certified individuals.

NS Enterprise uses the service requisition to capture what maintenance must be performed and what materials are required. It also allows crewmen to liaise with vendors, schedule the work and to record the findings for the maintenance history.



Section 3 ABS Survey Status

The purpose of the **NS Enterprise – ABS SafeNet/Freedom Survey Status** Interface is to allow survey status information, which is recorded by ABS personnel in the **Freedom Survey Status** system, to be systematically available in the **NS Enterprise Maintenance** module. In this way, the ship operator can obtain up-to-date and authoritative survey status information in an efficient and timely manner.

The following types of data will be sent from the **ABS Freedom Survey Status** database to the **NS Enterprise** database: The **NS Enterprise Maintenance** module is used to store and maintain:

- Surveys
- Class Item Inspections including Machinery, Structural, Hull and Outfitting
- Certificates – Class, Statutory, ISM and DOC
- Findings – Class Recommendations, Statutory Deficiencies, and ISM CARS
    - These are the condition of class items that must be fixed by a given Survey or a date.
- Comments to Owner - These are typically the less-serious items that do not need to be fixed e.g., a dent. In the **ABS Freedom Survey Status system**, these are known as "Comments to Owner".

3.1 *General Information*

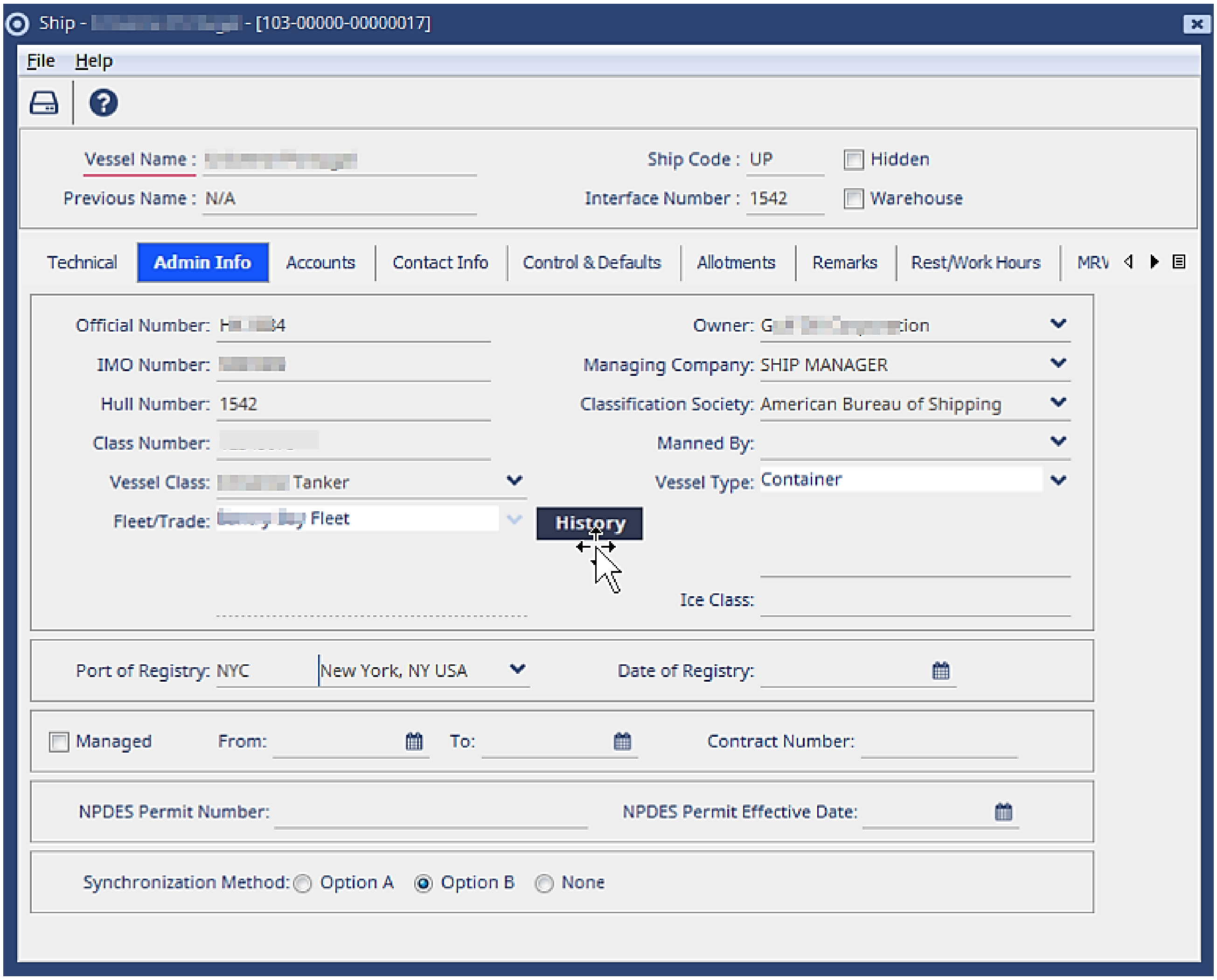
In addition to giving the user access/authorizations for the tasks associated to **ABS Survey Status** and **NS Enterprise** systems, certain configurations are required for a successful synchronization of the two systems.

The authorization **Update ABS Survey Status** at the ship level in the **NS Enterprise** application controls downloading ABS Survey Status. It enables one office to download the ABS Survey Status and propagate the changes to other offices via replication process.

NOTE: The process of authentication and authorization assumes that the **NS Enterprise** users requesting ABS Class information also has access to **ABS Freedom**.

NS Enterprise users requesting ABS Class information will be required to enter the User ID/Password that was provided by **ABS Freedom**. This User ID/Password along with the Ship's Class Number is sent to the **ABS Survey Status Web Service** module. **ABS Survey Status Web Service** module authenticates the user's credentials. The authorization process involving accesses to a particular ship is also handled by the **ABS Survey Status Web Service** module.

Clients may have a fleet classed by different class societies. The **Class Society** identified on the Ship record **Admin Info** Tab must also be flagged as a company type of "Class Society ABS".



Although the various types of surveys, certificates and class item inspections listed are treated separately by the **ABS Survey Status** system, the **NS Enterprise Maintenance** module documents the task information as a **Standard Job**.

The table below documents how the two systems map the **Survey /Certificate /Class** Item Inspection items:

3.1.1 *ABS Survey Status/NS Enterprise Mapping*

Data	**ABS Survey Status ID (as present in the XML file)**	**NS Enterprise** Screen/field Name (Maintenance Module)
Ship	ABS Class Number	Ship screen of Maintenance module
Survey	Survey Type ID	Survey/Cert. Standard Job screen

Data	ABS Survey Status ID (as present in the XML file)	NS Enterprise Screen/field Name (Maintenance Module)
Class Item Inspection	Item ID + Inspection Type ID	Standard Job screen of Maintenance module
Certificate	Certificate Type ID	Survey/Cert. Standard Job screen of Maintenance module
Findings	Findings unique ID	Findings are always attached to a Ship or an Item.
Comments to Owner	Comments unique ID	Comments to Owner are attached to a Ship.

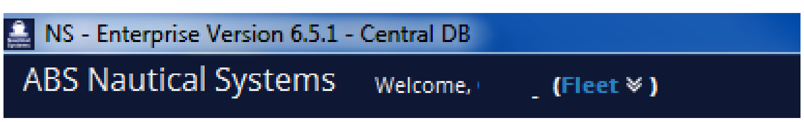
3.1.2 *System Administration Module*

In the **NS Enterprise** application, **System Administration** module, an authorized user will click on **Application Configuration→ABS Account Configuration** to open the **ABS Account Configuration** window.

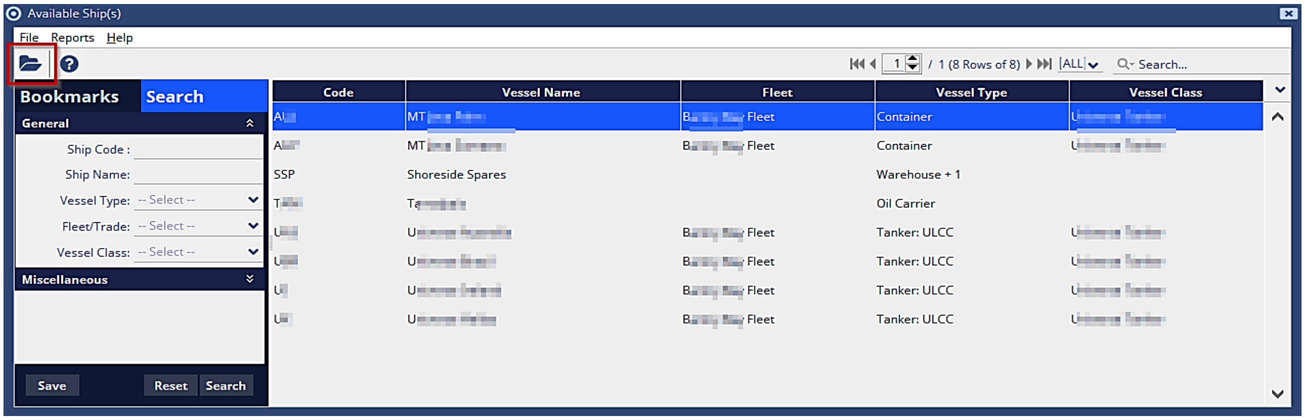
1. Enter in the URL or path for each of the modules that support the ABS Survey Interface.
2. Enter in the UserID and password to be used when running the Interface.
3. Click the **OK** button to save the configuration.

3.1.3 *Ship Record*

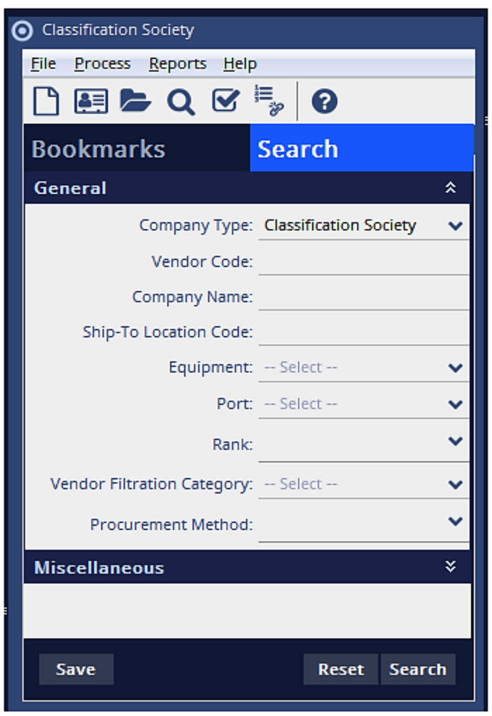
When logging into **NS Enterprise**, the default is set to open the application at the **fleet** level. After logging into the application, click on the dropdown menu in the upper left-hand portion of the window to open the **Available Ships** window.



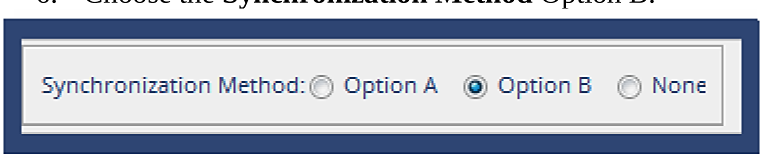
1. Highlight the vessel name and click on the open folder icon on the tool bar menu to open the ship record.



2. On the Ship window verify or enter the information needed for synchronization on the **Ship→Admin Info** Tab.
3. Enter in the **Class Number** for the Vessel.
4. Select the **Classification Society** for the Vessel by clicking the dropdown menu at the end of the **Classification Society** field. This opens the **Classification Society** window. Enter in search criteria and click the **Search** button.
5. Double click to select the company identified as a **Classification Society** to close the **Classification Society** search navigator and return to the Ship record.



6. Choose the **Synchronization Method** Option B.



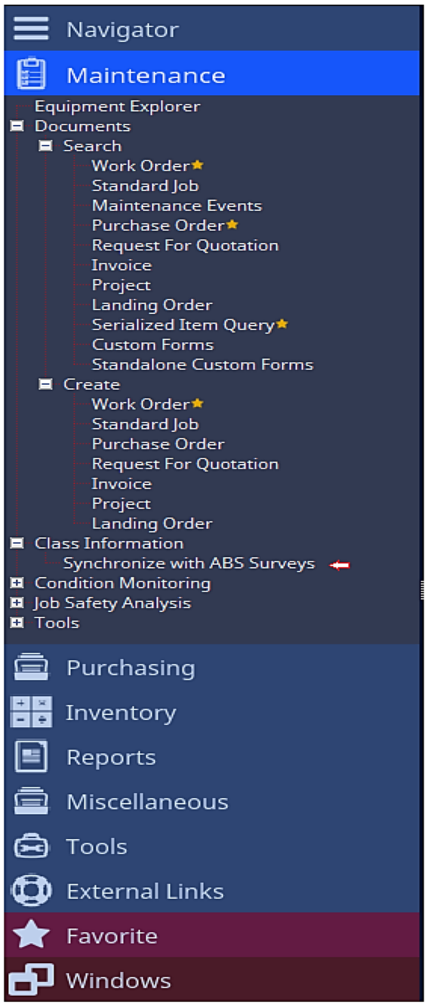
7. Click the **Save** button to save any changes made to the **Ship** record.

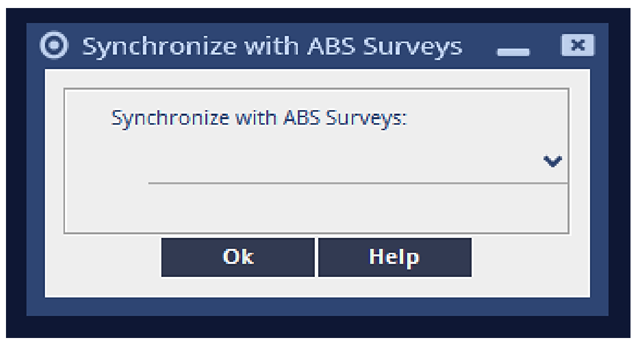
3.1.4 *Maintenance Module*

Both tasks: the synchronization of the Fleet from **ABS Survey Status** software to **NS Enterprise** and utilizing the **Survey Certificate Manager** at ship level to view and process the list of survey data are completed in the **NS Enterprise Maintenance** module.

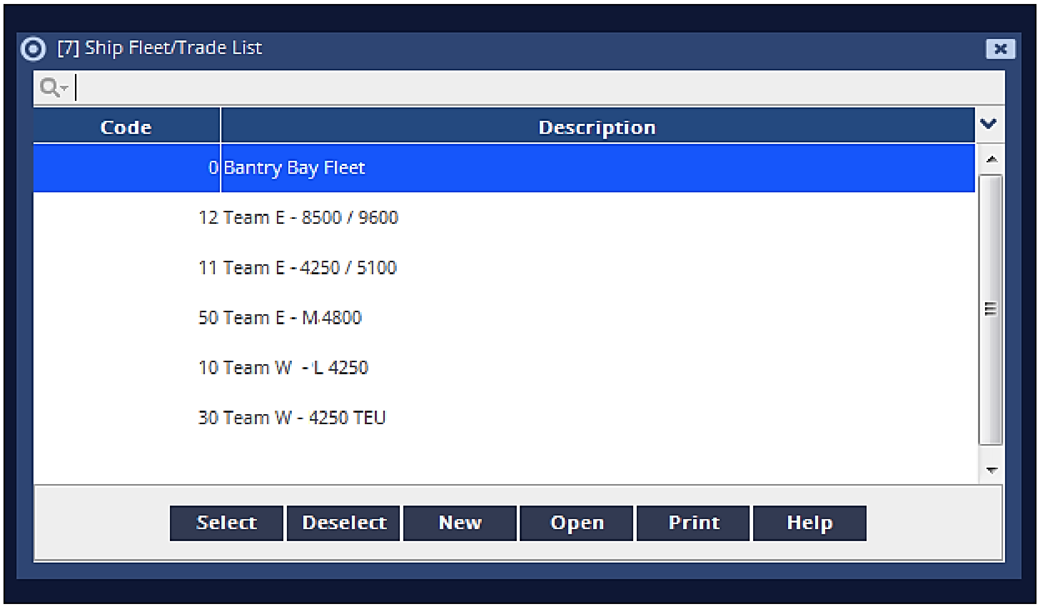
Synchronize Fleet to NS Enterprise

1. In the **NS Enterprise** application at **fleet** level, from the **Maintenance** module, click on **Maintenance** gadget→**Class Information**→**Synchronize with ABS Surveys** to open the **Synchronize** window.





2. Click on the dropdown menu to open the **Ship Fleet/Trade List** window to select which fleet to synchronize with **NS Enterprise**. Highlight the **fleet** and click the **Select** button to close the window and return to the **Synchronize with ABS Surveys** field.



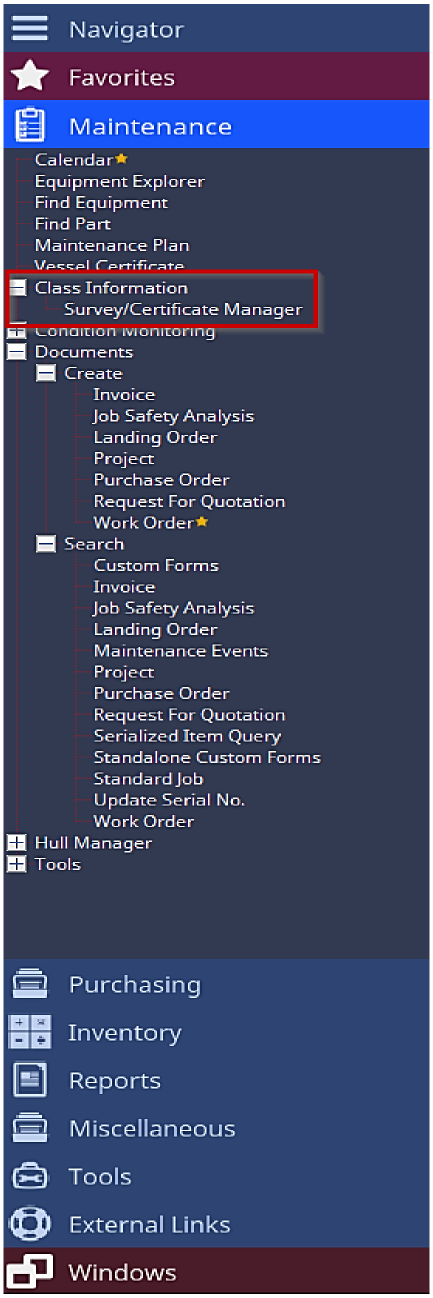
3. Click the **OK** button to start the integration process for the selected fleet.
4. While importing a fleet of vessels, a progress bar displays the Ship Name and downloading progress of "**X**" of "**Y**" ship(s).
5. On completion of the import process, an exception report displays if any errors are present e.g., if the ABS unique identifier does not match any of the **NS Enterprise Standard Jobs** set up for the ship.
6. This process is repeated if performing the synchronization for multiple fleets.
7. **Exception Report** Format includes detailed information about the issue and the vessel name.

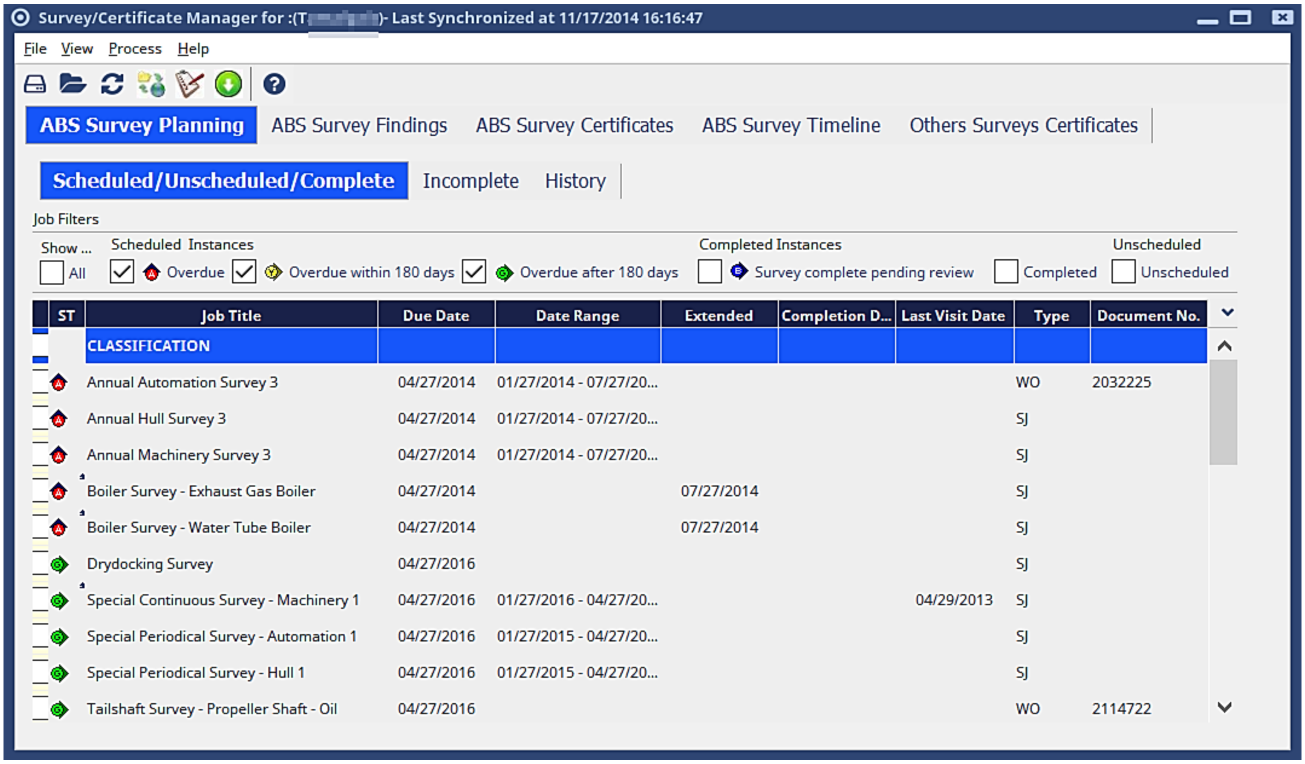
Issue	**Ship Name**

Survey/Certificate Manager

Once the synchronization (import) of the fleet has completed, the users can view the list using the **Survey/Certificate Manager** at the **Ship** level.

In the **NS Enterprise** Application, at **Ship** Level→**Maintenance and Purchasing** Module→**Maintenance** gadget, click on the Class **Information**→ **Survey/Certificate Manager** to open the **Survey/Certificate Manager** window.


Navigator
Favorites
Maintenance
Calendar
Equipment Explorer
Find Equipment
Find Part
Maintenance Plan
Vessel Certificate
Class Information
Survey/Certificate Manager
Condition Monitoring
Documents
Create
Invoice
Job Safety Analysis
Landing Order
Project
Purchase Order
Request For Quotation
Work Order
Search
Custom Forms
Invoice
Job Safety Analysis
Landing Order
Maintenance Events
Project
Purchase Order
Request For Quotation
Serialized Item Query
Standalone Custom Forms
Standard Job
Update Serial No.
Work Order
Hull Manager
Tools
Purchasing
Inventory
Reports
Miscellaneous
Tools
External Links
Windows



For those users who are classed through ABS, the **Survey/Certificate Manager** window in the **NS Enterprise Maintenance** module displays detailed survey information on the **ship** to include:

- **ABS Survey Planning Tab** (Survey/Certificate Status color indicators, Job Title, Due Date, Date Range, Extended, Completion Date, Last visit Date, What type of Job (WO, SJ) and Document number)
  - **Scheduled/Unscheduled/Complete** Sub Tab
  - **Incomplete** Sub Tab
  - **History** Sub Tab
- **ABS Survey Findings Tab** (all findings recorded by the attending surveyors)
- **ABS Survey Certificates Tab** (certificates issued by ABS and viewable PDF links)
- **ABS Survey Timeline Tab** (graphical display of the survey dates over time)
- **Other Survey Certificates Tab** (editable list, for updating USCG certs.)

For those users who are not classed through ABS, the Survey/Certificate window is slightly different as it contains the information depicted in the Other Surveys Certificate tab. More details on the Other Surveys Certificate tab is covered in the next section.

Survey & Certificate	Last Iss	Last Due	Interval	Next Due	Ext	Schedule	Comments
00 - CERTS/STATUTORY							
[0001] - Accomodation Cert	04/08/2009		0MONTHS	04/09/2013		09/01/2009	
[0002] - Ship Registry Cert	04/16/2009		0MONTHS				
[0003] - EPIRB/MMSI Registr...	04/08/2009		0MONTHS				
[0004] - Flag State Inspection			0MONTHS				
[0005] - GMDSS - Rec of Instl...	04/08/2009		0MONTHS				
[0006] - ISSC - Contnuous Sy...	04/08/2009		0MONTHS				
[0007] - Int. Tonnage Cert (1...	03/05/2009		0MONTHS				
[0008] - L.L. Cond. of Assign...	04/08/2009		0MONTHS				
[0009] - Min Safe Manning C...	04/08/2009		0MONTHS				
[0010] - Port State Insp. Rpt L...	04/08/2009		0MONTHS				
[0011] - Port State Rpt: Others			0MONTHS				
[0012] - Port State Rpt: Paris ...	08/03/2009	08/04/2009	0MONTHS				
[0013] - Port State Rpt: Tokyo...			0MONTHS				
[0014] - Port State Rpt: USCG	08/03/2009	08/08/2009	0MONTHS				

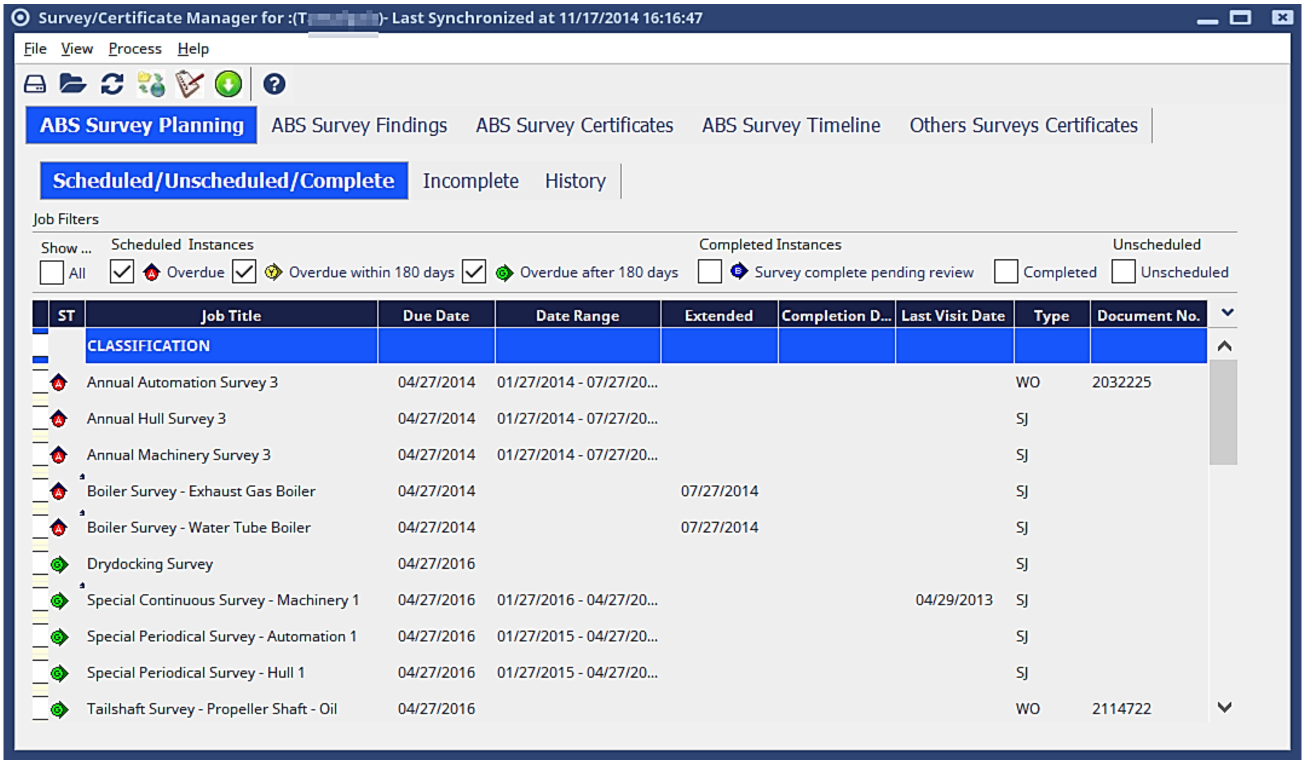
3.1.5 *Survey/Certificate Manager Window*

At **Ship** level, to start processing the surveys, click on the **Process** menu option→**Synchronize with ABS Surveys** on the **Survey/Certificate Manager** window.

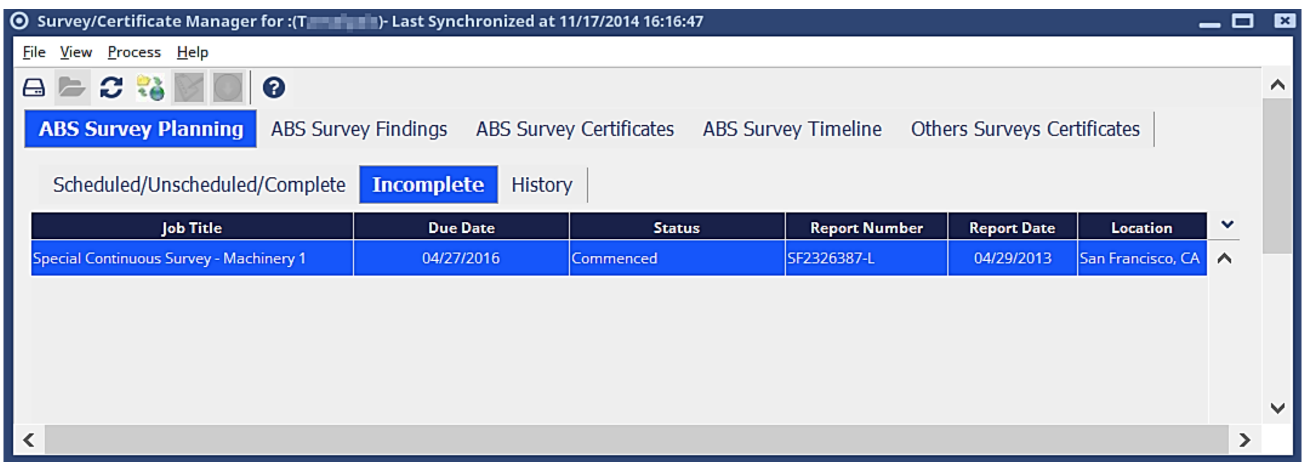
ABS Survey Planning Tab

The **Scheduled/Unscheduled/Complete** Sub Tab includes:

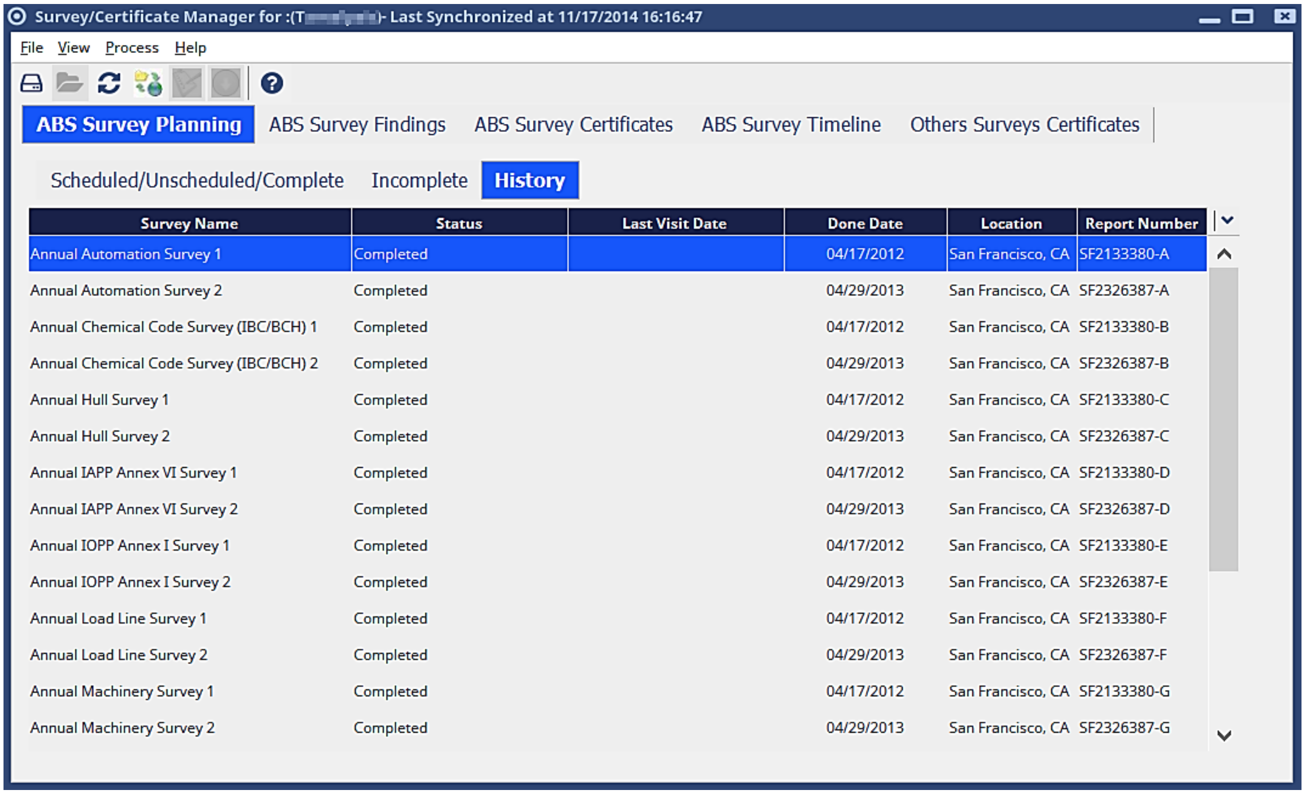
- ABS list of surveys status scheduled, unscheduled, commenced, or complete
- NS standard jobs assigned
- Filter options (Show **All** instances, **Scheduled** with 3 options for Overdue, Unscheduled, Completed with 2 options for those pending review and those completed)



The **ABS Survey Planning ➔ Incomplete** Sub Tab includes those surveys where status has commenced but not yet completed.

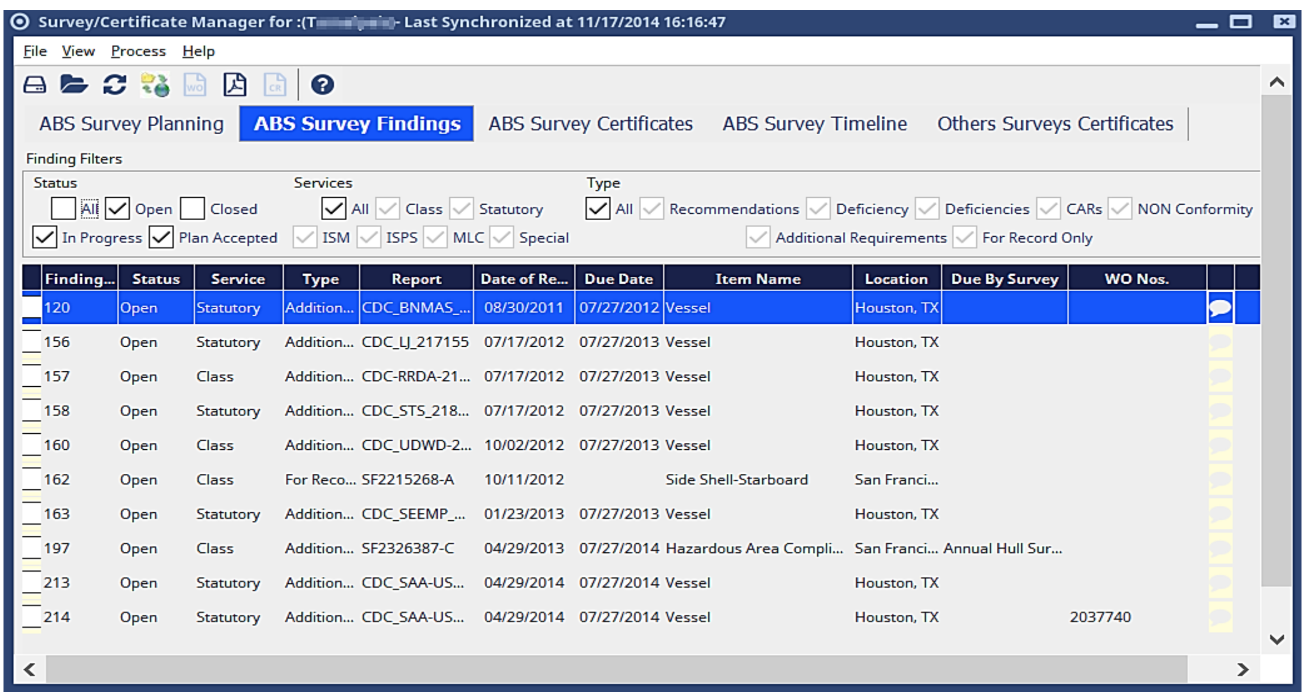


The **ABS Survey Planning ➔ History** Sub Tab includes a list of completed surveys.

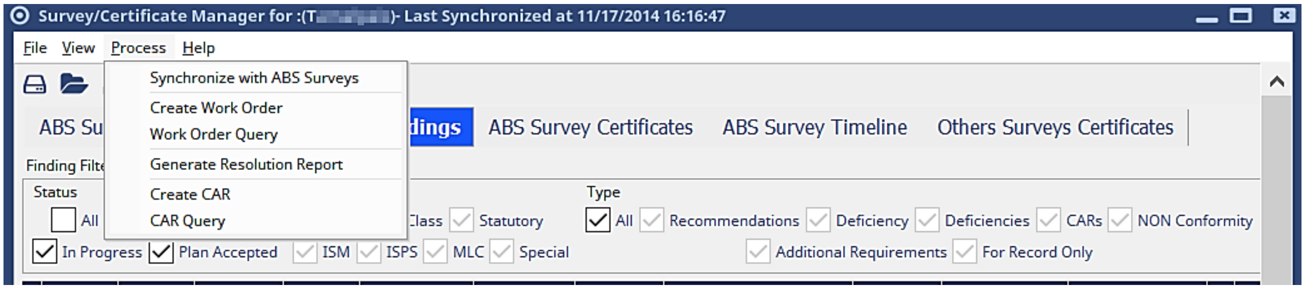


ABS Survey Findings Tab

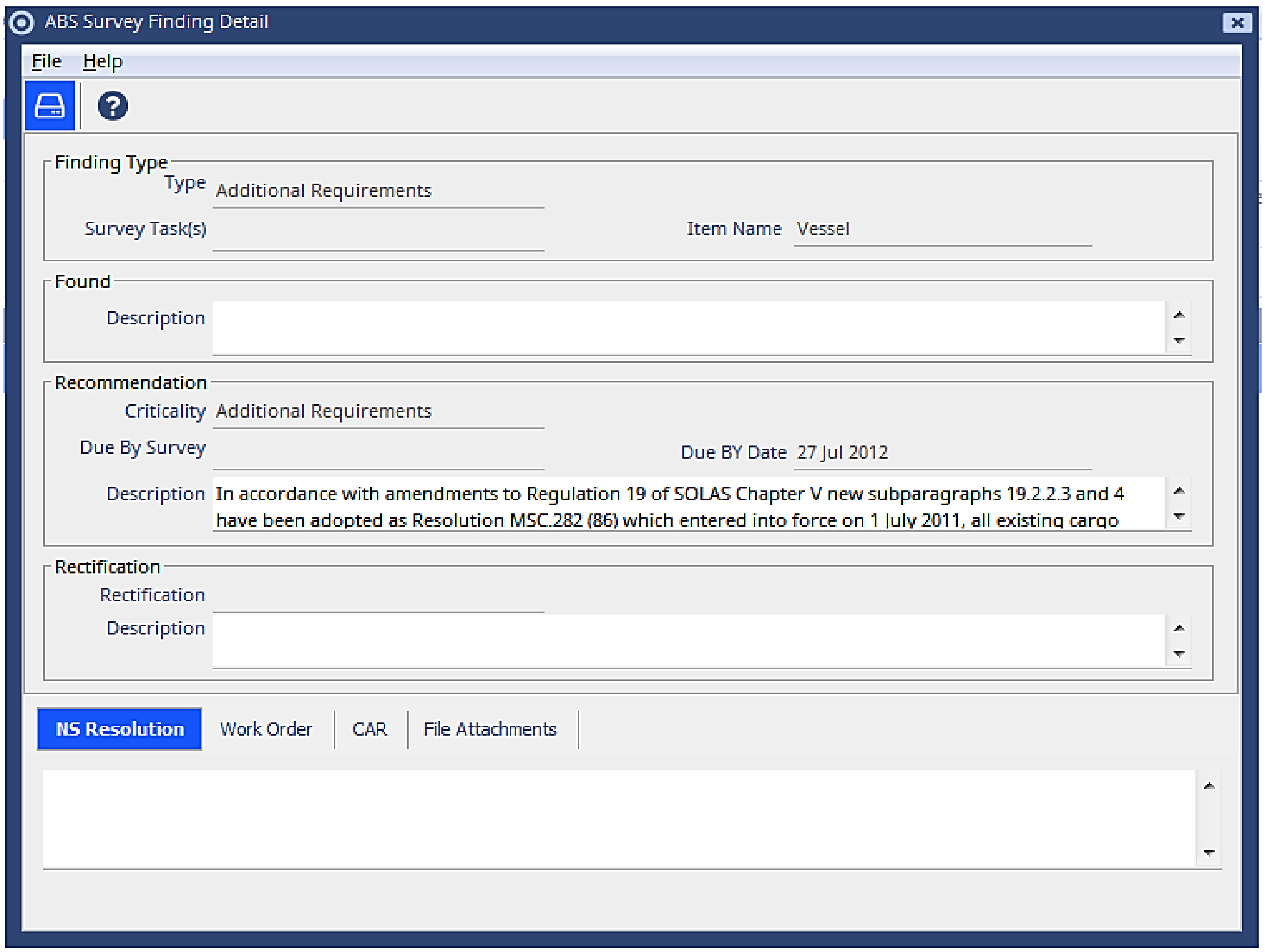
The **ABS Survey Findings** tab displays all the findings found during the survey. It also has filter options by **Status**, **Service**, **Type**, and **Due Date**.



From the **Process** menu, users can make a query or create work orders, corrective action (CARs), generate resolution report and synchronize with ABS Surveys.



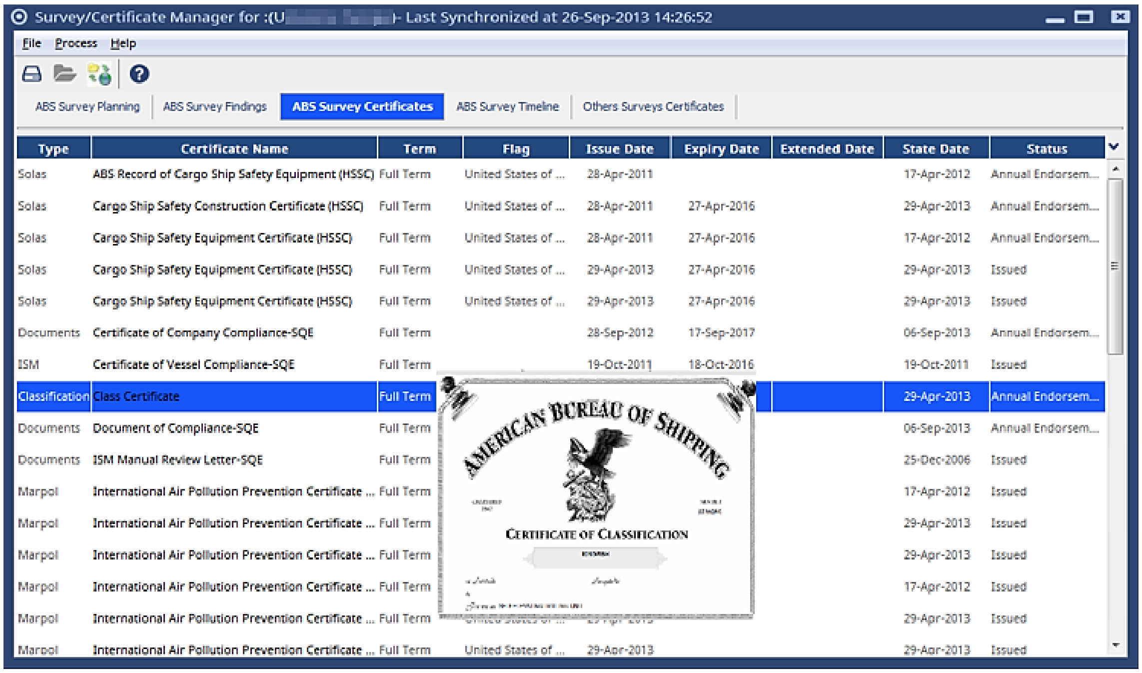
Double-clicking on a record in the list opens the **ABS Survey Finding Detail** window to record resolutions by crew.



ABS Survey Certificates Tab

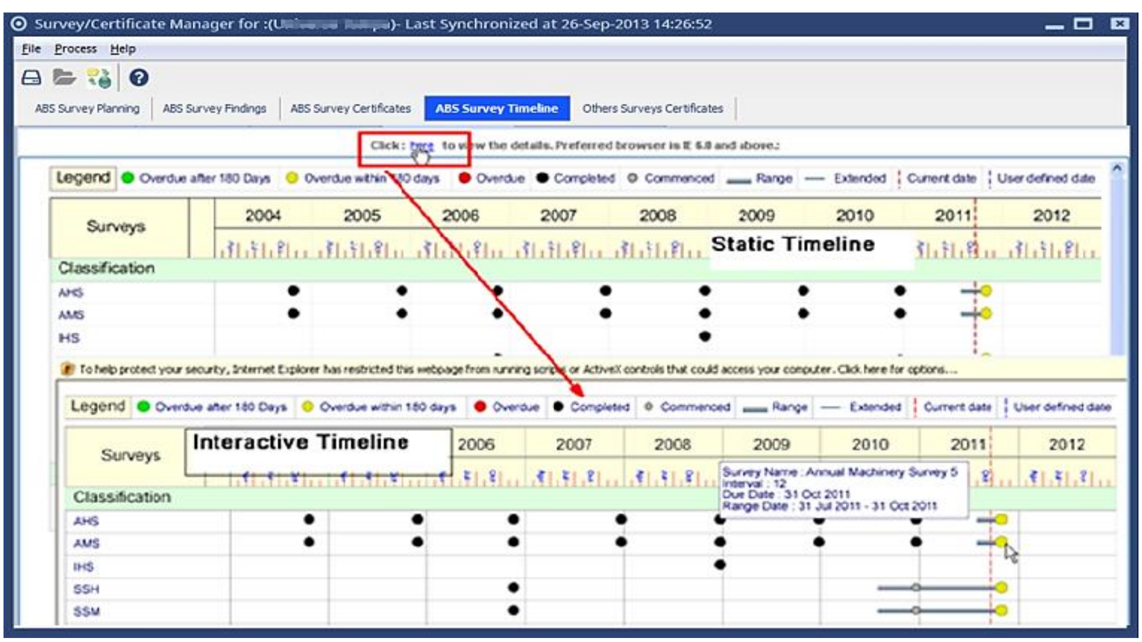
The **ABS Survey Certificates** tab displays the status of the ABS certificates with an option to view a copy of the certificate.

NOTE: The view certificate link becomes active when connected to the web.



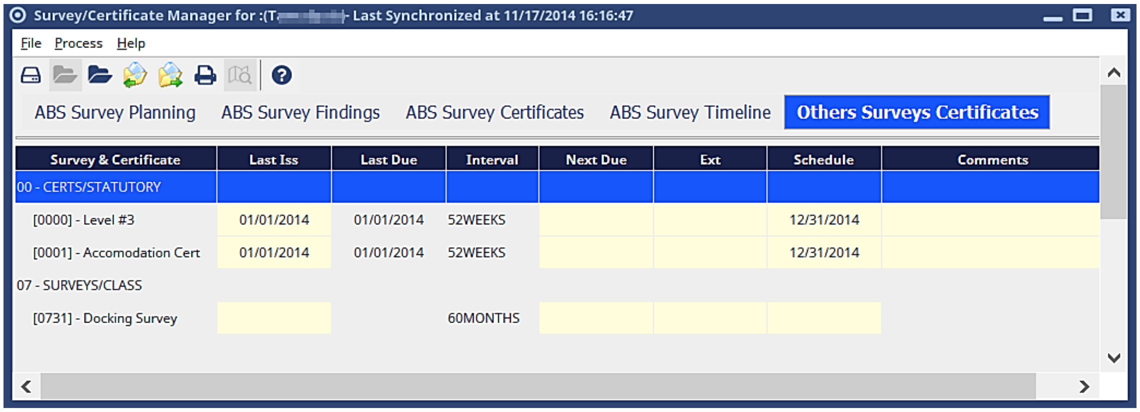
ABS Survey Timeline Tab

The **ABS Survey Timeline** tab displays a static image of the survey timeline. Clicking on the details link displays the interactive view of the timeline.

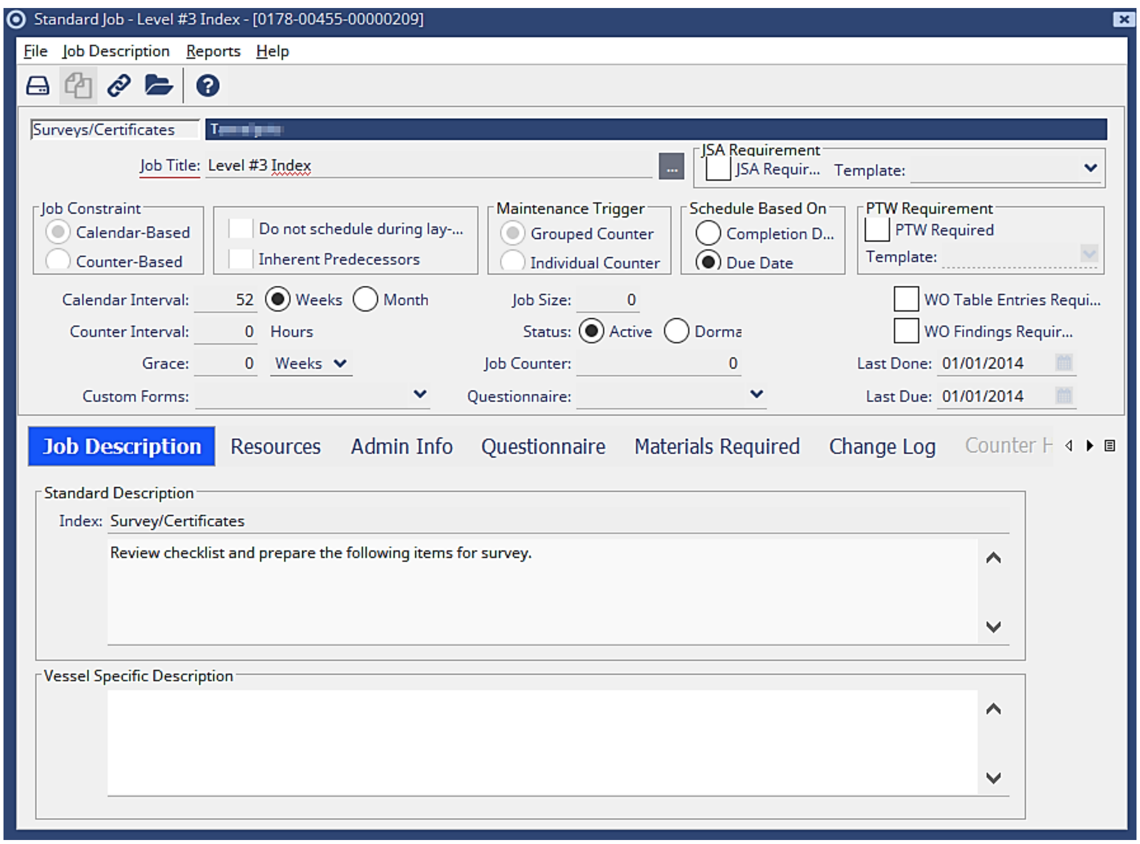


Other Surveys Certificates Tab

The **Other Surveys Certificates** Tab displays an editable list of certificates and status issued by other organizations, e.g. U.S. Coast Guard.



Double-clicking on a row in the list opens the Standard Job.

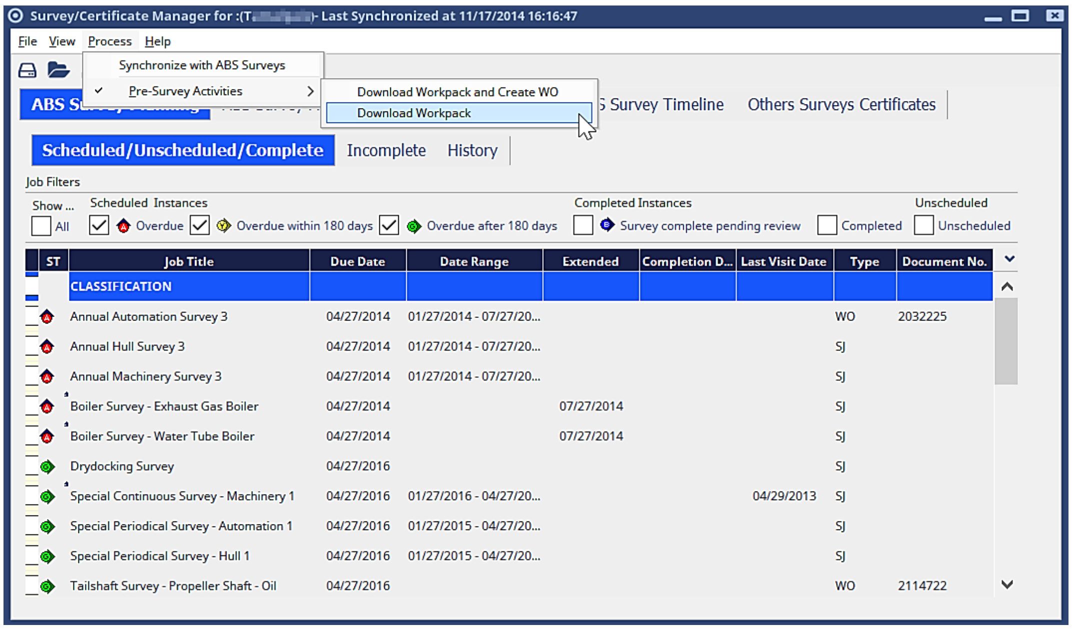


3.1.6 *ABS Survey Planning Work Packs*

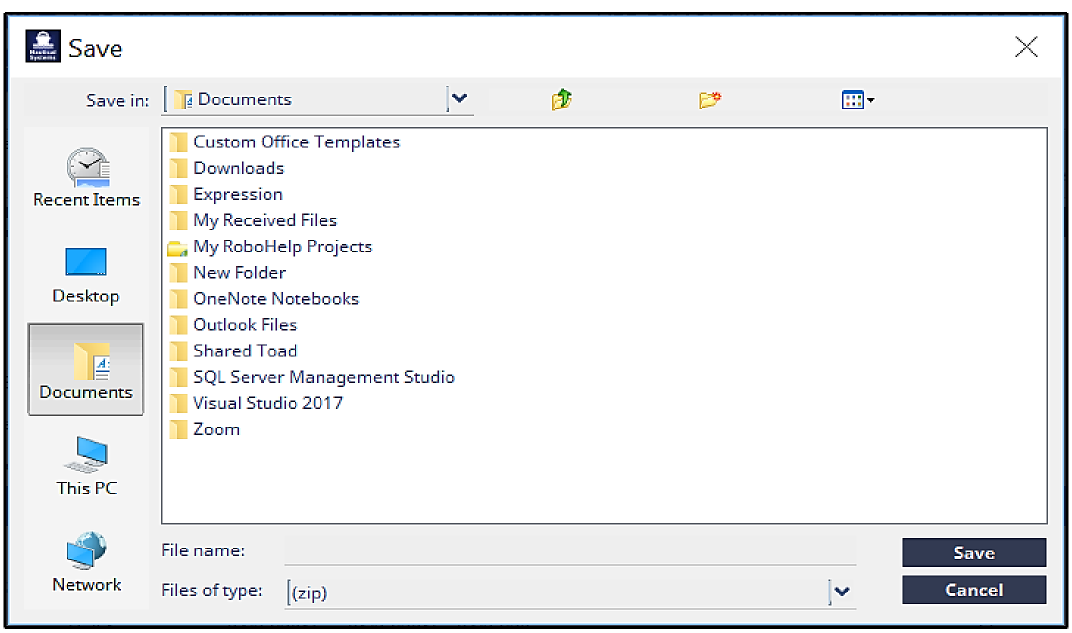
Download Work Pack

From the **Maintenance and Purchase** module at **ship** level → **Maintenance** gadget → **Class Information → Survey/Certificate Manager** window **- ABS Survey Planning→Scheduled/Unscheduled/Complete sub tab** review the surveys on the list.

1. Tick the check box (es) for those that need a work pack.



2. On the **Process** menu, click **Download Workpack**.
3. Type in the name of the file and location to save the workpack.



4. Click the **Save** button.
5. A progress bar will display showing the progress of the download.

6. The downloaded work pack zip file contains:
   - **Pre-survey Checklist**
   - **Pre-survey Checklist Recommendations**

NOTE: Upon requesting for the survey the program/plan required needs to be imported online. Completed documents need to be stored on the ship survey file as part of the IMO/Flag compliance.

Work Pack Pre-Survey Checklist

The **Work Pack ESP Program** is an editable pdf file to assist the ship staff in preparing for surveys. A completed checklist can be reviewed by the Port Engineer/Vessel Superintendent prior to requesting the survey. A completed checklist can be attached to the **NS Enterprise** Work Order, when required and can be exported/uploaded to ABS via online request for the attending surveyor review.

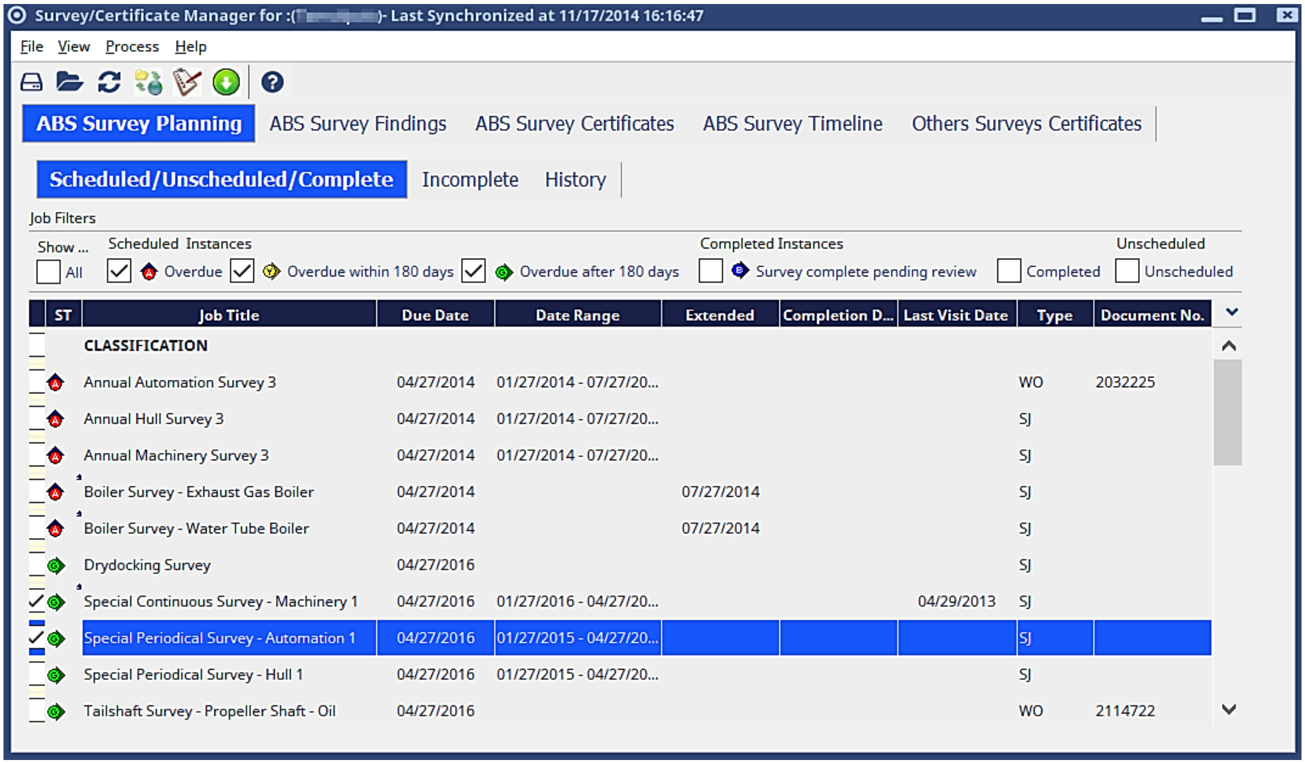
Work Pack Pre-Survey Recommendations

The **Work Pack Pre-Survey Recommendations** is a read only PDF. It lists all the open findings and recommendations to assist the ship staff prepare for the survey.

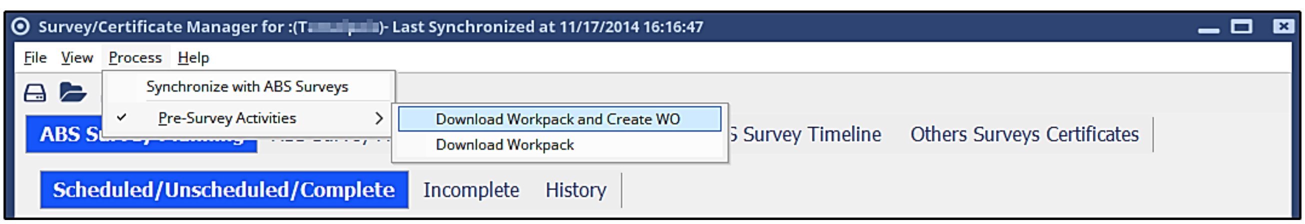
Create NS Enterprise Work Order

From the **ABS Survey/Certificate Manager** window, **ABS Survey/Certificate Planning** Tab:

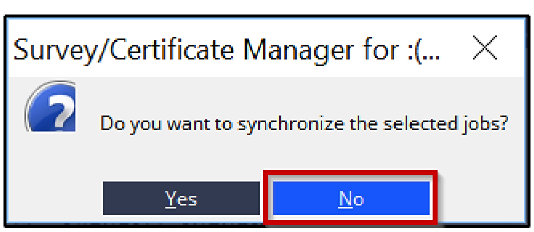
1. Tick the check box(es) of the survey that needs to be included in the new work order.



2. Click on the **Process** menu→**Pre-Survey Activities—Download Work Pack and Create WO link.**



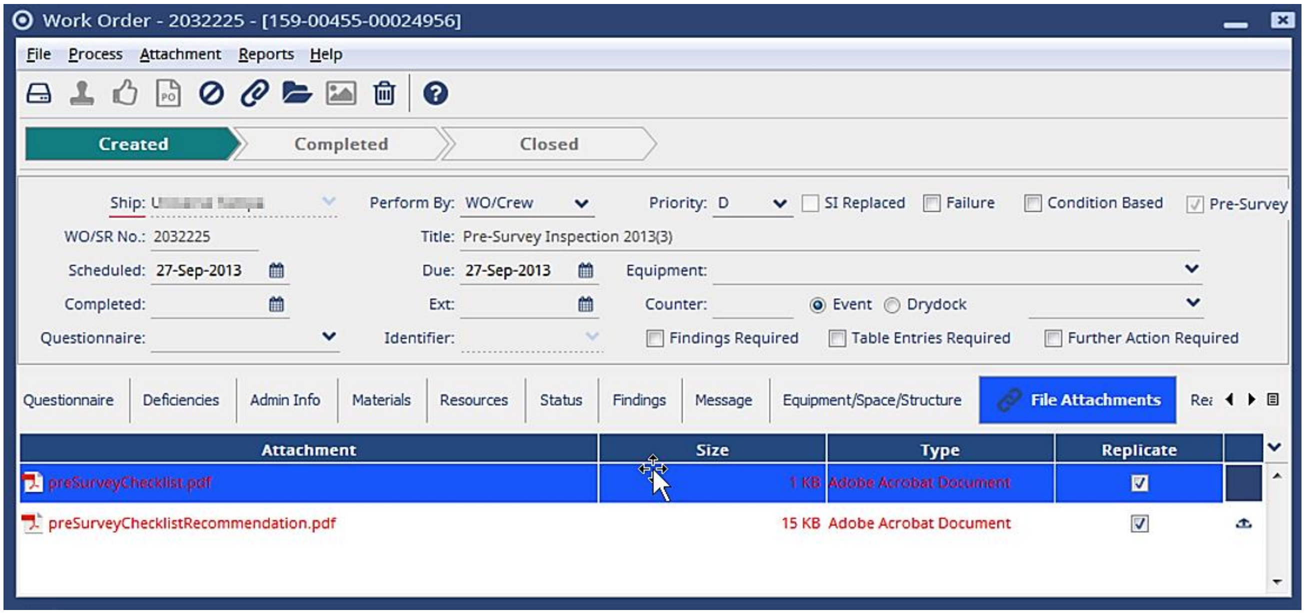
3. The option to synchronize with **ABS** will display. Click **No** button to create a work order in **NS Enterprise**.



- A message will display with the work order number and an option to open the work order.

4. Click the **Yes** button to open the work order.

- The work order will include the work pack as well as populate the Title field. The work order lists the selected surveys and has the ability to upload completed documents and replicate to vessel/central.



5. The work order now follows the normal workflow for this type of work.

Create NS Enterprise Service Order

From the **ABS Survey/Certificate Manager** window, **ABS Survey/Certificate Planning** Tab, tick the check box(es) of the surveys that will need to have a service order.

1. Click on the **Process** menu from the **Pre-Survey Work Order**→Create SO to create a service order.
2. All information is prepopulated from the work order.
3. Approval for the service order follows the client workflow

Request for Survey – NS Enterprise

From the **ABS Survey/Certificate Manager** window, **ABS Survey/Certificate Planning** Tab, check the check box (es) of the surveys that will need a survey request.

1. Once the service order is approved and becomes a Service Purchase Order. Search for the Purchase Order using the PO search navigator screen.
2. On the PO Documents tab, click on the work order number to open the work order window.
3. From the work order window, click on the Process menu→Request for Survey.
4. A service order is created to request the Survey. All information is prepopulated on the work order

5. Approval for the Request for Survey Service Order follows the client workflow.

Request for Survey – ABS Eagle

Authentication is completed via the ABS Eagle portal.

1. Using the ABS Eagle Portal→**ABS Survey Manager→Place order** to open the online place order screen.
2. Enter the date in the text fields.
3. Saved documents can be uploaded onto the order.
4. Click on the Place New order button to submit the request
5. The order will be sent to ABS office with return reply e-mail to the NS Point of Contact.

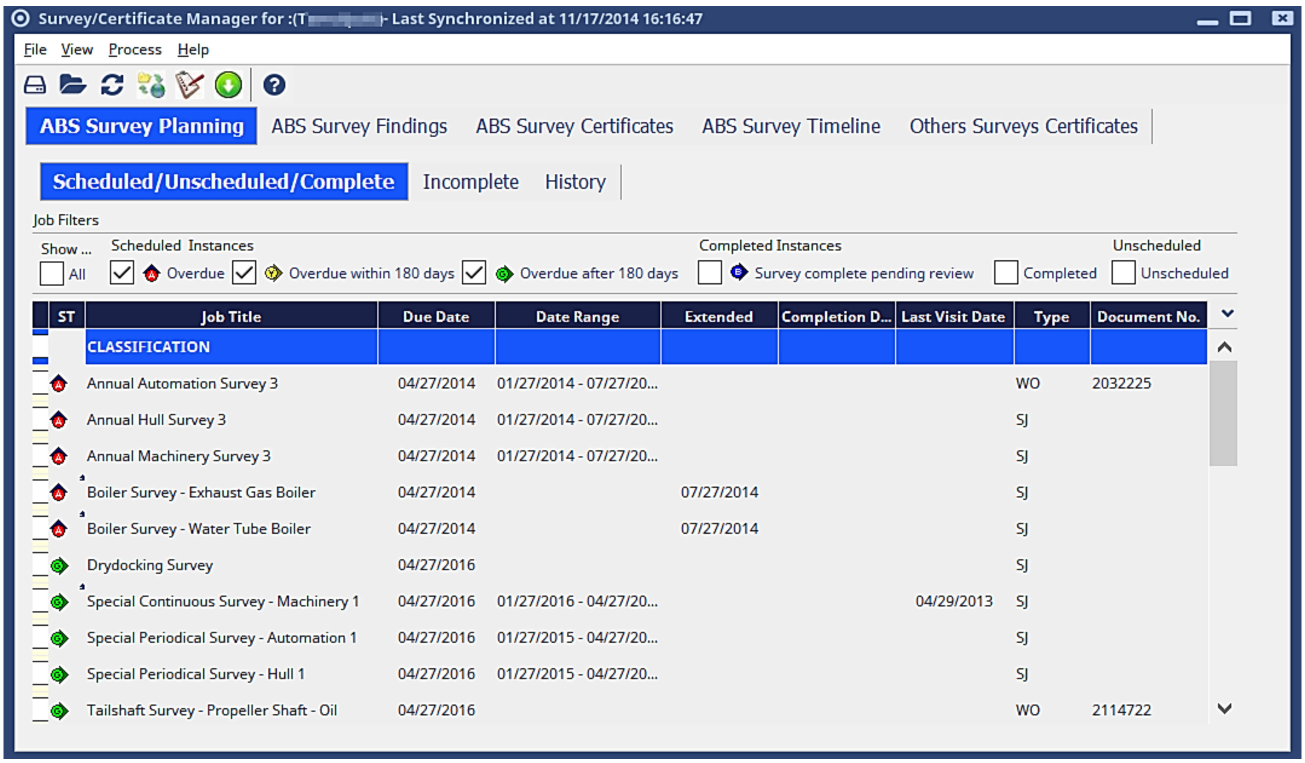
Section 4 Survey / Certificates

A ship has many certificates which must be kept current. **NS** provides a way to track and organize the certificates that any single ship maintains with a convenient interface for viewing and updating the database records.

4.1 *The Survey / Certificate Interface*

This functionality is found in the Maintenance and Purchasing module. From the **Maintenance** gadget **→ Class Information → Survey/Certificate Manager**.

The **Survey and Certificates** window opens.



All an individual ship's certificates, along with their associated information, are listed on the **Other Surveys Certificates** tab.

Each certificate is connected to a standard job. **NS** automatically creates and completes work orders for each certificate when information is updated.

Click the **Edit Survey** button to view the standard job connected to the highlighted certificate.

Choose the **Work Orders** tab to view the history of this certificate.

4.2 *Updating Certificates*

It is strongly recommended to update the certificates using the Surveys and Certificates interface even though the standard job connected to a certificate can be changed from the Maintenance Plan.

1. Open the Surveys and Certificates window by selecting **Class Information → Survey/Certificate Manager** from the Maintenance gadget on the Navigator.
2. Find the certificate needs to be updated by scrolling through the list of certificates.
3. Click the **Last Issued** date box of the certificate to be updated. Enter the new Issued date and choose the **Select** button. NS enters the date into the database and the **Next Due** and **Schedule** dates are updated after the Maintenance Plan is recalculated.

   The Next Due date is calculated based on the job interval, while the Scheduled date is when the job appears in the Maintenance Plan. If, for instance, the user connects the certificate WO to an event, the Scheduled date changes to the date of the event.

4. An error warning opens if users try to enter a date earlier than the current **Last Issued** date.

4.3 *Attaching a Scanned Copy of the Certificate*

Users can attach an image or PDF of the certificate to the certificate record.

1. Highlight the certificate in the **Surveys and Certificate** window.
2. Click the **Edit Last** button. The **Work Order** window for this certificate opens.
3. Attach the PDF file on the **File Attachments** tab.

4.4 *Correcting Errors*

Do not just enter the correct date in the **Last Issued** column if an incorrect date was entered accidentally for one of the certificates.

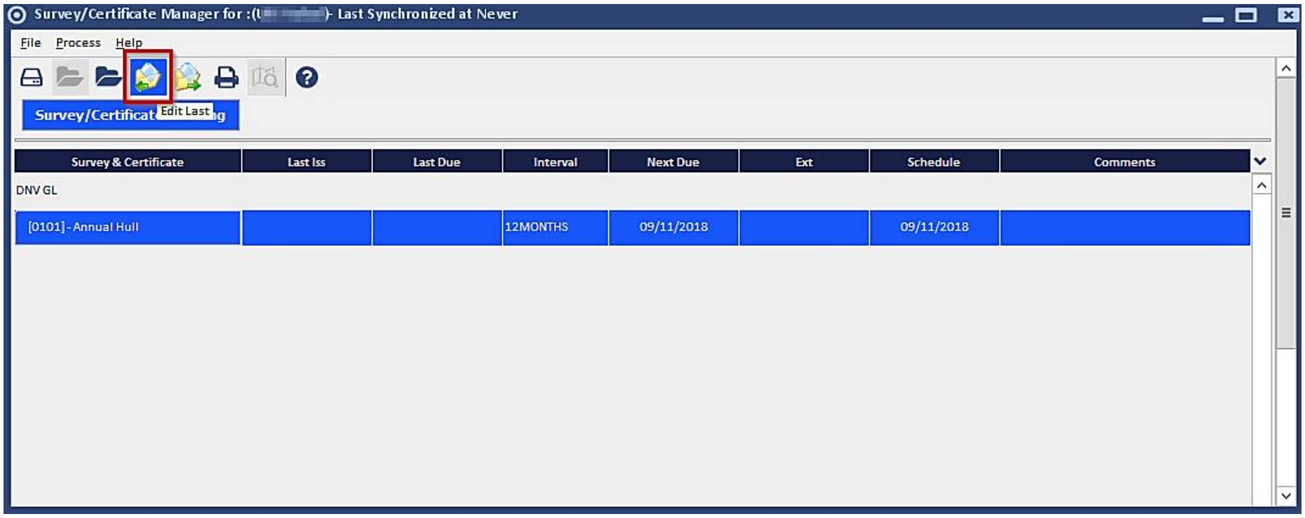
NOTES:

- This is very important, as the standard job connected to the certificate has its schedule based on **Due Date**, not **Completion Date** as is typical for most maintenance items.
- In order to view the Process menu options, ensure that the Classification Society field in the Ship screen is blank.

NS treats this as if a new certificate were issued if users just enter a new date in the **Last Issued** column. The calculation for the **Next Due** date will be incorrect.

To correct errors:

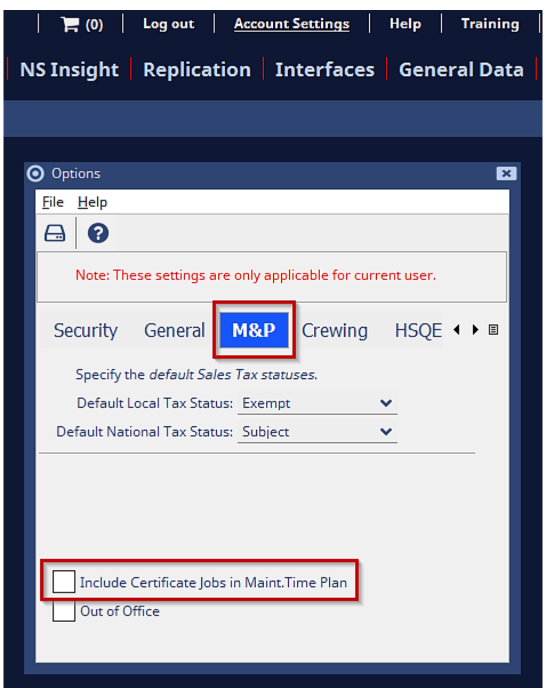
1. Highlight the certificate in the **Surveys and Certificate** window.
2. Click the **Edit Last** button. The **Work Order** window for this certificate opens.



3. Go to the **Message** tab. Right click and choose **New Message**. Address this message to the Technical Supervisor and ask to update the certificate with the correct information

4.5 *Certificate Jobs*

Jobs pertaining to certificates are now included in the Maintenance Time Plan. This can be configured from the user's account settings.



Section 5 Equipment Certificates

There are many items onboard a ship which have a certificate that needs to be stored and traced besides the ones described in the **Surveys and Certificates** section. **NS** has the ability to attach a copy of any certificate to the equipment detail for easy retrieval in the future. This proves to be beneficial during surveys, audits, etc. in which certificates are requested to be presented for inspection.

The process involves making a digital copy of the certificate, attaching it to the relevant equipment detail and then designating a term in the subject index on the **Admin Info** tab to allow for targeted searches.

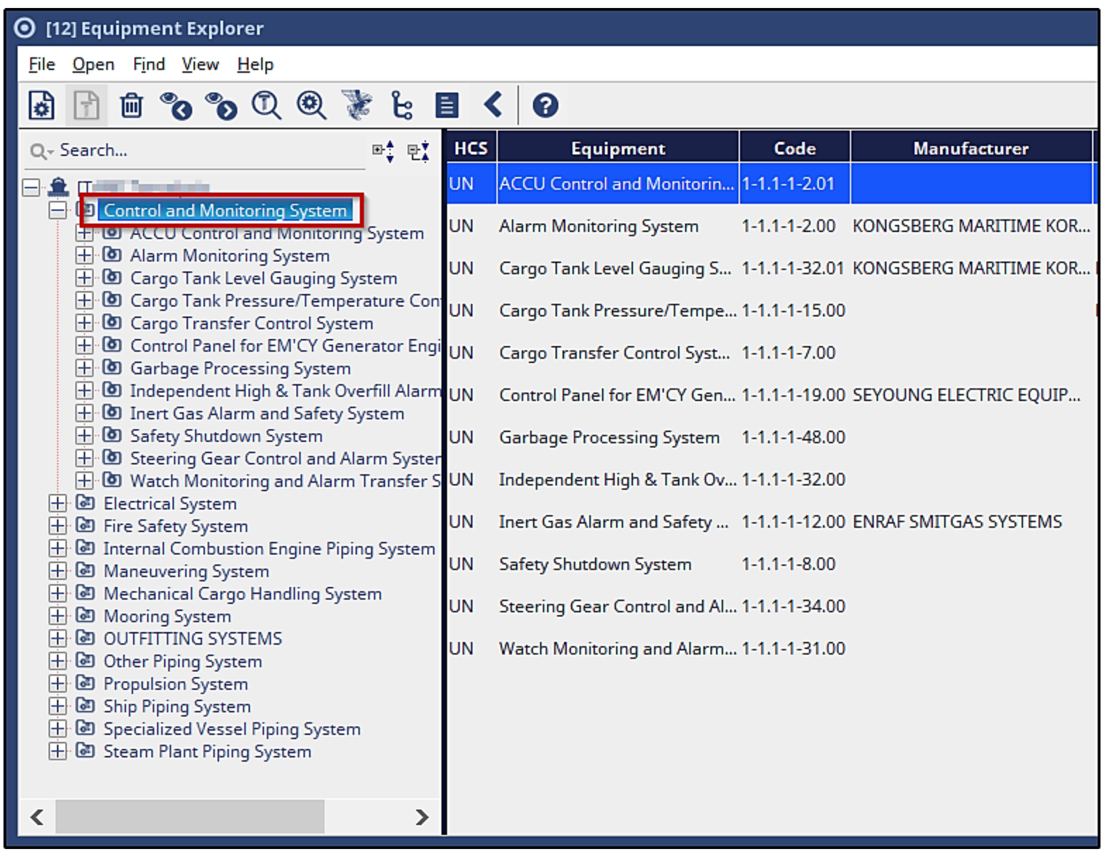
5.1 *Attaching Surveys / Certificates to Equipment*

The first step in attaching an equipment survey / certificate is to make a digital copy. This is then attached to the relevant equipment detail.

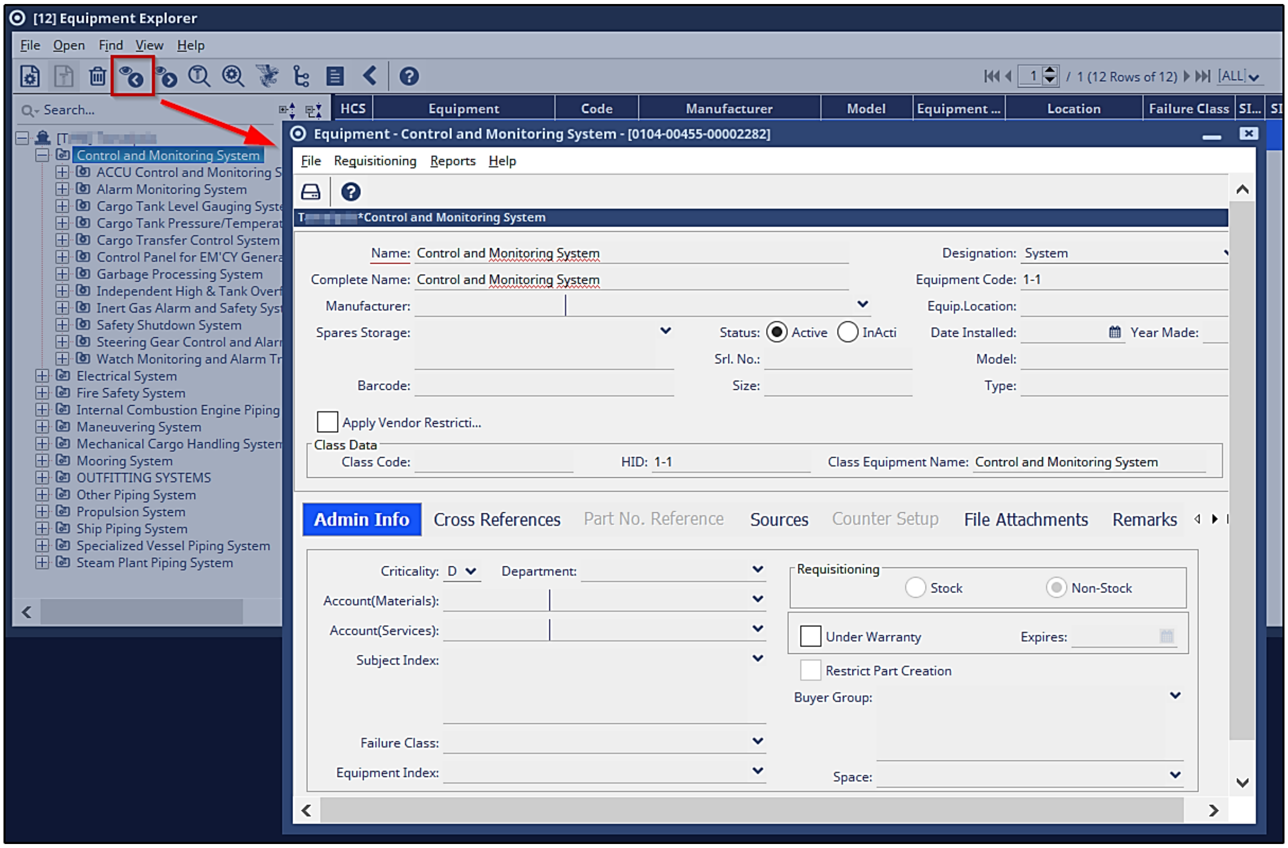
1. Scan the survey / certificate. Save the PDF in a convenient location on user's computer. Name the PDF file as follows: **DATE_EQUIPMENT.pdf**.

   This is important as it allows users to quickly find the most recent survey / certificate.

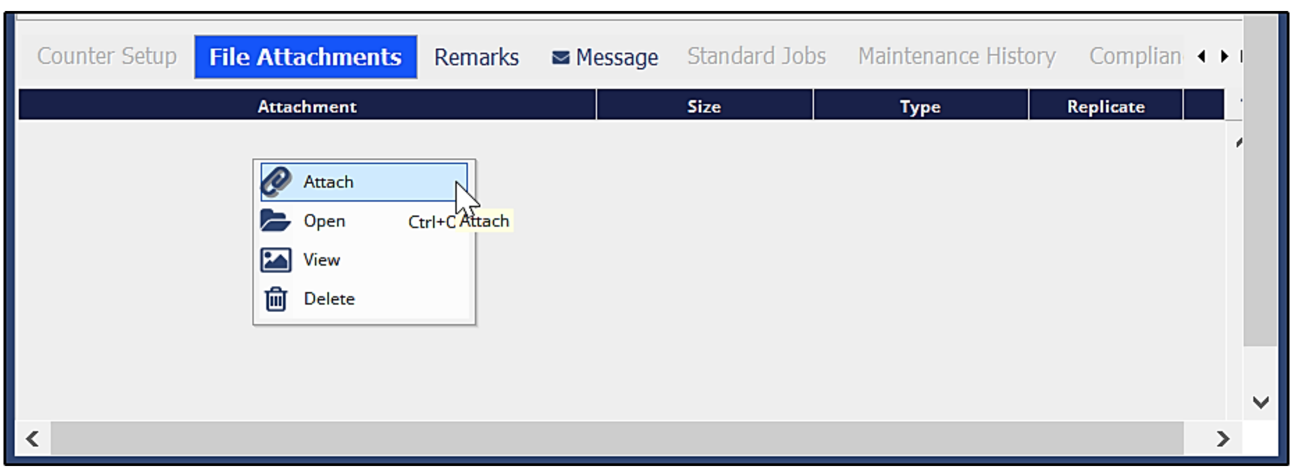
2. Go to **Maintenance** gadget ➔ **Equipment Explorer.** Drill down through the hierarchy and highlight the relevant equipment.



3 Click the **Open Left Pane Item** button. The **Equipment Detail** opens.



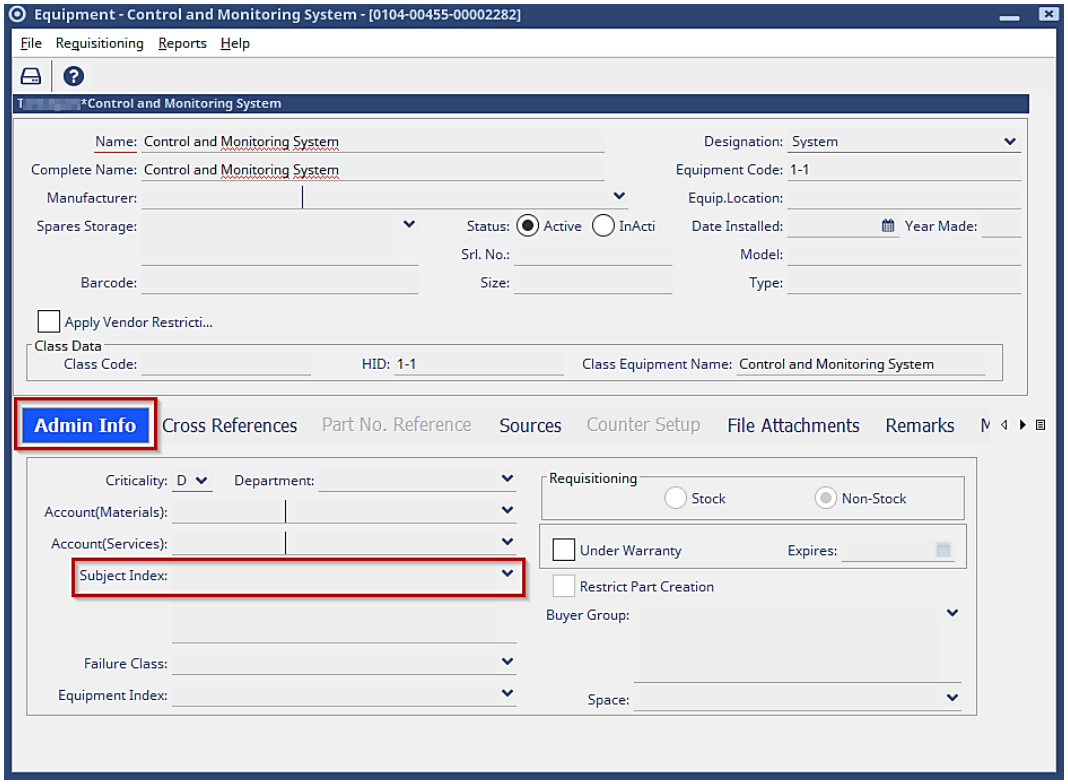
4. Right click on the **File Attachments** tab and choose **Attach**. Attach the PDF file that was created in step one.



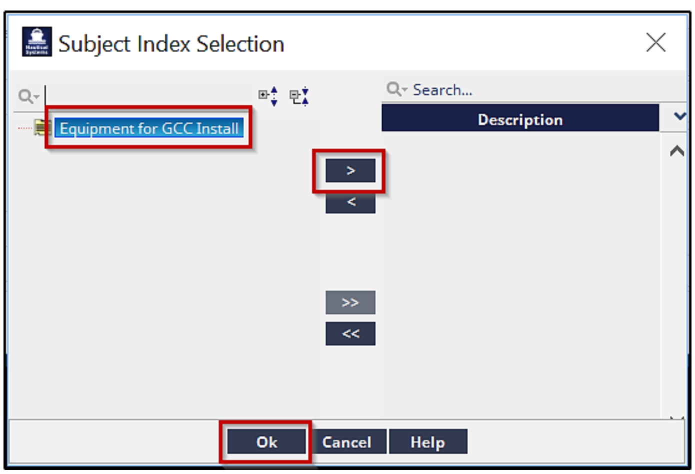
5.2 *Using the Subject Index*

The next step is to connect the CERTIFICATION label to the Subject Index so that all equipment details with a survey / certificate attached can be easily searched for.

1. Go to the **Admin Info** tab on the equipment detail. Click the dropdown menu at the end of the **Subject Index** field. The **Subject Index Selection** window opens.



2. Highlight the **CERTIFICATION** and click the **Right Arrow** button to move CERTIFICATION to the right side of the window. Click **OK**.

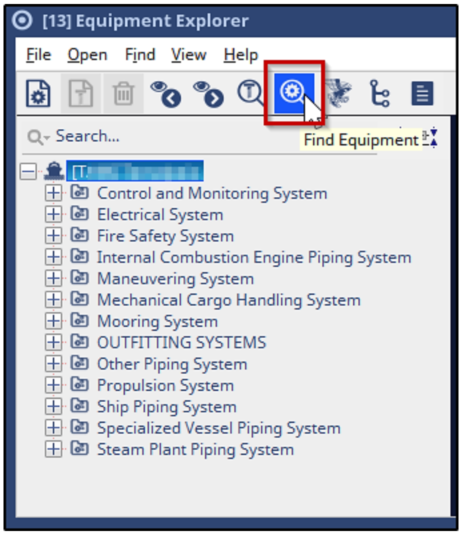


- The Subject Index is now searchable for Surveys and Certificates.

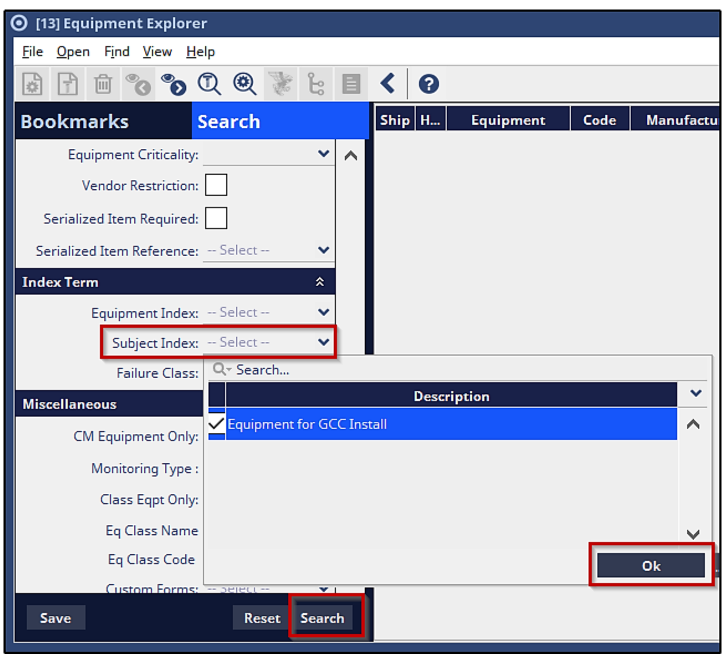
5.3 *Performing a Survey / Certificate search*

Users can search for equipment with a survey / certificate attached by using the **Equipment Query** and filtering for CERTIFICATION in the Subject Index.

1. Choose **Equipment Explorer** from the Maintenance gadget on the Navigator. The **Equipment Explorer** window opens.
2. Click the **Equipment Query** button. A search window opens.



3. Select the **CERTIFICATION** in the **Subject Index** field – this is under the **Index Term** group.
4. Click the **Search** button at the bottom of the **Search** tab to return a filtered list of equipment with survey / certificates attached.



5. Double click on the desired piece of equipment to open the equipment detail. The relevant survey / certificate is listed on the **File Attachments** tab.

Section 6 Hierarchy

The **NS Enterprise** hierarchy organizes machinery equipment, consumables, and jobs according to functional and physical relationships. The hierarchy is displayed in the form of the **Equipment Explorer**. The hierarchy is the organizational representation of the systems, equipment, parts, and consumables on board a vessel. Machinery and stores are located quickly by "drilling-down" through the various levels. The system hierarchy is defined by the company using the software.

Machinery equipment, consumables and jobs are displayed in the hierarchical structure corresponding to their actual physical interrelationships. This method provides comprehensive cross-referencing among machinery items and stores without requiring specialized code numbering systems. However, code numbering systems can be accommodated, if desired. As a result, the user has the capability to search for an item by location in the hierarchy or its physical location on the vessel. For example, engineers on a vessel are more adept at finding items by equipment and parts than by equipment identification numbers. This design results in a rapid initial learning curve, enhances the ability of the office staff and shipboard crew to perform data maintenance and eases the task of finding materials to be purchased or used in maintenance events. It provides a self-contained system, almost eliminating the need for reference manuals to access the data.

The hierarchical system is used in both the maintenance and purchasing processes of the module, but in different ways. The maintenance side uses the hierarchy to list systems and equipment that are maintained. The purchasing side uses the hierarchy to track materials included in inventory. Some items listed in the purchasing view are not visible in the maintenance view because all items need to be accounted for inventory, but not all of them are maintained items.

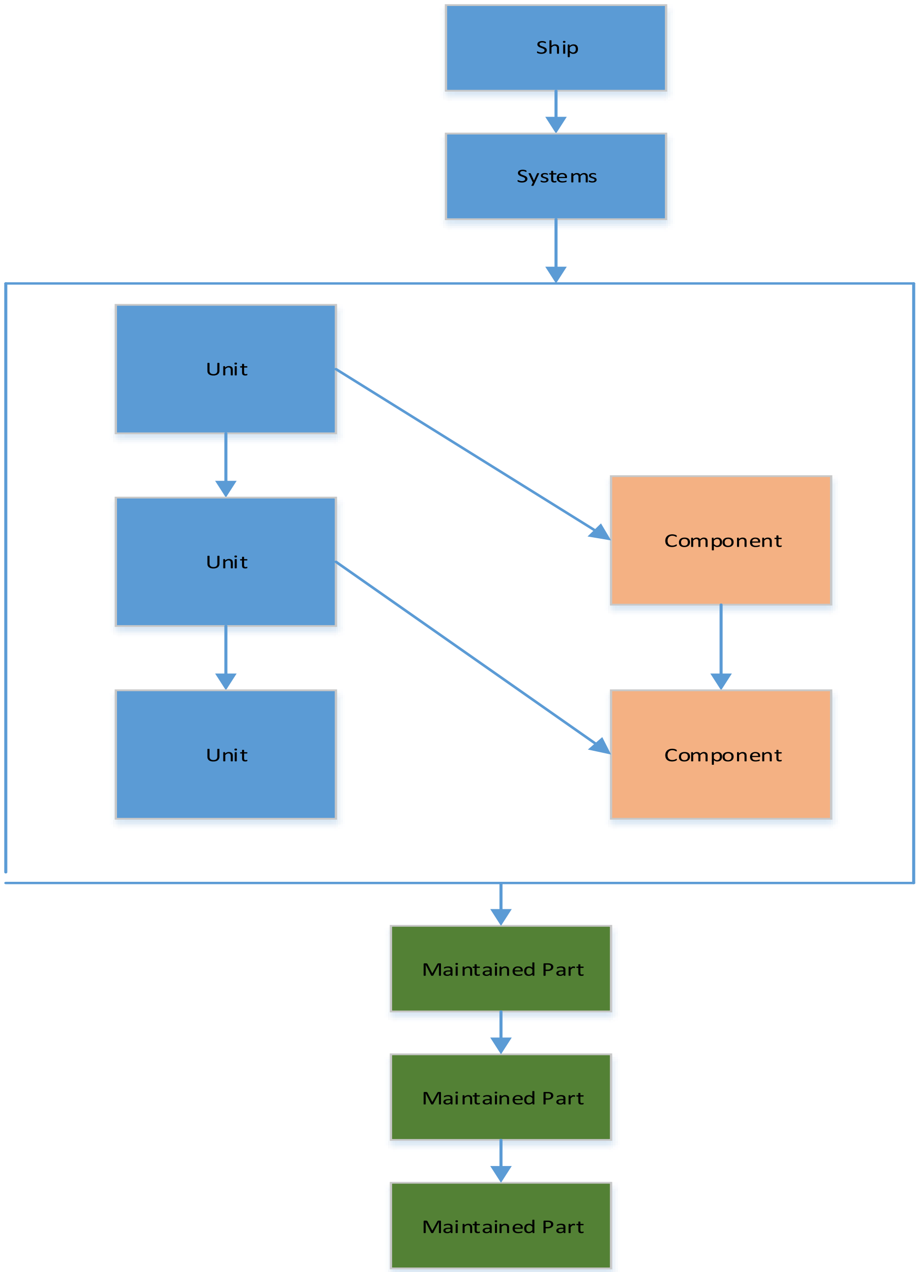
There are two reports on the ship level regarding the hierarchy. These are the **Equipment Hierarchy** report and the **Equipment Particulars** report. Select **Reports** gadget → **Inventory Reports** on the **Navigator** pane of the **Maintenance and Purchasing** window.

A message box opens when the **Equipment Particulars** report is selected advising that it may take a long time to create the report. Click the **Yes** button to close the message box and open the **Report Option** window. The **Equipment Particulars** report prints the details about each piece of equipment listed in the hierarchy. This report also includes the names of the systems with all equipment within that system listed below it. All the information about the equipment that is included on the **Equipment** window are listed on this report. This includes the storage locations, cross referenced equipment and any other information listed on the tabs on the **Equipment** window.

The **Equipment Hierarchy** report is a condensed version of the **Equipment Particulars** report. This report only lists the systems, the equipment in those systems, descriptions, bar code, ID code, model number, serial number, and manufacturer.

A hierarchy can be imported into or exported out of **NS Enterprise** from an Excel spreadsheet or copied from an identical or similar ship.

6.1 *Maintenance Hierarchy*



The hierarchy on the maintenance side is used to classify equipment, access machinery records, and organize jobs. It breaks down a Machinery System into units and components. A system is an assembly of mechanical or electronic components that function together as a unified whole. Units and components represent machinery equipment records such as a main engine, turbocharger #1 or cargo pump #1. They also represent physical relationships between machinery equipment. For example, the "Propulsion and Steering" system has a unit called "Main Engine" with its related units and components such as the "Turbocharger Aft", "Governor" and "Pneumatic Controls". This creates a parent-child relationship between the system, units, and components. A unit does NOT always operate together with the upper unit or system it is associated with. A unit that is a child of a parent system or unit does NOT receive the running hours of the parent because it is not running the whole time that the parent is running, but these units are still related. A component operates for the same amount of time together with the top-level unit. That means that each component that is a child of a parent unit receives the same running hours as the parent unit for purposes of scheduling planned maintenance.

Units and components can be subdivided further into parts. However, these parts must be specified as maintained parts to be visible on the Maintenance hierarchy.

When the system preference "**Display Hierarchy with Equipment Codes**" is set to "Yes", the hierarchy will display with the Equipment Code followed by two spaces followed by the equipment name, and sorting will be based first on the equipment code and then on the equipment name.

If this preference is set to "No" the hierarchy display will be unchanged from the current standard.

NOTE: Consumable Categories, Consumable Types and Groups are visible in the Maintenance hierarchy view because they are main category titles. These are **NOT** considered maintainable items.

6.2 *Equipment Explorer*

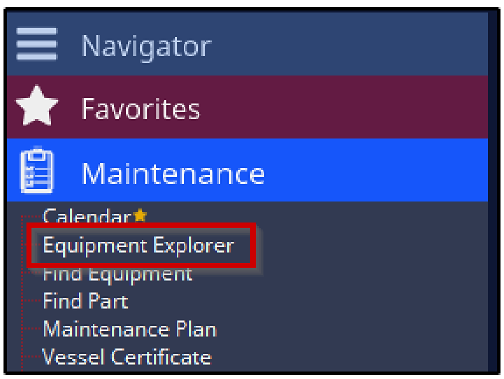
The **Equipment Explorer** is the center of the **Maintenance** and **Purchasing** modules hierarchy. All items that are maintained, purchased, or stored are listed on the **Equipment Explorer**. The **Equipment Explorer** window can be viewed from the fleet level or the ship level.

Equipment Explorer now has a relog menu option on the equipment document. Relog allows the user to replicate this document to all applicable remote sites for either a missing document or inconsistent data between sites.

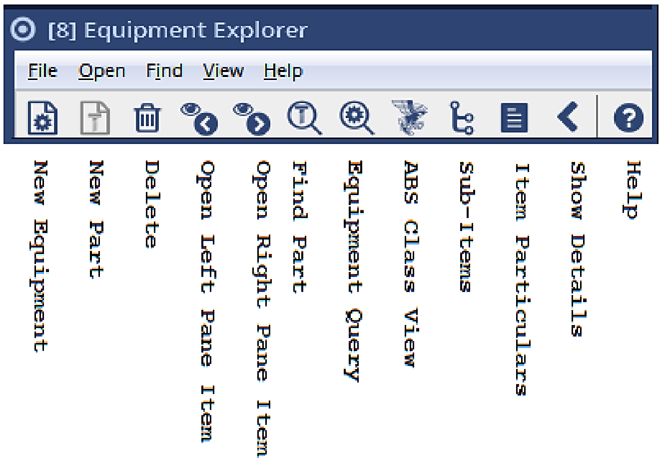
NOTE: This manual focuses on the maintenance portion of the **Equipment Explorer**.

1. Click the **Equipment Explorer** button on the **Navigator** pane of the **NS Enterprise Maintenance and Purchasing** window.

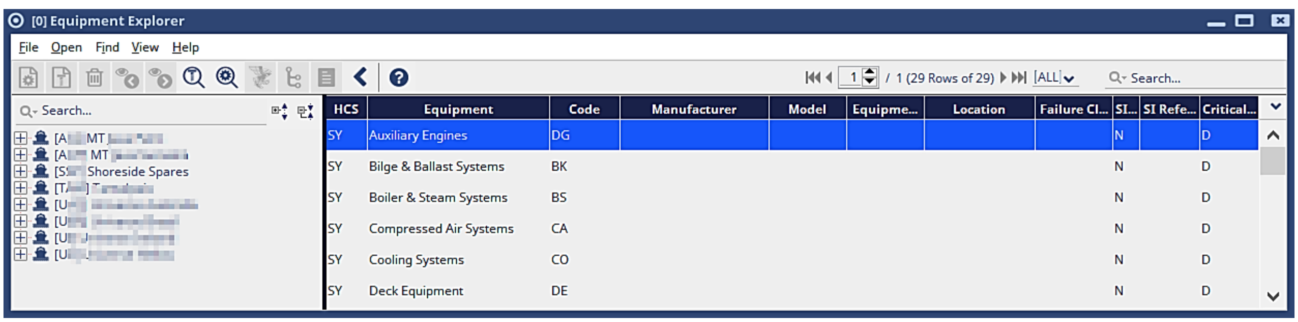
OR



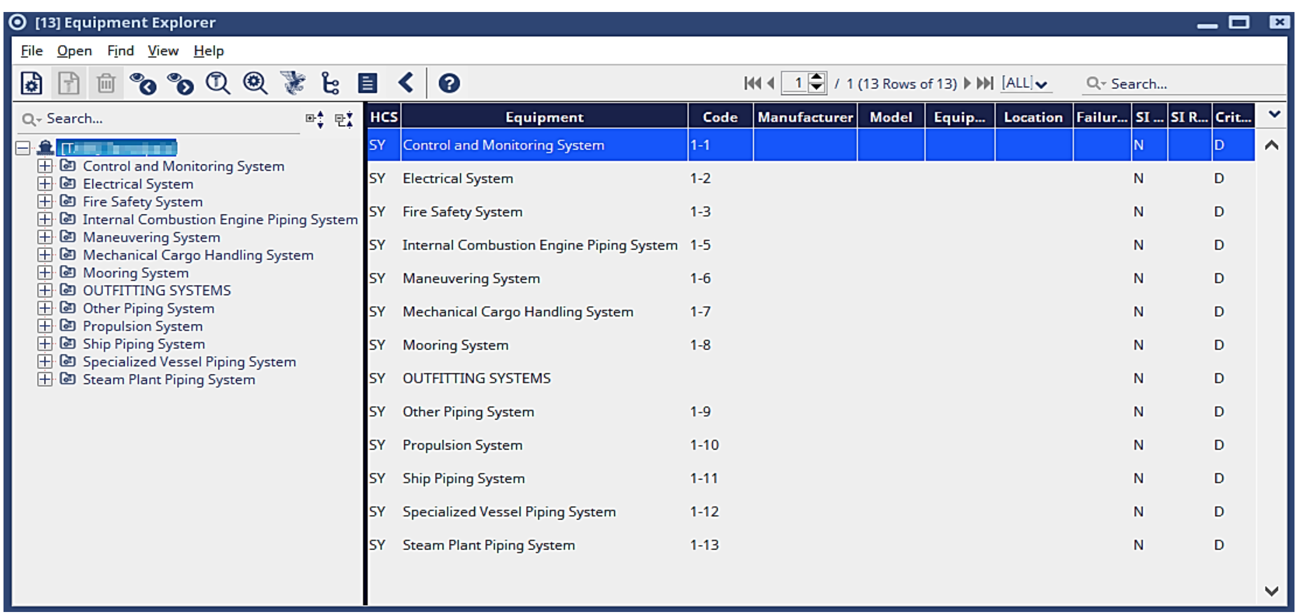
The **Equipment Explorer** window opens. The **Equipment Explorer** window differs depending on the view. All ships in the fleet are listed in the left pane of the window when the fleet view is used. Click the + sign preceding each ship for the hierarchy of systems for each ship. The items defined in the hierarchy below these systems can be viewed by clicking the + sign preceding each item. Items within the hierarchy can be easily found through the **Search** functionality.



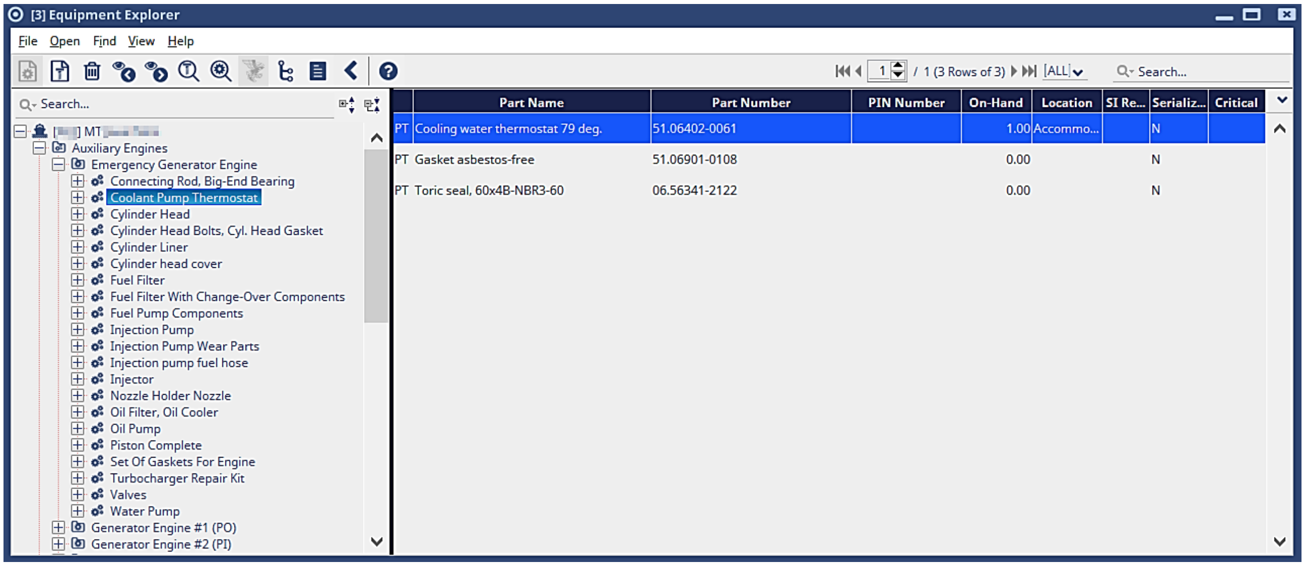
Fleet Level



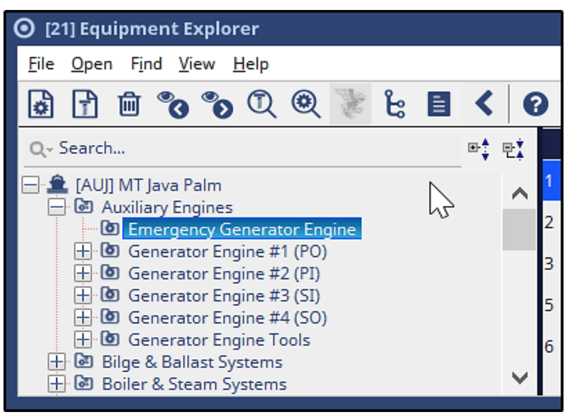
Ship Level

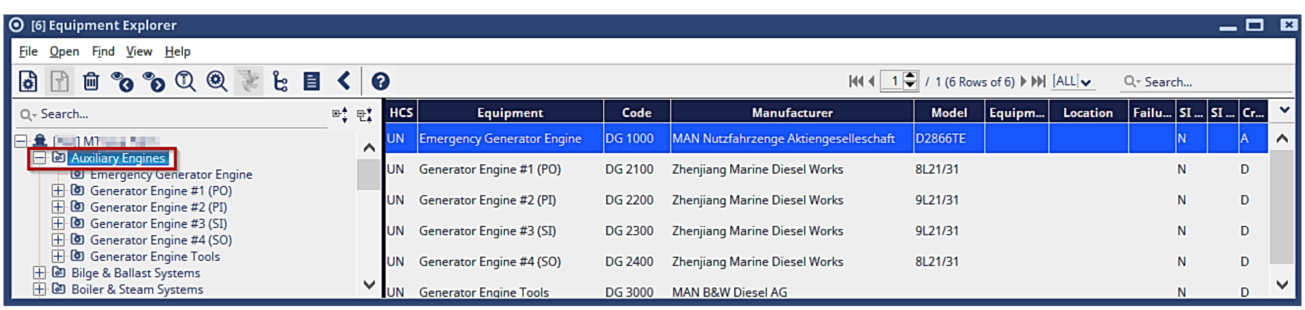


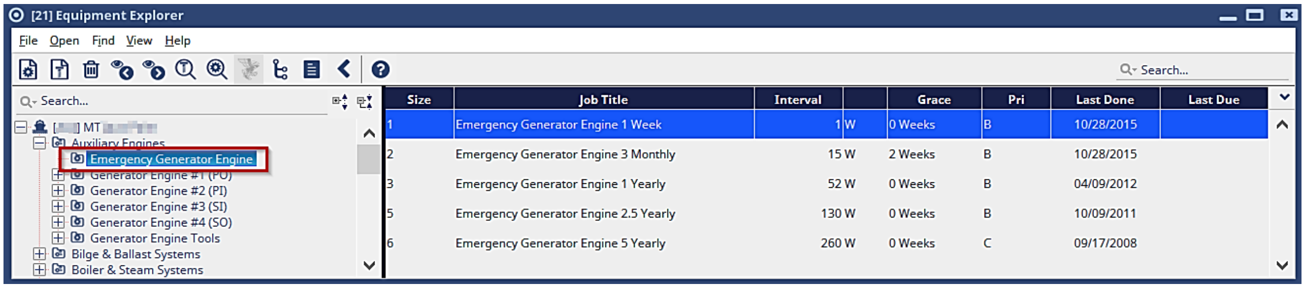
All systems that have been defined on the ship are listed in the left pane of the window when the ship view is used. Equipment defined under these systems can be viewed by clicking the + sign preceding each system or in the right pane of the window.

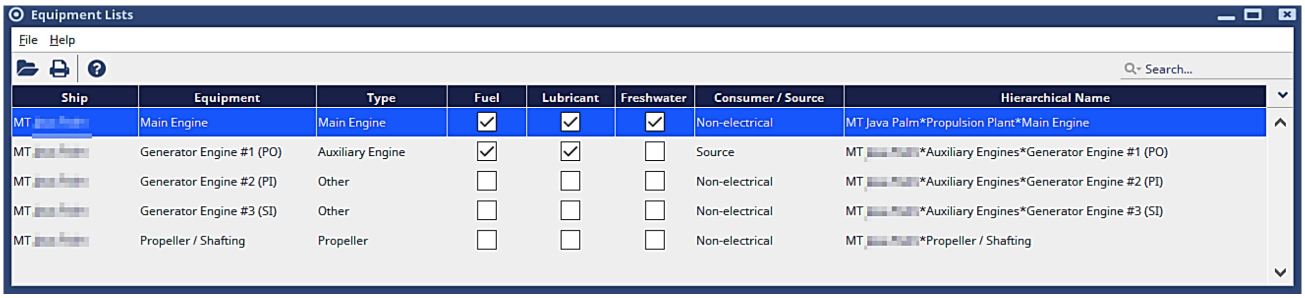


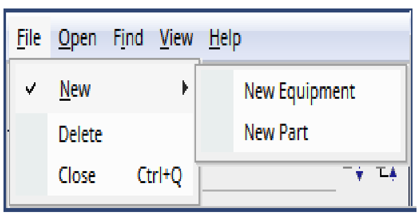
2. Select **View → Maintenance** from the **Equipment Explorer** window menu option to switch from Purchasing to the maintenance view. Jobs associated with the highlighted equipment or maintained part in the left pane of the window are displayed in the right pane of the window when the Maintenance view is selected.

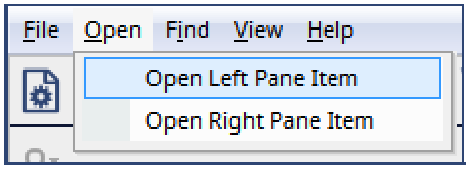
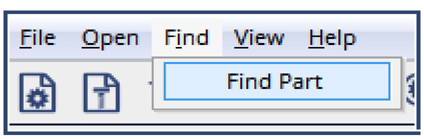
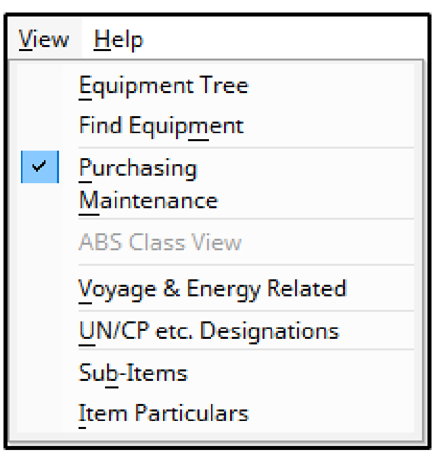




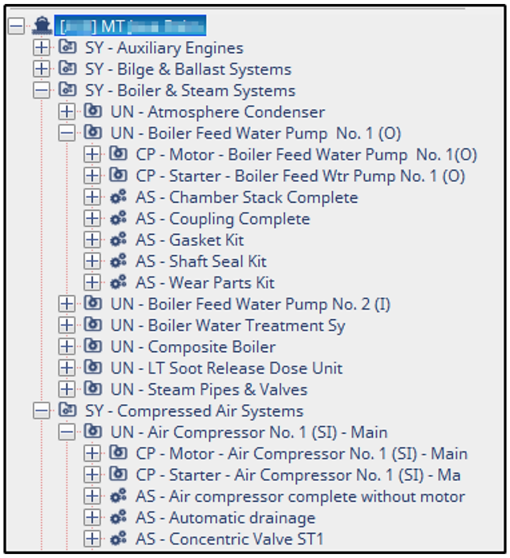




Option	Description
File→ 	The **File** menu contains options to manipulate a file.
New → **New Equipment** **New Part**	Select the **New** option / button to create new equipment or part.  **NOTE:** New parts can be created while in the Maintenance view, however they are NOT visible under the equipment unless the view is changed to Purchasing. Only maintained parts are visible under the equipment while in the Maintenance view. See ***Maintained Parts Tab*** in this section for details.
Delete	Select the **Delete** option / button to delete the selection highlighted in the left column of the **Equipment Explorer** window. A confirmation message box opens for verification of the item to be deleted.  **NOTE:** BE CAREFUL! Deleting a parent item also deletes all child items in the hierarchy beneath it.

Option	Description
Close	Select the **Close** option to close the **Equipment Explorer** window.
Open→ 	The **Open** menu contains options to open specific windows.
Open Left Pane Item	Select the **Open Left Pane Item** option / button to open the window for the item highlighted in the left pane of the **Equipment Explorer** window.
Open Right Pane Item	Select the **Open Right Pane Item** option / button to open the window for the item highlighted in the right pane of the **Equipment Explorer** window.
Find→	The **Find** menu contains the option to find a part.  **NOTE:** Do not confuse a part with equipment. This option ONLY searches for parts.
Find Part 	Select the **Find Part** option / button to open the **Search Companion** window in the left pane of the **Equipment Explorer** window to find a part. See ***Find Part*** in the **Search for Equipment or Parts** portion of this section for details.
View→ 	The **View** menu contains options to change what is displayed in the **Equipment Explorer** window. The View is defaulted to Purchasing.

Option	Description
Equipment Tree	Select the **Equipment Tree** option to display the equipment hierarchy in the left pane of the **Equipment Explorer** window.
Equipment Query	Select the **Equipment Query** option / button to display the **Search Companion** window to search for equipment in the left pane of the **Equipment Explorer** window.
Purchasing	Select the **Purchasing** option to display equipment and parts that are contained in the inventory. Purchasing is the default view of the **Equipment Explorer** window. The left pane of the window contains the Purchasing hierarchy and the right pane of the window contains items in the hierarchy below the selected item in the left pane.
Maintenance	Select the **Maintenance** option to display maintained equipment and parts. The maintenance hierarchy is displayed in the left pane of the **Equipment Explorer** window and the jobs associated with the equipment or part highlighted in the left pane are listed in the right pane of the window. The items included in the maintenance hierarchy are: • Machinery systems • Units • Components • Maintained Parts **NOTE:** Consumables Category and Consumables Type are visible in the Maintenance view. These are included because they are main headings NOT because they are maintained.
ABS Class View	Displays only the ABS classed equipment. This is only applicable if hierarchy was loaded via ABS Class Integration.
Voyage & Energy Related	Displays only the equipment that has consumption and usage being tracked via Voyage Manager module.

Option	Description
UN/CP etc. Designation  	Select the **UN/CP etc. Designation** option to view the designation of each item in the hierarchy. This includes: • SY – System • CC – Consumables Category • UN – Unit • CP – Component • PT – Part • MPT – Maintained Part • CT – Consumable Type • AS – Assembly • SA – Sub-assembly • GR – Group • SG – Sub-Group • IT - Item
Sub-Items	Select the **Sub-Items** option / button to view the sub-items in the right pane of the window under the item highlighted in the left pane of the window. This is selected by default. For example, the parts listed under highlighted equipment, sub-parts listed under a highlighted part or sub-assemblies listed under a highlighted assembly are listed in the right pane of the window.
Item Particulars	Select the **Item Particulars** option / button to view the details in the right pane of the window of the item highlighted in the left pane of the window.
Show Details button	Click the **Show Details** button to toggle open / close the right pane of the window.
Help	The option in the **Help** menu is **Help**. Select this option to open the online help.

6.2.1 *Add or Edit Equipment*

Equipment can be added or edited from the fleet view or the ship view. The procedure is the same whether equipment is added or information on the **Equipment** window is changed. The fleet view allows the central office to add equipment to any or all ships in the fleet at one sitting. A ship can only add equipment to itself in the ship view.

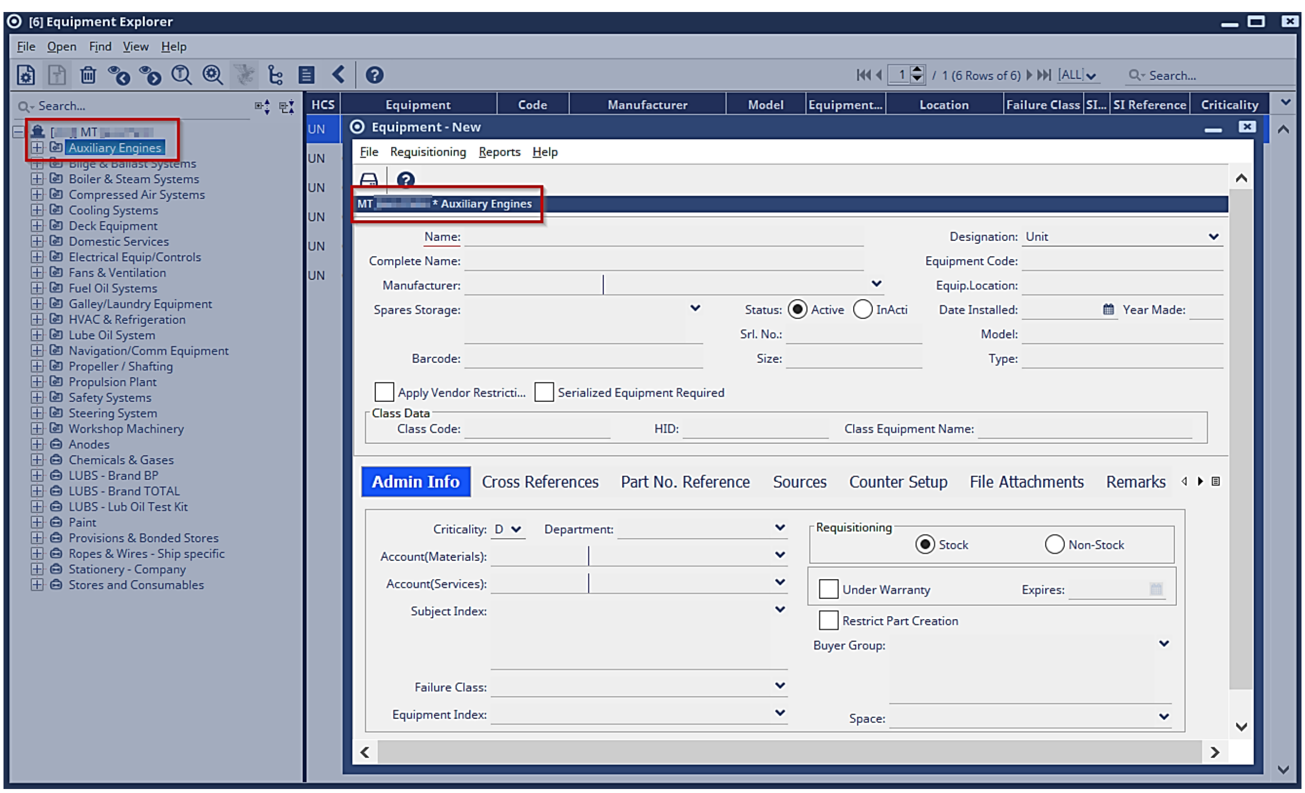
Edit equipment by opening the **Equipment** window and editing the fields that need to be edited.

NOTE: Hierarchy for a new vessel can be copied from an established hierarchy using the **Copy Ship Materials Classification** in the fleet level view of the **Maintenance and Purchasing** window. A hierarchy can be copied, modified, and then imported into a new vessel using the import hierarchy procedure.

1. Open the **Equipment Explorer** window.
2. Click the **New Equipment** button on the **Equipment Explorer** toolbar to open the **Equipment – New** window. The name of the ship is displayed on the first line of the window. The name of the ship and the name of the item that the new equipment is subordinate to are listed if this new item is not at the top level of the hierarchy.

--OR--

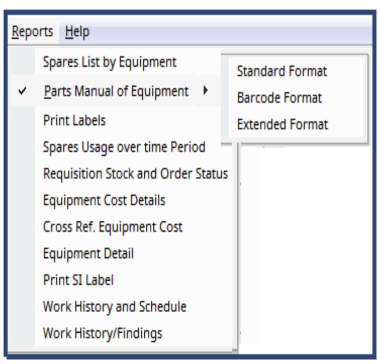
Click to select the equipment from the left side of the **Equipment Explorer** window to edit equipment that has already been created. Click the **Open Left Pane Item** button on the **Equipment Explorer** toolbar.



There are a number of fields and tabs on the **Equipment – New** window. The menu bar, toolbar, fields, and tabs are explained in the following sections.

Equipment Window

The options on the **Equipment** window menu bar and toolbar are:

Option	Description
File→	The **File** menu contains options to manipulate a file.
Save	Select the **Save** option / button to save any changes made on the **Equipment** window.
Relog	Relog allows the user to replicate this document to all applicable remote sites for either a missing document or inconsistent data between sites.
Requisitioning→	The **Requisition** menu contains options to create requisitions to replenish parts listed below the specified equipment in the hierarchy to the maximum, minimum or reorder level.
Reports→ 	The **Reports** menu contains options to create different kinds of reports.  **NOTE:** Only the reports associated with Maintenance are listed. Reports associated with Purchasing are in the **NS Enterprise Purchasing** module manual. Any report selected opens the **Report Options** window. Click the radio button to select where this report should be sent. The options are: • **Screen** – displays the formatted report on the screen. Click the **OK** button to generate the report. The report displays on the monitor when it is complete. • **Printer/Fax** – sends the report to the assigned printer. The **Print** window opens when the report is complete to select the printer. • **File** – the field next to the **File** radio button opens when this option is selected. Click on the dropdown menu to select the type of format for the saved report. Click the **OK** button. The **Save As** window opens to select the directory where the report is to be saved. • **Email** - The **Email** option allows the user to attach the report to a MS Outlook message.

<table>
<tr><th>Option</th><th>Description</th></tr>
<tr><td>Spares List by Equipment Report</td><td>
The Spares List by Equipment report is available under the Unit, Consumable Type and Component designations.
The Spares List by Equipment report displays all the assemblies and parts contained within the specified unit or component. This does NOT include other units or components listed beneath this specified unit in the hierarchy.
Two additional options are available on the Report Option window for this report. These options are:

Include quantity on order – two columns are added to the report to display the quantity listed on a purchase order and the quantity listed on a requisition.
Print critical parts only – only parts designated as critical on the Part window are listed on this report.

The information contained on this report is:

Maximum level of this part
Part description
Part number
Location of part
Reorder level
Quantity on hand
Unit of measure
Price at the referenced currency

</td></tr>
</table>

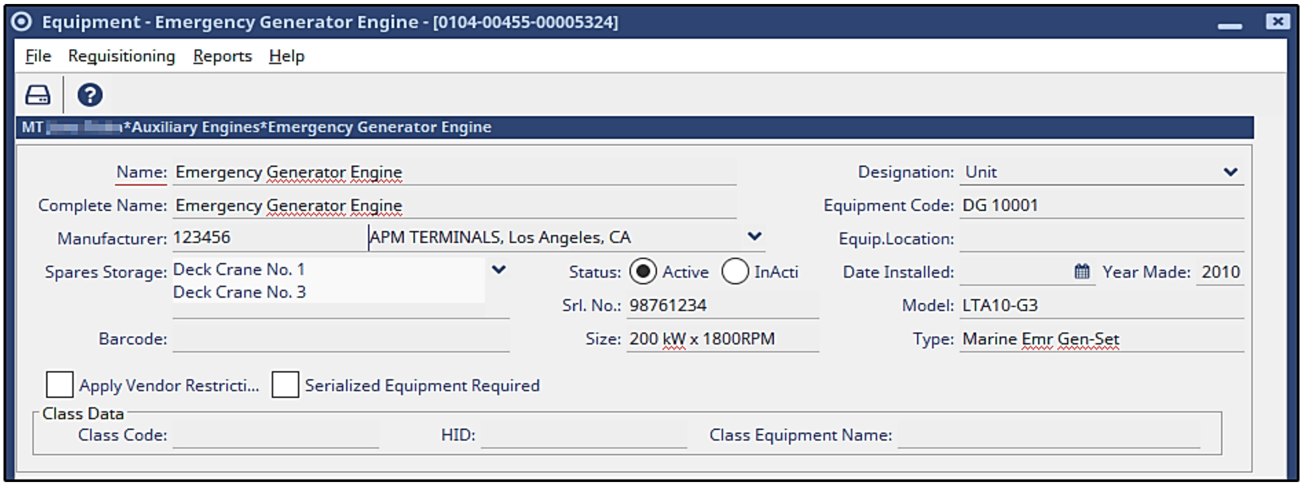
Option	Description
Parts Manual of Equipment Report→	The **Parts Manual of Equipment** report is available under the Unit, Consumable Type and Component designations. The **Parts Manual of Equipment** report displays all the assemblies and parts contained within the specified unit or component. This does NOT include other units or components listed beneath this specified unit in the hierarchy. There are three types of formats to select from: • **Standard** Format – basic information such as description of the parts/assemblies, part number, quantity and unit of measure and storage location. • **Bar Code** Format – includes all the information in the Standard format and includes the barcode. • **Extended** Format – includes all the information in the Standard format plus the pin number, maximum number of parts, minimum number of parts and number of parts reordered.

Option	Description
Print Labels **Print labels**	The **Print Labels** report is available under the Unit, Consumable Type and Component designations. The **Print Labels** option prints labels containing the following information: • Ship • Equipment • Manufacturer • Part name • Pin • Location • Date labels were printed • Bar code of part • Serial Number There are two options in the **Select Number of Labels to Print** portion of the **Report Option** window to print labels: • **Per Items on Hand**– this option prints one label for each part associated with the equipment unless the **Multiple Labels** check box on the **Part** window is checked. Then it prints one label for every part on hand of that part. For example, the part - “Piston” - is listed under a piece of equipment. There are 3 pistons on hand according to the **Inventory** tab on the **Piston Part** window. The **Multiple Labels** check box is NOT checked so only 1 label for pistons is printed regardless that there are 3 on hand. However, using the same example, the **Multiple Labels** check box is checked, and three labels are printed for pistons. • **Other Number** – the **Other Number** option prints the number of labels specified in this field for parts with the **Multiple Labels** check box checked on the **Part** window for each storage location. For example, the number 2 is typed in the **Other Number** option field. There are 3 roller bearings in Storage A and 3 roller bearings in Storage C. The **Multiple Labels** check box is checked on the **Roller Bearing Part** window. Two labels are printed for roller bearings in Storage A and 2 labels are printed for Roller Bearings in Storage C. Currently only 4 x 2-inch labels are available.

Option	Description
Spares Usage over time period Report	This report is available under the System, Consumables Category, Unit, Consumable Type and Component designations. The **Spares Usage over time period** report displays the parts used over a specified time period. This time period is designated on the **Report Option** window. Click the **Calendar** buttons at the end of the **Start Date** and **End Date** fields to select the date range for the information contained on the report.
Requisition Stock and Order Status Report	This report is available under the Unit, Consumable Type and Component designations. The **Requisition Stock and Order Status** report displays all parts ordered under the specified equipment. It lists the purchase order or request for quotation (RFQ) number as well as the quantity of each part ordered.
Equipment Cost Details Report	This report is available under the Unit, Consumable Type and Component designations. The **Equipment Cost Details** report displays the cost of the specified equipment over a period of time. This can include cost of parts to repair the equipment as well as the cost of service. There are a number of parameters that must be selected from the **Report Option** window prior to the report creation. These parameters include: • Time frame of report • Currency • Exclude certain documents from report
Cross Reference Equipment Cost Report	This report is available under the Unit, Consumable Type and Component designations. The **Cross-Reference Equipment Cost** report displays the cost of equipment that is cross referenced. It reflects the cost throughout the system where it is cross referenced. The same parameters used to create the **Equipment Cost Details** report are used for the **Cross-Reference Equipment Cost** report. **NOTE:** Data is displayed in this report only if documents such as purchase orders or requisitions have been created for the specified unit or part.
Equipment Detail Report	The **Equipment Detail** report displays information from the fields on the **Equipment** window as well as the **Cross-Reference** tab and **Remarks** tab. An option is available to include the maintenance history of the equipment.

Option	Description
Work History and Schedule Report	This report is available under the Unit, Consumable Type and Component designations. The **Work History and Schedule** report displays all the work orders for this piece of equipment. All or individual work orders can be selected for this report from the menu. These options are: • Summary – displays a summary of all the work orders for the selected equipment. This includes the scheduled date of service, work order number, equipment name, job title, last date service was performed, the interval between service and the job category. • Work Specifications – displays only the work specifications which include the job category, scheduled date of service, work order number and job title. • Detail Format - displays all work orders in detail. This includes such details as the estimated labor and cost data, materials required and used, work order description and findings.
Work History / Findings Report	This report is available under the Unit, Consumable Type and Component designations. The **Work History/Findings** report displays the completed work orders and findings for a specified time frame. Click the **Calendar** buttons at the end of the **Start Date** and **End Date** fields to select the date range for the information contained on the report.
Help 	The option in the **Help** menu is **Help**. Select this option / button to open the online help.

The fields on the **Equipment** window are:



1. Type the name of the system or equipment in the **Name** field. THIS IS A REQUIRED FIELD.

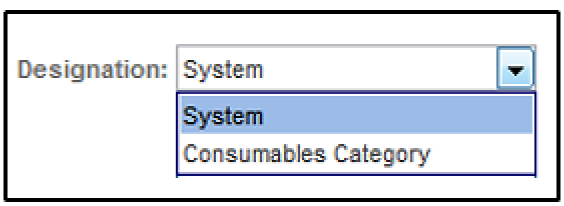
   There is no naming convention, but the name of the equipment or consumable type should identify the piece of machinery. This is important when there is duplicate equipment on board.

   NOTE: Whatever is entered in the **Name** field is repeated in the **Complete Name** field when the cursor is moved out of the **Name** field. A more descriptive name can be typed in the **Complete Name** field.

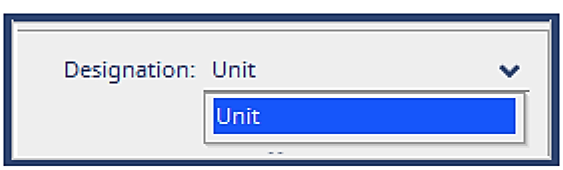
2. Click on the dropdown menu on the **Designation** field to select the classification. This is a required field that is automatically filled by default. This default value can be changed.

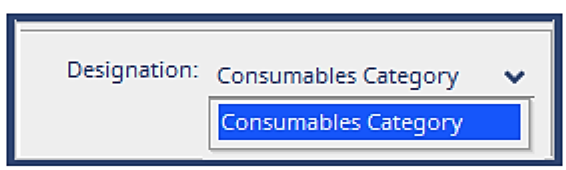
   The options in this field vary depending on the position in the hierarchy.

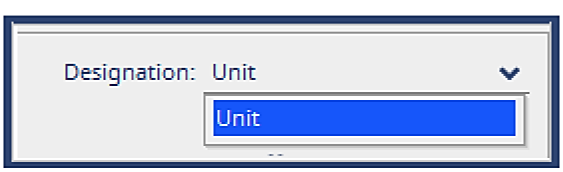
   The options are **System** or **Consumables Category** if it is directly under the ship.

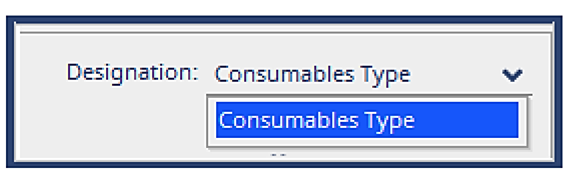


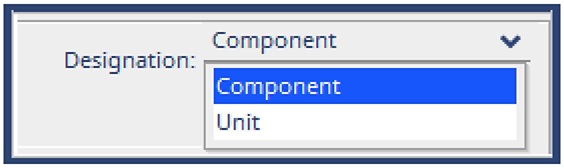
The option is **Unit** if it is under a **System** or it is a **Consumable Type** if it is under a **Consumable Category**.

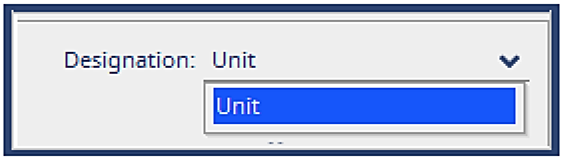


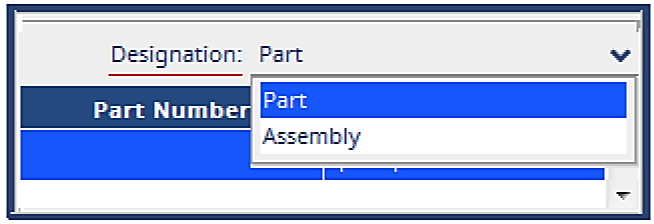




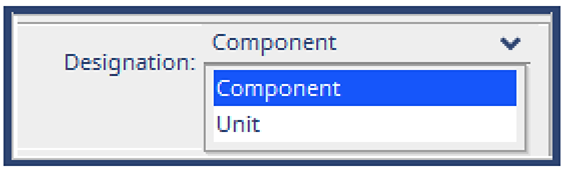








The options are **Unit** or **Component** if it is under a Unit.



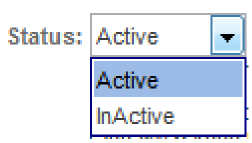
A unit is a piece of machinery that may run independently from its owner machinery. A component is a piece of machinery that only runs when its owner machinery is running. Unit and component designations are also important when dealing with running hours.

For example, the auxiliary blower is a unit under the main engine. It only runs on startup and then shuts off. But the turbocharger is a component under the main engine because it runs the whole time the main engine runs. The main engine is a unit because it is directly under the System Propulsion and Steering and only units can be entered directly under systems.

When the main engine is operating, so are the turbochargers. **NS Enterprise** has a single running-hour entry to update the register of all the items and the jobs that are associated with the main engine, its maintained parts, its components, and any component's-maintained parts.

The other fields on the **Equipment** window are:

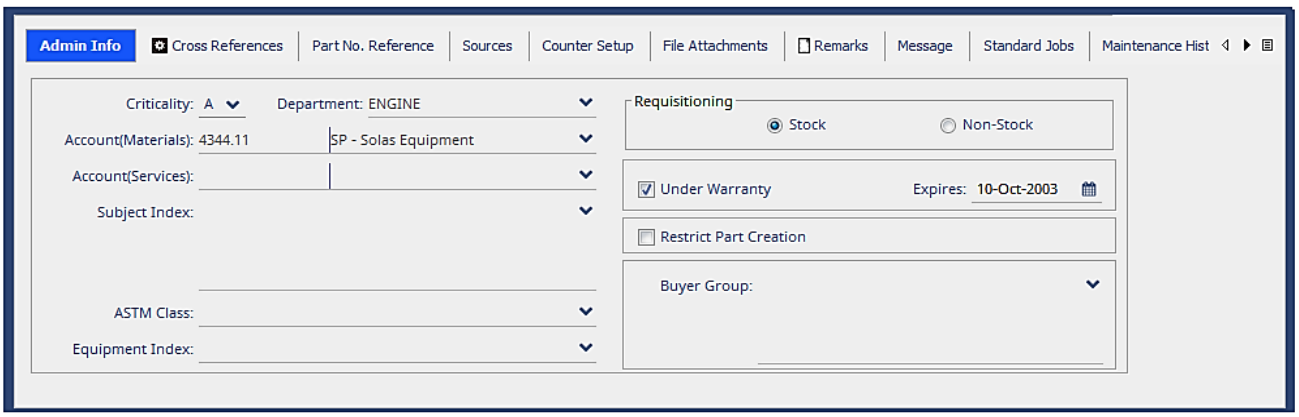
Field	Description
Name	The short name of the equipment.
Designation	Options include System, Consumables Category, Consumables Type, Unit, Component, Part, and Assembly depending on what type of equipment document is being created.
Complete Name	The **Complete Name** field fills with the same value that is typed in the **Name** field. A more descriptive name can be typed in the **Complete Name** field.
Equipment Code	Type an alphanumeric equipment code in the **Equipment Code** field. **NS Enterprise** can find equipment records by this code.

Field	Description
Manufacturer	There are two sections in the **Manufacturer** field. Either field can be filled first. The other field completes with referenced information from the **Companies** window.  Type the manufacturer code in the first section (shaded white) if it is known. The second section automatically fills if this manufacturer has been created in the **Companies** window. Click on the dropdown menu at the end of the second section to open the **Equipment Maker** window. Equipment Maker is selected in the **Company Type** field by default. Select any other parameters that will help locate the necessary manufacturer for the equipment. Click the **Search** button. All companies meeting the specified criteria are listed on the right side of the **Equipment Maker** window. Double click on the company that manufactures the equipment to close the **Equipment Maker** window and add the selected manufacturer to the **Manufacturer** field of the **Equipment – New** window. **NOTE:** The **Manufacturer** field applies to equipment and NOT to consumables.
Equipment Location	Type a location of the equipment in the **Equipment Location** field. This field is alpha-numeric with a maximum of 60 characters and is user defined. The **Equipment Location** field is included in the **Equipment Details** report and the **Equipment Particulars** portion of the **WO / SR / NAJ** form
Spares Storage	The **Spares Storage** field specifies where the equipment is stored and is related to inventory.
Status	Click on the dropdown menu in the **Status** field to select whether the equipment is Active or Inactive. The default selection is "Active".  This field is used in the **Preventive Maintenance** application. It defines whether the equipment is currently part of the ship's maintenance plan or has been removed, either temporarily or permanently. All the PM Standard Jobs based on the equipment are excluded from the job scheduling calculation when the **Status** is "Remove" and are not listed in the ship's **Maintenance Plan**. The **Running Hours Clock** of the equipment, its components and maintained parts are stopped. The PM Standard Jobs for these are also stopped. The entries of elapsed running hours for these items are ignored.

Field	Description
Date Installed	Click the **Calendar** button at the end of the field to open the **Calendar** window to select the month, day, and year that the equipment was installed. Click the arrow or double arrows at the top of the calendar to navigate to the correct date. Double click on the date to close the **Calendar** window and enter the date in the **Date Installed** field. -- OR – Type the date the equipment was installed in the **Date Installed** field. The date format is defined in the **Options** window.
Year Made	Type the year the equipment was made in the **Year Made** field.
Srl. No.	Type the serial number of the equipment in the **Srl. No.** field, if applicable. **NOTE:** The **Srl. No.** field applies to equipment and NOT to consumables.
Model	Type the model number of the equipment in the **Model** field. **NOTE:** The **Model** field applies to equipment and NOT to consumables.
Apply Vendor Restriction check box	Click the **Apply Vendor Restriction** check box to indicate that only vendors specified on the **Sources** Tab can be used for any requests for quotations or purchase orders regarding this equipment. A user with the **Override Vendor Restriction** authorization can use vendors not specified on the **Sources** tab.
Serialized Equipment Required checkbox	If this box is checked, then any time a Serialized Equipment is removed from the Equipment, the system displays a message that a new Serialized Equipment must be installed into the Equipment before the Equipment screen is closed. **NOTE:** This only applies when a Serialized Equipment is being removed from the Equipment.
Size	Type the size of the equipment, if applicable, in the **Size** field. **NOTE:** The **Size** field applies to equipment and NOT to consumables.
Type	Type the kind of equipment in the **Type** field. **NOTE:** The **Type** field applies to equipment and NOT to consumables.

Field	Description
Class Data section	The **Class Data** section was added to include classification information. The fields in this section are: • **Class Code** – classification code which is the UID of the vessel • **HID** – Hierarchy Identification Number • **Class Equipment Name** – the name by which the equipment is referenced by the class society  **NOTE:** Only authorized users can add or edit information in these fields.

Admin Info Tab



The **Admin Info** tab contains general information regarding the equipment. This includes the department responsible for the equipment and other purchasing information.

The fields on the **Admin Info** tab are:

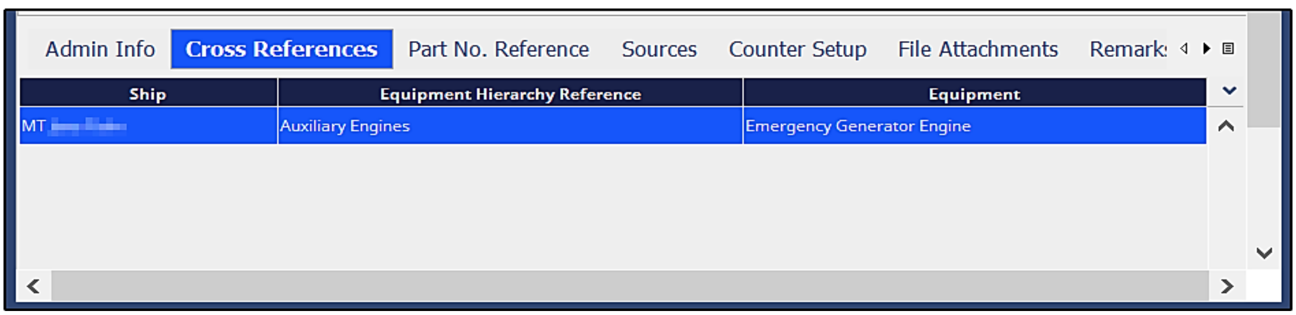
Field	Description
Criticality	Click on the dropdown menu in the **Criticality** field to select the priority rating of the equipment. The options are A, B, C and D with A being the highest priority. The default selection is “D”. It is suggested that the value “A” be used to designate equipment that is critical from a safety standpoint in connection with the ISM code requirements. “B” can be used to designate equipment which is critical from an economic/quality standpoint, which is related to the goals of ISO. The “C” and “D” designations can be used for less critical equipment.

Field	Description
Department	Click on the dropdown menu at the end of the **Department** field for a list of departments. The **Department List** window opens. Double click on a department to close the **Department List** window and add the selected department to the **Department** field of the **Equipment** window. Authorized users can add new departments from the **Department List** window.
Account (Materials)	Select the account that materials associated with this equipment are credited to in the **Account (Materials)** field. This account number is the default number included in any requisition for materials for this equipment. There are two sections in the **Account (Materials)** field. Either field can be filled first. The other field completes with referenced information from the **Available Accounts** window. -- OR -- Click on the dropdown menu at the end of the second section to open the **Available Accounts** window. Double click on the account associated with materials for the equipment to close the **Available Accounts** window and add the account to the **Account (Materials)** field. Authorized users can add new accounts from the **Available Accounts** window or from the **General Data** module.
Account (Services)	Select the account that services associated with this equipment are credited to in the **Account (Services)** field. This account number is the default number included in any requisition for services for this equipment. There are two sections in the **Account (Services)** field. Either field can be filled first. The other field completes with referenced information from the **Available Accounts** window. -- OR -- Click on the dropdown menu at the end of the second section to open the **Available Accounts** window. Double click on the account associated with services for the equipment to close the **Available Accounts** window and add the account to the **Account (Services)** field. Authorized users can add new accounts from the **Available Accounts** window or from the **General Data** module.

Field	Description
Subject Index	Click on the dropdown menu at the end of the **Subject Index** field to select a reference from the **Subject Index Selection** window for cross referencing and query purposes. One or more items can be selected. Select the subject index associated with the equipment. Double click on a selection from the left side of the **Subject Index Selection** window to move it to the right side of the window. More than one selection can be made, but they can only be moved to the right side of the window one at a time. Click the **OK** button on the **Subject Index Selection** window to accept the selections and close the window. These subject indexes are listed in the **Subject Index** field. Authorized users can add new indexes to the **Subject Index** from the **General Data** module.
ASTM Class	Click on the dropdown menu at the end of the **ASTM Class** field to select the American Standard Tools and Materials class for this piece of equipment. The **ASTM Code List** window opens. Double click on an ASTM selection to close the **ASTM Code List** window and add the selection to the **ASTM Class** field. Authorized users can add new selections from the **ASTM Code List** window or from the **General Data** module.
Equipment Index	The **Equipment Index** is intended to provide an additional means of classifying and searching equipment beyond the **Subject Index**. Click on the dropdown menu at the end of the **Equipment Index** field to select the equipment index list to associate with the new equipment
Requisitioning	Click the radio button in the **Requisitioning** section to indicate whether the equipment is included in inventory. • Stock – included in inventory. Inventory update is performed. • Non-Stock – not included in inventory. No inventory update is required.  **NOTE:** The **Requisitioning** section applies to the purchasing of materials.
Under Warranty check box	Click the **Under-Warranty** check box to indicate if this equipment is under warranty.
Expires	The **Expires** field becomes available when the **Under-Warranty** check box is checked. Click the **Calendar** button at the end of the **Expires** field to select the date that the warranty expires.

Field	Description
Restrict Part Creation check box	When checked the user is restricted in certain cases to create / edit part or group even if the user has Part/consumable Create /edit authorization. Equipment and consumable category checkbox indicate if create / edit restriction is to be applied for parts and groups under this particular equipment or consumable. If Equipment or consumable category has the restrict part create/edit checkbox checked, then user would require existing authorization of create/edit AND also the newly added authorizations of create/edit part for restricted equipment
Buyer Group	Click on the dropdown menu on the **Buyer Group** field to select the group authorized to purchase the equipment. The groups displayed on the **Buyer Group Selection** window are dependent on the user profile. Specific equipment may only be purchased by certain groups. The **Buyer Group** field applies to the purchasing of materials and equipment.

Cross References Tab



The **Cross References** tab contains information regarding the same equipment that is contained on other vessels or the same equipment located in another part of the same ship. The **Cross References** label on the tab turns blue and an icon is present when entries are made on the tab.

NOTE: Equipment that is cross referenced share the same parts listing. Any new parts entered in any of the equipment that is cross referenced are entered into all the equipment that is cross referenced together. This includes the storage locations and the quantities of the spare parts if the equipment is on the same vessel.

The selected equipment is listed on the **Cross References** tab by default.

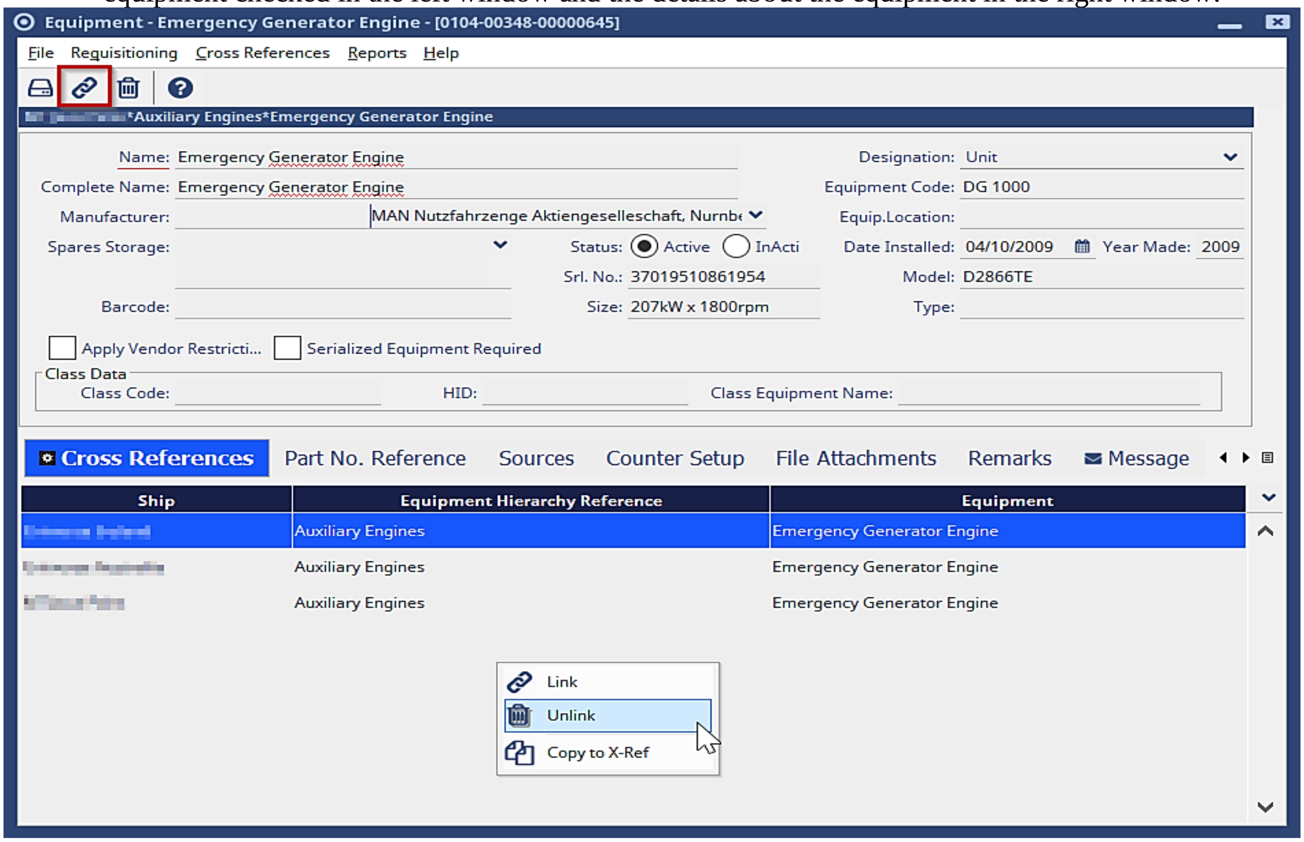
The fields on the **Cross-Reference** tab are:

- **Ship** name – the name of the ship where the cross-referenced equipment is located
- **Equipment Hierarchy Reference** – the name of the equipment or system in the preceding level of the hierarchy of the cross-referenced equipment
- **Equipment** – the name of the cross-referenced equipment

NOTE: Equipment MUST be cross referenced to add sites to the **Other Sites** tab on the **Parts** window.

Add or Link Equipment in Cross References Tab

1. Click the **Link** button from the **Equipment** toolbar to add a cross reference or right mouse click in the empty area of the Cross References Tab. The **Equipment Explorer** window opens with the selected equipment checked in the left window and the details about the equipment in the right window.



NOTE: Notice that all ships in the **NS Enterprise** system are listed at the bottom of the **Equipment Explorer** window if the window is accessed on the fleet level. The equipment on these vessels is listed within these vessel hierarchies.

2. Find the equipment that the selected equipment is linked to in the left window of the **Equipment Explorer.**

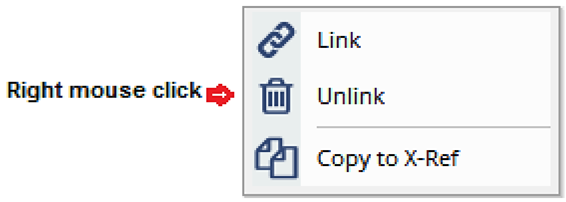
3. Click the check box to select the equipment. More than one selection can be made.

4. Click the **Select** button on the **Equipment Explorer** toolbar. The selected equipment is displayed on the **Cross References** tab.

Delete or Unlink Equipment in Cross References Tab

NOTE: Equipment with maintained parts that are cross referenced CANNOT be unlinked.

1. Click the equipment to be unlinked on the **Cross References** tab.
2. Click the right mouse button on the **Cross References** tab for a list of options.



3. Click the **Unlink** option. A confirmation message box opens.
4. Click **Yes** in the message box to unlink the equipment. The selected equipment is removed from the **Cross References** tab and is no longer linked.

Copy to X Ref

The **Copy to X Ref** option is only available from the **Equipment** window menu bar or by clicking the right mouse button within the **Cross References** tab. This option copies information from this equipment to the cross-referenced equipment.

1. Select the **Copy to X Ref** option from the **Equipment** window menu bar

-- OR –

Select the **Copy to X Ref** option from the menu that opens when the right mouse button is clicked on the **Cross References** tab.

The **Copy to X Ref** window opens.

2. Click the check box to select the information to be copied to the cross-referenced equipment. One or both options can be selected.

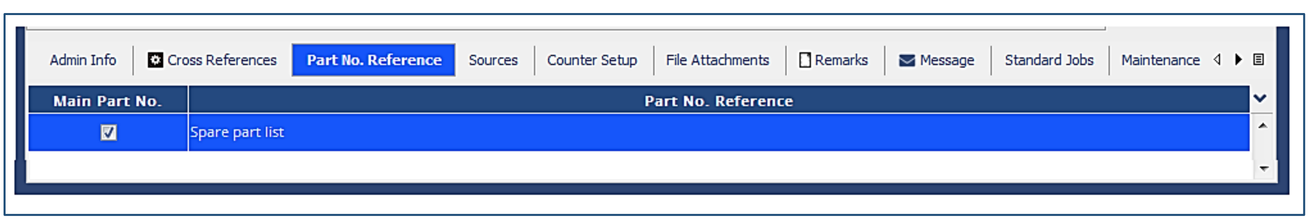
- Equipment Particulars – copies the following information:
    - Model
    - Equipment Code
    - Style
    - Type
    - Size
    - Year Made
    - Remarks
    - Manufacturer
    - Account
    - Department
    - Subject Index
    - Spares Storage Location (only copied to equipment of the same ship)
    - Sources (vendors)
    - Part Number Reference
    - SI Required
- Maintained Parts – copies information from the **Maintained Parts** tab

3. Click the **OK** button on the **Copy to X-Ref** window to accept the options selected and close the **Copy to X-Ref** window.

A message box opens confirming that the options selected have been copied to all cross-referenced equipment.

> **NOTE:** Any equipment particulars in the cross-referenced equipment is overwritten with this procedure. Maintained parts are NOT overwritten. Any new parts added to the original equipment are added to the cross-referenced equipment with this procedure, but parts are NOT deleted.

Part. No. Reference Tab



The **Part Number Reference** tab is used to add the reference manual names for the part numbers used on a piece of equipment. There can be several reference manuals for each piece of equipment.

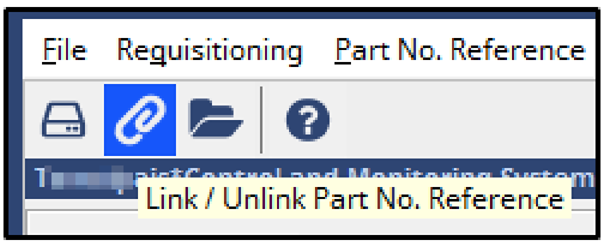
NOTE: Part number references MUST be created prior to part creation. Part numbers are used extensively throughout the **NS Enterprise Maintenance and Purchasing** modules. Having the correct part number and its corresponding reference manual is essential.

The fields on the **Part No. Reference** tab are:

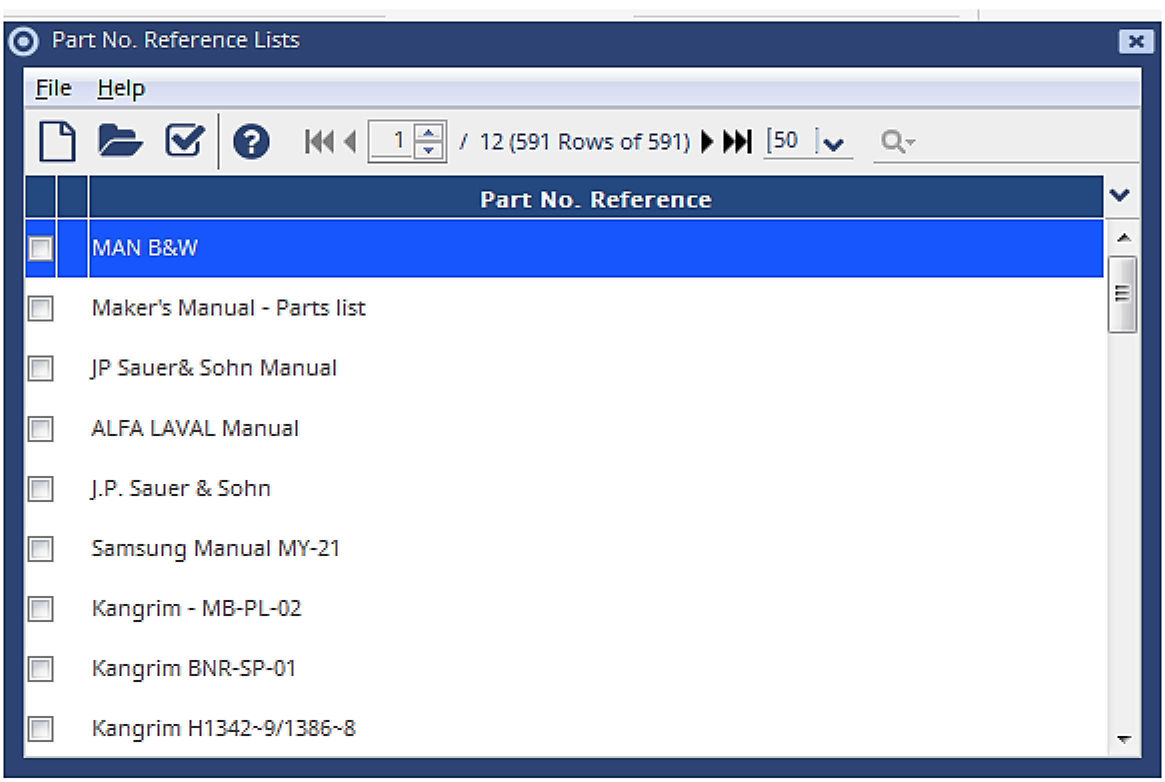
- Main Part No. – Click the check box in the **Main Part Number** column to indicate the primary manual used for parts. This is the manual used to check part numbers throughout the **NS Enterprise Maintenance and Purchasing** modules. The main reference can be changed at any time.
- Part No. Reference – the name of the reference manual

Add or Link a Reference in Part No. Reference Tab

1. Click the **Link / Unlink Part No. Reference** button from the **Equipment** toolbar to add a part number reference or right-click in an empty area on the Part No. Reference Tab.



The **Part No. Reference Lists** window opens.



2. Double click on a reference on the left side of the **Part No. Reference Lists** window to move it to the right side of the window**.** Authorized users can add new references from the **Part No. Reference List** window. Only one selection can be made at a time, but several references can be listed on the right side of window.

3. Click the **OK** button when the reference list is complete to close the **Part No. Reference List** window and list the selected references on the **Part No. Reference** tab.

4. Click the check box in the **Main Part No.** check box to specify the primary manual used for part numbers. The **Main Part No.** selection is used for reference in several other places within the **NS Enterprise** system.

NOTE:

The Main Part No. Reference tag is added to the approved RFQ export xml.

Delete or Unlink a Reference in Part No. Reference Tab

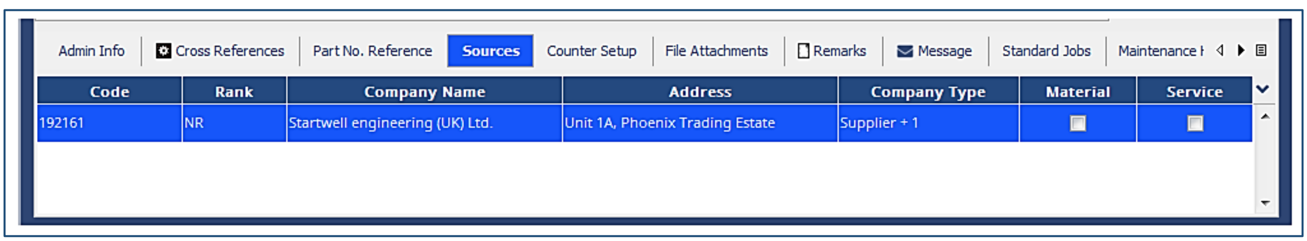
1. Click the **Link/Unlink Part No. Reference** button from the **Equipment** toolbar to remove a part number reference from the **Part Number Reference** tab. The **Part No. Reference List** window opens.

   NOTE: Click to uncheck the **Main Part No.** check box if the reference to be unlinked is used as the main part number reference. References that are selected as the main part reference CANNOT be unlinked or deleted.

2. Double click on the reference manual on the right side of the **Part No. Reference List** window to be unlinked to move it to the left side of the **Part No. Reference List** window. Only one selection can be made at a time, but more than one reference can be unlinked in this process.

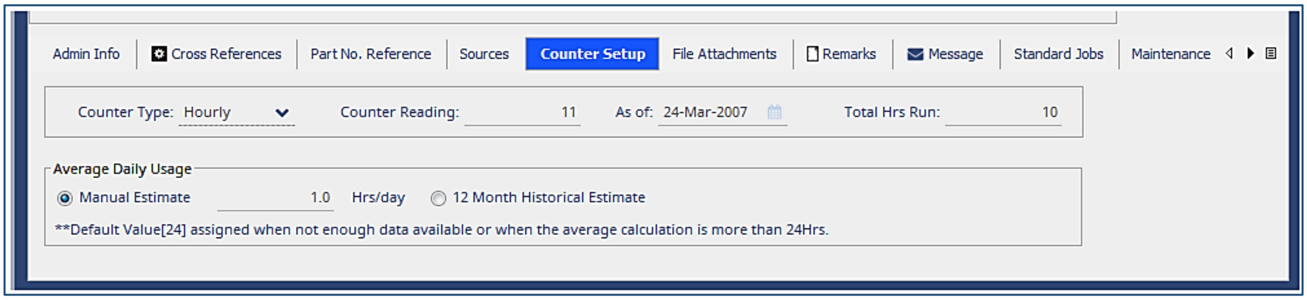
3. Click the **OK** button when all references to be unlinked have been moved to close the **Part No. Reference List** window. The selected references are deleted from the **Part No. Reference** tab.

Sources Tab



The **Sources** tab displays information regarding all vendors that have supplied the part or a quotation of a price for the part. The **Sources** tab contains basic vendor information that is applicable to purchasing.

Counter Setup Tab



The **Counter Setup** tab is used to set the counter readings of the equipment and all parts under this equipment in the hierarchy. This reading is used to schedule counter jobs for the equipment.

The fields on the **Counter Setup** tab are:

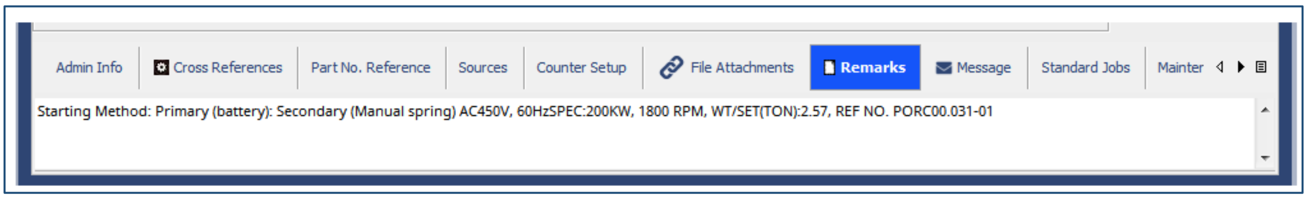
Field	Description
Counter Type	Click on the dropdown menu in the **Counter Type** field to select the format of the counter. The field is disabled using **Hourly** as the default counter type at this time. This field will have options in future versions of **NS Enterprise**.
Counter Reading	Set the number of hours the equipment has been running in the **Counter Reading** field. Zero is used if this is a new piece of equipment.
As of	Use the **Calendar** button at the end of the **As of** field to select the date the counter reading was entered.
Total Hrs. Run	Type the number of hours that the equipment has run in the **Total Hours Run** field. This should be the same number as the counter reading at this time. It may not be the same as the counter reading when the **Counter Type** field contains more options.
Average Daily Usage section:	The **Average Daily Usage** section of the tab is used when scheduled jobs are overdue.
Manual Estimate – Hrs/day	Click the **Manual Estimate – Hours per Day** radio button to type the number of hours in a day that this equipment operates.
12 Month Historical Estimate	Click the **12 Month Historical Estimate** radio button for the system to check the history of this equipment for the past 12 months to estimate the number of hours it operates. This value is set in the **Manual Estimate** field. The default value is 24 if there is NOT 12 months of historical data for this piece of equipment.

File Attachments Tab

Refer to Item 21.2 File Attachment Tab section of this manual

Remarks Tab

The **Remarks** tab is a free form text tab. Any comments or remarks pertaining to the equipment are recorded on the **Remarks** tab. For example, the amperage, voltage, and cycles can be specified here if the equipment is an electric motor. These comments and remarks are viewed by all who have access to this tab. The **Remarks** label on the tab turns blue and an icon is present when entries are made on the tab.

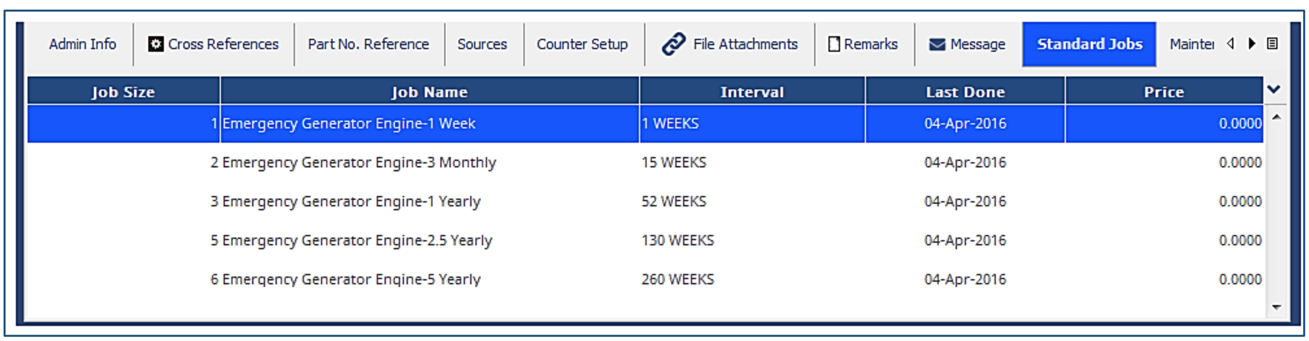


Messages Tab

Refer to Item 21.5 Messages Tab section of this manual.

Standard Jobs Tab

The **Standard Jobs** tab lists all the standard jobs for the specified equipment. Jobs are added to the tab automatically by the system when the standard jobs are created.



Standard jobs are created by the central office. Some fields on the standard job can be edited by authorized users at the ship level. Open the standard job listed on the **Standard Jobs** tab to view details about that job.

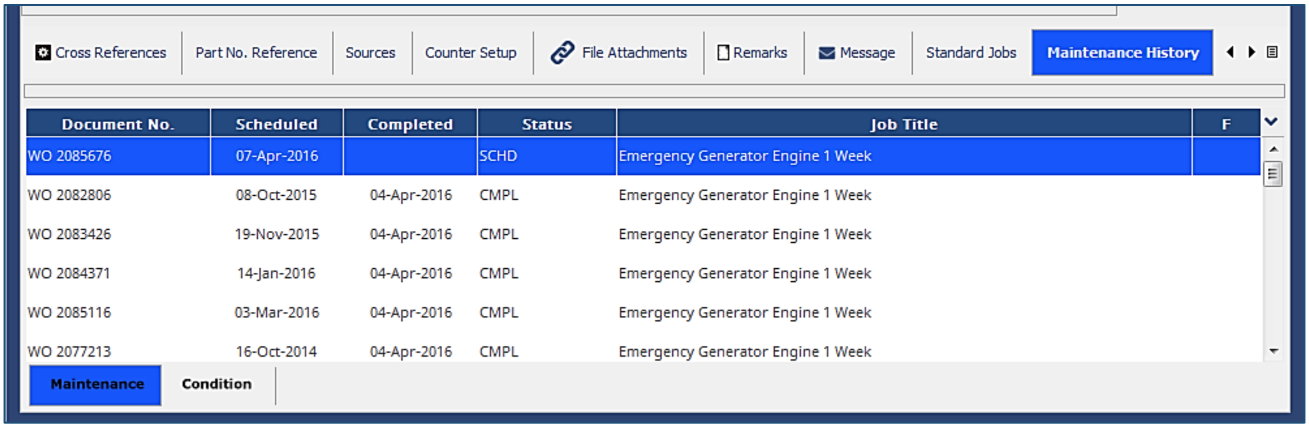
The fields on the **Standard Jobs** tab are:

- **Job Size** – the size of the job. This rating is from 1-99.
- **Job Name** – the name of the job
- **Interval** – the time frame between this job and the next time it is to be performed.
- **Last Done** – when the job was last completed
- **Price** – the cost of the job

Double click on a standard job on the **Standard Job** tab to open.

Maintenance History Tab

The **Maintenance History** tab displays the maintenance history of the equipment. This history has been divided by sub-tabs into two categories.



Document No.	Scheduled	Completed	Status	Job Title	F
WO 2085676	07-Apr-2016		SCHD	Emergency Generator Engine 1 Week	
WO 2082806	08-Oct-2015	04-Apr-2016	CMPL	Emergency Generator Engine 1 Week	
WO 2083426	19-Nov-2015	04-Apr-2016	CMPL	Emergency Generator Engine 1 Week	
WO 2084371	14-Jan-2016	04-Apr-2016	CMPL	Emergency Generator Engine 1 Week	
WO 2085116	03-Mar-2016	04-Apr-2016	CMPL	Emergency Generator Engine 1 Week	
WO 2077213	16-Oct-2014	04-Apr-2016	CMPL	Emergency Generator Engine 1 Week	

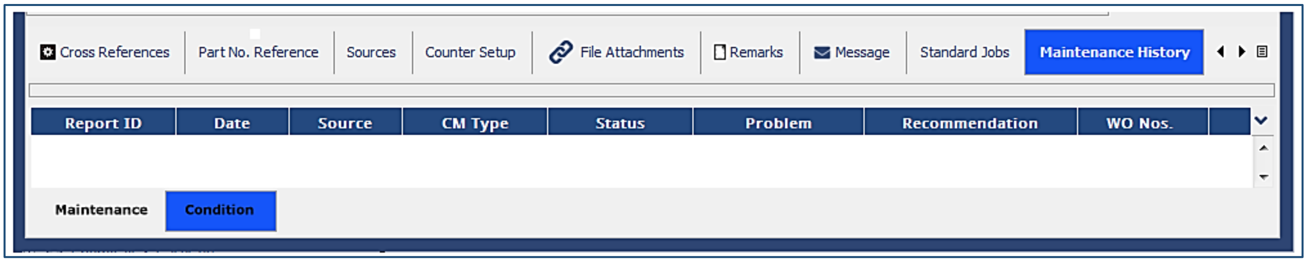
The **Maintenance** sub-tab contains the information previously available on the **Maintenance History** tab. It lists all the documents associated with maintenance on the specified equipment. These documents are work orders, service requisitions, no action jobs and service purchase orders. Documents are added to this tab when they are created if they specify this equipment.

The fields on the **Maintenance** sub-tab are:

- **Document Number** – the maintenance document name and number.
- **Scheduled** – the scheduled date of the maintenance
- **Completed** – the date the maintenance was completed
- **Status -** indicates whether the work is scheduled (SCHD or S), completed (CMPL or CP), closed (CLOS or CL) or cancelled (CANC or X).
- **Job Title** – the title of the maintenance as listed on the work order or service purchase order
- **F**(Findings) – an icon in this column indicates that entries are made on the **Findings** tab of the **Work Order**.

NOTE: Double click on any of the documents listed on this sub-tab to open the document.

The **Condition** sub-tab contains the information from the **Machinery Health** window that was added when the summary report from the condition monitoring analyst was imported.



The fields on the **Condition** sub-tab are:

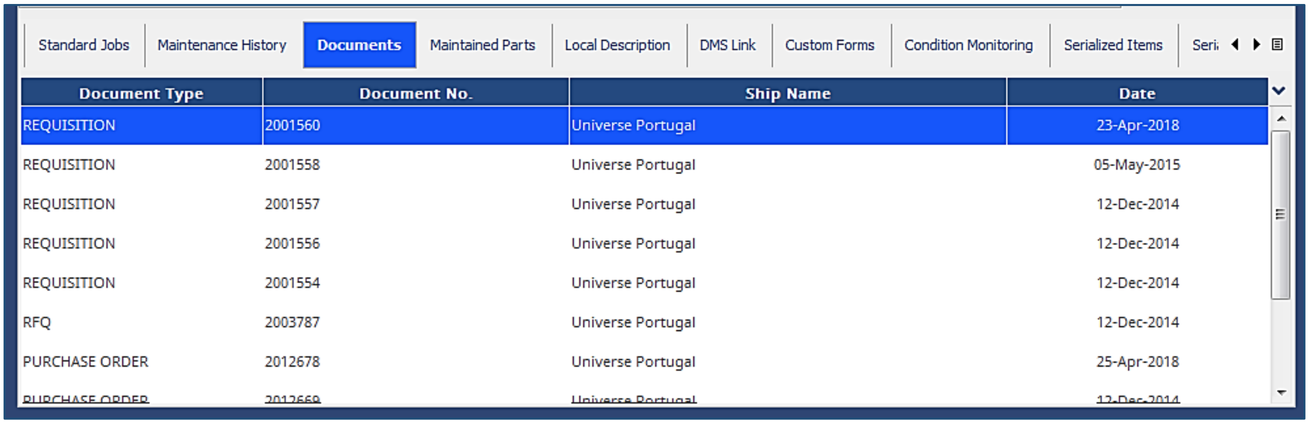
- **Report ID** – the number of the summary report. Click on the **Report ID** to open the **Condition Monitoring Report**.
- **Date** – the date of the visit by the condition monitoring analyst.
- **Source** – The **Sources** tab displays information regarding all vendors that have supplied the part or a quotation of a price for the part.
- **CM Type** – the type of condition monitoring checked for the report. Double click in this field to open the **CM Status Detail** window.
- **Status** – the condition monitoring status according to the summary report. Double click in this field to open the **CM Status Detail** window.
- **Problem** – the problem with the equipment associated with the condition monitoring type designated by the summary report. Double click in this field to open the **CM Status Detail** window.
- **Recommendation** – the recommendation by the monitoring analyst to fix the problem. Double click in this field to open the **CM Status Detail** window.
- **WO Number** – the number of the work order to do the work recommended in the **Recommendation** field. This field is completed by the system when the work order is created from the **Condition Monitoring Report**.

    NOTE: Double click on the work order listed on this sub-tab to open the document.

- **Last column** – the last column does not have a heading, but this column contains an **Attachment** icon if there is an attachment on the **CM Status Detail** window.

Documents Tab

The **Documents** tab lists all the documents associated with the purchasing and inventory on the specified equipment. These documents are requisitions, request for quotations, purchase orders and invoices. Documents are added to this tab when they are created and involve this equipment. Some fields on these documents can be edited by authorized users at the ship level.



Document Type	Document No.	Ship Name	Date
REQUISITION	2001560	Universe Portugal	23-Apr-2018
REQUISITION	2001558	Universe Portugal	05-May-2015
REQUISITION	2001557	Universe Portugal	12-Dec-2014
REQUISITION	2001556	Universe Portugal	12-Dec-2014
REQUISITION	2001554	Universe Portugal	12-Dec-2014
RFQ	2003787	Universe Portugal	12-Dec-2014
PURCHASE ORDER	2012678	Universe Portugal	25-Apr-2018

The fields on the **Documents** tab are:

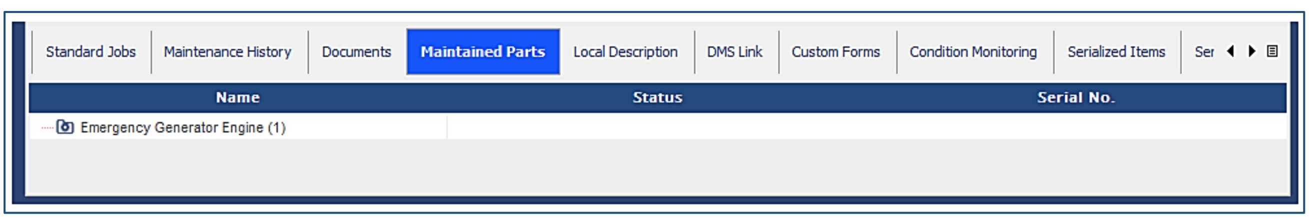
- Document Type – the type of document
- Document Number – the document number
- Ship Name – the name of the ship where the specified equipment is located
- Date – the date the document was created

Double click the document in the **Documents** tab and it opens.

Maintained Parts Tab

The **Maintained Parts** tab displays the list of maintained parts for a piece of equipment. Maintained parts are different than the **Parts** listed in the hierarchy because they track the maintenance and running hours of a specific part. The **Parts** listed on the hierarchy are more generalized and used for inventory.

For example, a ship's engine can have "x" number of cylinders. All these cylinders are exactly the same. So, for inventory purposes, "x" number of cylinders are listed plus any of the same cylinders that might be in spares. But, for maintenance purposes each cylinder has a different history. One cylinder may have been repaired twice with 10,000 running hours, whereas another cylinder may be brand new with zero running hours. This information is specific to a particular part and needs to be recorded. This is the maintained part.



Maintained parts are displayed in the **Maintenance** view on the hierarchy of the Equipment Explorer.

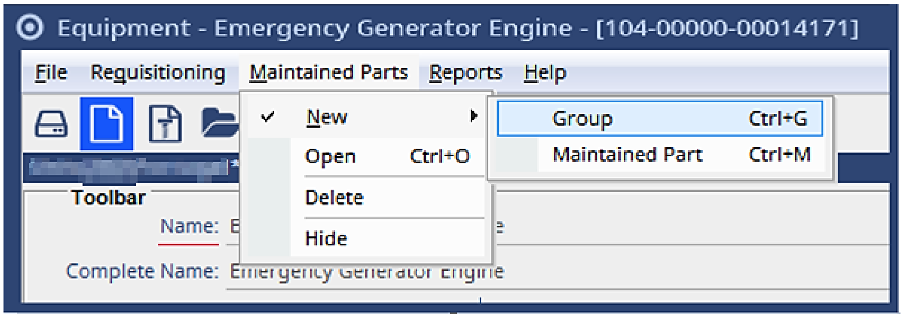
The fields on the **Maintained Parts** tab are:

- Name – name of the maintained group or part
- Status – indicates whether the part is Active or Inactive
- Serial Number – the serial number of the specific part

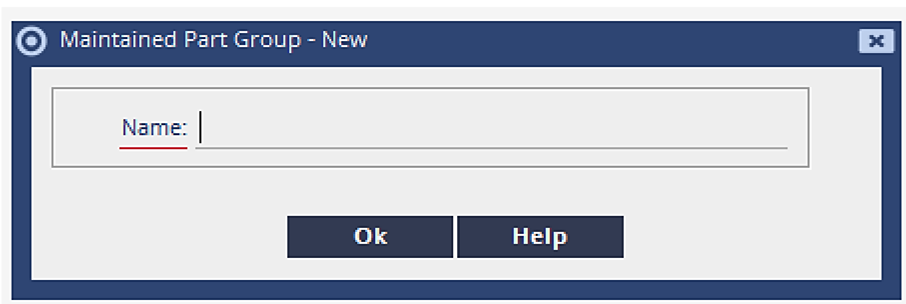
Create a New Maintained Group

A maintained group is a group of maintained parts that share a common characteristic.

1. Click the **Group** button from the **Equipment** toolbar or Maintained Parts menu option New→Group to add a maintained group.



- The **Maintained Part Group – New** window opens.



3. Type the name of the maintained part group in the **Name** field. THIS IS A REQUIRED FIELD.

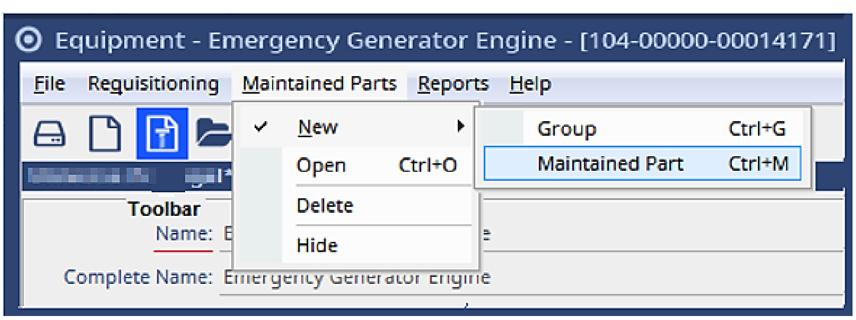
4. Click the **OK** button to save the name and close the **Maintained Part Group – New** window.

    - The **Maintained Part Group** name is displayed on the **Maintained Part** tab.

Create a New Maintained Part

Maintained parts are created from parts. The part must exist before it can be specified as a maintained part.

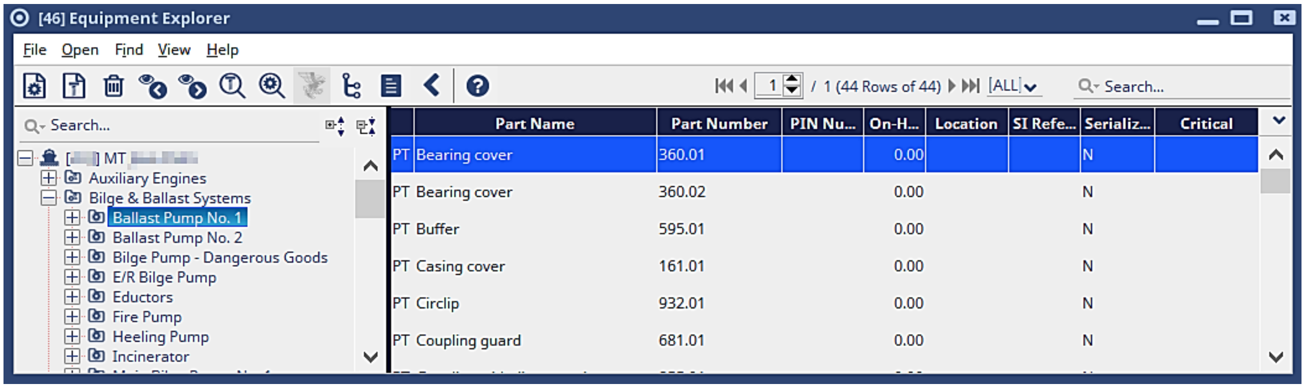
1. Click the **Maintained Part** button from the **Equipment** toolbar or Maintained Parts menu option New→Maintained Part when the **Maintained Part** tab is active to add a maintained part.



- The **Equipment Explorer** window opens with the selected equipment highlighted in the window.

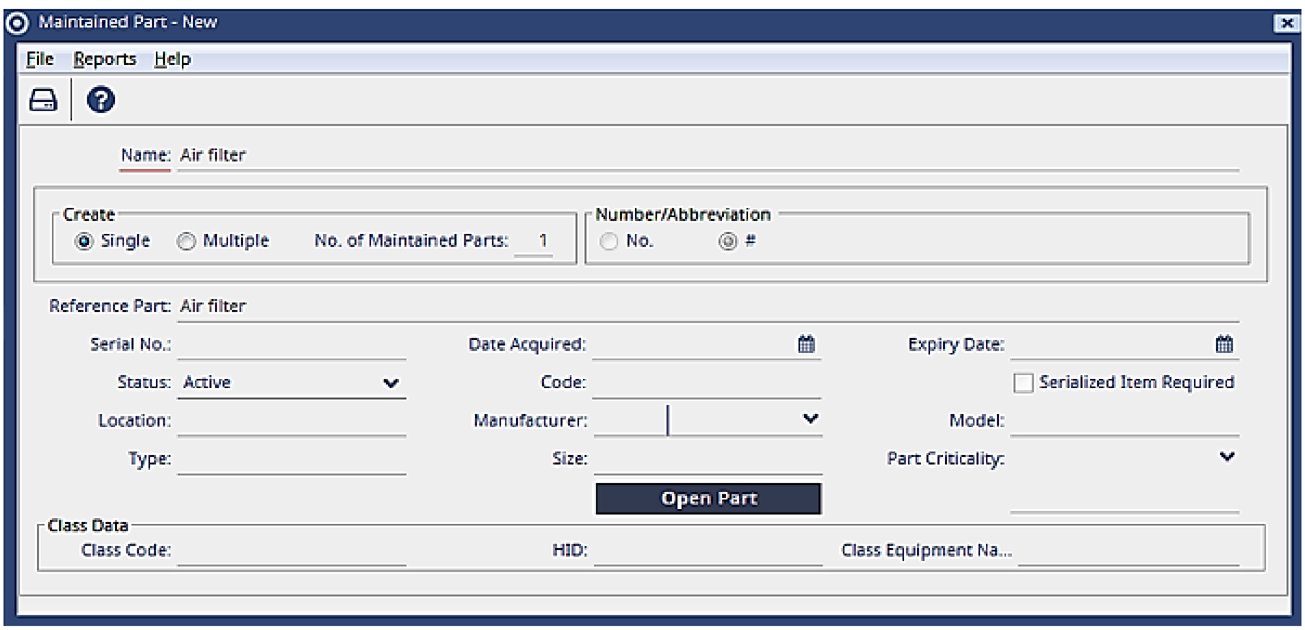
2. Click the + sign next to the selected equipment to expand the list to display the parts created under the selected equipment.

3. Click to highlight the part.



4. Click the **Select** button on the **Equipment Explorer** toolbar to select the part.

- The **Maintained Part – New** window opens. The name of the part is in the **Name** field.



5. Click the radio button in the **Create** section to select if one or more of these maintained parts are to be created. The **No. of Maintained Parts** field opens if the **Multiple** radio button is clicked.

Type the number of maintained parts to be created in the **No. of Maintained Parts** field if several of these parts are to be created.

Click the radio button in the **Number/Abbreviation** field to select the designation to be used to differentiate the parts – **No.** or **#**. This field becomes available when the **Multiple** radio button is clicked.

Once new maintained part is saved, it will display on the maintained parts tab of the equipment record.

The other fields on the **Maintained Part** window are:

Field	Description
Referenced Part Name	The **Referenced Part Name** field contains the name of the part listed in inventory. This field is automatically filled by the system.
Serial Number	The **Serial Number** field is the main field that distinguishes this part from all the other parts. For example, a ship's engine may have several cylinders that are exactly alike. The serial number is what distinguishes one cylinder from the others.
Date Acquired	Click the **Calendar** button at the end of the **Date Acquired** field to select the date the part was acquired.
Expiry Date	Click the **Calendar** button at the end of the **Expiry Date** field to select the date the part warranty expires.
Status	Click on the dropdown menu in the **Status** field to select whether the maintained part is Active on the ship or designated as Inactive.
Code	Type an alphanumeric part code in the **Code** field. This part code links an imported standard job to the maintained part.
Serialized Item Required check box	Click the **Serialized Item Required** check box to indicate that a serialized item must be installed for this part to be active.
Location	Type a location of the equipment in the **Equipment Location** field. This field is alpha-numeric with a maximum of 60 characters and is user defined. The **Equipment Location** field is included in the **Equipment Details** report and the **Equipment Particulars** portion of the **WO / SR / NAJ** form
Manufacturer	Click on the dropdown menu at the end of the **Manufacturer** field opens the **Equipment Maker** Search window. On the **Search** Tab, the company type is defaulted to Equipment Maker. Select any other filters that might apply. Highlight the selected manufacturer to close the **Equipment Maker** Search window and display the value on the new maintained part screen.
Model	Type the model number of the equipment in the **Model** field. **NOTE:** The **Model** field applies to equipment and NOT to consumables.
Type	Type the kind of equipment in the **Type** field. **NOTE:** The **Type** field applies to equipment and NOT to consumables.

Field	Description
Size	Type the size of the equipment, if applicable, in the **Size** field. **NOTE:** The **Size** field applies to equipment and NOT to consumables.
Part Criticality	Click on the dropdown menu at the end of the **Part Criticality** field to open the Part Criticality Selection window. Select the **part criticality** by highlighting and clicking the right arrow to move it from the left side of the window to the right side. Click the **OK** button when finished. More than one criticality can be selected for a maintained part.
Open Part button	Clicking on the **Open Part** button opens the part record for the part listed in the Name field of the new Maintained Part window.
Remarks	Click in the **Remarks** field to make notes regarding the maintained part. These remarks remain as part of the record for this part.
Class Data section	The **Class Data** section was added to include classification information. The fields in this section are: • **Class Code** – classification code which is the UID of the vessel • **HID** – Hierarchy Identification Number • **Class Equipment Name** – the name by which the equipment associated with this maintained part is referenced by the class society **NOTE:** Only authorized users can add or edit information in these fields.

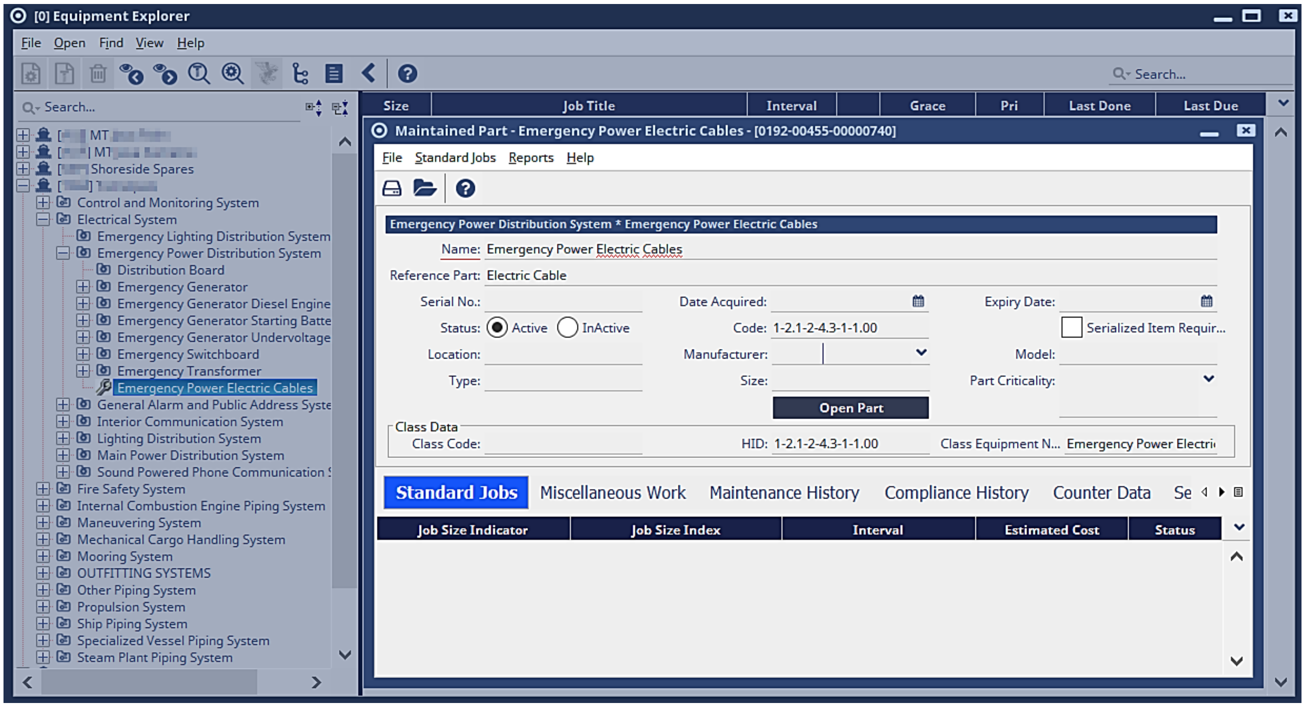
6. Click the **Save** button in the **Maintained Part – New** window to save the information and close the **Maintained Part – New** window.

   The maintained part is displayed on the **Maintained Part** tab.

Open a Maintained Part

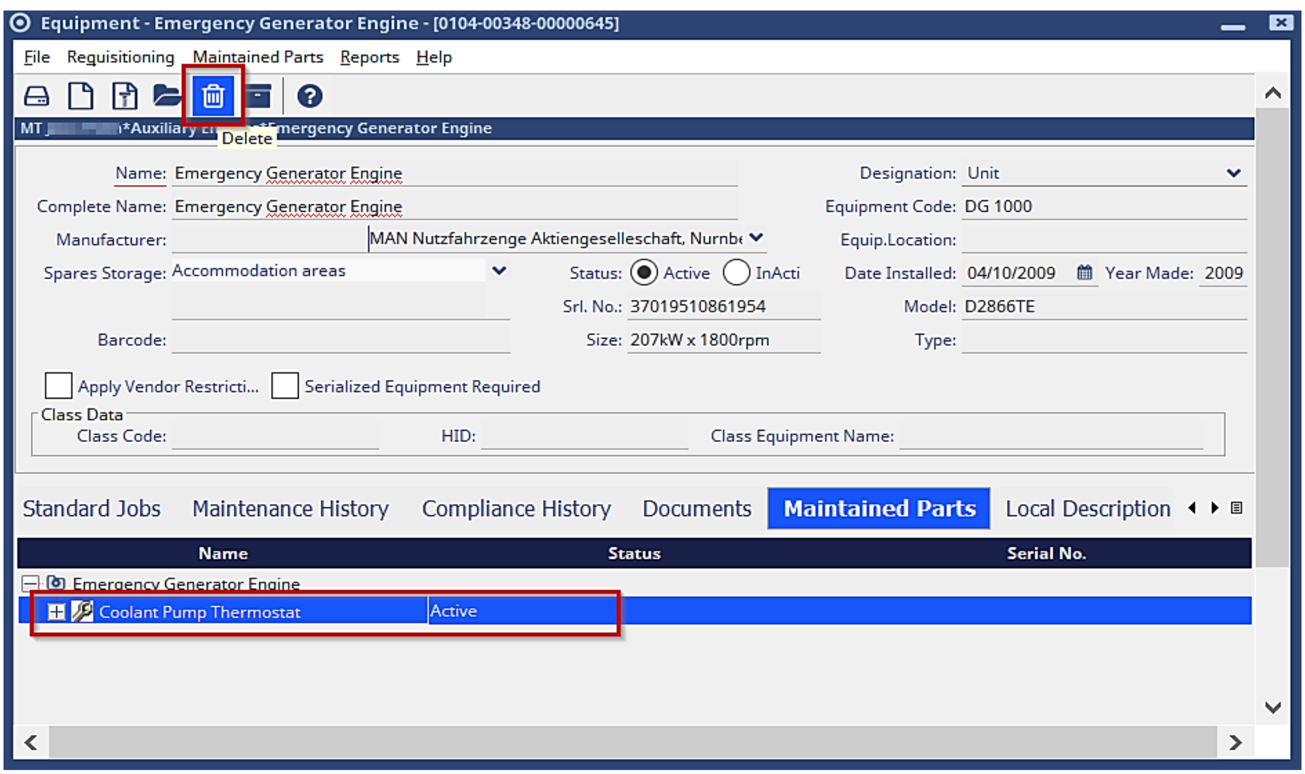
Double click on the maintained part from the **Maintained Part** tab.

- The **Maintained Part** window opens.



Delete a Maintained Part

1. Click to select a maintained part from the **Maintained Part** tab.
2. Click the **Delete** button from the **Equipment** toolbar to delete the selected maintained part.



- A delete confirmation message box opens.

3. Click the **Yes** button in this confirmation box to delete the selected part and close the confirmation box. The selected maintained part is deleted from the **Maintained Parts** tab.

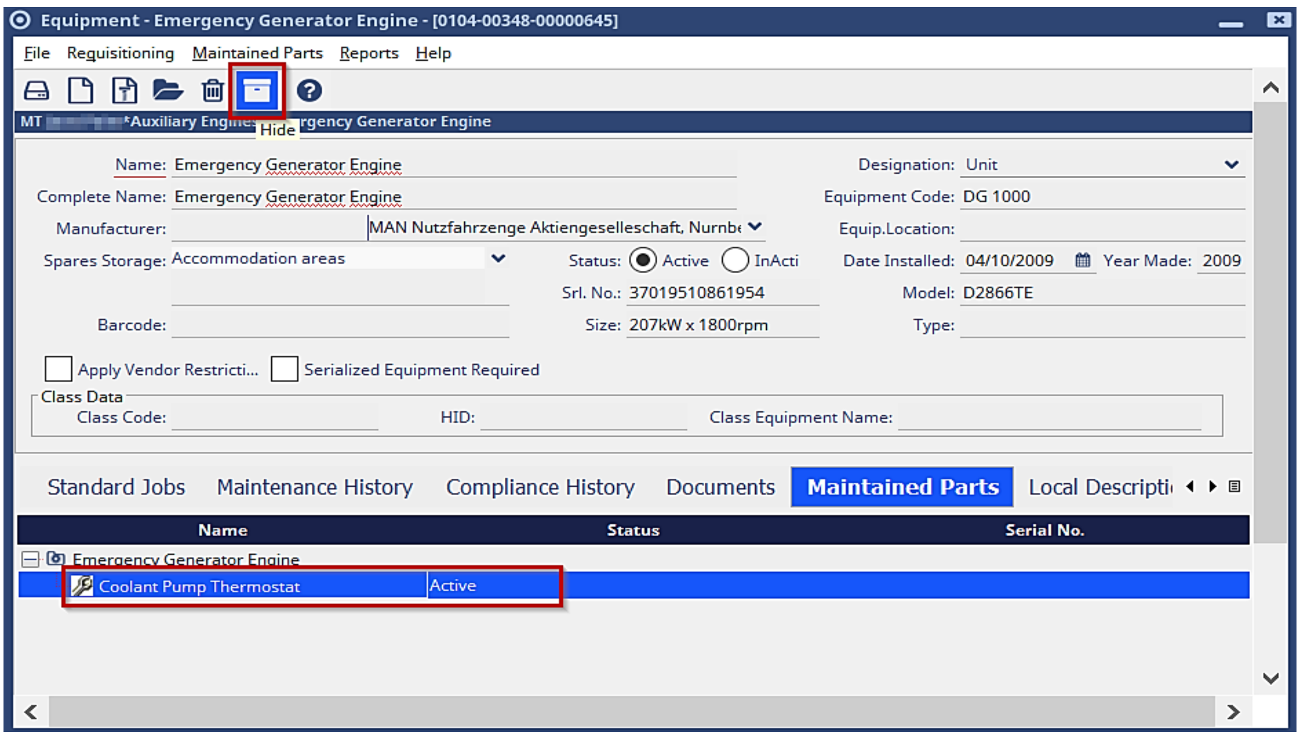
> **NOTE:** Parts in a Maintained Part Group MUST be deleted before the maintained group can be deleted. Follow steps 1 and 2 above to delete each part in the **Maintained Group** individually. Then the **Maintained Group** can be deleted using the same procedure.

Hide a Maintained Part

Hiding a part removes the part from view on the **Equipment Explorer** window or the **Maintained Parts** tab.

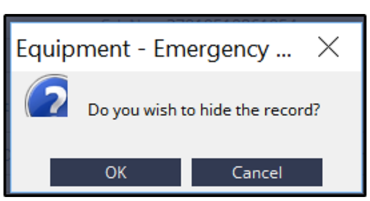
1. Click to select a maintained part from the **Maintained Part** tab.

2. Click the **Hide** button from the **Equipment** window toolbar to hide the selected maintained part from view.



A confirmation message box opens verifying that the selected part is to be hidden.

3. Click the **OK** button to hide the part and close the message box and close the message box. The selected part is hidden from view.

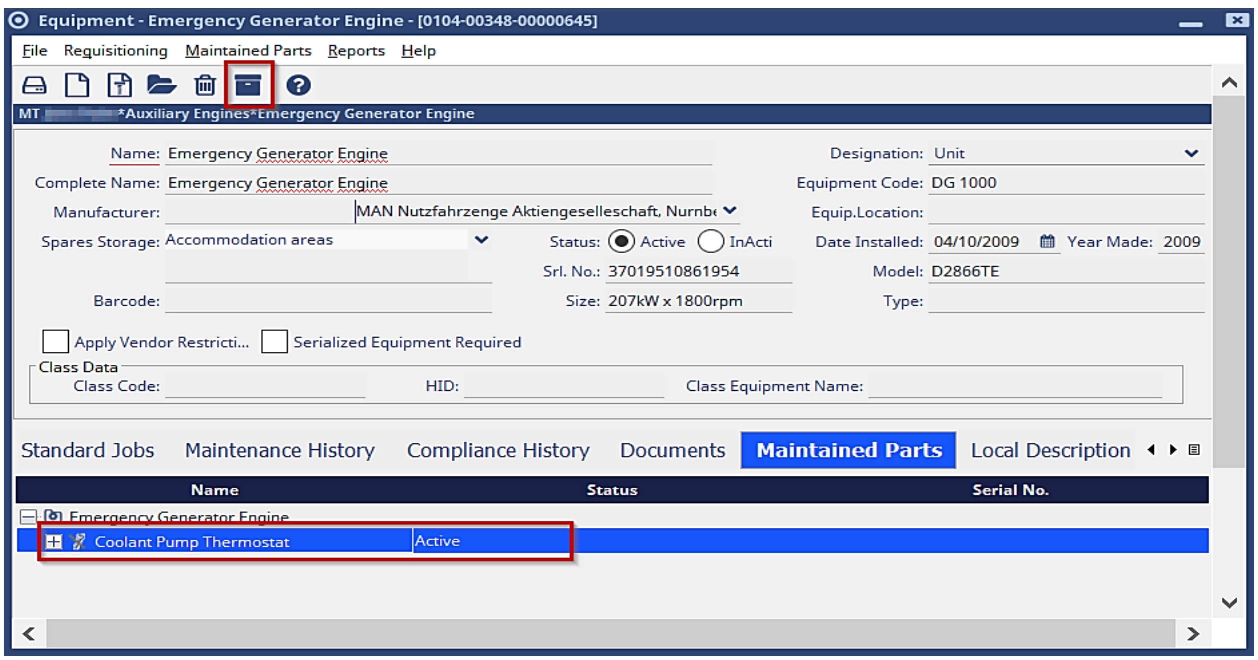


View a Hidden Maintained Part

1. Click the **Toggle Hidden Record Display Mode** button from the **Navigator** pane on the **Maintenance and Purchasing** window.
2. Open the **Equipment Explorer** window.
3. Click to select the equipment from the left side of the **Equipment Explorer** window.
4. Click the **Open Left Pane Item** button on the **Equipment Explorer** toolbar to open the **Equipment** window.
5. Click the **Maintained Parts** tab. The previously hidden part is shown on the tab.

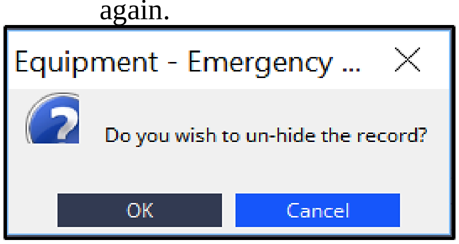
Unhide a Hidden Maintained Part

1. Follow the steps in the **View a Hidden Maintained Part** portion of this section to view the hidden part.
2. Click the hidden maintained part to select.
3. Click the **Hide** button from the **Equipment** window toolbar to unhide the selected maintained part from view.



- A confirmation message box opens verifying that the selected part is to be unhidden.

4. Click the **OK** button to unhide the part and close the message box. The previously hidden part is visible again.



Local Description Tab

The **Local Description** tab is a free form text tab. Use this tab to type information about the equipment in a language other than English. This information is viewed by all who have access to this tab.

DMS Link Tab

Refer to Item 21.8 DMS Link Tab section of this manual.

Custom Forms Tab

Refer to Item 21.3 Custom Forms Tab section of this manual

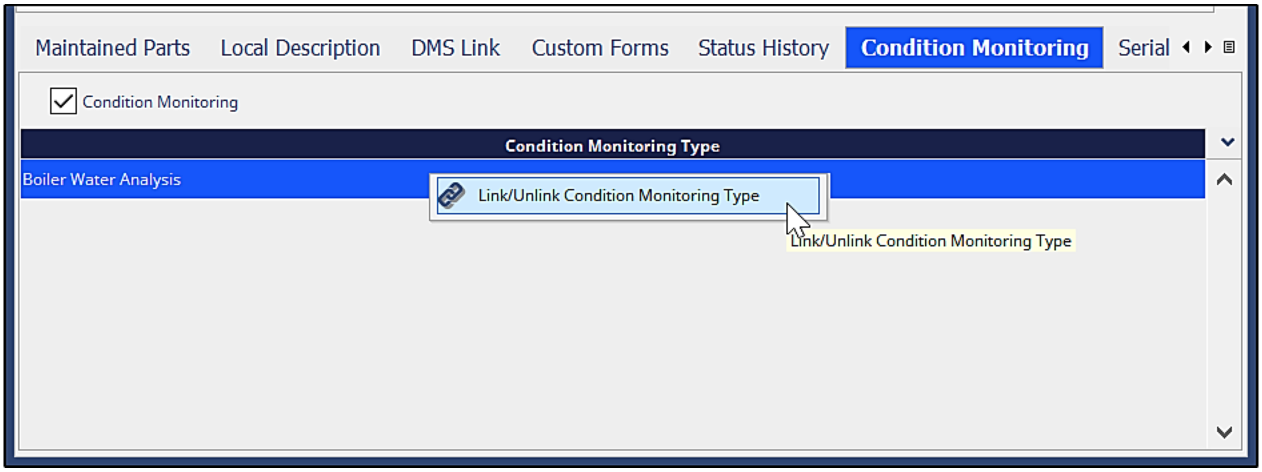
Condition Monitoring Tab

NOTE: Equipment MUST be set up for condition monitoring before it is available from any **Equipment** field associated with condition monitoring.

Select the condition monitoring types associated with the equipment on the **Condition Monitoring** tab.

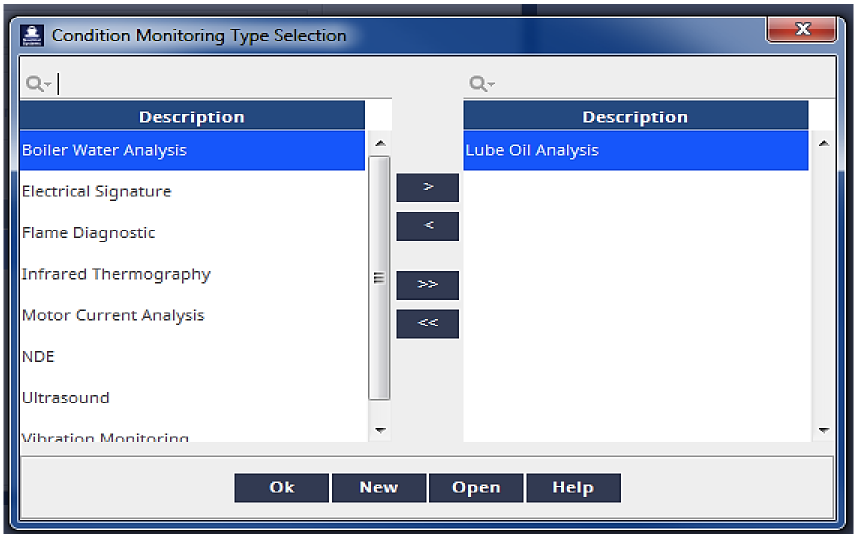
1. Click the **Condition Monitoring** check box to indicate that the equipment is being monitored.

   NOTE: This check box MUST be checked before condition monitoring types can be linked.



2. Click the **Link / Unlink Condition Monitoring** button on the **Equipment** window toolbar.

   - The **Condition Monitoring Type Selection** window opens.

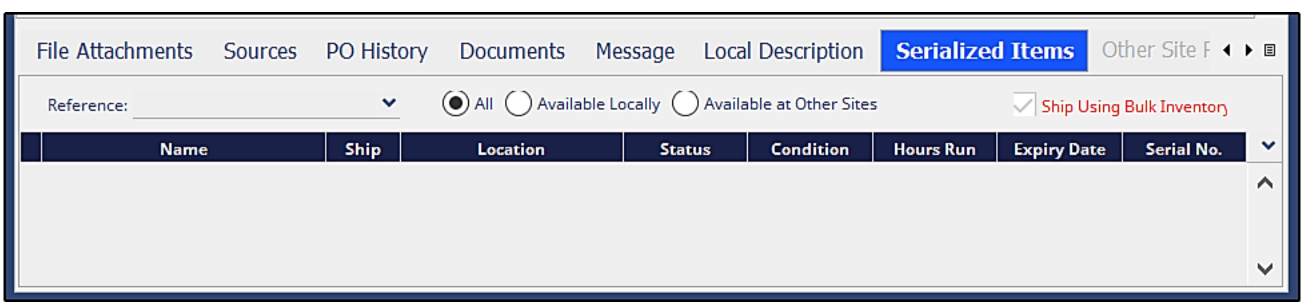


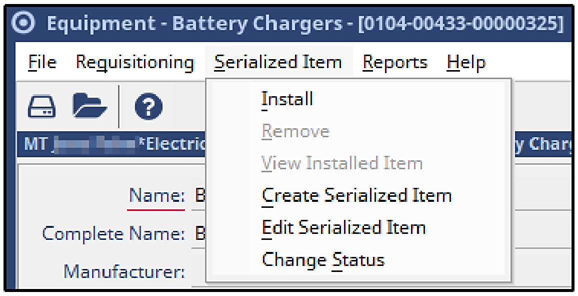
NOTE: Condition monitoring types and statuses are created in the **General Data** module by authorized users.

3. Double click on a selection on the left side of the **Condition Monitoring Type Selection** window to move it to the right side of the window.
4. Continue making selections until all condition monitoring types associated with the equipment are listed on the right side of the window.
5. Click the **OK** button to close the **Condition Monitoring Type Selection** window and add the selections to the **Condition Monitoring** tab.

Serialized Items Tab

When this tab is selected, **Serialized Item** menu options are available. The menu options allow the user to **Install, Remove, View Installed Item**, **Create Serialized Item, Edit Serialized Item** or **Change the Status** of a **Serialized Item**. **Serialized Item Tab** displays a list of all serialized parts with the same SI reference.





Menu Option	Description
Install	Select the **Install** option to install the part as a serialized item.
Remove	The **Remove** option becomes available when the maintained part has been installed as a serialized item. Select the **Remove** option to remove the part as a serialized item. A serialized item is removed to be repaired, used as a spare part, or discarded. Discarded items CANNOT be installed again.
View Installed Item	Selecting this menu option opens the selected serialized item on the **Serialized Item** Tab to allow the user to view the details for the serialized item.
Create Serialized Item	Before selecting this menu option, the SI reference must have been selected. Selecting this menu option allows the user to create a new serialized item.
Edit Serialized Item	Selecting this menu option opens the selected serialized item on the **Serialized Item** Tab to allow the user to edit the details for the serialized item.
Change Status	Selecting this menu option opens the selected serialized item on the **Serialized Item** Tab to allow the user to edit the **Status** field for the serialized item.

Add or Edit a Serialized Item

Refer to Section 8 of this manual, for a detailed information on the processes, tabs, and fields.

6.2.2 Add or Edit a Part

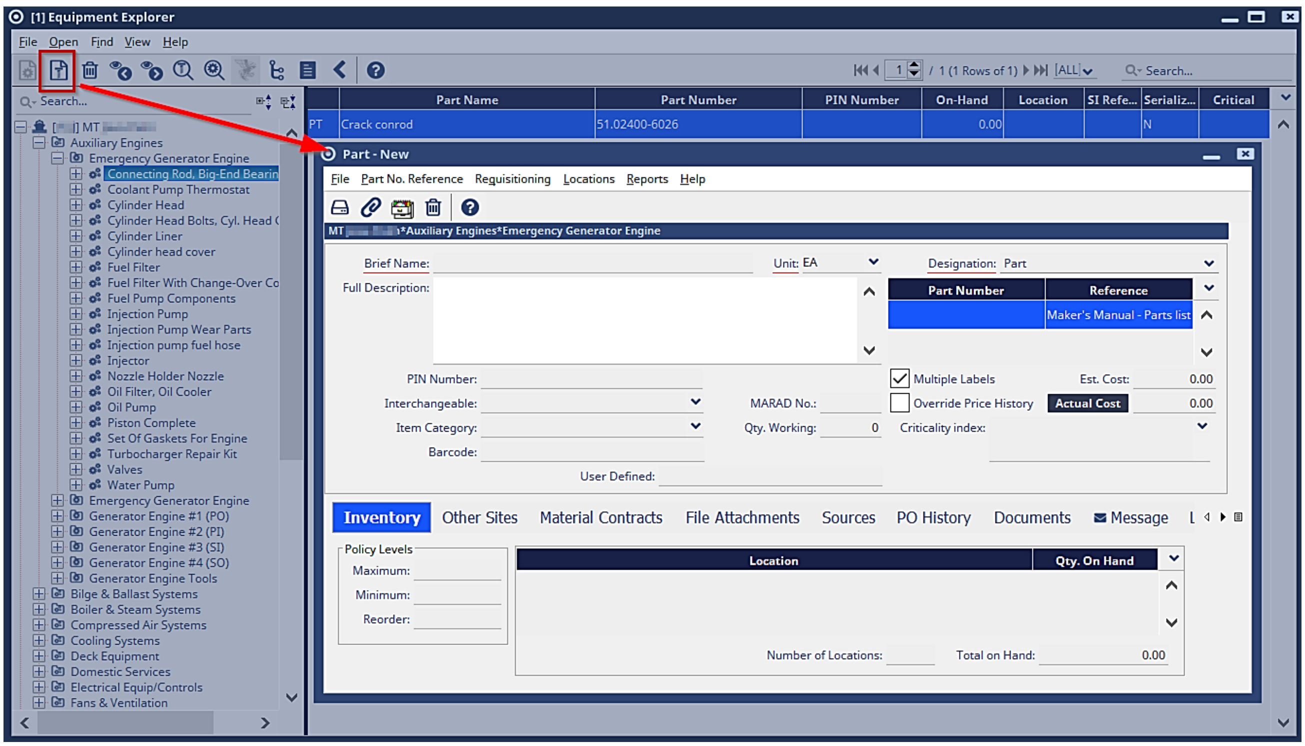
Parts can be added to equipment from the fleet or ship view as well as from the purchasing or maintenance view. However, parts that are added from the maintenance view are not visible on the maintenance hierarchy. Only maintained parts are visible on the maintenance view of the hierarchy.

NOTES:

- Parts can only be added under Units, Components or Assemblies on the hierarchy.
- For Part Entry, the system validates Part PIN duplication based on the system preference "**Validate Part PIN Duplicate**".

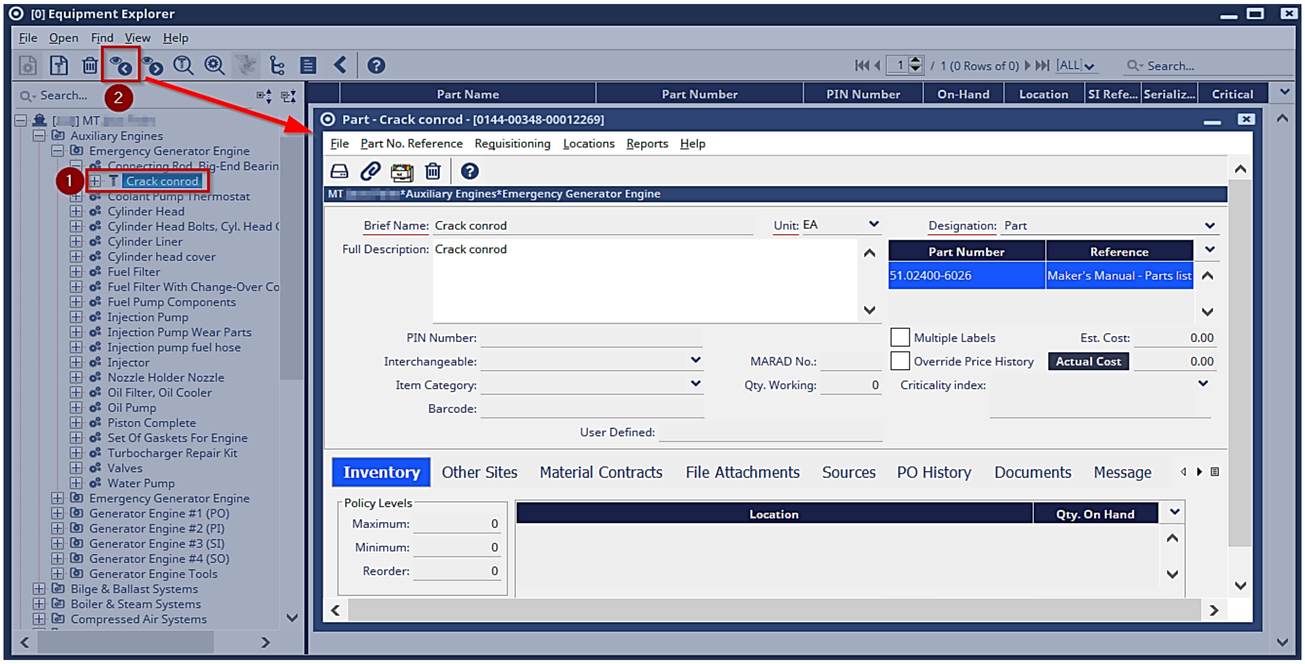
The procedure for adding a part is the same no matter which view it is created from. The fleet view allows the central office to add parts to any or all ships in the fleet at one sitting. A ship can only add parts to itself in the ship view.

1. Open the **Equipment Explorer** window.
2. Click the **New Part** button on the **Equipment Explorer** toolbar to open the **Part – New** window. The name of the ship and the name of the equipment that the new part is subordinate to are displayed in the first line of the window.



Editing a part can only be done in the purchasing view from either the fleet or ship views. Open the **Part** window from the **Equipment Explorer** and edit the necessary fields. The fields and procedures to edit them are the same as adding a new part.

1. Click to select a part from the left pane of the **Equipment Explorer** window to edit a part that has already been created.
2. Click the **Open Left Pane Item** button on the **Equipment Explorer** toolbar to open the selected part.



The options on the **Part** window menu bar are:

Option	Description
File→	The **File** menu contains options to manipulate a file.
Save	Select the **Save** option / button to save any changes made on the **Part** window.
Relog	This allows the user to replicate this document to all applicable remote sites for either a missing document or inconsistent data between sites.
Part No. Ref→	The **Part Number Reference** menu contains the option to link or unlink a part number reference manual to the part.  **NOTE:** Part number references MUST be created prior to part creation. Part numbers are used extensively throughout the **Maintenance and Purchasing** module. Having the correct part number and its corresponding reference manual is essential. The part number reference selected for the unit, component, or assembly that this part is under in the hierarchy is selected by default. New part number references can be added, but this default reference CANNOT be deleted unless it is deleted from the parent unit, component, or assembly.

Option	Description
Link/Unlink Part No. Reference	Select the **Link/Unlink Part Number Reference** option / button to open the **Part Number Reference Lists** window. Double click on the reference manual on the left side of the window to move the selection to the right side of the window. Click the **OK** button to accept the selections on the right side of the window, close the **Part No. Reference Lists** window and list the selected reference in the **Part Number / Reference** field of the **Part** window.
Requisitioning→	The **Requisitioning** menu contains options to create requisitions to replenish this part to the maximum, minimum or reorder level designated on the **Inventory** tab of the **Part** window. The **Inventory Replenishment Preview** option creates a report with information on the part to help determine whether a requisition needs to be created. The **Inventory Replenishment** adds the part to an existing requisition for the equipment the part is under in the hierarchy if a requisition exists that has NOT been approved. A new requisition is created if none exists or one has already been approved.
Locations→	The **Locations** menu contains options regarding storage and removal of inventory. The Locations menu options is only for parts.
Storage Locations	The **Storage Locations** option / button opens the **Storage Locations** window for the selected part. These storage locations are used on the **Inventory** tab of the **Part** window. Storage locations are used mainly in the **Purchasing** module.
Delete Inventory Data	The **Delete Inventory Data** option / button deletes the selected storage locations and the quantity on hand information from the **Inventory** tab of the **Part** window.  **NOTE:** BE CAREFUL! The information CANNOT be retrieved once the button or option is selected and the information is deleted.

Option	Description
Reports→	The **Reports** menu contains options to create different kinds of reports. Any report selected opens the **Report Options** window. Click the radio button to select where this report should be sent. The options are: • **Screen** – displays the formatted report on the screen. Click the **OK** button to generate the report. The report displays on the monitor when it is complete. • **Printer/Fax** – sends the report to the assigned printer. The **Print** window opens when the report is complete to select the printer. • **File** – the field next to the **File** radio button opens when this option is selected. Click on the dropdown menu to select the type of format for the saved report. Click the **OK** button. The **Save As** window opens to select the directory where the report is to be saved. • **Email -** The **Email** option allows the user to attach the report to a MS Outlook message.
Time Phased Part Usage	The **Time Phased Part Usage** report is a report of the usage of the selected part as indicated through purchase orders and requisitions. Click the **Calendar** button at the end of the **Start Date** and **End Date** fields to select the time frame for the report.

<table>
<tr><th>Option</th><th>Description</th></tr>
<tr><td>Print Labels</td><td>The Print Labels option prints labels containing the following information:

Ship
Equipment
Manufacturer
Part name
Pin
Location (2 sections)
Number of parts available
Date labels were printed
Bar code of part

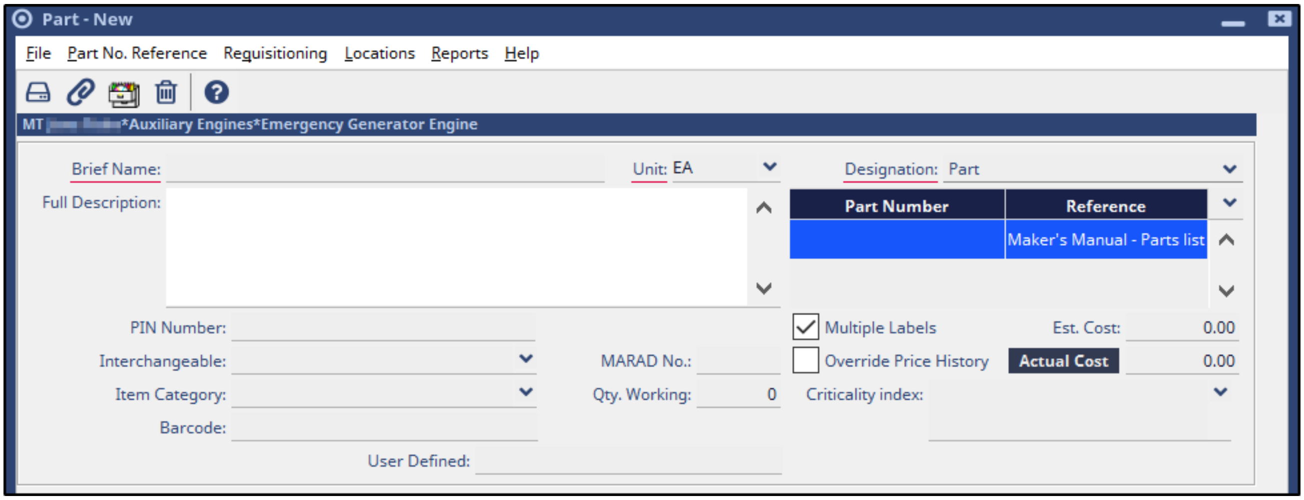
There are two options in the Select Number of Labels to Print portion of the Report Option window to print labels:

Per Items on Hand– this option prints one label for the part unless the Multiple Labels check box on the Part window is checked. Then it prints one label for every part on hand of that part. For example, there are 3 pistons on hand according to the Inventory tab on the piston Part window. The Multiple Labels check box is NOT checked so only 1 label for pistons is printed regardless that there are 3 on hand. However, using the same example, the Multiple Labels check box is checked, and three labels are printed for pistons.
Other Number – the Other Number option prints the number of labels specified in this field for each storage location if the Multiple Labels check box is checked. For example, the number 2 is typed in the Other Number option field. There are 3 roller bearings in Storage A and 3 roller bearings in Storage C. Two labels are printed for roller bearings in Storage A and 2 labels are printed for Roller Bearings in Storage C. Only one label per storage location is printed if the Multiple Labels check box is NOT checked regardless of the value typed in the Other Number field.

At this time only 4 x 2-inch labels are available.</td></tr>
<tr><td>Part Detail</td><td>The Part Detail report displays information from the fields on the Part window as well as the Inventory tab and Local Description tab.</td></tr>
</table>

Option	Description
Print SI Labels	The **Print SI Labels** option prints labels for serialized items.
Help	The option in the **Help** menu is Help. Select this option to open the online help.

The fields on the **Part** window are:



1. Click in the **Brief Name** field to type the name of the part. THIS IS A REQUIRED FIELD with a maximum of 40 characters.

There is no naming convention, but the name of the part should identify the part. This is important when there are multiple parts with the same name on board.

> **NOTE:** Whatever is typed in the **Brief Name** field is repeated in the **Full Description** field when the cursor is moved out of the **Brief Name** field.

2. Click the dropdown menu at the end of the **Unit** field to select the unit of measure used for this part. The **Available Units** window opens with a list of units of measure. Authorized users can add new units of measure from this window or the **General Data** module.

This is a required field that is automatically filled as "Pieces" by default. This default value can be changed.

The **Unit** field can only be edited for an existing part if:

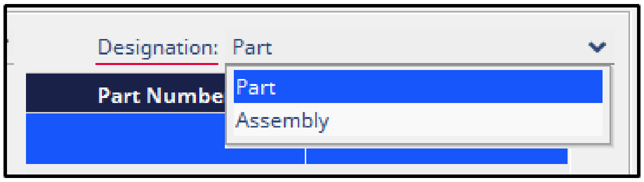
- The part information has NOT been replicated
- A spares record has NOT been created
- This part is not included in any document such as a purchase order or requisition

> **NOTE:** Inventory quantities MUST be adjusted manually if the unit of measure is changed. A warning message box opens stating this fact.

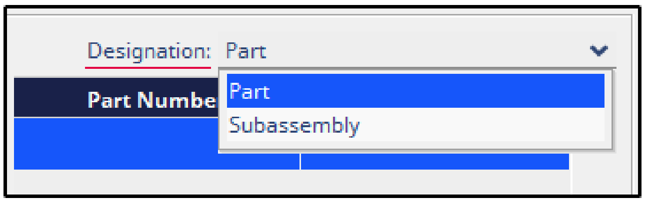
3. Click on the dropdown menu on the **Designation** field to select the classification. THIS IS A REQUIRED FIELD that is automatically filled by default. This default value can be changed.

The options in this field vary depending on the position in the hierarchy.

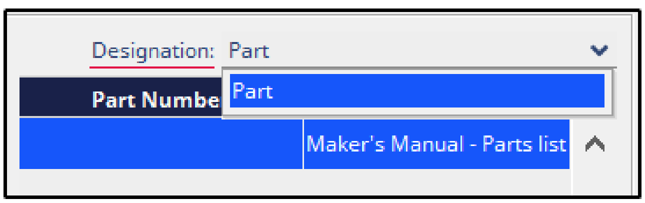
The options are **Part** or **Assembly** if it is directly under a **Unit** or **Component**.



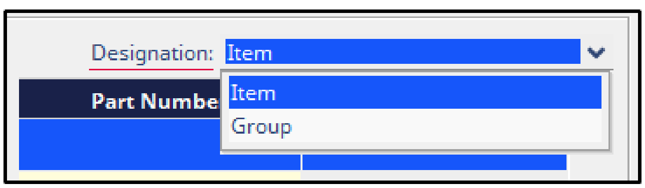
The options are **Part** or **Subassembly** if it is under an **Assembly** or **Subassembly**.



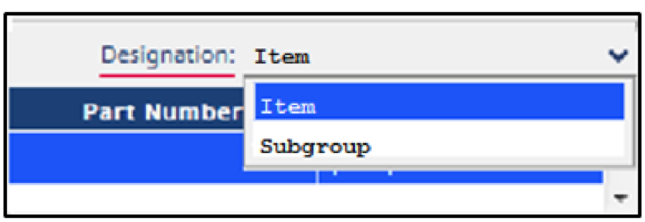
The option is **Part** if it is under a **Part**.



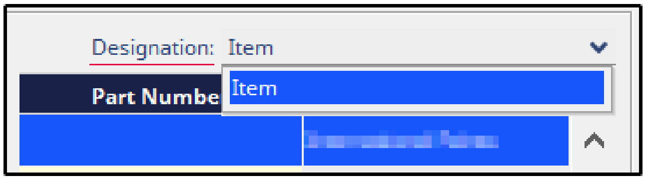
The options are **Item** or **Group** if it is under a **Consumable Type**.



The options are **Item** or **Subgroup** if it is under a **Group** or **Subgroup**.

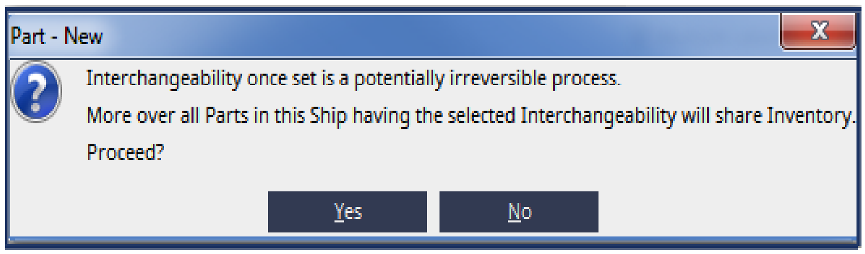


The option is **Item** if it is under an **Item**.



Other fields on the **Part** window are:

Field	Description
Full Description	Whatever is typed in the **Brief Name** field is copied to the **Full Description** field. The **Full Description** field is used to type more details or an expanded explanation of the **Brief Name** field.
Part Number and Reference	 **NOTE:** Part number references MUST be created prior to part creation. Part numbers are used extensively throughout the **NS Enterprise Maintenance and Purchasing** module. Having the correct part number and its corresponding reference manual is essential The **Reference** portion of this field is automatically filled with the **Reference** selected for the Unit, Assembly or Component that this part is under in the hierarchy. New part number references can be added, but this default reference CANNOT be deleted unless it is deleted from the parent unit, component, or assembly. Click the **Link / Unlink Part No. Reference** button on the toolbar to add or delete a part number reference. See ***Link/Unlink Part No. Reference*** in the menu and toolbar table for the **Part** window preceding this section for details on linking or unlinking part number references. Click in the **Part Number** field of the selected reference to add the part number for this part.
PIN Number	Type the PIN number in the **PIN Number** field. The PIN number is used to distinguish a part or consumable item from other parts with the same name. The same PIN number can be used for several parts with different names if the part is the same. The PIN number has the same function as the interchangeability term used in the **Interchangeable** field. This field indicates any parts designated as interchangeable with this part.

Field	Description
Interchangeable	Identical parts installed in unrelated equipment or called by a different name are defined as interchangeable. These parts are linked by a common index term that is defined in the **Part Interchangeability** window. Click the dropdown menu at the end of the **Interchangeable** field to identify this part with an interchangeability index term. A message box opens cautioning that interchangeability is irreversible and verifying that you want to continue.  Click the **Yes** button to proceed. The **Available Interchangeabilities** window opens. Defined interchangeability terms are listed on this window. Authorized users can add new terms to this window. All parts with the same index term selected in the **Interchangeable** field can be substituted for each other. These parts can be instantly found in any storage location by clicking the **Find a Part** button on the **Equipment Explorer** window and searching by the **Interchangeable** field. The stock of interchangeable parts is included in the inventory count of the particular item in certain inventory reports.
Item Category	**Item Category** is used to categorize items for reporting purposes. Click the dropdown menu at the end of the **Item Category** field to select a category. **The Item Category List** window opens with a list of categories defined in the **General Data** module. Authorized users can create more categories from the **Item Category List** window.
MARAD No.	The MARAD number is available to companies upon request. It is used to identify the inventory, such as the part's specific location. The MARAD number differs from the PIN number because a PIN number is the same across the fleet whereas the MARAD number is specific to a ship or warehouse.
Qty. Working	Type how many of this part are being used in the piece of equipment in the **Qty. Working** field.
Multiple Labels check box	Click the **Multiple Labels** check box to print more than one label for this part. The number of labels printed depends on the selection made when the **Print Labels** option is selected on the **Report** menu of the **Parts** window menu bar. Only one label prints for the part regardless of how many of this part is in inventory if this check box is unchecked. It is unchecked by default.

Field	Description
Override Price History check box	The **Override Price History** check box and the **Estimated Cost** field work together. **NS Enterprise** uses the pricing history for a part as the basis of any pricing used in reports. The pricing history is created from past purchase orders and requests for quotations (RFQ) for this part. Click the **Override Price History** check box to disregard any price history and use the value in the **Estimated Cost** field for these reports. **NOTE:** Checking this check box has NO validity if no price history for this part is available or no value is listed in the **Estimated Cost** field.
Criticality Index	Click the dropdown menu at the end of the **Criticality Index** field to open the Part Criticality window. Highlight the criticality index term and click on the arrow to move the criticality term to the right-hand portion of the screen. Once all Criticality terms are selected click the **OK** button to close the window and bring all selected terms to the Part screen.
Estimated Cost	Type the estimated cost of this part in the **Estimated Cost** field. The **Estimated Cost** field is associated with the **Override Price History** check box. **NS Enterprise** uses the pricing history for a part as the basis of any pricing used in reports. The pricing history is created from past purchase orders and requests for quotations (RFQ) for this part. However, the value in the **Estimated Cost** field is used if the **Override Price History** check box is checked.
Actual Cost button	Click the **Actual Cost** button to calculate the cost of the part as specified in the **Inventory Valuation Method** system preference in the **System Administration** module. The actual cost is calculated by averaging the last 3 prices on the price history for the part. The value in the **Actual Cost** field is calculated in real time when the button is depressed and is only available when calculated. This value is not retained after the **Part** window is closed. The actual cost of the part can be recalculated every time the **Part** window is opened.
Barcode	The code assigned to the part to which it can be identified.
User Defined	

Inventory Tab

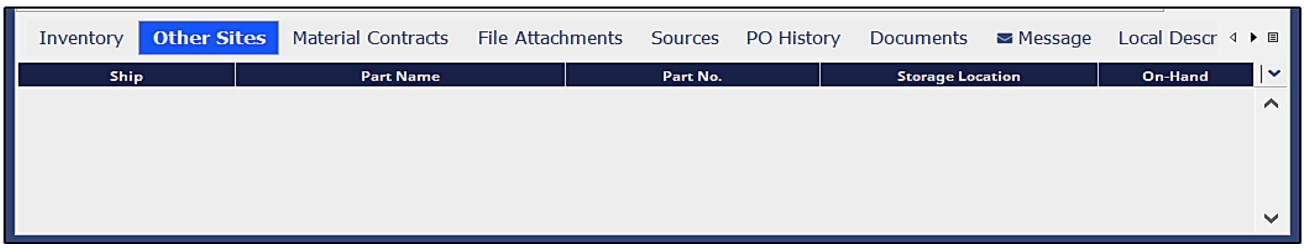
The **Inventory** tab on the **Part** window contains information regarding the inventory of this part for the selected ship or warehouse. This includes the maximum, minimum and reorder level for this part as well as where the parts are stored and the number of spare parts on hand. The **Inventory** tab contains information that is applicable to purchasing.

Other Sites Tab

The **Other Sites** tab displays the quantity-on-hand of the part on each ship that carries this part in its inventory. Sites are copied to this tab from the **Cross References** Tab of the equipment that the part is under in the hierarchy.

> **NOTE:** Information on this tab is only visible to the central office. The shipboard database does NOT display this information.

The **Other Sites** tab contains information that is applicable to purchasing.

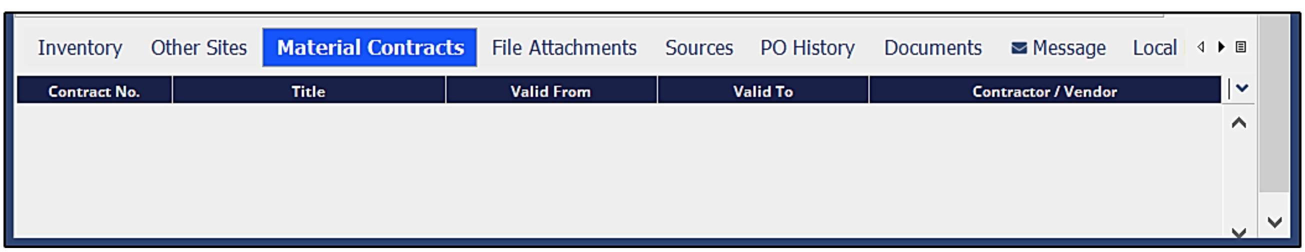


Material Contracts Tab

The **Material Contracts** tab displays all material contracts that include this part.

> **NOTE:** Contracts are only used for material purchases NOT for service.

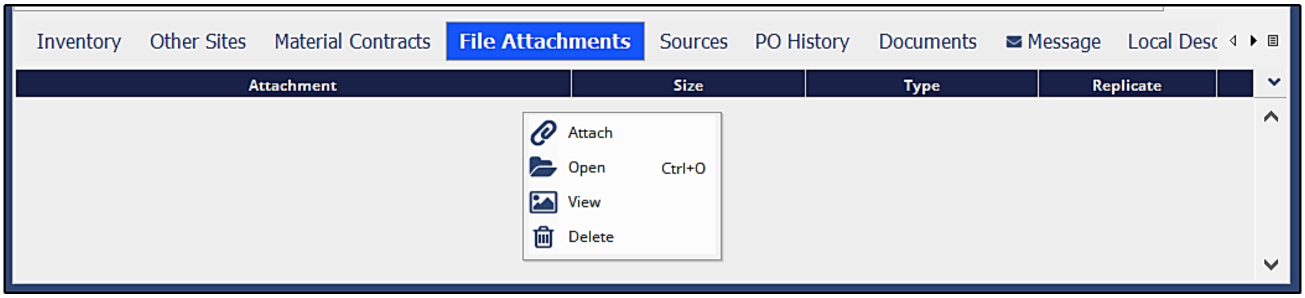
The **Material Contracts** tab contains information that is applicable to purchasing.



File Attachments Tab

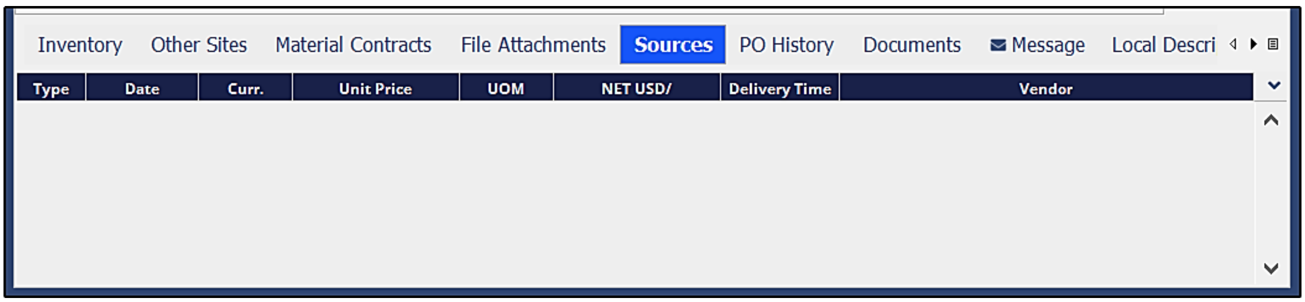
Refer to Item 21.2 File Attachment Tab section of this manual.

The tab name turns blue and an icon is added in front of the tab name when entries are present on the tab.



Sources Tab

The **Sources** tab displays information regarding all vendors that have supplied the part or a quotation of a price for the part. This information is automatically added to the tab by the system whenever a purchase order or request for quotation (RFQ) is created for this part. The **Sources** tab contains information that is applicable to purchasing.



PO History Tab

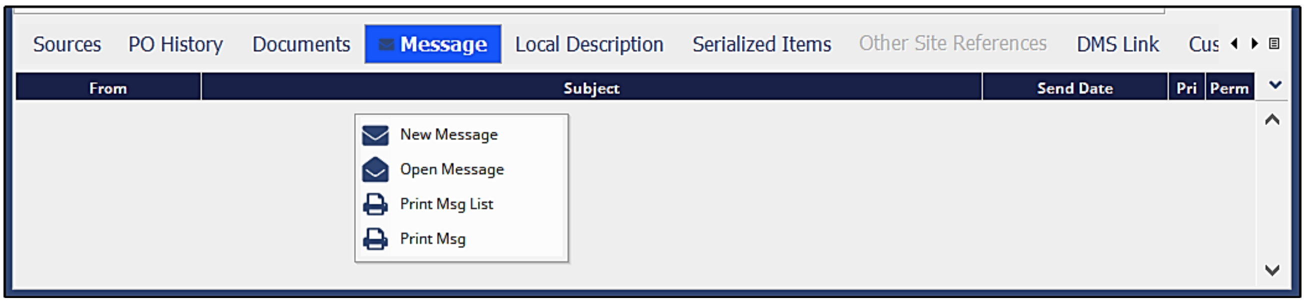
The **PO History** tab displays the purchasing history of the part through purchase orders. This tab contains information that is applicable to purchasing.

Documents Tab

The **Documents** tab lists all the documents associated with the purchasing and inventory on the specified part. This tab contains information that is applicable to purchasing.

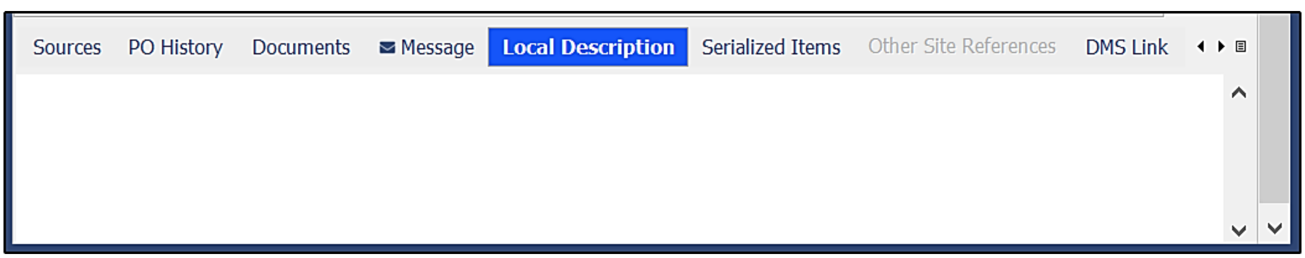
Messages Tab

The **Messages** tab on the **Part** window works the same as the **Messages Tab** on the **Equipment** window.



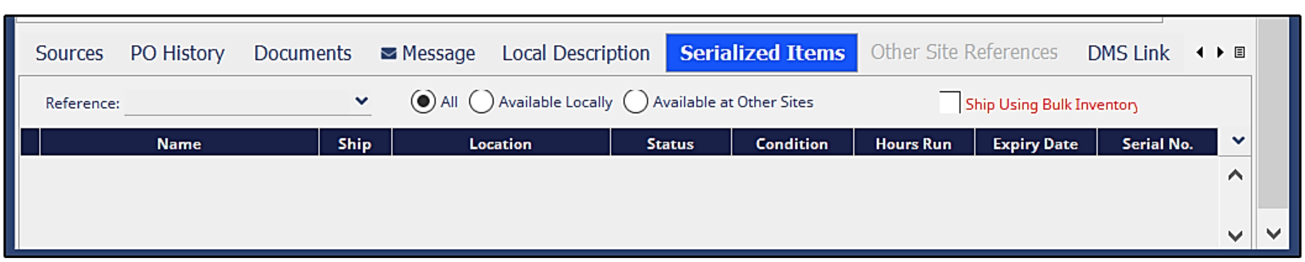
Local Description Tab

The **Local Description** tab is a free form text tab. Use this tab to type information in a language other than English. This information is viewed by all who have access to this tab.



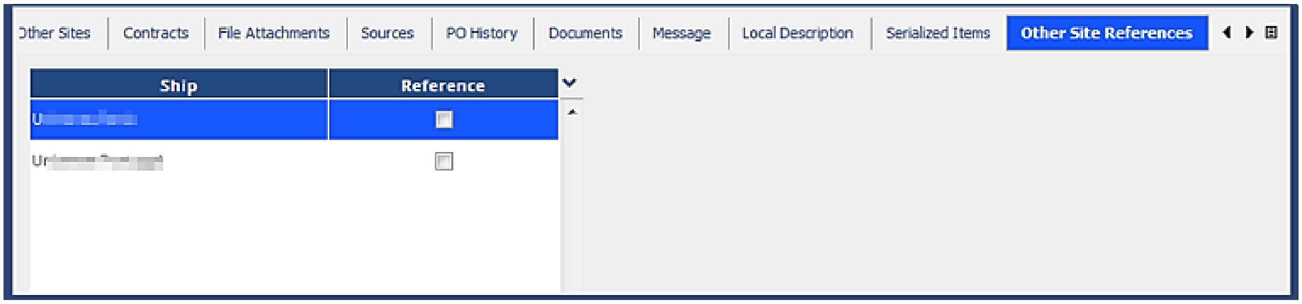
Serialized Items Tab

Serialized Item Tab displays a list of all serialized parts with the same **SI reference** number. Users can create new serialized items or edit an existing **Serialized Item** from this tab.



Other Site Reference Tab

Displays all vessels where the part is used. This is applicable for equipment that is cross referenced. If the reference tab is checked, then inventory from other vessels is displayed in the **Other Sites** Tab.



DMS Link Tab

The **DMS Link** tab is used to attach documents from the **Document Management System (DMS)** module to the part.

The fields on this tab are:

- Display Name - the name of the part
- Size - the size of the part
- Type - the type of part

NOTES: The **Document Management System** module is one of the web-based modules in **NS Enterprise**. It is used to store, organize, and track electronic documents and images. These documents can then be linked to parts and documents within **NS Enterprise**.

The **DMS Link** tab is only available if the **Document Management System** module is part of your company's NS **Enterprise** suite of modules.

1. Click the **Link** button from the toolbar of the **Part** window to add a document to the tab.

NOTE: Be sure the DMS web app configuration has the correct server and IP address.

2. Another window opens with the hierarchy from the **Document Manager**.
3. Navigate through the folders until the document to be linked with the part is located.
4. Click the check box preceding the documents to be linked.
5. Click the **Select** button to close the **Document Manager** window and add the selections to the **DMS Link** tab.

Delete a Document

1. Highlight a document on the **DMS Link** tab.
2. Click the **Delete** button on the **Part** window toolbar to delete the selection from the tab.

> **NOTE:** The right mouse button can be clicked anywhere on the **DMS Link** tab to get the same options.

Custom Forms Tab

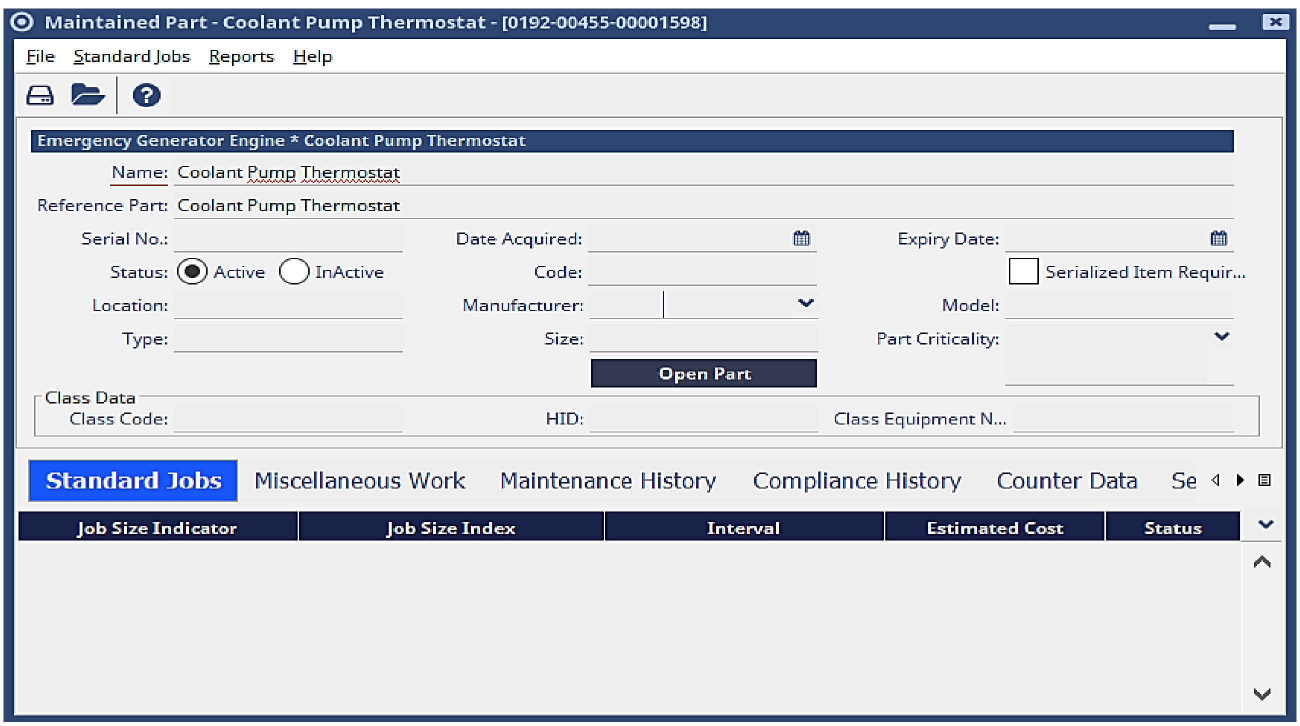
Refer to Item 21.3 Custom Forms Tab section of this manual

Maintained Part Window

Maintained parts are created and viewed differently from other parts. Maintained parts are created from the **Maintained Parts** tab of the **Equipment** window.

Maintained parts can only be seen in the hierarchy when **View → Maintenance** is selected on the **Equipment Explorer** menu bar.

1. Select a maintained part from the hierarchy.
2. Click the **Open Left Pane** button on the **Equipment Explorer** toolbar to open the **Maintained Part** window.



The options / buttons on the **Maintained Part** window menu bar and toolbar are:

Option	**Description**
File→	The **File** menu contains options to manipulate a file.
Save	Select the **Save** option / button to save any changes made on the **Maintained Part** window.
Standard Job→	The **Standard Job** menu contains options on opening a standard job.
Open	Select the **Open** option / button to open the selected standard job.
Serialized Items	The **Serialized Items** menu contains options is available when user selects Serialized Items Tab.
Install	Select the **Install** option to install the part as a serialized item.
Remove	The **Remove** option becomes available when the maintained part has been installed as a serialized item. Select the **Remove** option to remove the part as a serialized item. A serialized item is removed to be repaired, used as a spare part, or discarded. Discarded items CANNOT be installed again.
View Installed Item	Selecting this menu option opens the selected serialized item on the **Serialized Item** Tab to allow the user to view the details for the serialized item.
Create Serialized Item	Selecting this menu option allows the user to create a new serialized item. The Serialized Item Reference must first be populated on the Serialized Item Tab before the **Serialized Item - New** window opens.
Edit Serialized Item	Selecting this menu option opens the selected serialized item on the **Serialized Item** Tab to allow the user to edit the details for the serialized item.
Change Status	Selecting this menu option opens the selected serialized item on the **Serialized Item** Tab to allow the user to edit the **Status** field for the serialized item.

Option	Description
Reports→	The **Reports** menu contains options to create different kinds of reports. Any report selected opens the **Report Options** window. Click the radio button to select where this report should be sent. The options are: • **Screen** – displays the formatted report on the screen. Click the **OK** button to generate the report. The report displays on the monitor when it is complete. • **Printer/Fax** – sends the report to the assigned printer. The **Print** window opens when the report is complete to select the printer. • **File** – the field next to the **File** radio button opens when this option is selected. Click on the dropdown menu to select the type of format for the saved report. Click the **OK** button. The **Save As** window opens to select the directory where the report is to be saved. • **Email -** The **Email** option allows the user to attach the report to a MS Outlook message.
Work History and Schedule	The **Work History and Schedule** report displays all the work orders for the maintained part. Click on the dropdown menu in the Desired Format field to select the format of the report. The options are: • **Summary** – displays a summary of all the work orders for the selected part. This includes the scheduled date of service, work order number, part name, job title, last date service was performed, the interval between service and the job category. • **Work Specifications** – displays only the work specifications which include the job category, scheduled date of service, work order number and job title. • **Detail Format -** displays all work orders in detail. This includes such details as the estimated labor and cost data, materials required and used, work order description and findings. Click the radio button to select if all or individual work orders are to be selected for this report. A list of work orders associated with the maintained part are listed if the Selected ratio button is clicked. Click the check box of the work orders to be included on the report. Click the **OK** button to generate the report.
Work History/Findings	The **Work History/Findings** report displays the completed work orders and findings for a specified time frame.
Help	The option in the **Help** menu is Help. Select this option to open the online help.

The **Maintained Part** window has fields and tabs. The tabs are explained in their own sections, but the fields are explained in the following table.

The name of the equipment that the maintained part is under in the **Equipment Explorer** hierarchy and the name of the maintained part are displayed in the first field.

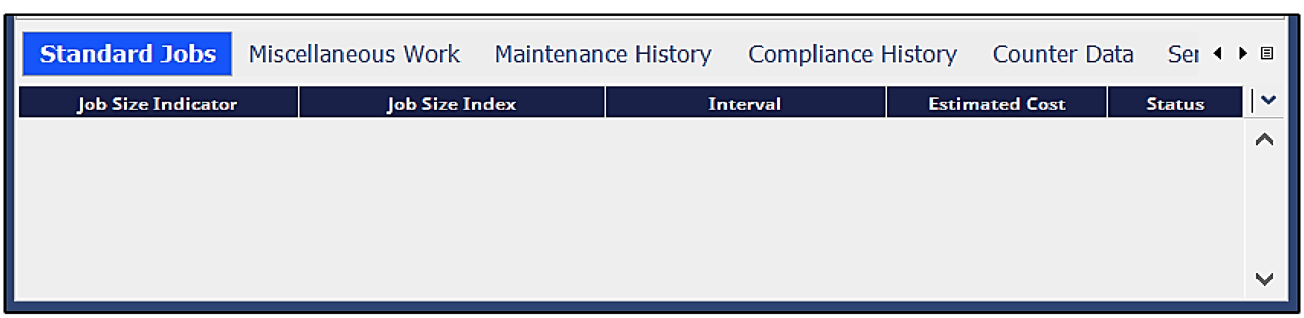
Field	Description
Name	The **Name** field contains the name of the part and a number. This number distinguishes this part from other parts if more than one maintained part was created.
Referenced Part Name	The **Referenced Part Name** field contains the name of the part listed in inventory.
Serial Number	The **Serial Number** field is the main field that distinguishes this part from other parts. For example, a ship's engine may have several cylinders that are exactly alike. The serial number is what distinguishes one particular cylinder from the others.
Date Acquired	Click the **Calendar** button at the end of the field to select the date the part was acquired.
Expiry Date	Click the **Calendar** button at the end of the field to select the date the part warranty expires.
Status	The **Status** field displays whether the maintained part is Active/Inactive on the ship or has been removed. Click on the radio button to select a status.
Code	Type an alphanumeric part code in the **Code** field. This part code links an imported standard job to the maintained part.
Serialized Item Required check box	Click the **Serialized Item Required** check box to indicate that the maintained part is a serialized item.
Location	Type a location of the equipment in the **Equipment Location** field. This field is alpha-numeric with a maximum of 60 characters and is user defined. The **Equipment Location** field is included in the **Equipment Details** report and the **Equipment Particulars** portion of the **WO / SR / NAJ** form
Manufacturer	Click on the dropdown menu at the end of the **Manufacturer** field to open the **Equipment Maker** Search window. On the **Search** Tab, the company type is defaulted to Equipment Maker. Select any other filters that might apply and click Search to view a list of manufacturers. Highlight the selected manufacturer to close the **Equipment Maker** Search window and display the value on the new maintained part screen.
Model	Type the model number of the equipment in the **Model** field. **NOTE:** The **Model** field applies to equipment and NOT to consumables.

Field	Description
Type	Type the kind of equipment in the **Type** field. **NOTE:** The **Type** field applies to equipment and NOT to consumables.
Size	Type the size of the equipment, if applicable, in the **Size** field. **NOTE:** The **Size** field applies to equipment and NOT to consumables.
Part Criticality	Click on the dropdown menu at the end of the **Part Criticality** field to open the Part Criticality Selection window. Select the **part criticality** by highlighting and clicking the right arrow to move it from the left side of the window to the right side. Click the **OK** button when finished. More than one criticality can be selected for a maintained part.
Open Part button	Clicking on the **Open Part** button, opens the **Part** record associated with this **Maintained Part.**
Class Data section	The **Class Data** section was added to include classification information. The fields in this section are: • **Class Code** – classification code which is the UID of the vessel • **HID** – Hierarchy Identification Number • **Class Equipment Name** – the name by which the equipment associated with this maintained part is referenced by the class society **NOTE:** Only authorized users can add or edit information in these fields.

Standard Jobs Tab

The **Standard Jobs** tab lists the standard jobs that include this part. The information on this tab is taken from the standard job.

Double click on a standard job on the **Standard Jobs** tab to open the job window. Only authorized users can enter or change information on the **Standard Job** window.



The fields on the **Standard Jobs** tab are:

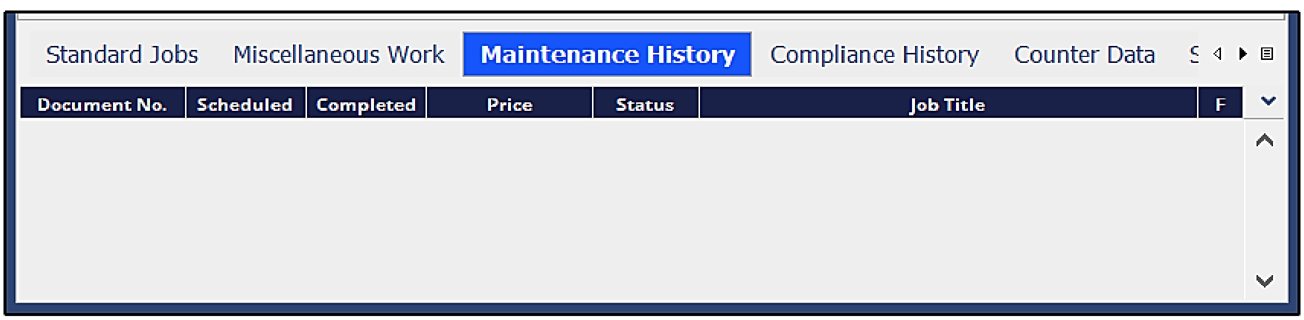
- **Job Size Indicator** –the **Job Size Indicator** defines the relationship of the job compared to other jobs under the same equipment or space.
- **Job Size Index** – the **Job Size Index** categorizes machinery jobs. For example, a Major Overhaul for Unit #1 can be a job size index and all the smaller tasks involved in completing this job are given a **Job Size Indicator**.
- **Interval** – the **Interval** is the time frame between when the job was last performed and the next time it needs to be performed.
- **Estimated Cost** – the estimated price of performing the job that includes cost of personnel, tools, services, and materials.
- **Status** – indicates the status of the standard job associated with the maintained part.

Miscellaneous Work Tab

Refer to Item 21.6 Miscellaneous Work Tab section of this manual.

Maintenance History Tab

The **Maintenance History** tab lists the documents associated with the maintenance on the specified maintained part. Tracking also includes individual maintained parts and equipment by serial number. Landing order documents facilitate the movement of serialized items from one location to another. These documents are work orders, service requisitions, no action jobs and service purchase orders that have the maintained part listed. Some fields on these documents can be edited by authorized users at the ship level. Documents are automatically added to this tab when they are created if they specify this maintained part.



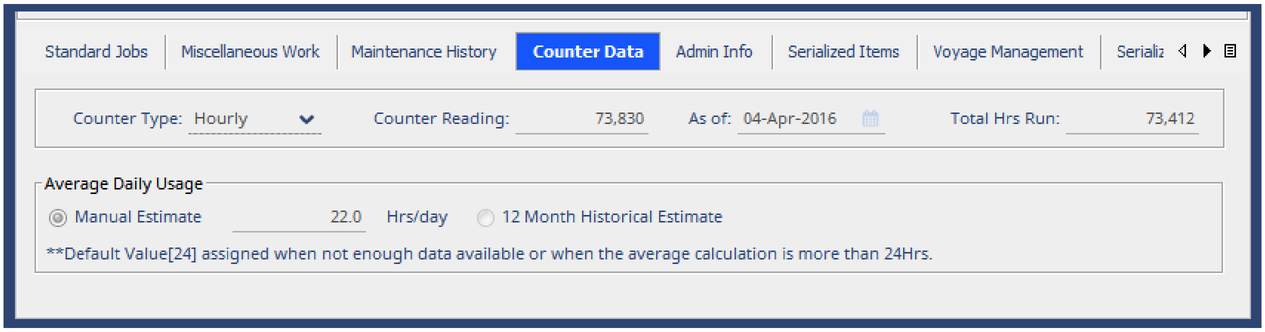
The fields on the **Maintenance History** tab are:

- **Document number** – the maintenance document name and number.
- **Scheduled** – the scheduled date of the maintenance
- **Completed** – the date the maintenance was completed
- **Price** – the price to do the job
- **Status -** indicates whether the work is scheduled (SCHD or S), completed (CMPL or CP), closed (CLOS or CL) or cancelled (CANC or X).

- **Job Title** – the title of the maintenance as listed on the work order or service purchase order
- **F** – an icon is displayed in this column if information is entered on the Findings tab of the document. Double click the icon to open the document.

Double click on a document on the **Maintenance History** tab to open.

Counter Data Tab

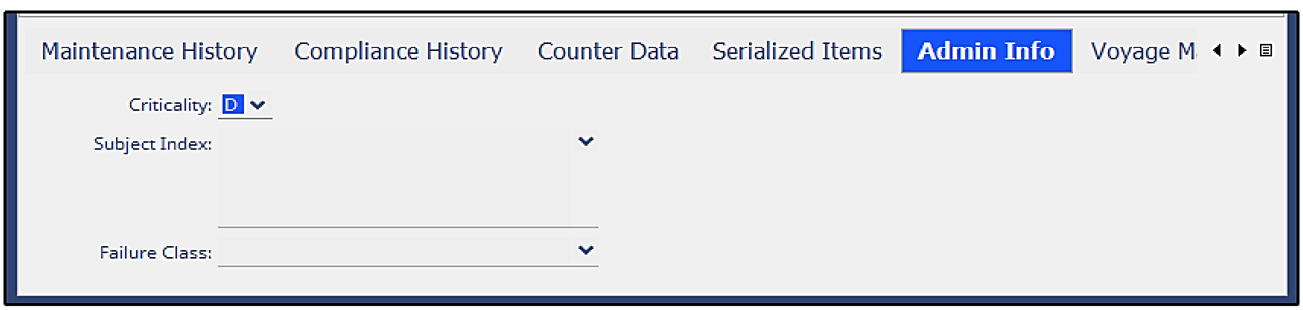


The **Counter Data** tab displays the counter information recorded on the **Counter Setup Tab** of the equipment that the maintained part is under in the hierarchy. Only the **Total Hrs Run** field is editable from this tab.

Admin Info Tab

The **Admin Info** Tab identifies the **Criticality** for the maintained part, the **Subject Index** and **ASTM Class** associated to the Maintained Part.

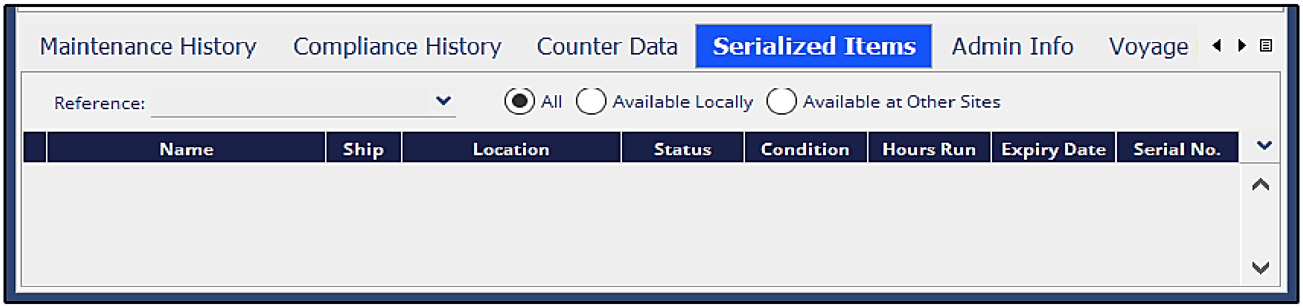
Serialized Items Tab



The menu options allow the user to **Install, Remove, View Installed Item**, **Create Serialized Item, Edit Serialized Item** or **Change the Status** of a **Serialized Item**. If there are serialized items with the same **SI Reference** as the **Maintained Part** and already associated to the maintained part, they will display on this tab.

When creating a new Serialized Item, user must first select the **SI reference** on the **Equipment record→Serialized Item** Tab before selecting the menu option **Serialized Item→Create New Serialized** Item.

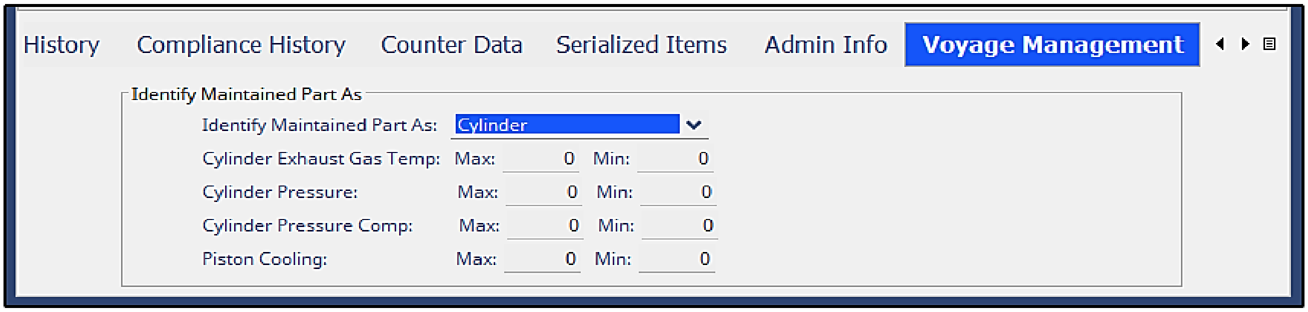
Click on the menu option **Serialized Item→Create Serialized Item** to open the **Serialized Item – New** window.



Menu Option	Description
Install	Select the **Install** option to install the part as a serialized item.
Remove	The **Remove** option becomes available when the maintained part has been installed as a serialized item. Select the **Remove** option to remove the part as a serialized item. A serialized item is removed to be repaired, used as a spare part, or discarded. Discarded items **CANNOT** be installed again.
View Installed Item	Selecting this menu option opens the selected serialized item on the **Serialized Item** Tab to allow the user to view the details for the serialized item.
Create Serialized Item	Selecting this menu option allows the user to create a new serialized item. The **Serialized Item Reference** must first be populated on the **Serialized Item** Tab before the **Serialized Item - New** window opens.
Edit Serialized Item	Selecting this menu option opens the selected serialized item on the **Serialized Item** Tab to allow the user to edit the details for the serialized item.
Change Status	Selecting this menu option opens the selected serialized item on the **Serialized Item** Tab to allow the user to edit the **Status** field for the serialized item.

Voyage Management Tab (Maintained Part)

Currently as part of the Voyage Manager Module if the maintained part is identified as a Cylinder the user would enter/save in the min/max values on this tab. As events occur on the voyage that record performance of the cylinder the values are validated against the min/max values. In future releases more types of maintained parts will be included.



Serialized Item History Tab

The **Serialized Item History** Tab displays a list of all serialized items that have been in this **Maintained Part** slot throughout the lifetime of the vessel. The tab includes the name, serial number, date installed, date removed and document number.

File Attachments Tab

Refer to Item 21.2 File Attachment Tab section of this manual

Message Tab

Refer to Item 21.5 Messages Tab section of this manual.

Custom Forms Tab

Refer to Item 21.3 Custom Forms Tab section of this manual

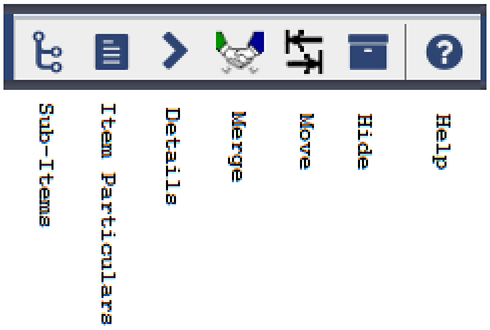
6.2.3 *Merge Parts*

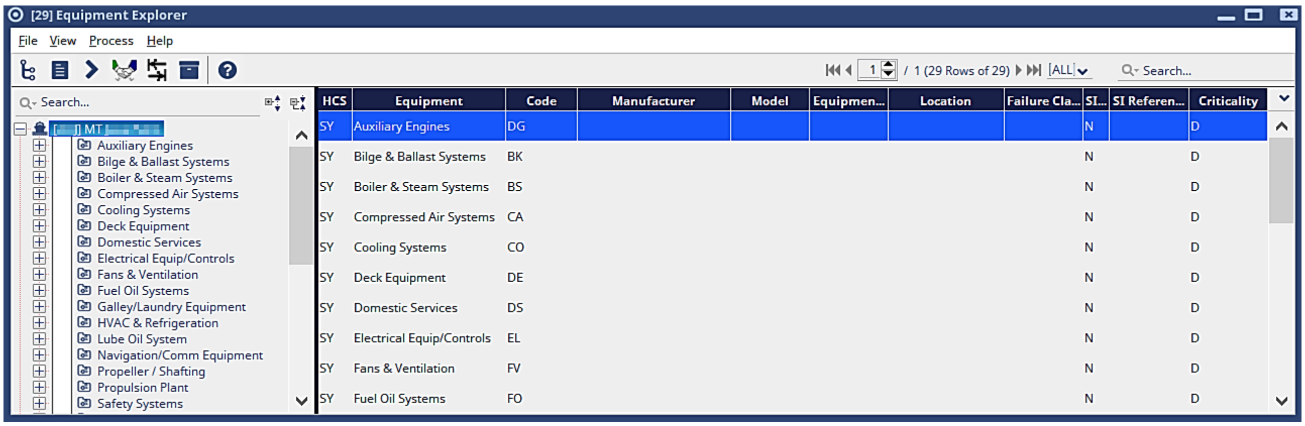
Sometimes parts are created that actually are the same as another part. Both parts may also contain inventory. These parts can be merged into one part and their inventories merged in **NS Enterprise**.

> **NOTE:** Only parts can be merged. Systems, equipment, consumable types, and components CANNOT be merged.

1. Select **Inventory** gadget→ **Tools** → **Hide/Reclassify Equipment/Parts, Merged Parts** from the **Navigator** pane on the **Maintenance and Purchasing** module at either the ship level or the fleet level.

The **Hide, Merge, Move Equipment/Parts Explorer** window opens. This **Explorer** window has a different menu and toolbar than the **Equipment Explorer** used to create equipment and parts. This **Explorer** window is used specifically for hiding, merging, or moving equipment and / or parts and the menu bar and toolbar are equipped to perform those procedures.

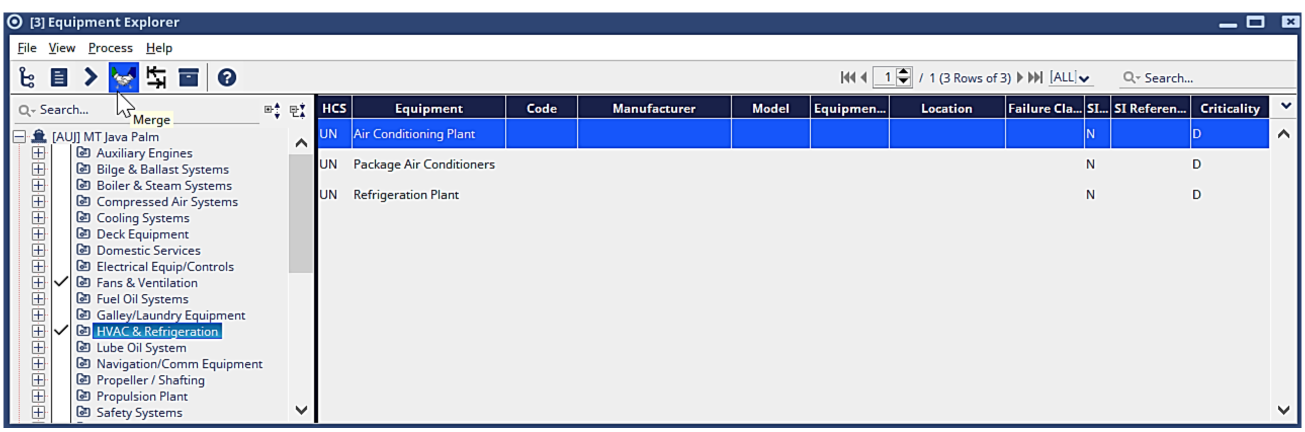




2. Drill down through the hierarchy to locate the parts to be merged.
3. Tick the check boxes preceding the parts to be merged. The parts are merged into the first part selected. For example, Merge Part A and Merge Part B are to be merged. If Merge Part A is selected before Merge Part B, the items in Merge Part B are merged into Merge Part A. If Merge Part B is selected before Merge Part A, then all items are merged into Merge Part B.

> **NOTE:** All sub-items listed under the part are also merged so these check boxes do NOT need to be checked if the parent part is being merged.

4. Click the **Merge** button from the toolbar.



- A message box opens confirming the merging of parts.

5. Click the **Yes** button on the message box to confirm the merge and close the message box.

The parts are merged into one part and the other selected parts are hidden. These parts can be used again, but they must be "unhidden".

> **NOTE:** Parts that are merged on one ship are also merged on all ships where the parent equipment is cross referenced.

6.2.4 *Hide Equipment or Parts*

Equipment and parts that are no longer used can be hidden or archived to reduce the number displayed on the **Equipment Explorer** window. These same equipment and parts can also be viewed or "unhidden".

1. Select **Inventory** gadget→ **Tools** → **Hide/Reclassify Equipment / Parts, Merged Parts** from the **Navigator** pane on the **Maintenance and Purchasing** window.

   The **Hide, Merge, Move Equipment/Parts Explorer** window opens. This **Explorer** window has a different menu and toolbar than the **Equipment Explorer** window used to create equipment and parts. This **Explorer** window is used specifically for hiding, merging, or moving equipment and / or parts and the menu bar and toolbar are equipped to perform those procedures.
2. Drill down through the hierarchy to locate the equipment or parts to be hidden.
3. Click the check boxes preceding the equipment or parts to be hidden.

More than one piece of equipment or part can be hidden at one time by clicking the check boxes for all equipment and parts that are to be hidden.

> **NOTE:** All sub-locations listed under the hidden equipment or parts are also hidden so these check boxes do NOT need to be checked if the primary equipment or part is being hidden.

4. Click the **Hide** button on the **Hide, Merge, Move Equipment/Parts Explorer** window.
5. Select "**Yes**" or "**No**" to the confirmation/warning message "**The inventory associated with equipment(s) / part(s) will not be accessible.**"

The selected equipment or part is removed from view on the **Hide, Merge, Move Equipment/Parts Explorer** window.

View Hidden Equipment or Part

1. Click the **Toggle Hidden Record Display Mode** button on the **Navigator** pane toolbar from the **Maintenance and Purchasing** window.
2. Select **Inventory** gadget→ **Tools** → **Hide / Reclassify Equipment / Parts, Merged Parts** from the **Navigator** pane on the **Maintenance and Purchasing** window to open the **Hide, Merge, Move Equipment/Parts Explorer** window. The hidden equipment or part is displayed with a red "X" on the equipment or part icon.

Unhide Hidden Equipment or Part

Unhiding equipment or parts is different than viewing them. They are visible in the hierarchy on the **Equipment Explorer** window without using the toggle.

1. Click the **Toggle Hidden Record Display Mode** button from the **Navigator** pane toolbar on the **Maintenance and Purchasing** window.
2. Select **Inventory** gadget→ **Tools → Hide/Reclassify Equipment / Parts, Merged Parts** from the **Navigator** pane on the **Maintenance and Purchasing** window to open the **Hide, Merge, Move Equipment/Parts Explorer** window. The hidden equipment or part is displayed with a red "X" on the equipment or part icon.
3. Click the **Hide** button on the **Hide, Merge, Move Equipment/Parts Explorer** window.

The previously hidden equipment or part is again visible on the **Hide, Merge, Move Equipment/Parts Explorer** window.

6.2.5 *Move Equipment or Parts*

Equipment and parts can be moved from one position on the hierarchy to another. The **Tools** menu does NOT list "Move" as an option, it is called "Reclassify Equipment". It is called reclassify because it redefines the relationship of the part or equipment within the hierarchy.

NOTE: Equipment or parts CANNOT be moved to a location that is a sub-item of the equipment or part. For example, equipment CANNOT be moved "under" a part.

There are two ways to move equipment or parts from one position in the hierarchy to another:

- Drag and Drop
- Conventional method

NOTE: Both methods move all sub-items listed under the equipment or parts.

Drag and Drop

1. Click and hold the left mouse button on the equipment or part to be moved.
2. Continue depressing the left mouse button and "drag" the equipment or part to the destination location on the hierarchy.
3. Release the mouse button to "drop" the equipment or part into the destination location on the hierarchy.

Conventional Method

1. Select **Inventory** gadget→ **Tools → Hide/Reclassify Equipment / Parts, Merged Parts** from the **Navigator** pane on the **Maintenance and Purchasing** window.

The **Hide, Merge, Move Equipment/Parts Explorer** window opens.

2. Click the check boxes preceding the equipment or parts to be moved.

> **NOTE:** All sub-items listed under the equipment or part are also moved so these check boxes do NOT need to be checked if the primary equipment or part is being moved.

3. Click to highlight the position where the equipment or parts are to be moved. DO NOT CLICK THE CHECK BOX!

4. Click the **Move** button on the **Hide, Merge, Move Equipment/Parts Explorer** window.

- A message box opens to confirm the locations to be moved.

5. Click the **Yes** button on the message box to confirm moving the equipment or part and close the message box.

- The equipment or part is moved.

6.2.6 *Search for Equipment or Parts*

The **Equipment Explorer** provides options for locating parts or equipment.

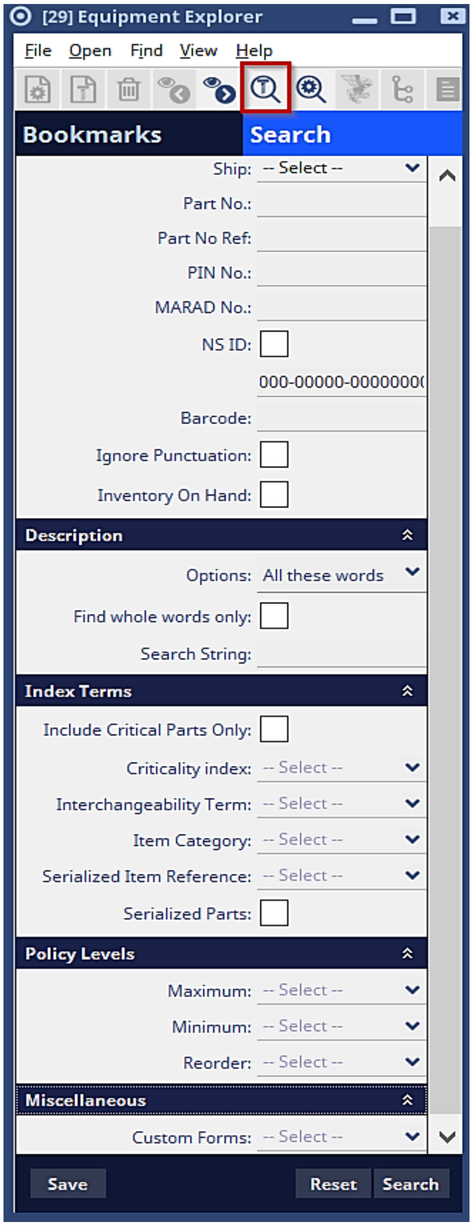
NOTE: NS Search windows include:

- If any document is edited, the document is marked with a Red color to indicate that it has been edited.
- If any document is edited and the document screen is closed, the row for that document will remain highlighted.
- The edited documents indicator will be reset on Search button click.

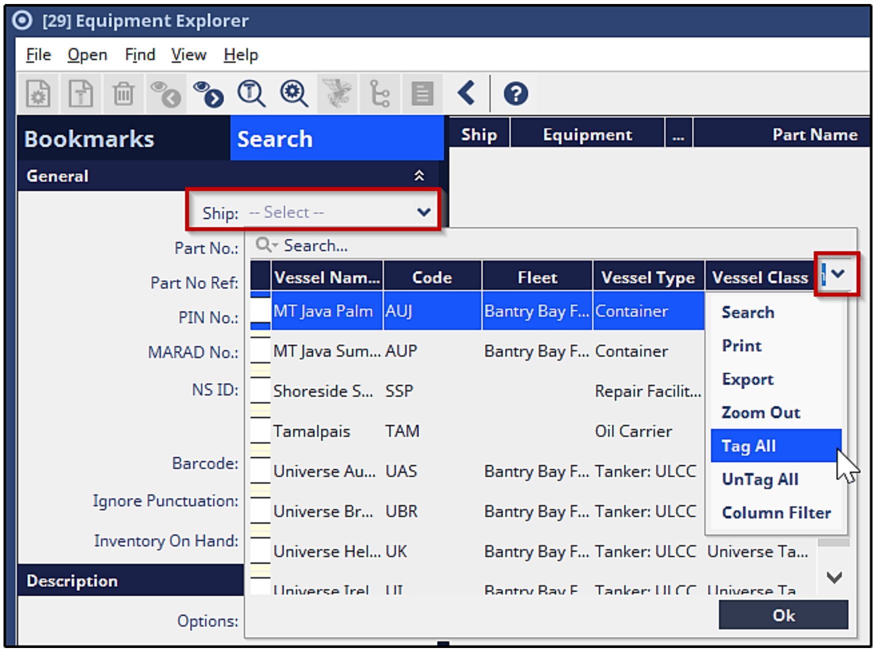
Find Part

Locate a part with the **Find Part** button on the **Equipment Explorer** toolbar.

1. Click the **Equipment Explorer** button from the **Navigator** pane toolbar on the **Maintenance and Purchasing** window.
2. Click the **Find Part** button on the **Equipment Explorer** toolbar to search for a part by one of the options.



2. Click on the dropdown menu at the end of the **Ship** field to open the **Ship List** window. To select/Tag all ships, click on the dropdown menu to the right of the Vessel Class column and choose Tag All. To select individual ships, check the box (es) to the left of the Vessel Name.



3. Click in the field(s) to type the required parameter.

NOTE: Parameters must be entered in the correct case. The more parameters entered shortens the number of results found.

- **General** section
  - **Part Number**
  - **Part Number Reference**
  - **Pin Number**
  - **MARAD Number**
  - **ID/Bar Code** – click the check box at the end of this field to open this field. Type the bar code or the ID number of the part for the query. Some fields in the **Search Companion** are disabled when this field is used.
  - **Ignore Punctuation** check box – click the **Ignore Punctuation** check box to ignore any punctuation in these fields
- **Description** section – the **Description** section is used to find equipment or parts using specific words included in the **Description** field
  - Options: Help to filter information entered in the **Description** section. Only one choice can be selected.
    - All these Words
    - Any of these Words
    - The exact phrase
  - Find whole words only check box – click this check box to trigger the query to only find whole words used in the **Search String** field.

- Search String - type a word or words that may be included in the description of the part.

- **Index Term** Section
  - **Include Critical Parts Only** check box – click this check box to only include parts that have the **Critical** check box on the **Part** window checked.
  - **Criticality Index –** click on the dropdown menu at the end of the field to open the list of criticality indexes. Check the box (es) that will be applied to the query and click the **OK** button to return to the search companion window.
  - **Interchangeability Term** – click on the dropdown menu at the end of the field to open the **Available Interchangeabilities** window. Check the box (es) that will be applied to the query and click the **OK** button to return to the search companion window.
  - **Item Category** – click on the dropdown menu button at the end of the field to open the **Item Category Selection** window. Check the box (es) that will be applied to the query and click the **OK** button to return to the search companion window.
  - **Serialized Item Reference** – click on the dropdown menu at the end of the field to open the list for serialized item references.
  - **Serialized Parts check box** – click the check box to only include serialized parts.
- **Miscellaneous Section**
  - **Custom Forms -** click on the dropdown menu at the end of the **Custom Form** field to select the custom form

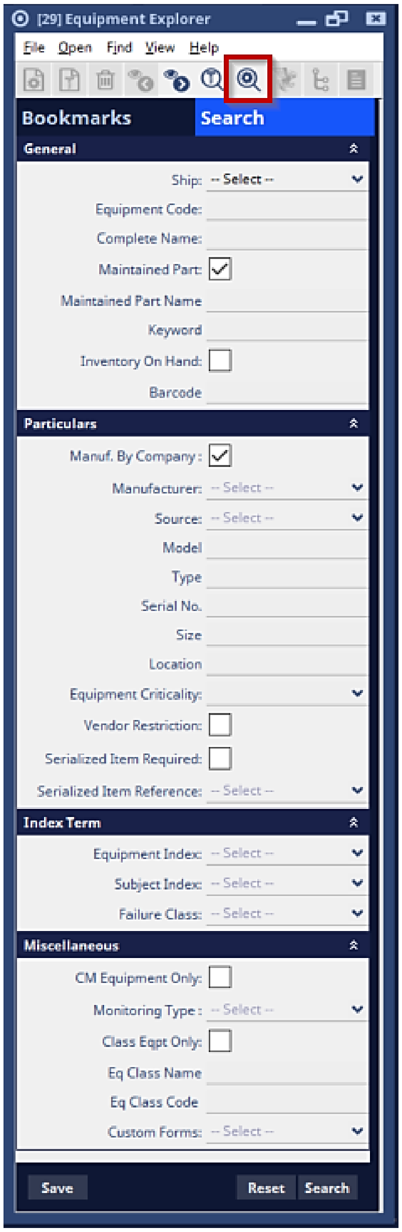
4 Click the **Search** button to generate the search. The right side of the window displays the items meeting the specified criteria when the search is complete.

- "**Critical**" column is added in the search result screen for **Find Part**.

Find Equipment

1. Click the **Equipment Query** button on the **Equipment Explorer** toolbar to search for equipment.

   - The **Equipment Query** window opens.



2. Click in the field to type the required parameter or click the dropdown menu on the selected field for a list of options to search for the desired equipment.

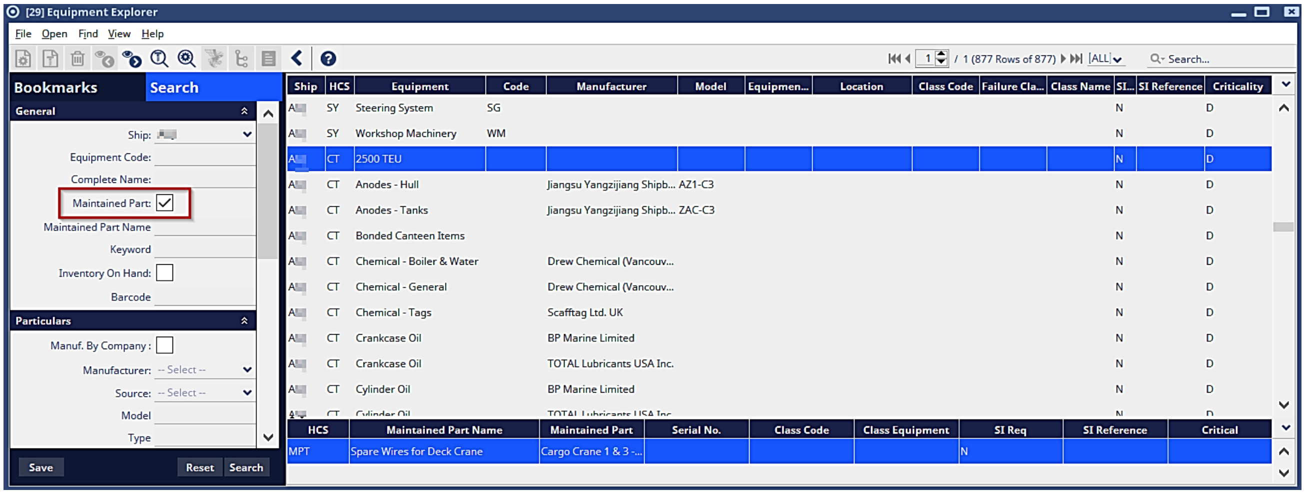
NOTE: Parameters must be entered in the correct case. The more parameters entered shortens the number of results found.

- **General Section**
  - **Ship -** click the dropdown menu at the end of the field for a list of ships. The ship name is automatically entered if the query is run from the ship level. Only one selection can be made.
  - **Equipment Code –** type the equipment code for the equipment
  - **Complete Name** (of the equipment) – a partial name can also be used

  - **Maintained Part** check box – The check box by default is selected to include the maintained parts for the equipment.
  - **Maintained Part Name** – type the name of a specific maintained part in the **Maintained Part** field.
  - **Keyword** – type a word or words that may be included in the description of the equipment.
- **Particulars Section**
  - **Manuf. By Company** check box **–** By default this is checked and will filter the search to look only at company records that are identified as a manufacturer
  - **Manufacturer** – click the dropdown menu in this field for a list of manufacturers
  - **Source –** click the dropdown menu in this field for a list of vendors
  - **Model** – model number
  - **Type** – the type of equipment
  - **Serial No.** – serial number of the equipment
  - **Size** – the size of the equipment
  - **Equipment Criticality** – click on the dropdown menu at the end of the field to select the level of user defined equipment criticality. A column in the search result screen is added and named "**Criticality**".
  - **Vendor Restriction** check box
  - **Serialized Item Required** check box
  - **Serialized Item Reference –** click on the dropdown menu at the end of the field to open the list for serialized item references
- **Index Term Section**
  - **Equipment Index –** click on the dropdown menu at the end of the field to select the equipment term.
  - **Subject Index** – click the dropdown menu at the end of the field for a list of subject index terms that best describes the equipment.
- **Miscellaneous Section**
  - **CM Equipment Only** check box **-** click this check box to only include equipment that has the **Condition Monitoring** check box checked.
  - **Monitoring Type** – the **Condition Monitoring Type** field becomes available when the **All** check box is unchecked. Click on the dropdown menu at the end of the field to select the type of condition monitoring equipment is to be included in the query results.
  - **Class Equipment Only** check box – click the check box to only include equipment where the **Class Data** section of the **Equipment** window is completed
  - **Eq Class Name** – specify a class name
  - **Eq Class Code** – specify a class code
  - **Custom Forms -** click on the dropdown menu at the end of the **Custom Form** field to select the custom form.

1. Click the **Search** button. The right side of the window displays the items meeting the specified criteria when the search is complete.

2. When searching with the **Maintained Part** checkbox checked, the Equipment List window displays two panes. The top part of the window lists the information about the equipment. The bottom half of the list window displays the detailed information for the maintained parts.



Section 7 Condition Based Monitoring

Condition based monitoring is used to monitor the condition of specific areas of equipment for predictive maintenance. This is done automatically with the use of instrumentation such as machinery vibration analysis and thermal imaging equipment or manually. Properly applied condition-based maintenance can help identify and rectify problems at an early stage, improve machinery reliability and can help to reduce maintenance costs.

The condition-based monitoring workflow is:

- Ship owner identifies the machineries whose condition is to be monitored and tags them in **NS Enterprise**. The equipment is identified on the **Condition Monitoring** tab of the **Equipment** window.
- A standard job is created for each type of condition monitoring and linked to the related machineries.
- Service requisitions and service purchase orders are created from the standard job. The service purchase order vendor is an approved condition monitoring firm.
- The third-party condition monitoring vendor comes on board the vessel and conducts the monitoring. The condition monitoring vendor is identified as “Condition Monitoring Analyst” by the **Identity** field on the **Company Type** window.
- The vendor places the summary report in .xml format on their ftp site or emails the report. Either format can be imported into **NS Enterprise**.
- Work orders are created per the report for equipment having problems.

Fields and tabs have been added to several windows within the **NS Enterprise Maintenance** module to reflect the addition of **Condition Based Monitoring**.

7.1 *Setup for Condition Based Monitoring*

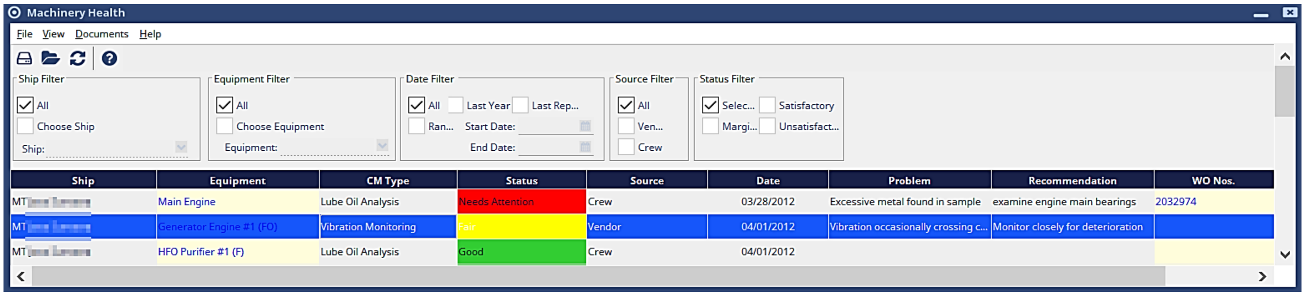
The URL for the condition monitoring analyst vendor and any other configuration is set up in the **System Administration** module by an authorized user.

7.2 *Machinery Health*

Information from condition reports is displayed on the **Machinery Health** window. The **Machinery Health** window is a query window where parameters are set to display selected reports. The information from the **Machinery Health** window is also on the **Condition** sub-tab of the **Maintenance History** tab on the **Equipment** window.

Machinery Health is available both in the fleet level and ship level. A snapshot of the overall health of the fleet can be viewed at the fleet level. The **Machinery Health** window is slightly different on the fleet level than the ship level. The **Machinery Health** window that is opened from the fleet level displays the condition reports for all vessels in the fleet.

Fleet Level



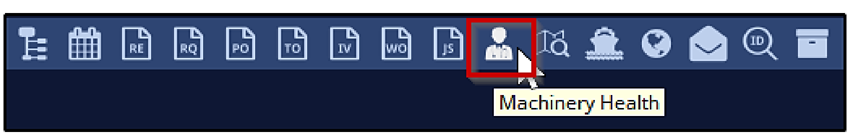
Ship Level

There are two tabs on the **Machinery Health** window opened at ship level:

- **Equipment View** – the **Equipment View** tab is used to query the system for condition reports according to the parameters selected in the filters on the header. It displays the details of the condition monitoring summary report. The information can be filtered by equipment, date, source, or status.
- **Report View** – the **Report View** tab is used to query the system for condition reports by date, source, and the identity of the condition monitoring type. It displays the basic information of the report such as the name of the condition monitoring company, the date the report was created, the name of the report, equipment, and the status.

To open the Machinery Health functionality:

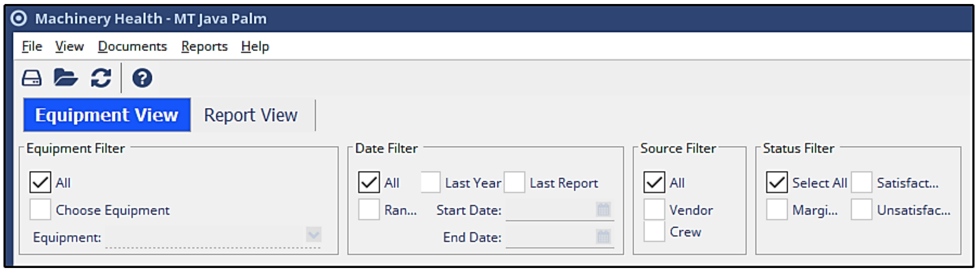
1. Click the **Machinery Health** button on the **Navigator** pane toolbar of the **Maintenance** window from the fleet or ship view.



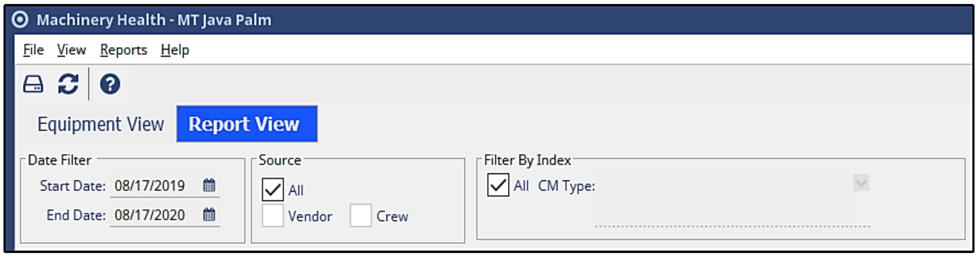
The **Machinery Health** window opens.

> **NOTE:** The **Machinery Health** window can also be opened by selecting **Condition Monitoring →Equipment Status** from the **Maintenance** gadget on the **Navigator** pane on the **Maintenance** window from either the fleet or ship level.

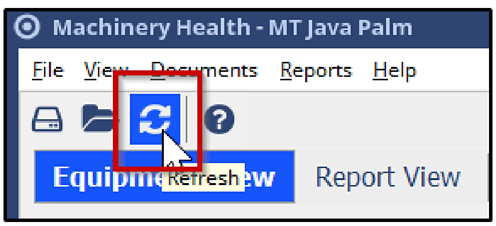
2 Select the parameters according to equipment on the **Equipment View** tab or according to specific reports on the **Report View** tab.



OR



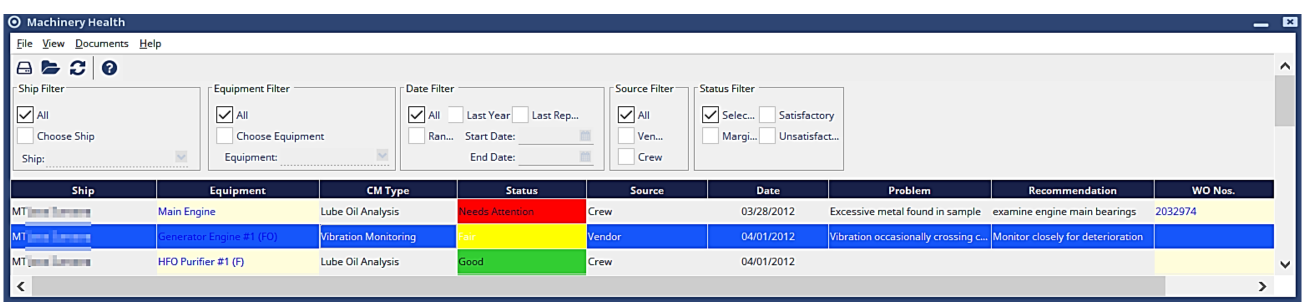
3 Click the **Refresh** button on the **Machinery Health** window to display reports meeting the selected criteria.



4 Click the equipment listed in the **Equipment** column of the **Equipment View** tab to open the **Equipment** window.

5 Double click on the information in the **CM Type**, **Status, Date**, **Problem**, **Recommendation** or **Attachment** columns to display the **CM Status Detail** window.

6 Click on the work order number to open the **Work Order** window.



The menu bar and toolbar options for the **Maintenance Health** window on the fleet level are the same as the ones for the ship level when the **Equipment View** tab is active except the option for reports. The **Reports** menu bar option is not available at the fleet level.

7.2.1 *Equipment View Tab*

The **Equipment View** tab is a query of condition monitoring reports for selected equipment, time frames and status. Select the criteria for the query using the filter sections on the header of the tab. At the **fleet** level there is also a filter for All Ships or selecting a specific ship.

Filter	Fields	Description
Equipment	**All** check box	The **All** check box is checked by default. The **All** check box indicates that all equipment is included on the list. The **Choose Equipment** check box becomes available when the **All** check box is unchecked.
	Choose Equipment check box	The **Choose Equipment** check box becomes available when the **All** check box is unchecked. Click the **Choose Equipment** check box to select what equipment condition monitoring reports are included on this query. The dropdown menu at the end of the **Equipment** field becomes available when the **Choose Equipment** check box is checked. **NOTE:** Only equipment that is set up as condition monitored is available from this window.
	Equipment	Click the dropdown menu at the end of the **Equipment** field when the **Choose Equipment** check box is checked. **NOTE:** Only equipment that is set up as condition monitored is available from this window. Click the dropdown menu at the end of the **Equipment** field to select the equipment. The **Equipment Explorer** window opens. Click the plus sign (+) preceding each system to display the equipment under the system. Click the check box for all equipment to be included in the query. Click the **Select** button to close the **Equipment Explorer** window and add the selections to the **Equipment** field.
Date	**All** check box	The **All** check box is checked by default. The **All** check box indicates that all dates are included on the list. The **Last Year**, **Last Report** and **Range** check boxes become available when the **All** check box is unchecked.
	Last Year check box	The **Last Year** check box becomes available when the **All** check box is unchecked. Click the **Last Year** check box to only include the past year's condition monitoring reports for the selected equipment. The current date is selected for the **End Date** field and the same date from the previous year is selected in the **Start Date** field. The dates CANNOT be changed. Use the **Range** check box to custom select the start and end dates.

Filter	Fields	Description
	Last Report check box	The **Last Report** check box becomes available when the **All** check box is unchecked. Click the **Last Report** check box to only include the last condition monitoring reports for the selected equipment. The date of the last condition monitoring report is listed in the **Start Date** and **End Date** fields. Use the **Range** check box to custom select the start and end dates.
	Range check box	The **Range** check box becomes available when the **All** check box is unchecked. Click the **Range** check box to select a date range for the condition monitoring reports for the selected equipment. The **Start Date** and **End Date** fields become available when the **Range** check box is clicked.
	Start Date / End Date	The **Start Date** and **End Date** fields become available when the **Range** check box is checked. Click the **Calendar** buttons at the end of these fields to select the time frame for the reports. Reports with a date between the dates selected in the **Start Date** and **End Date** fields are included in the query.
Source	**All** check box	The **All** check box is checked by default. The **All** check box indicates that condition monitoring reports created by both vendors and crew members for the selected equipment within the specified date range are included in the query. The other check boxes become available when the **All** check box is unchecked.
	Vendor check box	The **Vendor** check box becomes available when the **All** check box is unchecked. Click the **Vendor** check box to only include condition monitoring reports submitted by vendors.
	Crew check box	The **Crew** check box becomes available when the **All** check box is unchecked. Click the **Crew** check box to only include condition monitoring reports submitted by the crew.
Status	**Select All** check box	The **Select All** check box is checked by default. The **Select All** check box indicates that condition reports with all status types for the selected equipment and date range are included on the list. The **Satisfactory**, **Marginal** and **Unsatisfactory** check boxes become available when the **Select All** check box is unchecked.
	Satisfactory check box	The **Satisfactory** check box becomes available when the **Select All** check box is unchecked. Click the **Satisfactory** check box to include only those reports with a status of “Satisfactory”.

Filter	Fields	Description
	Marginal check box	The **Marginal** check box becomes available when the **Select All** check box is unchecked. Click the **Marginal** check box to include only those reports with a status of “Marginal”.
	Unsatisfactory check box	The **Unsatisfactory** check box becomes available when the **Select All** check box is unchecked. Click the **Unsatisfactory** check box to include only those reports with a status of “Unsatisfactory”.

The options on the menu bar and toolbar of the **Machinery Health** window when the **Equipment View** tab is active are:

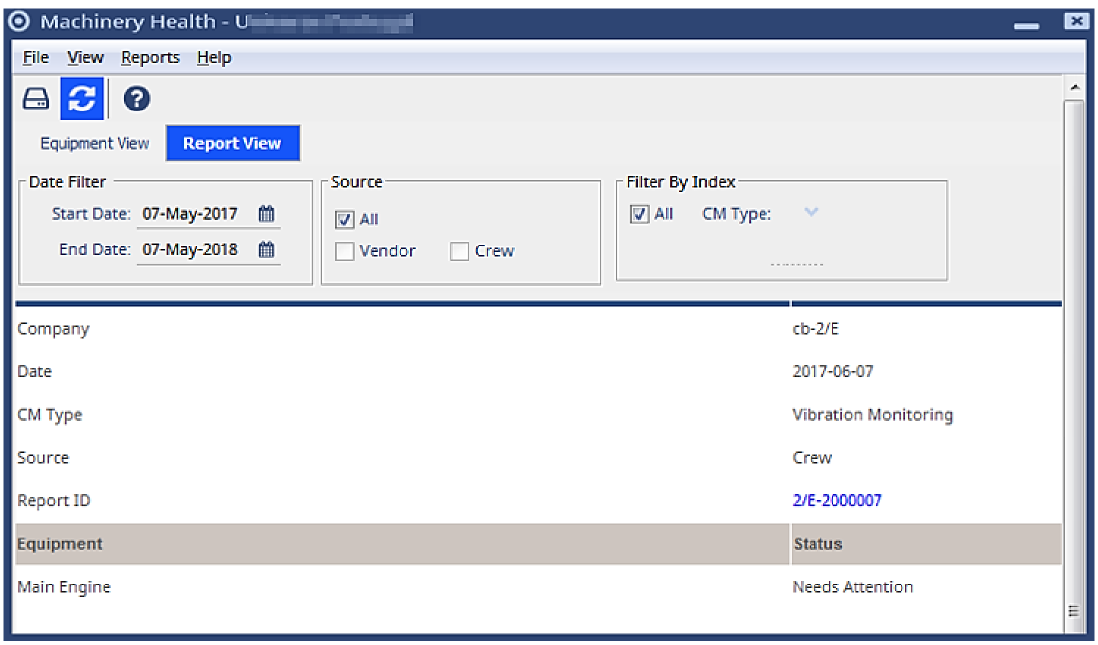
Option	Description
File→	The **File** menu contains options to manipulate a file.
Open	Select the **Open** option / button to open the **CM Status Detail** window for the highlighted selection. **NOTE:** Double clicking on the information in the **Date**, **CM Type**, **Status**, **Problem**, **Recommendation** or **Attachment** columns opens the **CM Status Detail** window.
Save	Select the **Save** option / button to save any changes made on the **Machinery Health** window.
View→	The **View** menu contains options regarding what is displayed on the **Machinery Health** window.
Refresh	Select the **Refresh** option / button to refresh the information on the window. This is used when filters have been changed.
Equipment	Select the **Equipment** option to open the **Equipment** window for the equipment that is highlighted.
Documents→	The **Documents** menu contains options regarding the documents available on the **Machinery Health** window.

Option	Description
Open Work Order	Select the **Open Work Order** option to open the **Work Order** window on the highlighted row. Double clicking on the work order number also opens the **Work Order** window. **NOTE:** Work orders are added from the **Condition Monitoring Report**.

For the Reports menu, refer to Section 21 – Miscellaneous Items for the detailed descriptions of each item.

7.2.2 *Report View Tab*

The **Report View** tab is used to query the system for condition reports by date and the identity of the condition monitoring type. Select the criteria for the query using the filter sections on the header of the tab.



Filter	Fields	Description
Date	**Start Date / End Date**	Click the **Calendar** buttons at the end of the **Start Date** and **End Date** fields to select the time frame for the reports. Reports with a date between the time frame selected in the **Start Date** and **End Date** fields are included in the query.

Filter	Fields	Description
Source	**All** check box	The **All** check box is checked by default. The **All** check box indicates that condition monitoring reports created by both vendors and crew members for the selected equipment within the specified date range are included in the query. The other check boxes become available when the **All** check box is unchecked.
	Vendor check box	The **Vendor** check box becomes available when the **All** check box is unchecked. Click the **Vendor** check box to only include condition monitoring reports submitted by vendors.
	Crew check box	The **Crew** check box becomes available when the **All** check box is unchecked. Click the **Crew** check box to only include condition monitoring reports submitted by the crew.
Index	**All** check box	The **All** check box is checked by default. The **All** check box includes all condition monitoring types in the report. The **CM Type** field become available when the **All** check box is unchecked.
	CM Type	The **CM Type** field becomes available when the **All** check box is unchecked. Click the dropdown menu at the end of the **CM Type** field to select the condition monitoring types to be included on the report. The **Condition Monitoring Type Selection** window opens. Double click on a monitoring type on the left side of the window to move it to the right. More than one selection can be made. Click the **OK** button to close the type selection window and add the selections to the **CM Type** field.

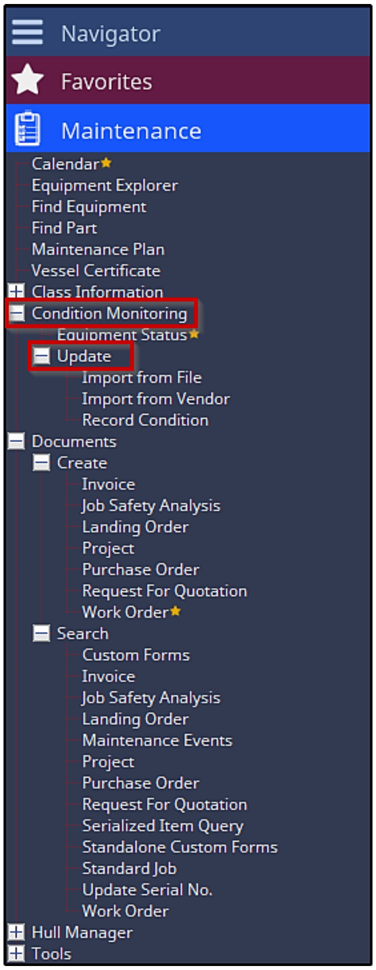
The menu bar and toolbar options available on the **Machinery Health** window when the **Report View** tab is active are:

Option	Description
File→	The **File** menu contains options to manipulate a file.
Save	Select the **Save** option / button to save any changes made on the **Machinery Health** window.
View→	The **View** menu contains options regarding what is displayed on the **Machinery Health** window.
Refresh	Select the **Refresh** option / button to refresh the information on the window. This is used when filters have been changed.

For the Reports menu, refer to Section 21 – Miscellaneous Items for the detailed descriptions of each item.

7.3 *Update Condition Status*

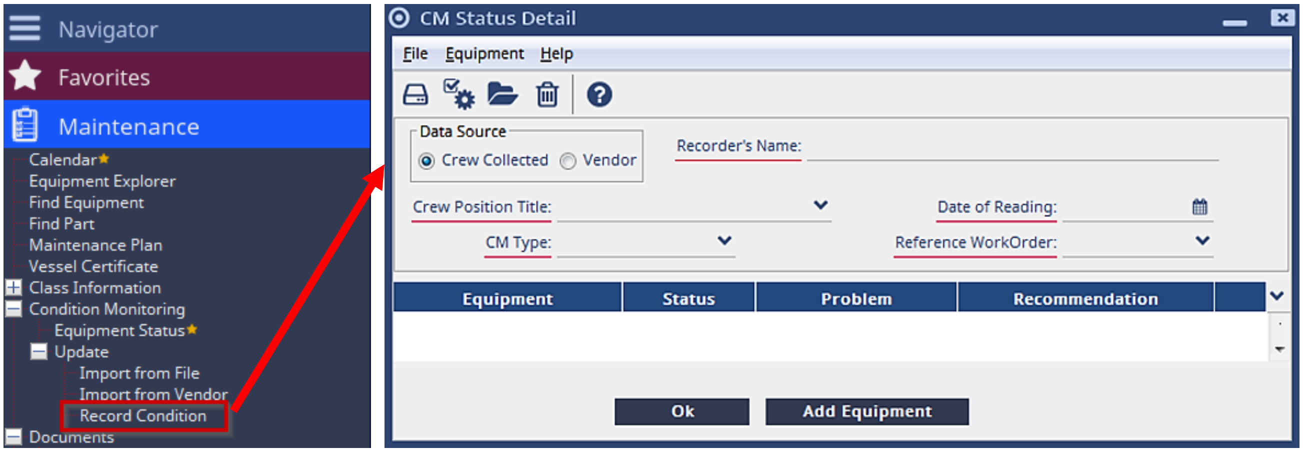
The **Update Condition Status** is used to import the summary report from the condition monitoring vendor. This report can be imported from a URL provided by the vendor or from a file sent from the vendor. A message is sent to the appropriate user if the "Receive Condition Monitoring message" check box has been checked on the **Ship Notifications** view of the **Notifications** tab on the **User** window.



7.3.1 *Record Condition*

The **Record Condition** option is used to update the condition monitoring status of equipment manually. This is used when importing the information is not available or when the information is not available in the correct file type.

1. Select the **Maintenance** gadget→ **Condition Monitoring → Update → Record Condition** from the **Navigator** pane on the **Maintenance and Purchasing** module on the ship level. The **CM Status Detail** window opens.



2. Click the radio button in the **Data Source** section to select whether the information was reported by a crew member or the condition monitoring vendor. The **CM Status Detail** window changes slightly depending on the radio button clicked.

Crew Collected

The **Crew Collected CM Status Detail** window is the default view when the **Record Condition** option is selected.

3. Type the name of the person making the report in the **Recorder's Name** field. This is a required field.

4. Click the dropdown menu at the end of the **Crew Position Title** field to select the position title of the crew member reporting the information. The **Crew Position Title** window opens.

5. Double click on the crew position title to close the **Crew Position Title** window and add the selection to the **Crew Position Title** field. This is a required field.

6. Click the **Calendar** button at the end of the **Date of Reading** field to select the date the condition monitoring information was read.

7. Click the dropdown menu at the end of the **CM Type** field to select the condition monitoring type being recorded. The **Condition Monitoring Type List** window opens.

8. Double click on a condition monitoring type to close the **Condition Monitoring Type List** window and add the selection to the **CM Type** field.

9 Click the dropdown menu at the end of the **Reference Work Order** field to select the work order associated with the report. This is a required field.

The **Work Order Selection** window opens. Click the **Search** tab after selecting the parameters for searching for the work order associated with the report.

10. Click the check box preceding the work order associated with the condition monitoring report. More than one selection can be made. Click the **Select** button on the **Work Order Selection** window to close the window and add the selection to the **Reference Work Order** field.

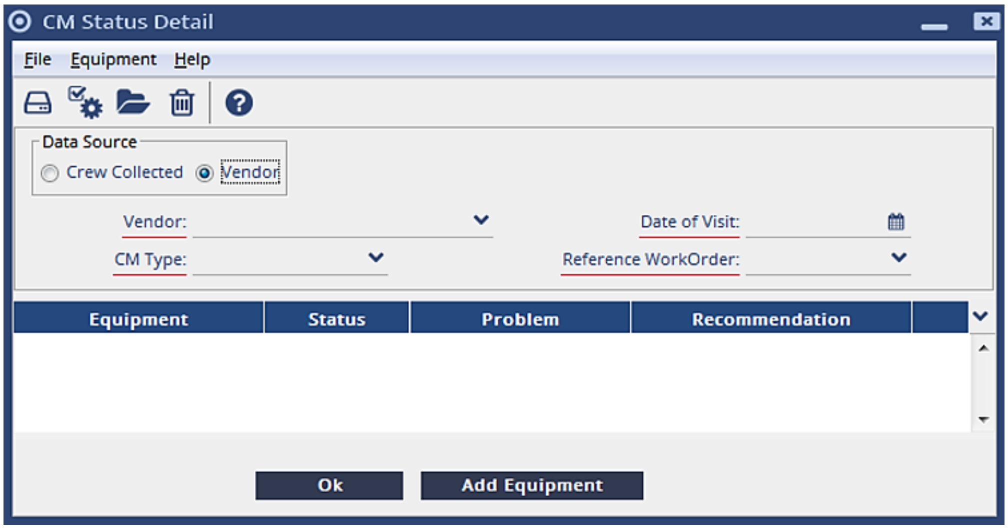
11. Click the **Add Equipment** button at the bottom of the **CM Status Detail** window to add the equipment associated with the report. Another **CM Status Detail** window opens.

12. Repeat steps until all equipment associated with this condition report are added to the **CM Status Detail** window accessed from the **Record Condition** option.

13. Click the **OK** button at the bottom of the **CM Status Detail** window for the condition report to close the window. The report is added to the **Machinery Health** window.

Vendor

The fields on the **CM Status Detail** window when the **Vendor** radio button is clicked is slightly different than the default window displayed with the **Crew Collected** radio button selected.



1. Click the dropdown menu at the end of the **Vendor** field to select the condition monitoring vendor reporting the information. The **CM Vendor** window opens. Notice that the company type with the **CM Analyst** identity is listed by default in the **Company Type** field on the **Search** tab.

   Click the **Search** button. Companies with that company type are listed in the query results.

   Double click on the condition monitoring vendor filing the report to close the **CM Vendor** window and add the selection to the **Vendor** field. This is a required field.

2. Click the **Calendar** button at the end of the **Date of Visit** field to select the date the vendor visited the vessel for the report. Navigate through the **Calendar** window to select the date. Click the date to close the **Calendar** window and add the date to the **Date of Visit** field. This is a required field.

3. Click the dropdown menu at the end of the **CM Type** field to select the condition monitoring type being reported. The **Condition Monitoring Type List** window opens.

   Double click on a condition monitoring type to close the **Condition Monitoring Type List** window and add the selection to the **CM Type** field. This is a required field.

4. Click the dropdown menu at the end of the **Reference Work Order** field to select the work order associated with the report. This is a required field.

The **Work Order Selection** window opens. Click the **Search** tab after selecting the parameters for searching for the work order associated with the report.

Click the check box preceding the work order associated with the condition monitoring report. More than one selection can be made. Click the **Select** button on the **Work Order Selection** window to close the window and add the selection to the **Reference Work Order** field.

5. Click the **Add Equipment** button at the bottom of the **CM Status Detail** window to add the equipment associated with the report. Another **CM Status Detail** window opens.

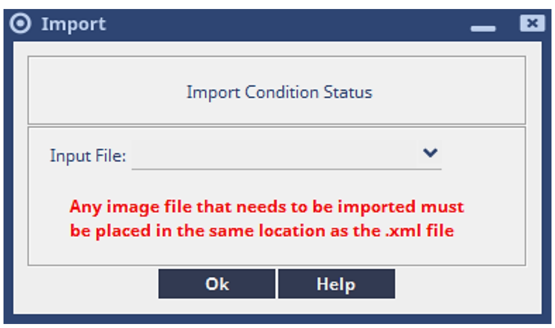
6. Repeat steps until all equipment associated with this condition report are added to the **CM Status Detail** window accessed from the **Record Condition** option.

7. Click the **OK** button at the bottom of the **CM Status Detail** window for the condition report to close the window. The report is added to the **Machinery Health** window.

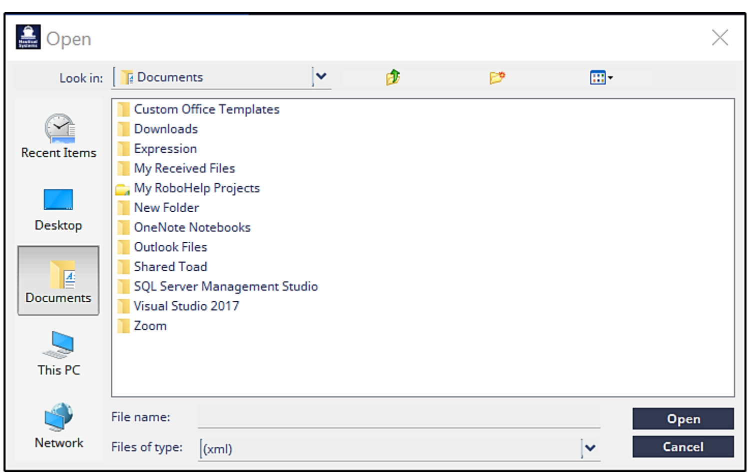
7.3.2 *Import from File*

The **Import from File** option is used to import the condition report in .xml format. No other format is supported. Images associated with the file are added if they have been placed in the same location as the .xml file.

1. Select the **Maintenance** gadget→ **Condition Monitoring → Update → Import from File** from the **Navigator** pane on the **Maintenance and Purchasing** window on the ship level. The **Import** window opens.



2. Click the dropdown menu at the end of the **Input File** field. The **Open** window opens on the default directory.



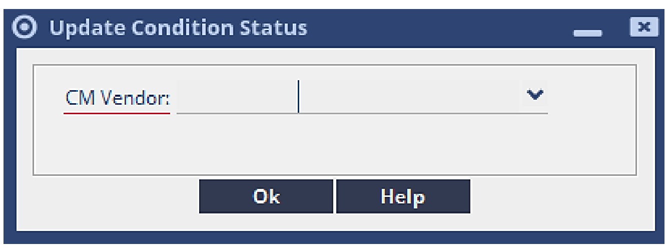
NOTE: Notice that the only file type available is .xml. Any images with a .jpg extension associated with the .xml file in the same directory as the .xml are also imported.

3. Navigate through the directory to find the summary report.
4. Double click on the file. The **Open** window closes, and the file name is displayed in the **Input File** field.
5. Click the **OK** button on the **Import** window to close the window and start the import process.
   - A log file in Notepad opens when the process ends with a message stating if the import was successful.

7.3.3 *Import from Vendor*

NOTE: The **Vendor URL Configuration** MUST be setup prior to using the **Import from Vendor** option.

1. Select the **Maintenance** gadget→ **Condition Monitoring → Update → Import from Vendor** from the **Navigator** pane on the **Maintenance and Purchasing** window on the ship level. The **Update Condition Status** window opens.



2. Click the dropdown menu at the end of the **CM Vendor** field. The **CM Provider** window opens. Notice that the company type with the **CM Provider** identity is listed by default in the **Company Type** field on the **Search** tab.

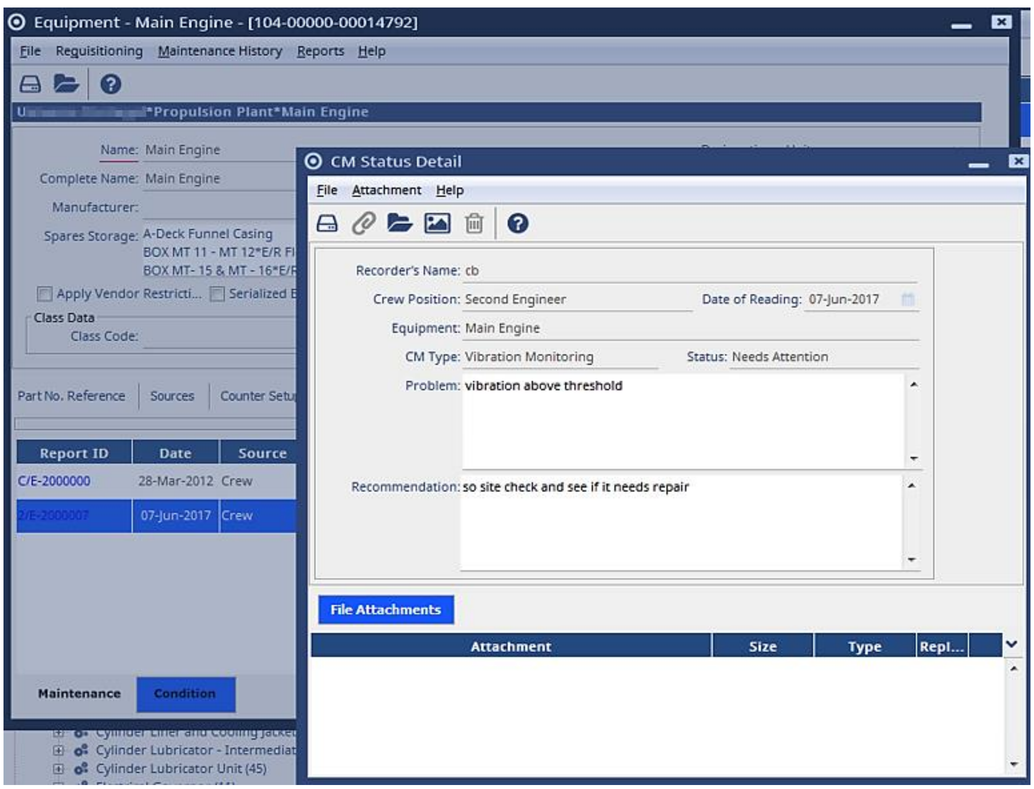
   Click the **Search** button. Companies with that company type are listed in the query results.
3. Double click on a vendor to close the **CM Provider** window and add the selection to the **CM Vendor** field.
4. Click the **OK** button to connect to the URL for the selected vendor and close the **Update Condition Status** window.
   - A log file in Notepad opens when the process ends with a message stating if the import was successful.

7.4 *CM Status Detail Window*

NOTE: This **Condition Status Detail** window is not to be confused with the one that opens when the **Maintenance** gadget **→Condition Monitoring →Update→ Record Condition** option is selected.

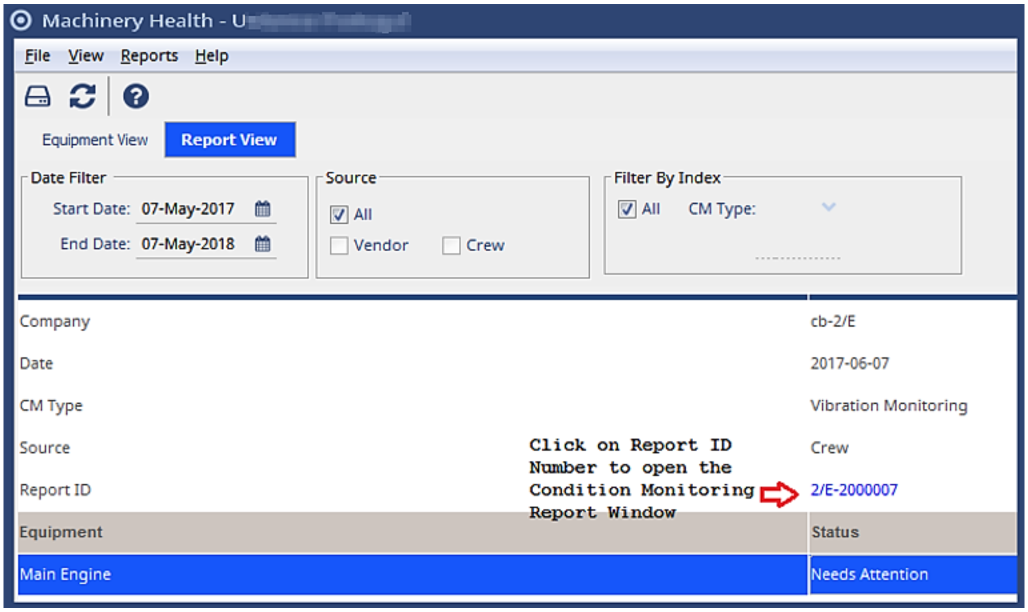
There are two types of **CM Status Detail** window. One is editable whereas the other is read-only. The read-only version contains the information that was entered in the editable version.

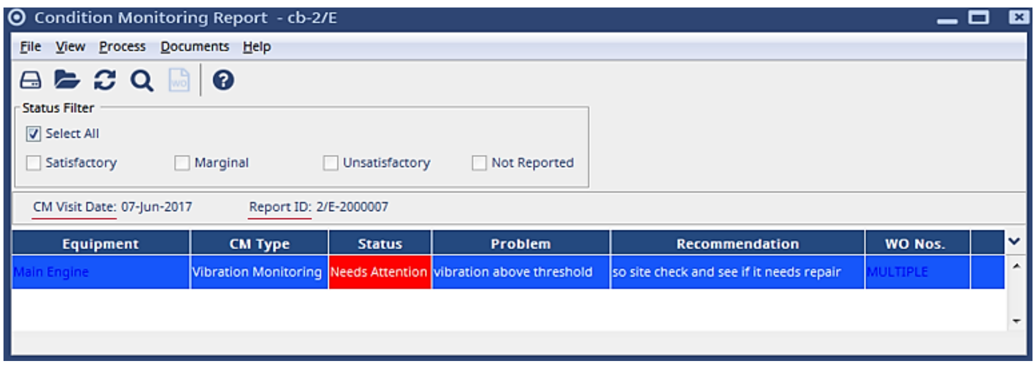
The **CM Status Detail** window displays the details on a condition monitoring report for a specific piece of equipment and the file attachments associated with the report. This window is accessed by double clicking on the information in the **CM Type**, **Status, Date**, **Problem**, **Recommendation** or **Attachment** columns on either the **Condition** sub-tab of the **Maintenance History** tab on the **Equipment** window or the **Equipment View** tab on the **Machinery Health** window.



7.5 *Condition Monitoring Report*

The **Condition Monitoring Report** window is accessed from either the **Report View** tab of the **Machinery Health** window at the **ship** level or the **Condition** sub-tab on the **Maintenance History** tab of the **Equipment** window. Click the information in the **Report ID** column / row of either window to open the window.





The **Status Filter** section can be used to change the list to view only those pieces of equipment with the selected status. The **Select All** check box MUST be unchecked to access the other check boxes. Click the **Refresh** button in the **Condition Monitoring Report** window toolbar to refresh the list with the selected status.

The options on the menu bar and toolbar of the **Condition Monitoring Report** are:

Option	Description
File→	The **File** menu contains options to manipulate a file.
Open	Select the **Open** option / button to open the **CM Status Detail** window for the highlighted row.
Save	Select the **Save** option / button to save any changes.
View→	The **View** menu contains options regarding what is displayed on the **Condition Monitoring Report** window.

Option	Description
Refresh	Select the **Refresh** option / button to refresh the information on the window. This is used when filters have been changed.
Process→	The **Process** menu contains options regarding a procedure.
Generate WO for Selected Equipment	Select the **Generate WO for Selected Equipment** option / button to create a work order for the highlighted equipment.
Documents→	The **Documents** menu contains options regarding the documents available on the **Condition Monitoring Report** window.
Open Work Order	Select the **Open Work Order** option to open the **Work Order** window on the highlighted row. Double clicking on the work order number also opens the **Work Order** window.

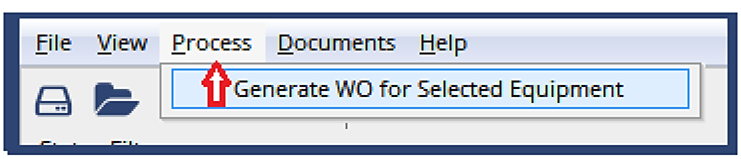
7.6 *Work Orders and Condition Monitoring*

Work orders are associated with the **Condition Monitoring Report** in two ways:

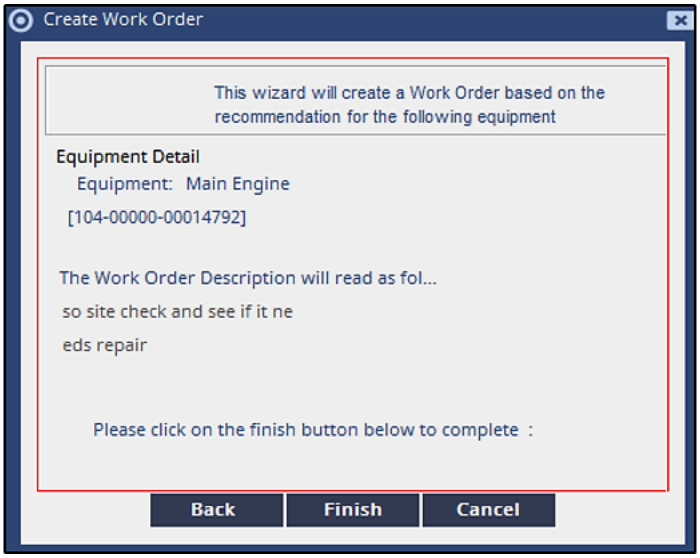
- Create a work order from the **Condition Monitoring Report**
- Link a previously created work order to the **Condition Monitoring Report**

7.6.1 *Create a New Work Order*

1. Click the **Generate Work Order for Selected Equipment** button on the **Condition Monitoring Report** window.



- The **Create Work Order** wizard window opens.



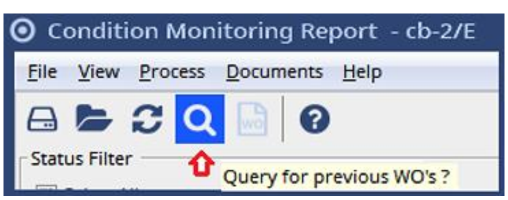
2. Click the **Finish** button on the **Create Work Order** window to open the **Work Order** window. The **Ship**, **Condition Based** check box, **Scheduled** and **Equipment** fields are filled with information from the report. The **Description** tab is also pre-filled with the information from the **Recommendations** field on the report.
3. Complete any other necessary information on the **Work Order** window.
4. Click the **Save** button to save the work order and close the **Work Order** window. The work order number is listed in the **Work Order Numbers** column on the **Condition Monitoring Report**.

7.6.2 Link Previously Created Work Orders to Condition Monitoring Report

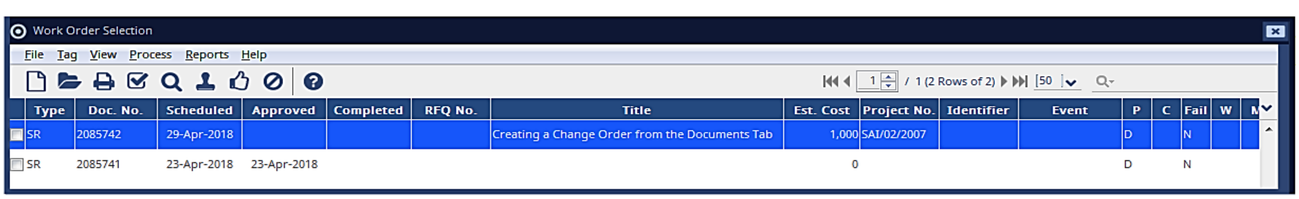
Previously created work orders can be linked through the **Condition Monitoring Report** window.

> **NOTE:** Only previously created work orders linked from the **Work Order Selection** window on the **Condition Monitoring Report** are associated with the report.

1. Click the **Query for Previous Work Orders** button on the **Condition Monitoring Report** window toolbar.



- The **Work Order Selection** window opens.



The **Work Order Selection** window has the same fields as the **Work Order Search** window. Only the menu bar and toolbar options are different.

2. Select the criteria to locate the work orders to be linked to the **Condition Monitoring Report**.
3. Click the **Search** button on the **Work Order Selection** window to initiate the query.
4. Click the check box preceding the work orders to be linked to the **Condition Monitoring Report**. More than one selection can be made.
5. Click the **Select** button to close the **Work Order Selection** window and add the selections to the report. The work order number is listed in the **Work Order Numbers** column or “Multiple” is listed if more than one work order is selected. Click on “Multiple” to open a **Work Orders** window listing the work orders.

Section 8 Serialized Items

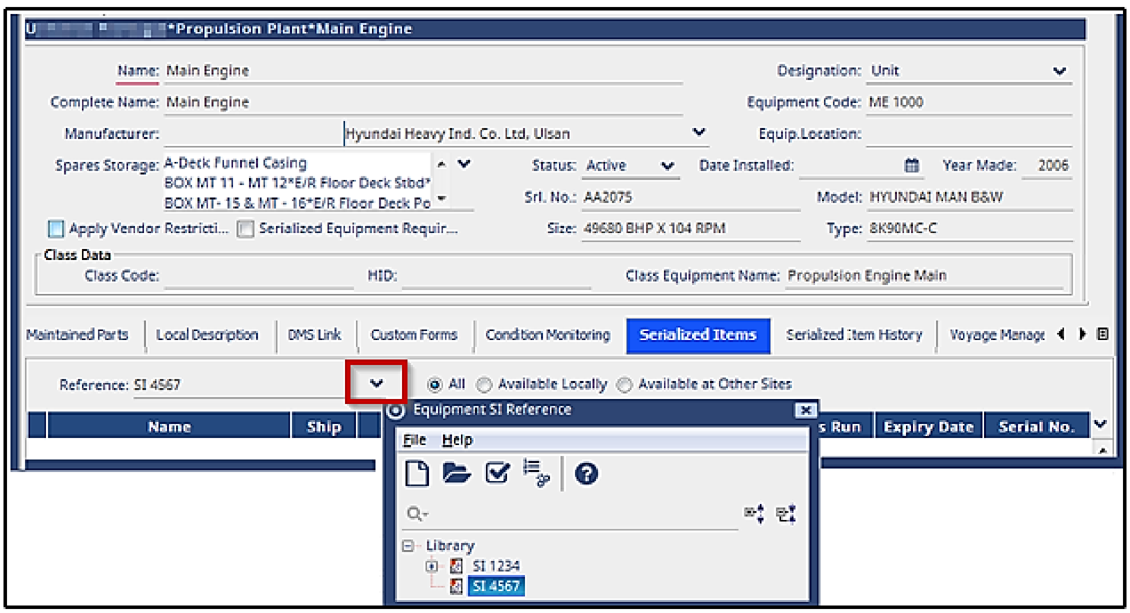
Work orders are associated with the **installation and removal** of **Serialized Items**. **Landing Orders** are used to **move Serialized Items** from one site to another. This includes vessels, warehouses, and vendors. See the **Landing Orders** section of this manual for details on moving serialized Items.

The **Transfer Order** is integrated into the materials ordering cycle and the requisition approval process in **NS Enterprise**. The document trail of ordering materials and maintenance cycles is automatically maintained.

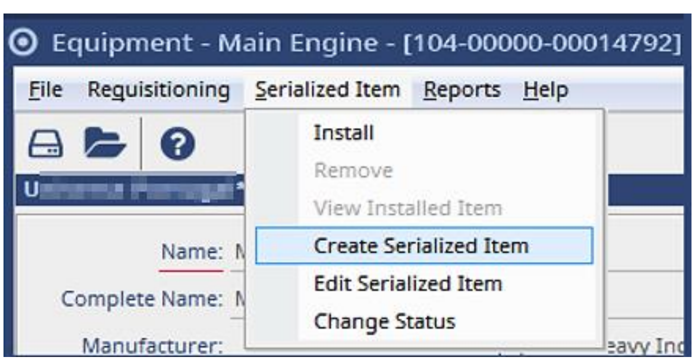
NOTE: Serialized Item record must already exist in the database.

8.1 *Create a Serialized Item*

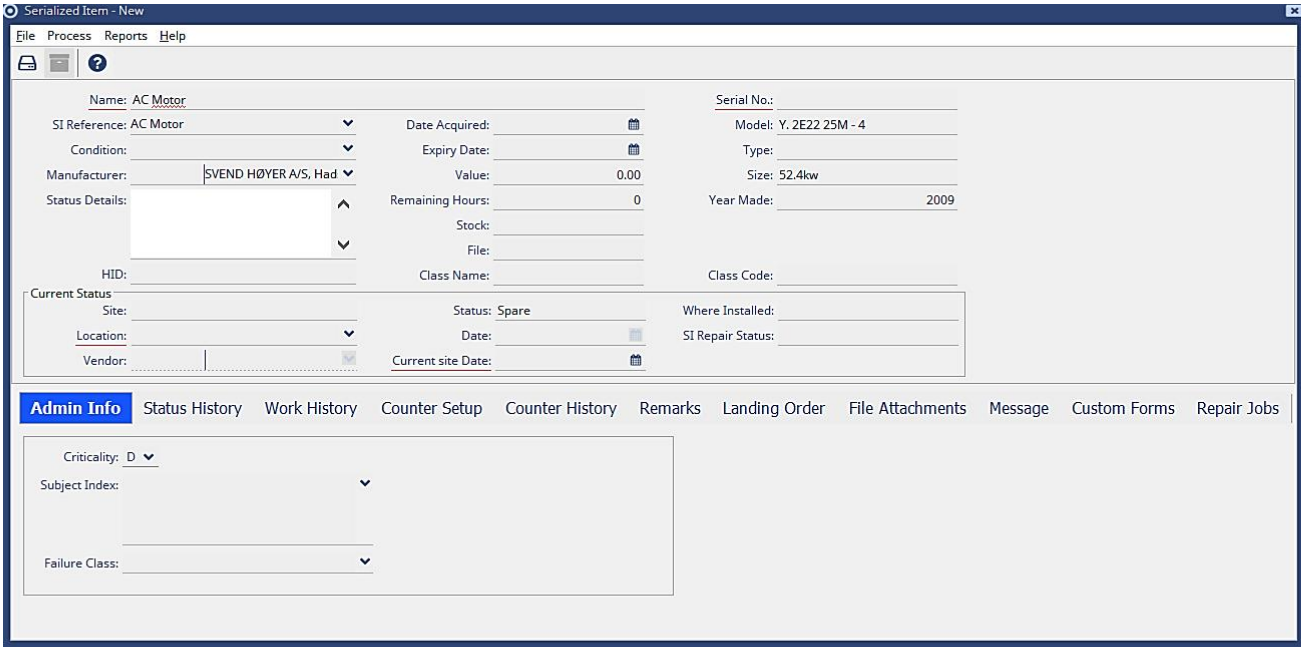
On the **Serialized Items** tab of the **Equipment** window, click on the dropdown menu at the end of the **Reference** field to open the **Equipment SI Reference** library, select the **Reference**.



From the **Serialized Item** menu, select **Create Serialized Item**.

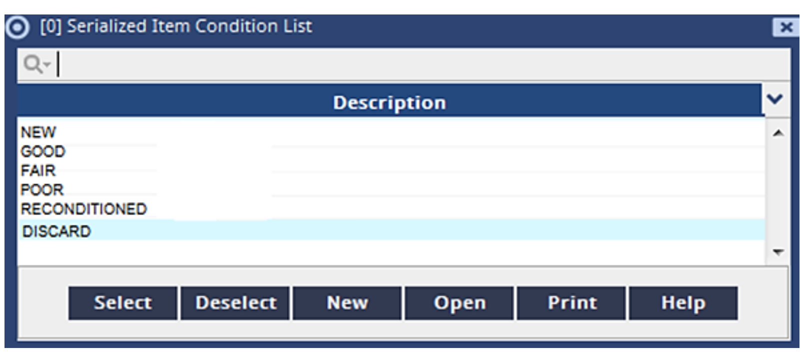


- The **Serialized Item – New** window opens.

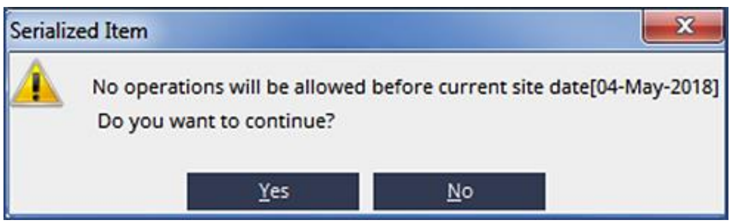


The fields on the new **Serialized Item** window are:

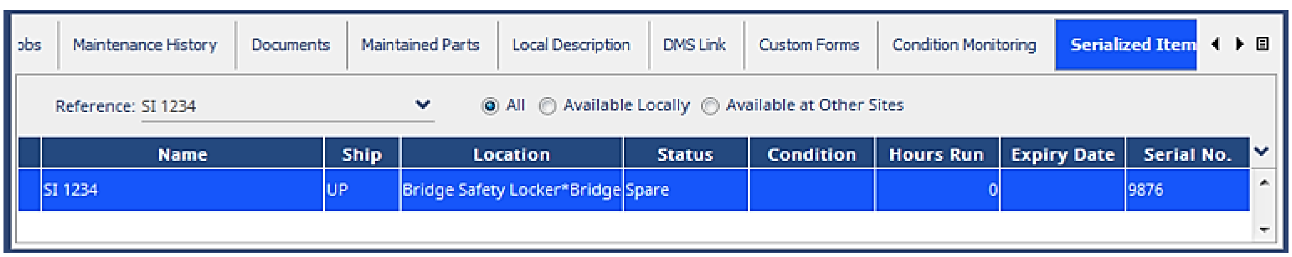
Field	Description
Name	Auto populates with the SI reference, however the user can add additional information to further identify the name of the serialized item.
Serial No.	Enter in the serial number of the item
SI Reference	Auto populates when the SI reference is chosen
Date Acquired	The date the serialized item was received/delivered.
Model	Enter in the model number for the serialized item
Condition	Clicking on the dropdown menu at the end of the field opens the serialized item condition list window. Select the description that best fits the condition of the serialized item.



Field	Description
Expiry Date	If the serialized item has a warranty/certification, enter in the date the warranty/certification will expire.
Type	Type of the Serialized Item
Manufacturer	Auto populates with the manufacturer based upon the SI reference.
Value	The value of the item at the time it was acquired.
Size	Enter in the dimensions of the items, e.g. 3x3x3 or 3-inch gauge steel
Status Details	Free form text field
Remaining Hours	If this is a serialized item that needs to be maintained on a maintenance schedule or the running hours need to be tracked, enter in the number of remaining hours before its next maintenance is required. This also might be the number of remaining hours before the item is to be discarded in the case the serialized item is a one-time use item.
Year Made	The year the item was built.
Stock	This is a 25-character free text field to be used for further classification of the part.
File	This is a 25-character free text field to be used for further classification of the part
HID	Hierarchy Identification Number
Class Name	The name by which the equipment is referenced by the class society.
Class Code	The classification code which is the UID of the vessel.
Current Status Section	
Site	This field is tied to the "Where Installed" because the Serialized Part is currently installed in a Maintained Part, the Site field automatically sets to the Ship to which the Maintained Part belongs and cannot be changed. For a non-installed Serialized Part (i.e., which is not installed in any Maintained Part), the Site field is determined by the site where the item is physically located, e.g. on board the vessel or located at a warehouse or repair facility.
Status	Uses an index term called "**Serialized Item" Status** with pre-populated with values: "Installed", "Repair Locally", "Repair Ashore", "Spare", "Recommend Discard", "Discarded". There are restrictions and logic associated with selection of these values. Default value for a new Serialized Part is "Spare".

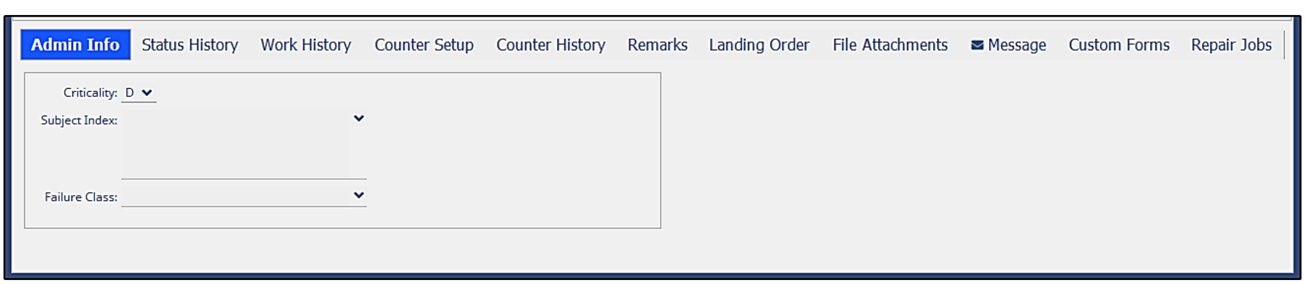
<table>
<tr><th>Field</th><th>Description</th></tr>
<tr><td>Where Installed</td><td>A read only, calculated field. It will display the equipment name and maintained part name where the serialized part is installed. If the serialized part is not currently installed, it will be blank.</td></tr>
<tr><td>Location</td><td>This is required to display the location where the part is installed, stored, or located at any given time.</td></tr>
<tr><td>Date</td><td></td></tr>
<tr><td>SI Repair Status</td><td>Tracks the status and progress of a serialized item which is being repaired ashore</td></tr>
<tr><td>Vendor</td><td>This is read only. Auto populates with the vendor associated to the SI reference</td></tr>
<tr><td>Current Site Date</td><td>THIS IS A REQUIRED FIELD.
If choosing today’s date and clicking save will return a message,


Click Yes to save the new record, close the new Serialized Item window and a new row will display on the Serialized Item Tab of the associated equipment window.</td></tr>
</table>



8.1.1 *Admin Info Tab*

Double clicking on the row of the serialized tab of the equipment record will open the Serialized Item record.

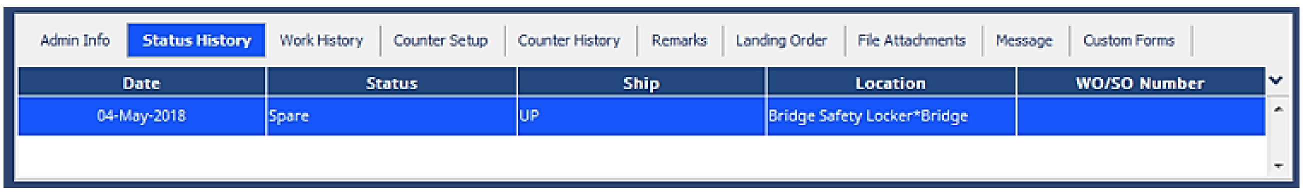


The fields on the **Admin Info** tab are:

Field	Description
Criticality	A, B, C, or D; A being the most and D the least.
Subject Index	Click on the dropdown menu at the end of the Subject Index field to open the Subject Index selection window. Select the subject index by clicking the arrows to move the item from the left to right side of window. Clicking the OK button closes the subject index selection window and returns the value to the Admin Info Tab.
ASTM Class	This is the ASTM class associated equipment slot of the serialized item

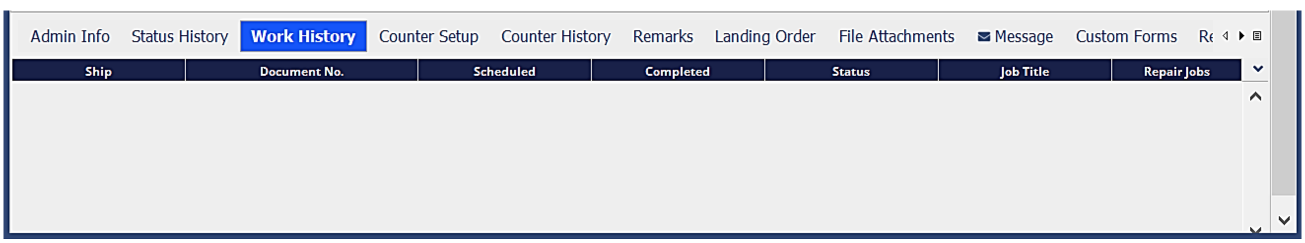
8.1.2 *Status History Tab*

The **Status History** tab captures the history throughout the lifecycle of the serialized item.



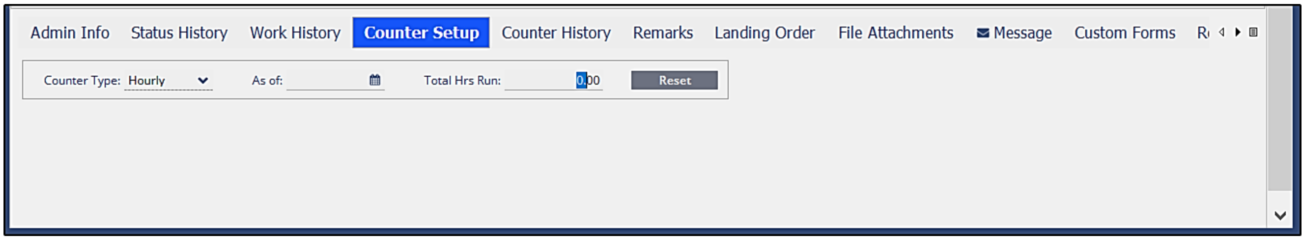
8.1.3 *Work History Tab*

The **Work History** Tab auto populates with the work history associated to the serialized item throughout its life cycle.



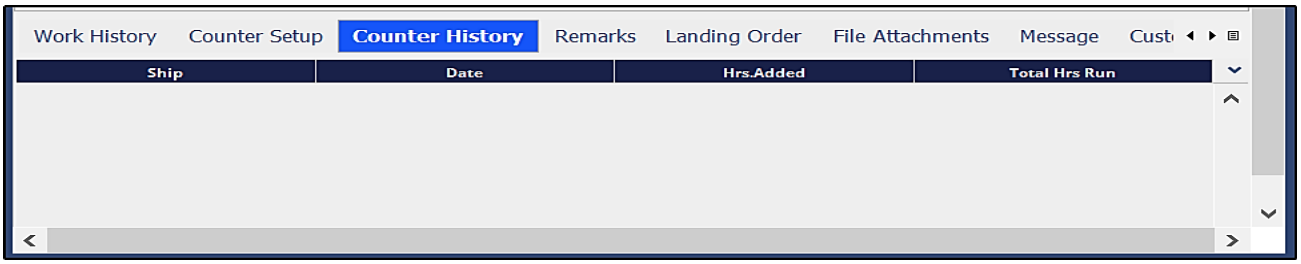
8.1.4 *Counter Setup Tab*

The **Counter Setup** tab is used to set the counter readings of the serialized item under this equipment in the hierarchy. This reading is used to schedule jobs by the amount of hours that the serialized item is used. This tab is applicable to maintenance. See **Counter Setup Tab** in the **Equipment Explorer** section of the **NS Enterprise Maintenance Manual** for details on this tab.



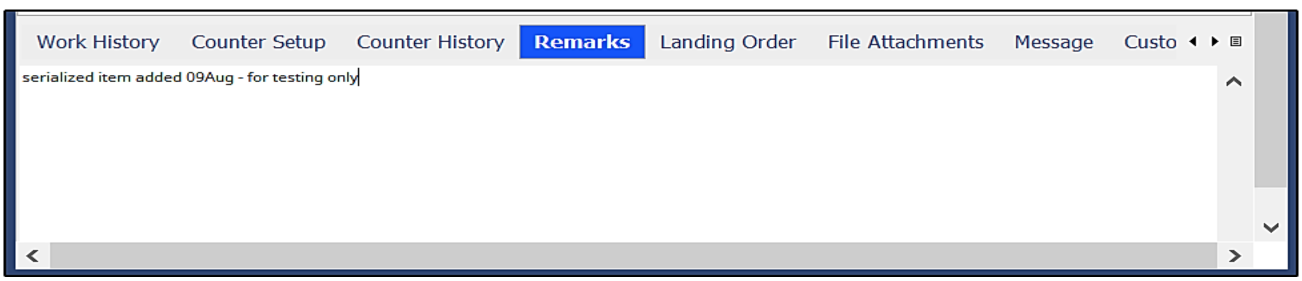
8.1.5 *Counter History*

The Counter History tab displays history counter readings that have been recorded and keeps count of the number of running hours between maintenance jobs. An entry is made on the tab whenever the running hours on the piece of equipment is updated. The number of running hours displayed in the Job Counter field on the Standard Job window is taken from this tab.



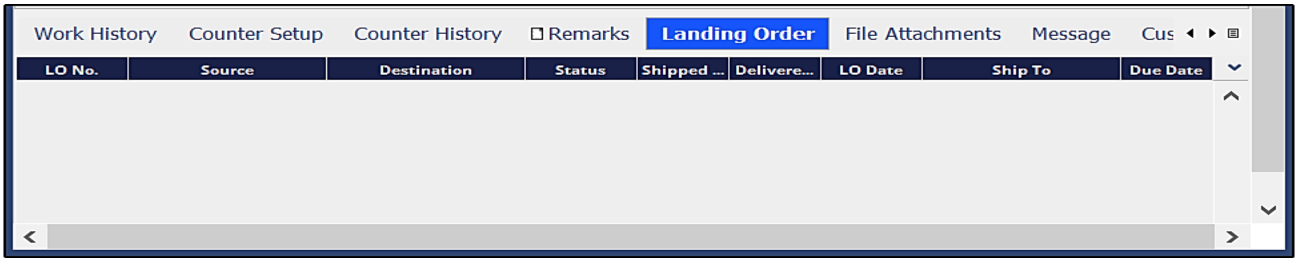
8.1.6 *Remarks Tab*

The **Remarks** tab is a free form text tab. Any comments or remarks pertaining to the serialized item are recorded on the **Remarks** tab. These comments and remarks are viewed by all who have access to this tab.



8.1.7 *Landing Order Tab*

The Landing Order Tab will auto populate to keep all history for moves/transfers of the serialized item through the lifecycle of the slot for the associated equipment.



8.1.8 *File Attachments Tab*

Refer to Item 21.2 File Attachment Tab section of this manual

8.1.9 *Message Tab*

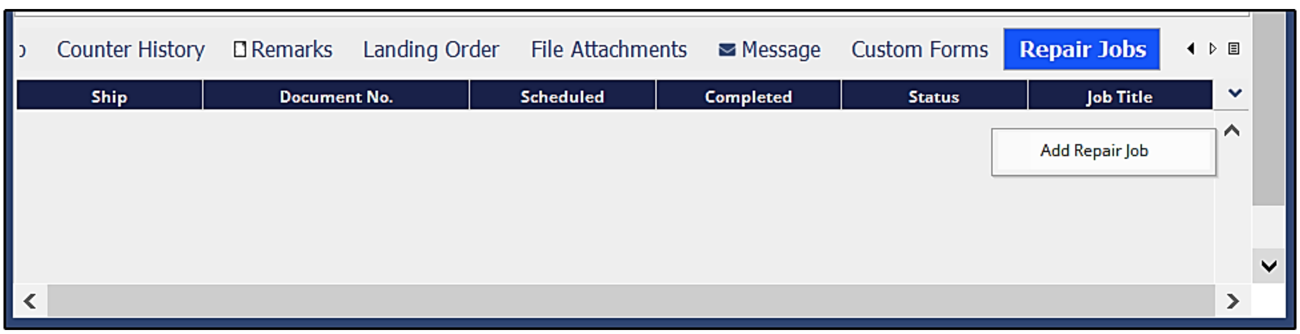
Refer to Item 21.5 Messages Tab section of this manual.

8.1.10 *Custom Forms*

Refer to Item 21.3 Custom Forms Tab section of this manual

8.1.11 *Repair Jobs*

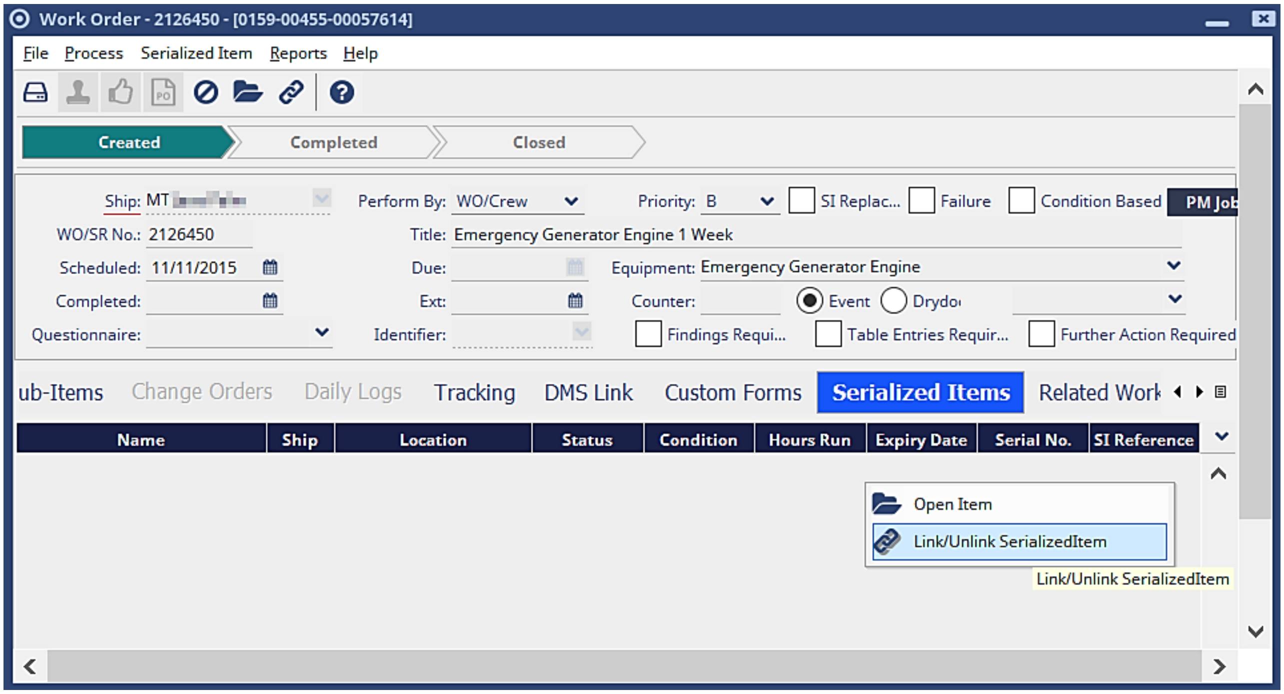
Repair Jobs relative to the serialized item are recorded in this tab. Right-click on the field under repair jobs to add a job.



8.2 *Install a Serialized Item*

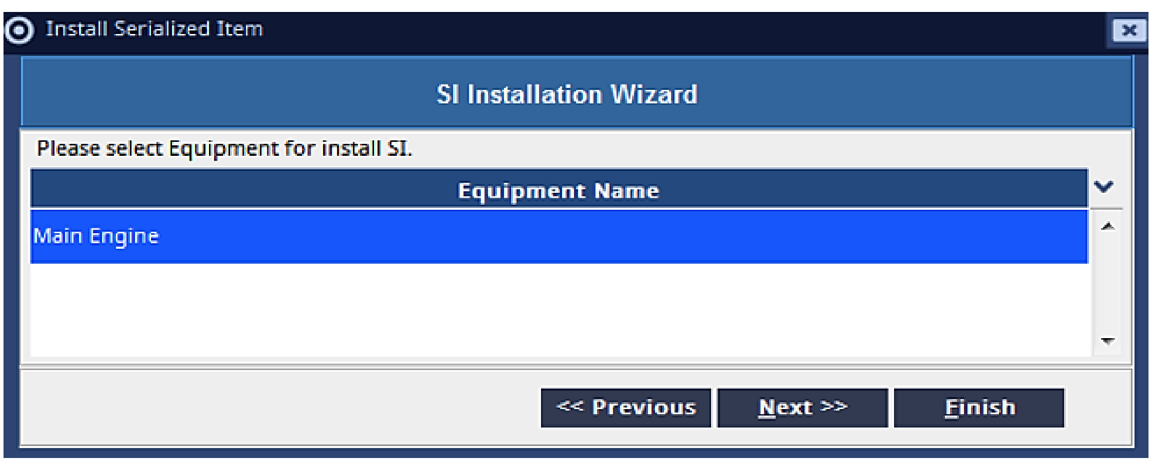
1. On the **Maintenance** gadget→**Documents**→ click the **Create New Work Order** link to open the **Work Order - New** window.
2. Click on the dropdown menu at the end of the **Ship** field to **Select Ship** window. Highlight the vessel and click the **Select** button to close the **Select Ship** window and add the value to the **Ship** field.
3. Enter in **Title** and any other relevant information on the WO header and other WO tabs.

4. Click on the **Serialized Items Tab**.
5. Right-click in an open area on the tab and select **Link Serialized Item**.

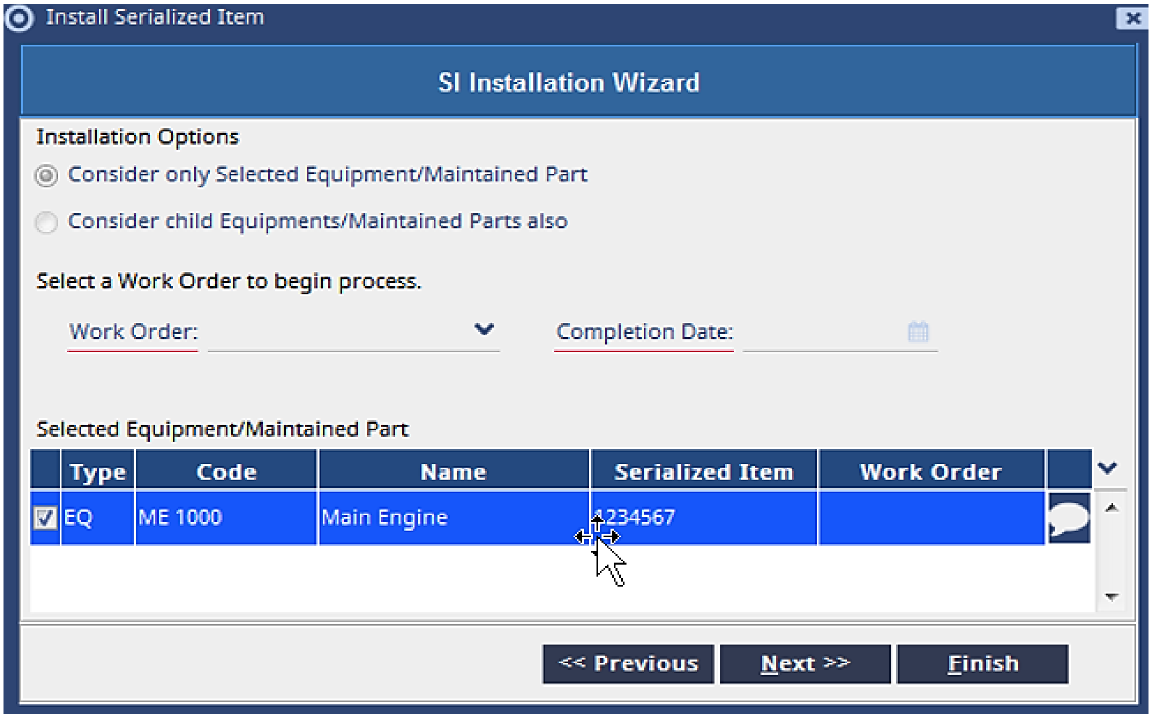


- A message will display that a **Work Order** was created.

6. Click the **OK** button to close the message window and open the **SI Query** window.
7. Find the serialized item on the **List** window, highlight the item, and click on the **Select** icon on the tool bar menu to close the Query window and populate the Serialized tab on the work order.
8. If the item selected for install/remove process does not have an Equipment/Maintained Part linked first, a message will display.
9. Once item displays on the serialized tab, select **Install** from the Process menu options.
10. The serialized item wizard opens.



11. Select the serialized item to be installed and click the **Next** button.The Install Serialized Item window opens.



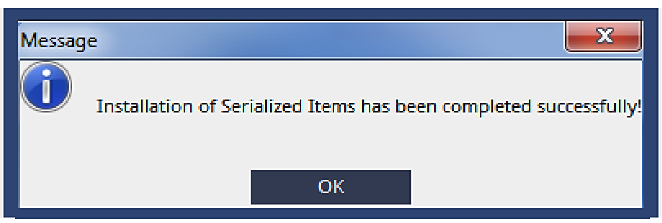
The fields include:

Field	Description
Consider only Selected Equipment/ Maintained Part radio button	The **Consider only Selected Equipment/ Maintained Part** radio button filters to only those equipment record that have been selected.
Consider child Equipments/Maintained parts also radio button	The **Consider child Equipments/Maintained parts also** radio button filters to only child equipment and maintain part records.
Select a Work Order to begin Process section	
Work Order	Select the dropdown menu at the end of the **work order** number field to open the **Work Order Search** window. Using filters, find the work order that is associated to this install. Highlight and click the **select** button to close the **Work Order Search** window and add the value to the **SI installation wizard** screen.
Completion Date	Enter in the date the install occurred. This cannot be a date in the future.
Selected Equipment/Maintained Part Section	
Type	Identifies the types of item, e.g. MP for maintained part
Code	Identifier for the item, e.g. CYLLIN-01 for Cylinder 01
Name	Description for the item

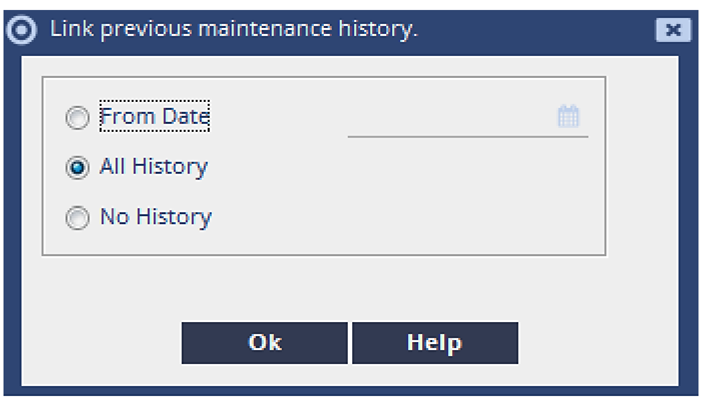
Field	**Description**
Serialized Item	SI Reference Index number
Work Order Numberz	Identifies the number of the work order that completed the install tasks.
Remarks Icon	This is a free form text field.

12. Click the **Finish** button to open the Counter Reading window. Enter in the **Counter Reading** and click **OK** button to continue through the **SI Installation Wizard**.

13. A message will display to say the installation of the SI item was successfully completed. Click the **OK** button to continue with the wizard.



14. The Link previous maintenance history window opens. Select the radio button that is application to this installation task for the serialized item. Click the **OK** button to continue with the wizard.



15. Clicking the **OK** button closes the **SI Installation Wizard** window. The **Serialized Item Query** window is still open.
16. To verify the history, re-open the **Serialized Item** document and click on the **Work History** Tab.

Ship	Document No.	Scheduled	Completed	Status	Job Title
Universe Portugal	2085743	07-May-2018	07-May-2018	COMPLETION RECORDED	Installing Serialized Engine
Universe Portugal	2076771	31-Jan-2015	04-Apr-2016	COMPLETION RECORDED	Main Journal And Bearing #3 6...
Universe Portugal	2082998	28-Oct-2015	04-Apr-2016	COMPLETION RECORDED	Cylinder Liner/Cool Jk #8 3200...
Universe Portugal	2079542	19-Mar-2015	04-Apr-2016	COMPLETION RECORDED	Main Engine 1 Monthly
Universe Portugal	2082312	12-Sep-2015	04-Apr-2016	COMPLETION RECORDED	Fuel Injector Valves #4 8000 H...
Universe Portugal	2085225	10-Mar-2016	04-Apr-2016	COMPLETION RECORDED	VIT Actuators 1 Week

17. Double clicking on the completion row will open the Work Order to review any information needed concerning the installation task.

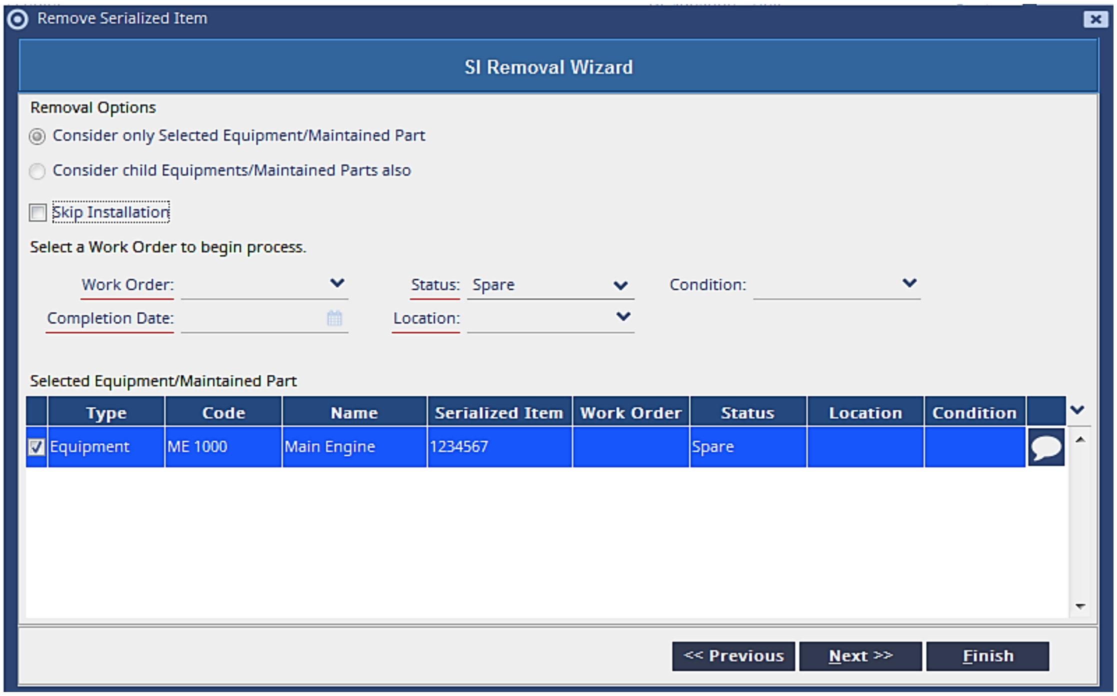
8.3 *Remove a Serialized Item*

Work orders are associated with the **installation** and **removal** of Serialized Items. Landing Orders are used to move serialized items from one site to another. This includes vessels, warehouses, and vendors.

When removing a Serialized Part, the user will designate what status it should have: Spares, Repair Locally, Repair Ashore, or Discard. I.e., anything other than installed. Once the serialized item is removed it available to be installed in any other Maintained Part.

1. If the "Serialized Item Required" checkbox on the Maintained Part screen was checked (see Maintained Part section below), the system will require that a new Serialized Item be installed into the Maintained Part before the Maintained Part screen is closed.
2. Removal of a serialized part requires linking to a work order.
3. When a serialized part is removed the user options include:

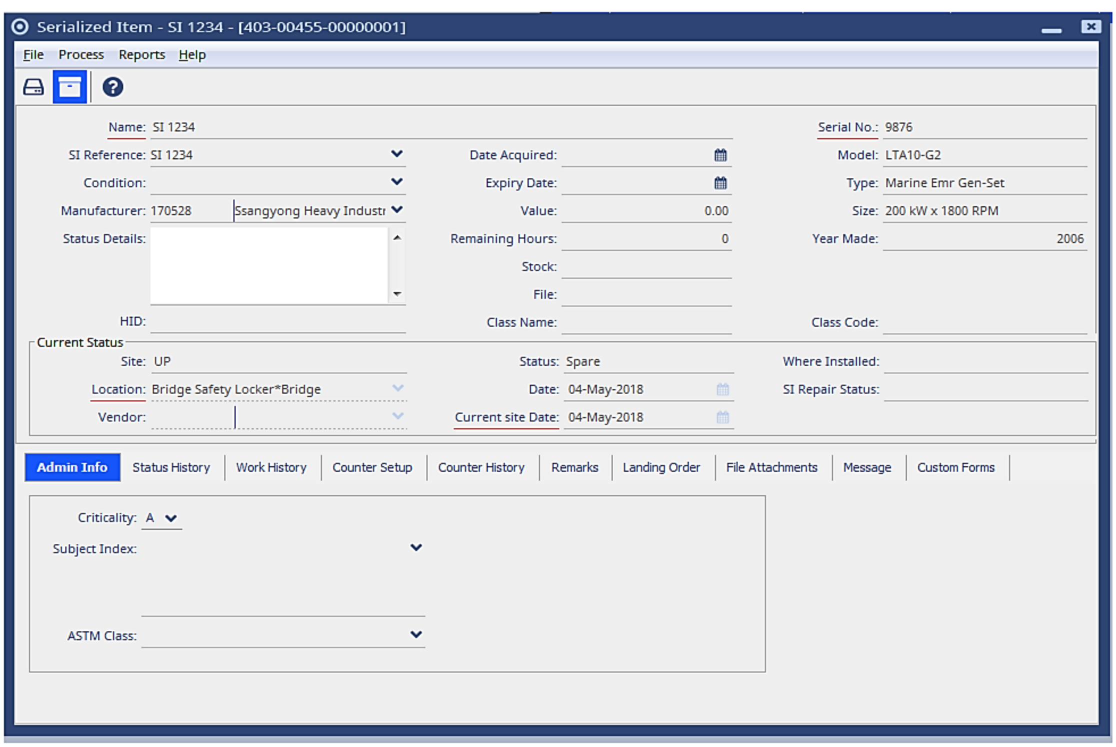
   a. Create New Work Order – If the user selects this option a new work order is created and linked to the Maintained part as well as the Serialized Part that is being removed.
   b. Select from existing Work Orders – If the user selects this option the work order query automatically sets the query filters set to only include Scheduled or Completed work orders for the current Maintained Part. The user can then select a single work order by tagging it and clicking the blue checkmark. The user can also install a new serialized part at this time using the same work order.
4. From the **Serialized Items** Tab on the equipment window double click to open the **serialized item** record. Choose **Remove** from the Process menu option to open the **SI Removal Wizard**.



5. Continue by clicking Next and then Finish to complete the wizard.

8.4 *Edit a Serialized Item*

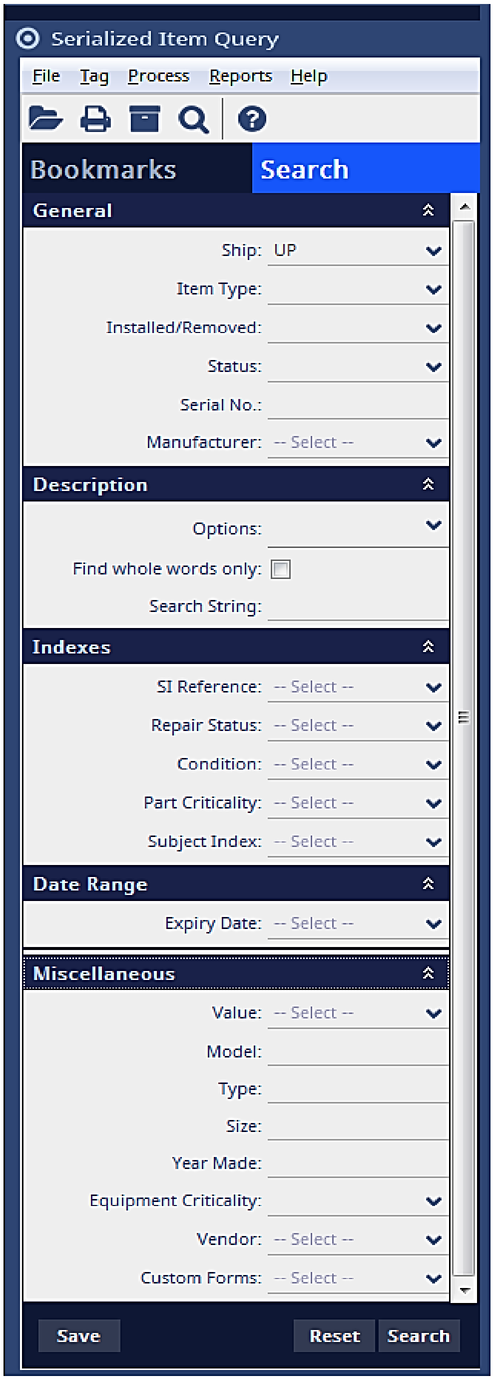
On the **Equipment** record→**Serialized Items** tab, double click to open the **Serialized Item** record.



Make appropriate changes to the serialized item record and save the changes before exiting the window and returning to the equipment record.

8.5 *Search for a Serialized Item*

In the **Maintenance** gadget→**Documents**→**Search**→**Serialized Item Query** in the Maintenance and Purchasing module opens the **Serialized Item Query Search Navigator** pane.



The fields on the **Search Navigator** are:

Field	Description
General Section	
Ship	Allows the selection of the vessel. More than one vessel can be selected.
Item Type	The two choices are a check box for Parts and a checkbox for Equipment. Both can be selected.
Installed/ Removed	Allows the search to filter by only installed or only removed serialized items.
Status	Status options are: Spare, Repaired Locally, Repaired Ashore, Recommend Discard, or Discarded.
Serial No.	The serial number of the item
Manufacturer	The manufacturer of the serialized item.
Description Section	
Options	The options to search the description field are: • All these words • Any of these words • The exact phrase
Find Whole Word Only Checkbox	Searches for the whole word in the description field
Search String	Searches for the string entered into the Search String field, e.g. *cylinder*
Indexes Section	
SI Reference	The Serialized Item Reference ID
Repair Status	This is an index term that is user defined. Options might include: • At Repair Facility • At Warehouse • In Transit to Repair • Under Evaluation
Condition	This is an index term that is user defined. Options might include: • 01 – New • 02 – Good • 03 – Fair • 04 – Poor • 05 – Reconditioned • 06 – Repairable • 07 – Unrepairable

Field	Description
Part Criticality	The options are: • Critical • Critical - Operational
Subject Index	This is an index term that is user defined. Options might include: • Equipment for GCC Install
Date Range Section	
Expiry Date	Enter in a date range to search for an expiration date of the serialized item.
Miscellaneous Section	
Value	Enter in a range for the cost (value) of the serialized item.
Model	This is a free form text field for the model number.
Type	This is a free form text field for the type of serialized item.
Size	This is a free form text field for the size of the serialized item.
Year Made	This is a free form text field for the year the serialized item was made.
Equipment Criticality	This is an index term. The options are check boxes: A B C D
Vendor	Click on the dropdown menu at the end of the field displays a list of vendors for the serialized items with a check box preceding each name. Multiple selections can be made.
Custom Forms	Click on the dropdown menu at the end of the field to display a list of custom forms associated to the serialized item. Multiple selections can be made.

Enter in filter criteria and click **Search** button to display search results in the List window. Also available on the search list window is the ability to choose filters/columns to display on the list window. To choose filters, left click on the dropdown menu next to the SI reference column and choose filter. The choose filter box will display, by default all fields are checked. Uncheck the columns that are not necessary for this search and click close.

Searches can also be saved/bookmarked, just like those saved in other search navigator panes in **NS Enterprise**.

Section 9 Spaces

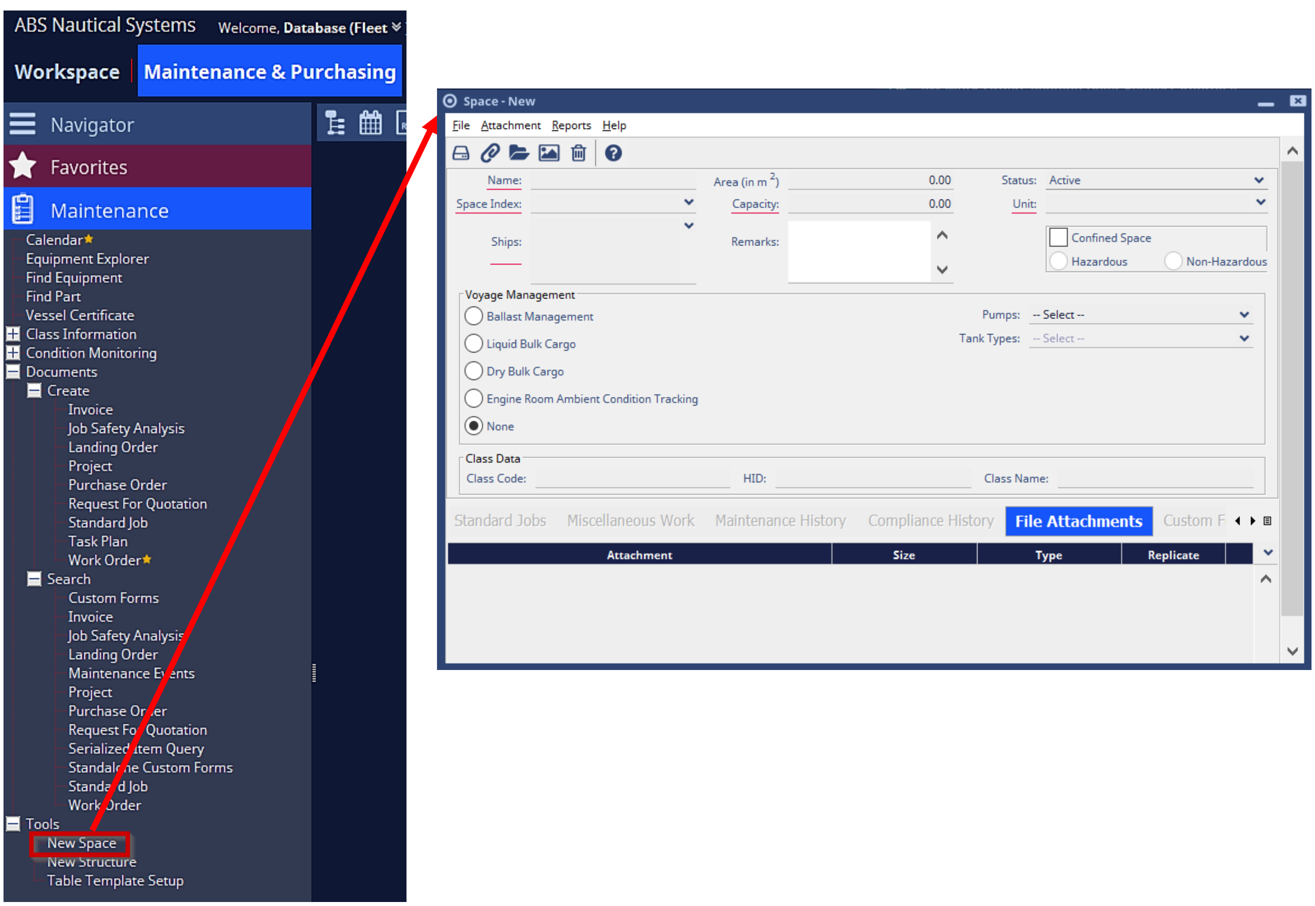
Spaces are the cargo holds, service tanks, cabins and any other compartment of the ship included in the maintenance plan. The preventive maintenance plan must include those spaces listed in the classification society and / or other regulatory body requirements.

The **Space Standard Job** title is created by combining the space name with an index term indicating the job size. This is similar to the PM standard job creation for equipment or maintained parts except that the job schedule can only be based on a calendar interval instead of running hours.

9.1 *Create Spaces*

Space is created or defined from the **fleet** level by the central office, but it is edited from the **ship** level to apply to each individual ship. The newly created space is replicated to each ship's database that it pertains to. However, the individualized information regarding the space is NOT replicated back to the central database. It remains in each ship's database.

From the **Maintenance and Purchasing** module, select **Maintenance** gadget → **Tools** → **New Space**



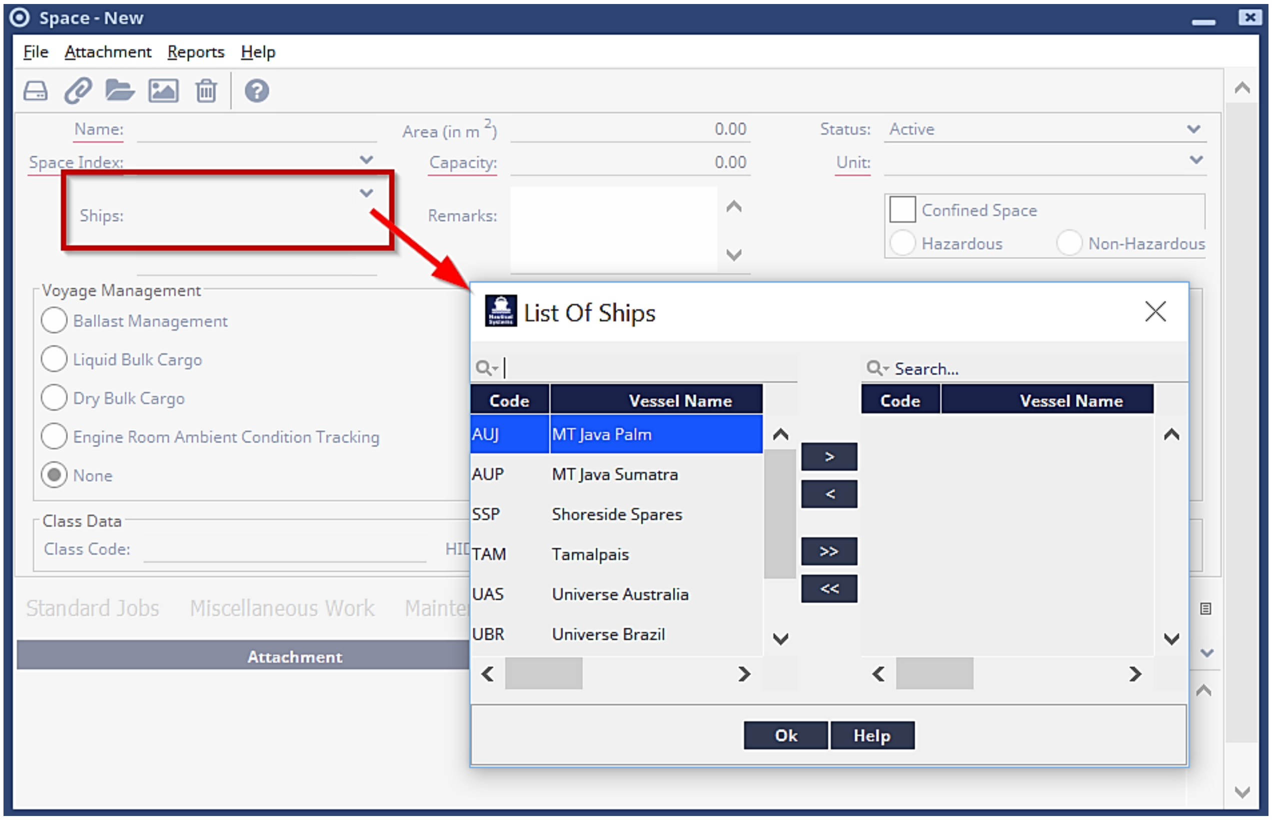
- The **Space - New** window opens.

The fields on the **Space** window are:

Field	Description
Name	Type the name of the space in the **Name** field. This name can be specific to a ship or generic to apply to several ships. THIS IS A REQUIRED FIELD.
Space Index	Click the dropdown menu at the end of the **Space Index** field to open the **Space Index** window for a list of index terms that apply to space. Index terms are used for cross reference and query purposes. Authorized users can add new index terms to the **Space Index** window. Click to highlight an index term from the **Space Index** window. Click the **Select** button on the **Space Index** toolbar to select the highlighted space. The **Space Index** window closes, and the selected space is listed in the **Space Index** field. This is a required field.
Ships	Click the dropdown menu at the end of the **Ships** field to open the **List of Ships** window to select the ship or ships that have this space. This is a required field. **NOTE:** Ships only see information that pertains to their ships. Only the ship viewing the **Space** window is listed once the central office has sent the information to the ships' databases.
Area	Click in the **Area** field to type the area of the space in square meters. This field can be left blank if the area for the specified space differs from ship to ship in the fleet. It can be defined at the ship level.
Capacity	Click in the **Capacity** field to type the capacity of the space in cubic meters. This field can be left blank if the capacity for the specified space differs from ship to ship in the fleet. It can be defined at the ship level.
Unit	Click on the dropdown menu at the end of the Unit field to open the **Available Units** List window. Highlight the row to select the unit and click the Select button to close the **Available Units** List and return the value to the new **Space** window.
Status	Click on the dropdown menu at the end of the **Status** field to change the status of the space. The default value is "Active".
Remarks	Type any remarks pertaining to the space in the **Remarks** field. The **Remarks** field is a free form text field and is editable at any time. This field can be left blank for the ship to complete unless the remark pertains to this space on all ships in the fleet.
Confined Space checkbox	If this box is ticked, user must indicate as well if it is: • Hazardous • Non-Hazardous

Field	Description
Voyage Management	This information is used in conjunction with the **Voyage Manager** module. The Voyage Management section identifies if the Space is associated with voyage-related activities that needs to be tracked. Radio buttons: • Participates in Ballast Water Management • Liquid Bulk Cargo • Dry Bulk Cargo • Engine Room Ambient Condition Tracking • None (The default value is None.) **Pumps**: This field becomes available if one of the radio buttons (other than None is selected.) Click on the dropdown menu at the end of the **Pump** field to open a **list of ships** window to drill down to find the specific pump associated to the radio button selected. Check the box to select the pump and click the **OK** button to close the list of ships window and display the pump on the new **Space** window. **Tank Types**: Click on the dropdown menu at the end of the **Tank Type** field. Check the box to select the tank type and click the **OK** button to close the list of ships window and display the tank type on the new **Space** window.
Class Data section	The **Class Data** section was added to include classification information. The fields in this section are: • Class Code – classification code which is the UID of the vessel • HID – Hierarchy Identification Number • Class Name – the name by which the space is referenced by the class society  **NOTE:** Only authorized users can add or edit information in these fields.
File Attachments tab	The **File Attachments** tab is the only active tab on the **Space – New** window. Attachments pertaining to the defined space can be attached in the form of text, graphics, or Excel spreadsheet.

9.1.1 *List of Ships Window (from Ships dropdown menu)*



1. Double click a ship on the left pane of the window to move it to the right pane of the window. Continue selecting and moving them until all ships that contain this space are listed on the right pane of the window.
2. Click the **OK** button to accept all selected ships, close the **List of Ships** window and list the ship or ships in the **Ships** field of the **Space – New** window.

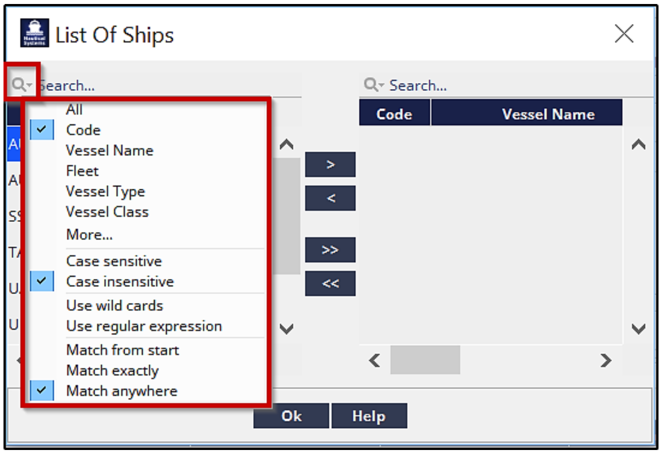
Unselect a Ship - Double click on a ship on the right pane of the window to move it back to the left pane of the window to unselect a ship.

Select all Ships - Click the double right arrow to move all ships from the left side of the window to the right side of the window.

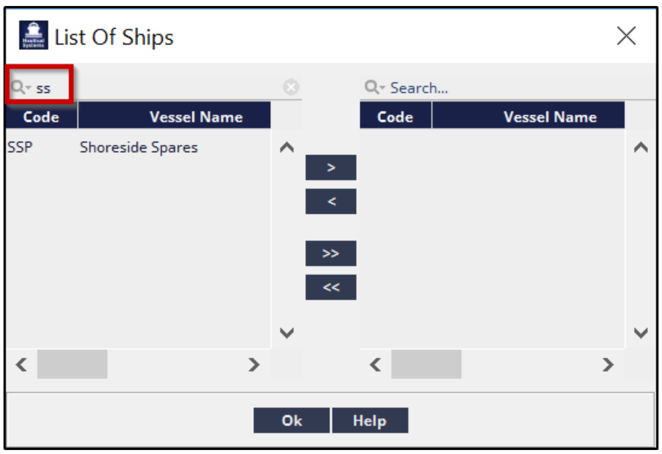
Search for a Ship

Some companies have an extensive list of ships. The **List of Ships** window contains a search field to help locate a ship.

3. Click on the dropdown menu located at the Search field in the List of Ships screen. Tag an item to which will be the basis of the search.



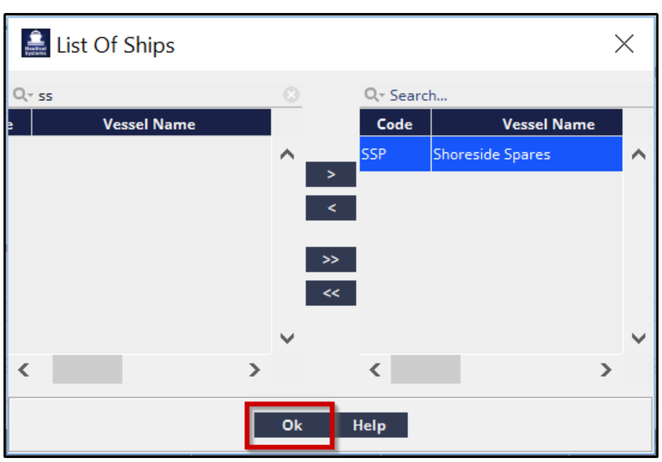
4. Type the beginning letters or numbers of the category of the ship to be located in the **Search** field. The cursor moves with every character typed to the ship meeting the search criteria according to the letters or numbers typed.



5. Continue typing until the specific ship is located.

6. Double click on a ship from the left side of the window to move it to the right side of the window.

7. Click the **OK** button to accept all selected ships, close the **List of Ships** window and list the ship or ships in the **Ships** field of the **Space – New** window.



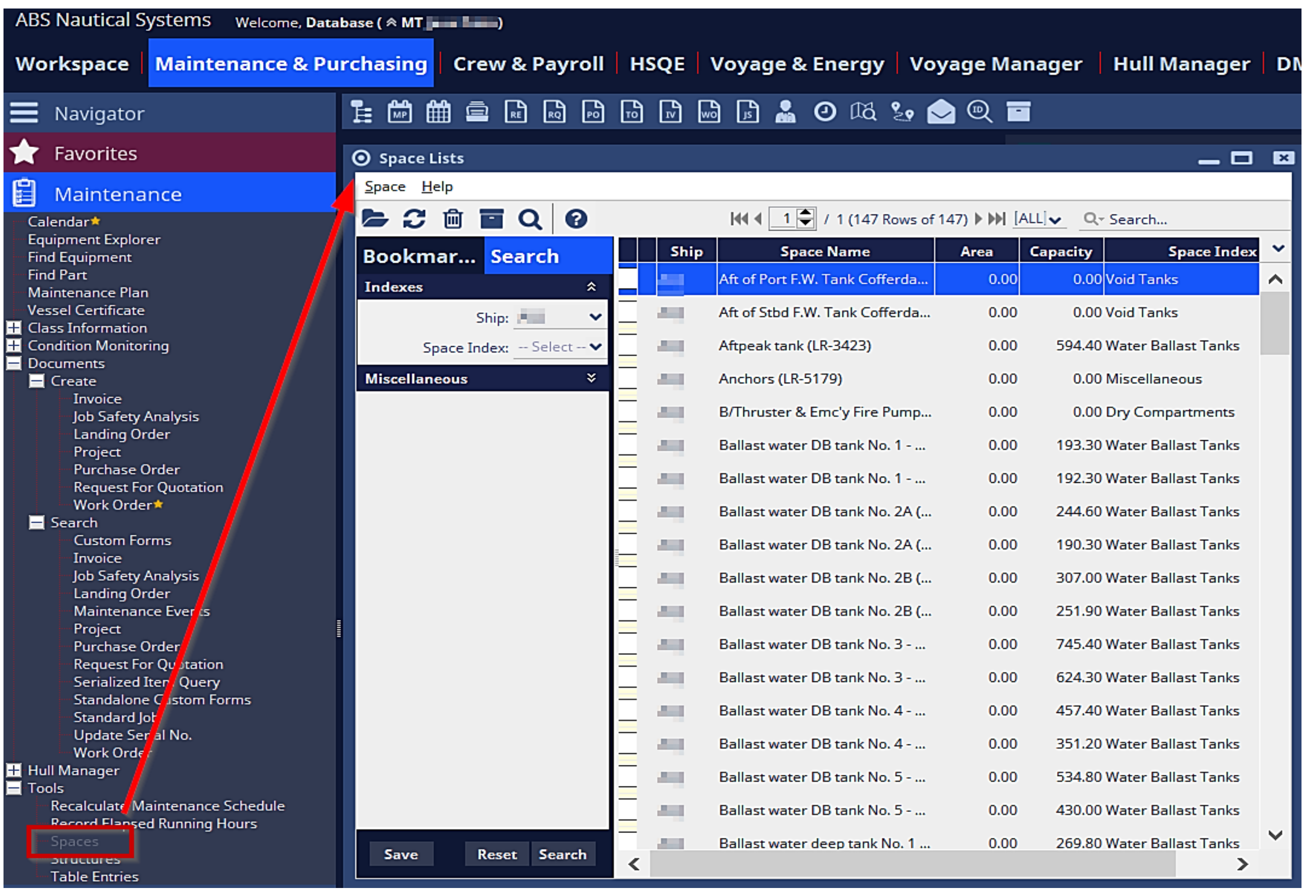
9.2 *Edit a Space*

Space can be edited and customized to a specific ship's needs once it is created by the central database and replicated to the ship. This is done from the **ship** view.

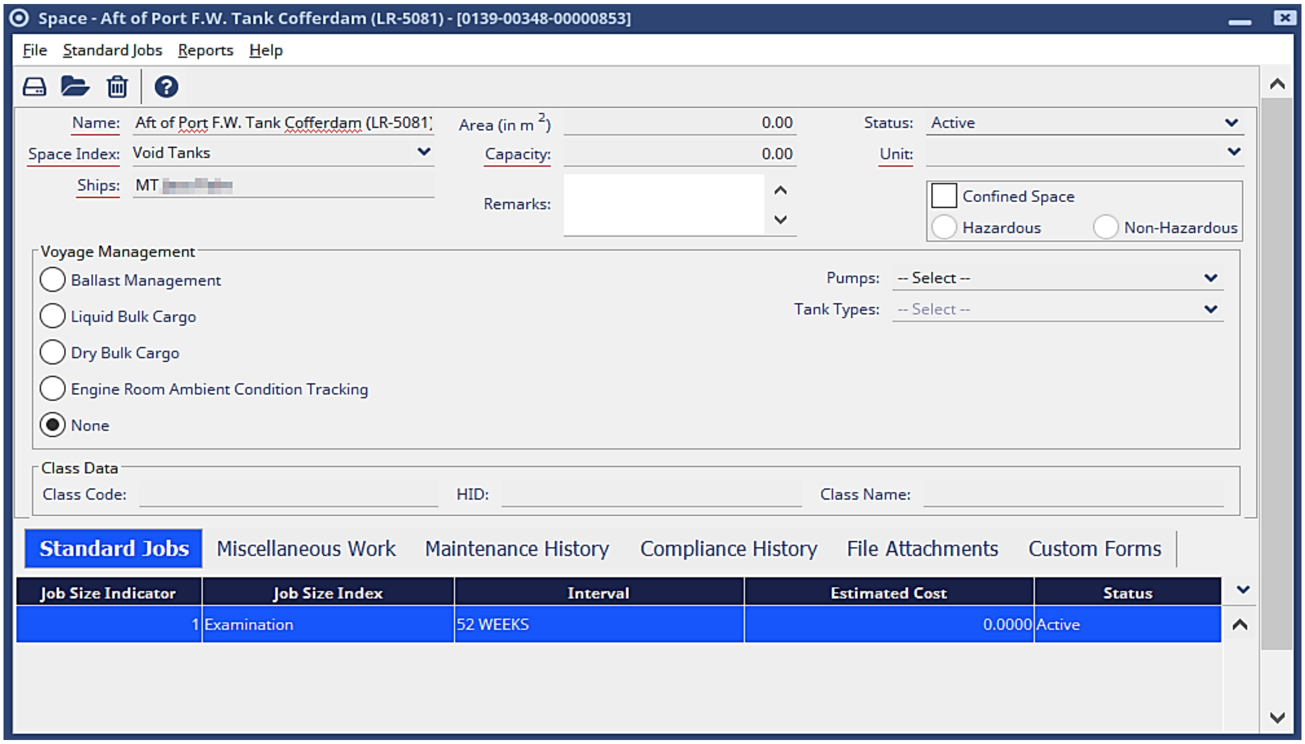
NOTE: Only authorized users can make changes to the **Space** window.

1. From the **Maintenance and Purchasing** module, select **Maintenance** gadget→ **Tools** → **Spaces** to open the **Space Lists** window. Click on the **Search** tab after selecting the parameters for the search. Select the **Search** button to initiate the search. A list of all spaces that meet the criteria set for the search opens on the right side of the window. This window lists all the spaces created for this specific ship.

NOTE: The **Area** and **Capacity** columns may have zeros (0) if this is a newly created space. This information can be added or changed in the **Space** window.



2. Double click on a space to be edited. The **Space** window for the selected space opens.

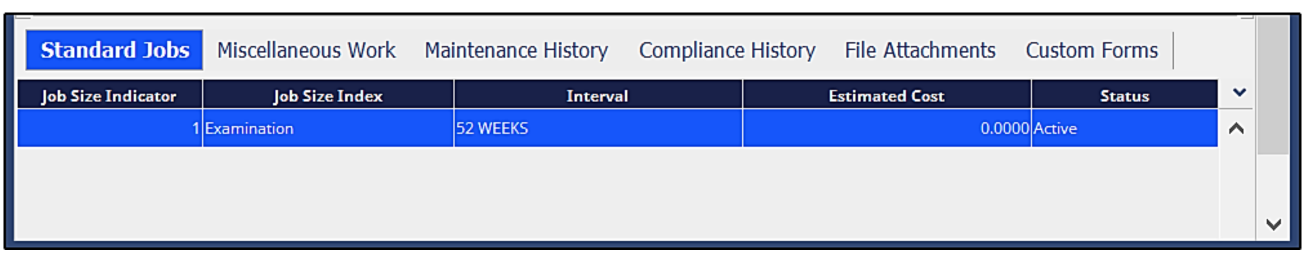


- The fields on the **Space** window at the ship level are the same as the space fields on the fleet level.

9.2.1 *Standard Jobs Tab*

The **Standard Jobs** tab lists all the standard jobs for the specified space. Open the standard job listed on the **Standard Jobs** tab to view details of the job.

Standard jobs are created by the central office. Some fields on the standard job can be edited by authorized users at the ship level.



The columns on the **Standard Jobs** tab are:

- **Job Size Indicator** – The job size indicator defines the relationship of the job compared to other jobs under the same equipment or space. This rating is from 0 – 99.
- **Job Size Index** – The job size index describes the nature of the job. For example, overhaul or inspection. The name of the PM Standard Job is derived by combining the name of the physical item on which the job is performed with the job size term. For example, #1 Forward Tank - Tank Inspection – Visual.

- **Interval** – the time frame between this job and the next time it is to be performed.
- **Estimated Cost** – the estimated price of performing the job that includes cost of personnel, tools, services, and materials.

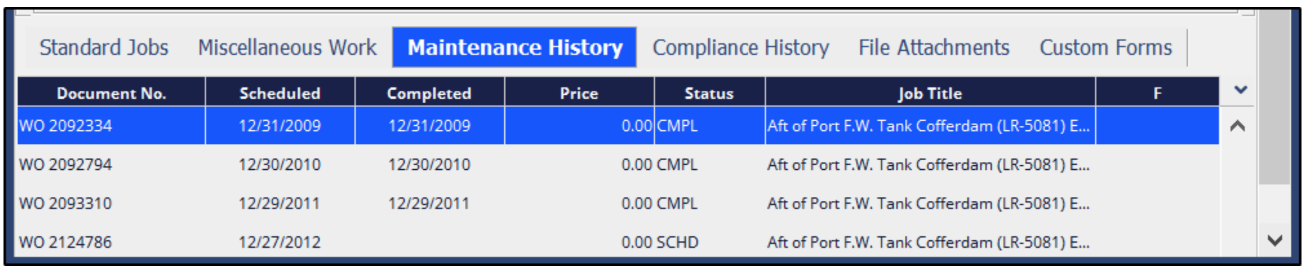
Double click the standard job in the **Standard Job** tab to open the job window.

9.2.2 *Miscellaneous Work Tab*

Refer to Item 21.6 Miscellaneous Work Tab section of this manual.

9.2.3 *Maintenance History Tab*

The **Maintenance History** tab lists all the documents associated with the maintenance on the specified space. These documents are work orders, service requisitions, no action jobs and service purchase orders. Some fields on these documents can be edited by authorized users at the ship level. Documents are automatically added to this tab when they are created if they specify this space.



Document No.	Scheduled	Completed	Price	Status	Job Title	F
WO 2092334	12/31/2009	12/31/2009	0.00	CMPL	Aft of Port F.W. Tank Cofferdam (LR-5081) E...	
WO 2092794	12/30/2010	12/30/2010	0.00	CMPL	Aft of Port F.W. Tank Cofferdam (LR-5081) E...	
WO 2093310	12/29/2011	12/29/2011	0.00	CMPL	Aft of Port F.W. Tank Cofferdam (LR-5081) E...	
WO 2124786	12/27/2012		0.00	SCHD	Aft of Port F.W. Tank Cofferdam (LR-5081) E...	

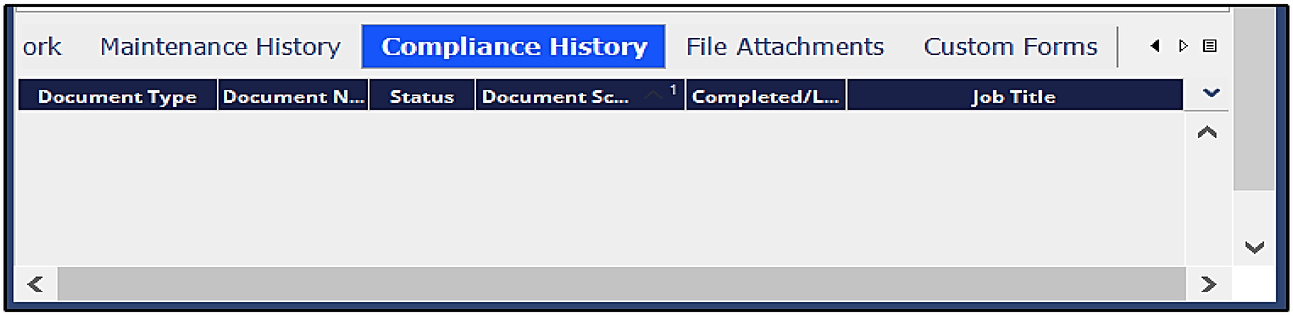
The fields on the **Maintenance History** tab are:

- **Document number** – the maintenance document name and number.
- **Scheduled** – the scheduled date of the maintenance
- **Completed** – the date the maintenance was completed
- **Price** – the cost of the job
- **Status -** indicates whether the work is scheduled (SCHD or S), completed (CMPL or CP), closed (CLOS or CL) or cancelled (CANC or X).
- **Job Title** – the title of the maintenance as listed on the work order or service purchase order
- **F** (Findings) – An icon in the column indicates the entries are made on the **Findings** tab of the **Work Order**. Double click on the work order to open the **Work Order** window.

Double click the document on the **Maintenance History** tab and to open the selected work order.

9.2.4 *Compliance History*

This tab shows all Compliance Documents linked to the structure. Click to select a document and click the Open icon to view the record.



9.2.5 *File Attachments Tab*

Refer to Item 21.2 File Attachment Tab section of this manual.

9.2.6 *Custom Forms Tab*

Custom Forms field allows the user to link **Custom Form Templates** to Spaces Documents.

Refer to Item 21.3 Custom Forms Tab section of this manual.

9.1 *Space Lists Window*

The **Space Lists** window contains all the spaces created for the specified ship. Click on the dropdown menu in the fields on the **Search** tab to define the parameters for finding the desired spaces.

The options on the menu bar and toolbar for this window are explained in this section.

Option	**Description**
Space→	The **Space** menu contains options to manipulate a selected space.
Open	Select the **Open** option / button to open the space highlighted on the **Space Lists** window.
Refresh	Select the **Refresh** option / button to refresh the view on the window.
Delete	Select the **Delete** option / button to delete the space highlighted on the **Space Lists** window. Spaces can only be deleted if they have NOT been replicated. This option is only available for the central office.
Hide	Select the **Hide** option / button to hide the space highlighted on the **Space Lists** window.

Option	Description
Search	This toolbar icon works as a toggle to display or hide the **Bookmarks** and **Search** tabs of the **Space Lists** window.
Help	The option in the **Help** menu is **Help**. Select this option to open the online help.

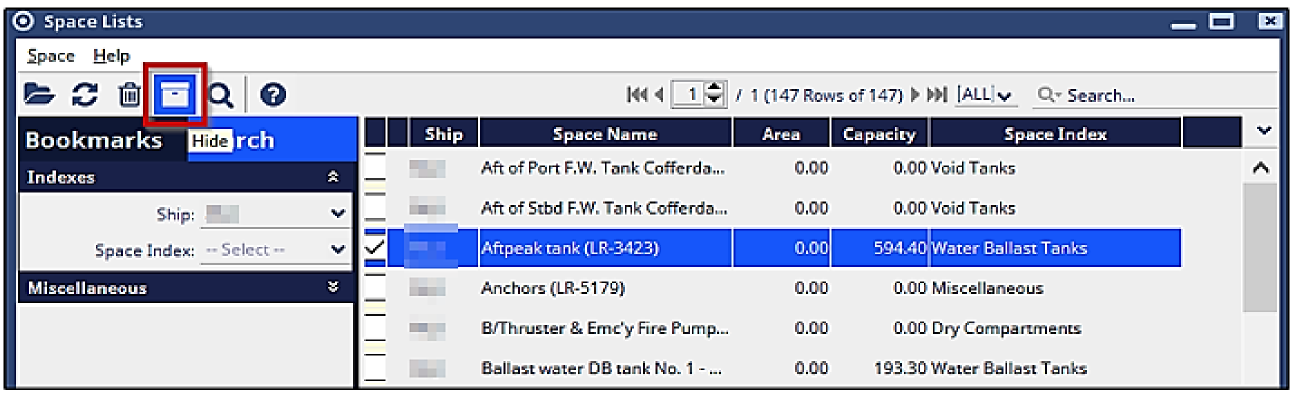
9.2 *Hide Spaces*

Spaces that have been created cannot be deleted, but they can be hidden.

1. Select **Maintenance** gadget→ **Tools** → **Spaces** from the **Navigator** pane on the **Maintenance and Purchasing** module from the ship view to open the **Space Lists** window. Click the **Search** tab after selecting the parameters for the search. Click the **Search** button to initiate the search.

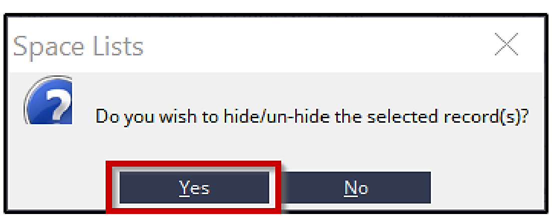
All the spaces that meet the specified criteria are listed on the right side of the window for this specific ship.

2. Tag the space to hide and then click the **Hide** button.



- A confirmation message box opens to verify that the space is to be hidden.

3. Click the **Yes** button to close the message box and hide the selected space.

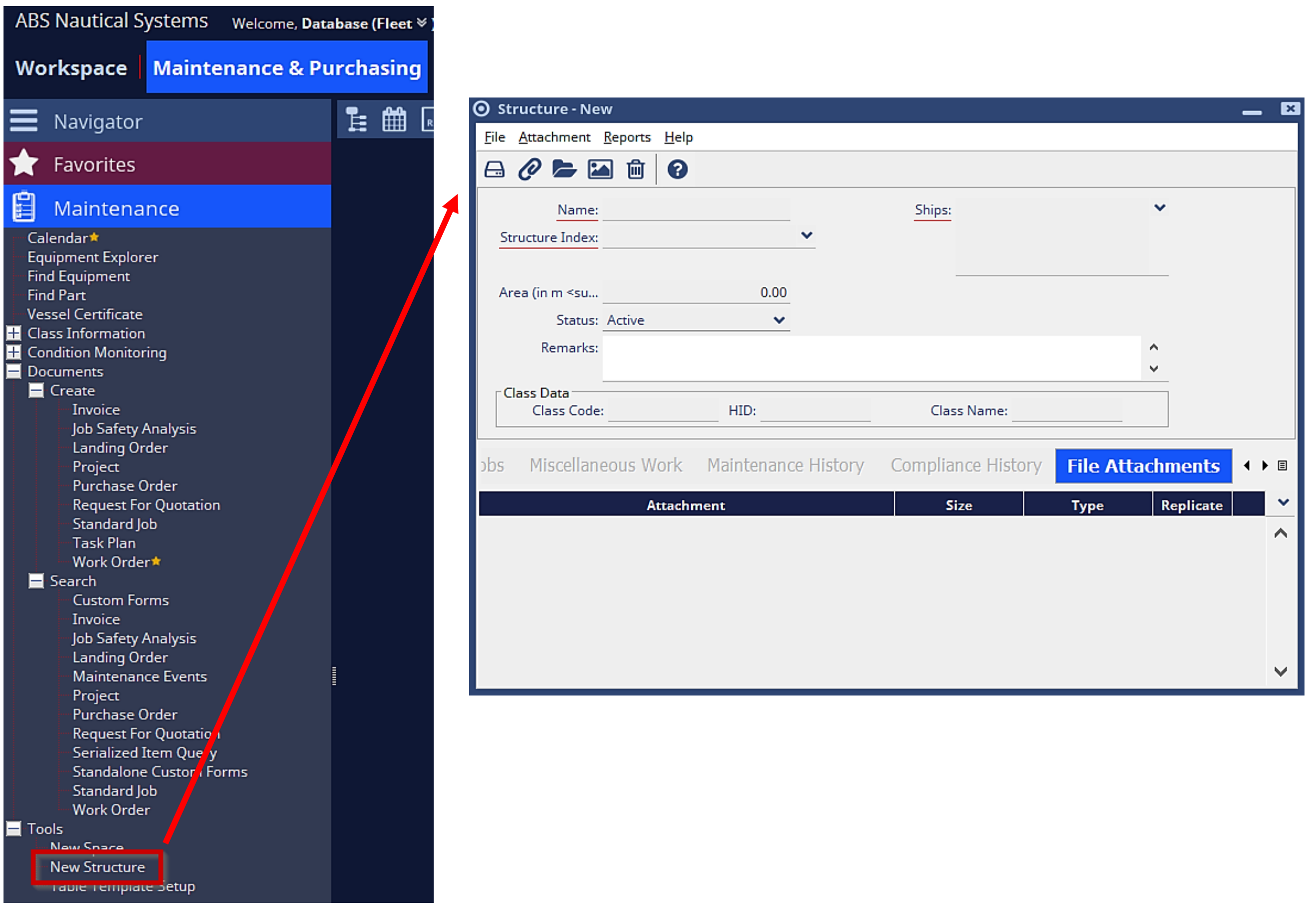


Section 10 Structures

10.1 *Create Structures*

A structure is created or defined from the fleet level by the central office, but it is edited from the ship level to apply to each individual ship. The newly created structure is replicated to each ship's database that it pertains to. However, the individualized information regarding the structure is NOT replicated back to the central database. It remains in each ship's database.

From the **Maintenance and Purchasing** module, select **Maintenance** gadget→ **Tools** → **New Structure**



- The **Structure - New** window opens. The **Structure** window looks similar to the **Space** window.

The fields on the **Structure** window are:

Field	Description
Name	Type the name of the structure in the **Name** field. This name can be specific to a ship or generic to apply to several ships. This is a required field.
Structure Index	Click the dropdown menu at the end of the **Structure Index** field to open the **Structure Index** window for a list of index terms that apply to structures. Index terms are used for cross reference and query purposes. Authorized users can add new index terms to the **Structure Index** window. Click to highlight an index term from the **Structure Index** window. Click the **Select** button on the **Structure Index** toolbar to select the highlighted structure. The **Structure Index** window closes, and the selected structure is listed in the **Structure Index** field. This is a required field.
Ships	Click the dropdown menu at the end of the **Ships** field to open the **List of Ships** window to select the ship or ships that have this structure. This is a required field. **NOTE:** Ships only see information that pertains to their ships. Only the ship viewing the **Structure** window is listed once the central office has sent the information to the ships' databases.
Area	Click in the **Area** field to type the area of the structure in square meters. This field can be left blank if the area for the specified structure differs from ship to ship in the fleet. It can be defined at the ship level.
Status	Click on the dropdown menu at the end of the **Status** field to change the status of the structure. The default value is "Active".
Remarks	Type any remarks pertaining to the structure in the **Remarks** field. The **Remarks** field is a free form text field and is editable at any time. This field can be left blank for the ship to complete unless the remark pertains to this structure on all ships in the fleet.
Class Data section	The **Class Data** section was added to include classification information. The fields in this section are: • Class Code – the UID of the vessel • HID – Hierarchy Identification Number • Class Name – the name by which the space is referenced by the class society **NOTE:** Only authorized users can add or edit information in these fields.

Field	Description
File Attachments tab	The **File Attachments** tab is the only active tab on the **Structure – New** window. Attachments pertaining to the defined structure can be attached in the form of text, graphics, or Excel spreadsheet.

10.2 *Edit a Structure*

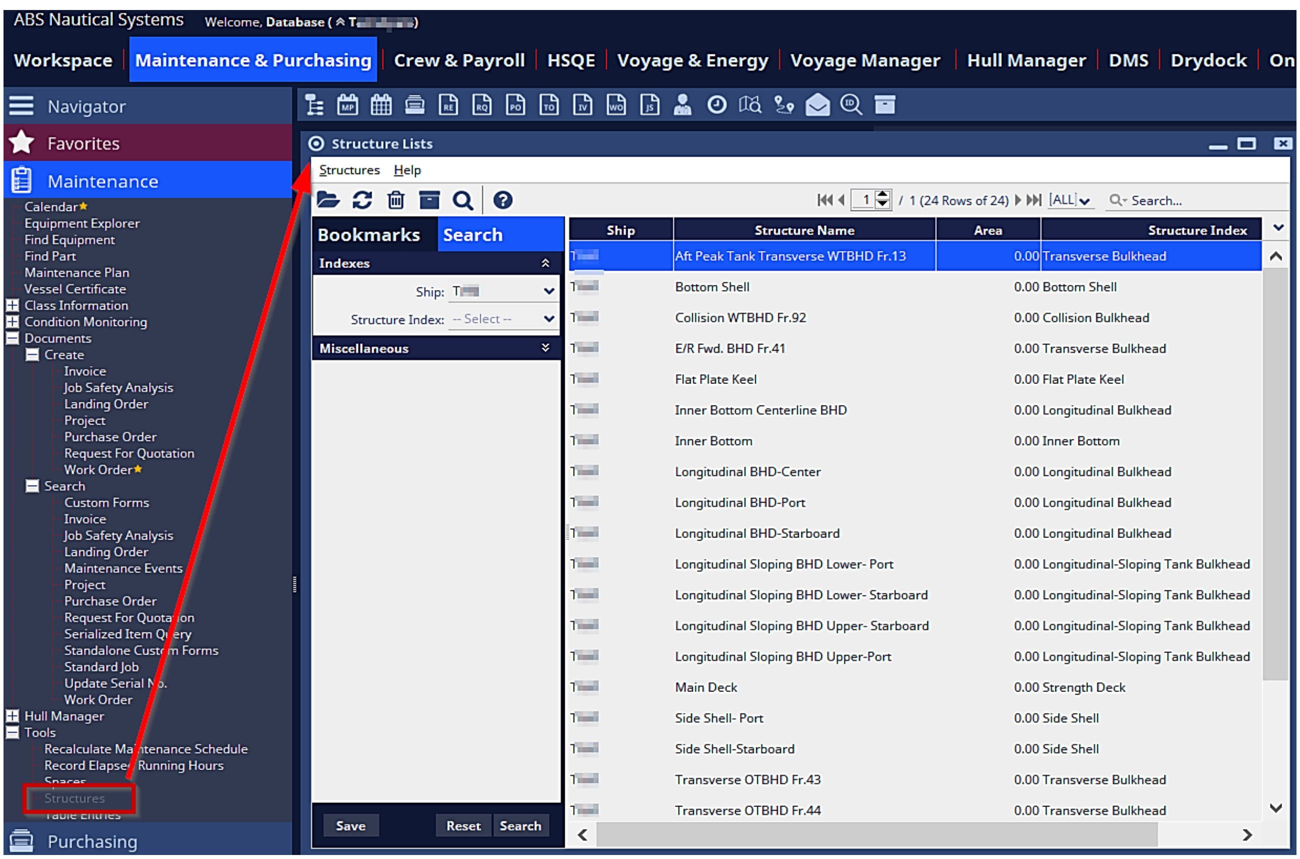
A structure can be edited and customized to a specific ship's needs once it is created by the central database and replicated to the ship. This is done from the ship view.

NOTE: Only authorized users can make changes to the **Structure** window.

At Ship Level:

1. From the Maintenance and Purchasing module, select **Maintenance** gadget→ **Tools → Structures** to open the **Structure Lists** window.
2. The **Ship** field on the **Search** tab is filled by default with the vessel name. Click the **Search** button at the bottom of the **Search** tab to initiate the search. The structures created for this specific ship are listed on the right side of the window.

NOTE: The **Area** column may have zeros (0) if this is a newly created structure. This information can be added or changed in the **Structure** window.



3. Double click on a structure to be edited. The **Structure** window for the selected structure opens.
   - The fields on the **Structure** window at the ship level are the same as the fields on the fleet level.

10.2.1 *Standard Jobs Tab*

The **Standard Jobs** tab lists the standard jobs for the specified structure. Jobs are added to this tab when they are created for the specified structure. Open the standard job listed on the **Standard Jobs** tab to view details of the job.

Standard jobs are created by the central office. Some fields on the standard job can be edited by authorized users at the ship level.

The **Standard Jobs** option and drop-down menu options are added to the menu bar of the **Structure** window when the **Standard Jobs** tab is clicked.

The columns on the **Standard Jobs** tab are:

- **Job Size Indicator** – The job size indicator defines the relationship of the job compared to other jobs under the same equipment, space, or structure. This rating is from 0 – 99.
- **Job Size Index** – The job size index describes the nature of the job. For example, overhaul or inspection. The name of the PM Standard Job is derived by combining the name of the physical item on which the job is performed with the job size term. For example, #1 Forward Tank - Tank Inspection – Visual.
- **Interval** – the time frame between this job and the next time it is to be performed.
- **Estimated Cost** – the estimated cost of the job

Double click the standard job in the **Standard Job** tab to open the job window.

10.2.2 *Miscellaneous Work Tab*

The **Miscellaneous Work** tab lists miscellaneous standard jobs. The miscellaneous standard job is a type of standard job and like the **Standard Job** tab; jobs are added to the tab when the structure is linked to the job on the **Miscellaneous Equipment** tab on the standard job. It is work of a general nature such as painting, sandblasting or anode replacement that is not associated with a specifically identifiable item on the ship like a piece of equipment, space. However, miscellaneous work can be cross-referenced with multiple items such as equipment, space, or structure so that when the standard job is completed, these areas are automatically updated with maintenance history. The job schedule can only be based on calendar interval.

The fields on the **Miscellaneous Work** tab are:

- **Ship Name** – the name of the ship
- **Job Name** – the job title on the miscellaneous standard job
- **Dormant** – the job status. A “No” indicates that the job is active.
- **Last Done** – the date the last time the job was performed

- **Interval** – the time frame when the job was last performed until the next time it needs to be performed.

Double click the standard job in the **Miscellaneous Work** tab and it opens. Only authorized users can enter or change information on the **Standard Job** window.

10.2.3 *Maintenance History Tab*

The **Maintenance History** tab lists the documents associated with the maintenance on the specified structure. These documents are work orders, service requisitions, no action jobs and service purchase orders. Some fields on these documents can be edited by authorized users at the ship level. Documents are automatically added to this tab when they are created if they specify this structure.

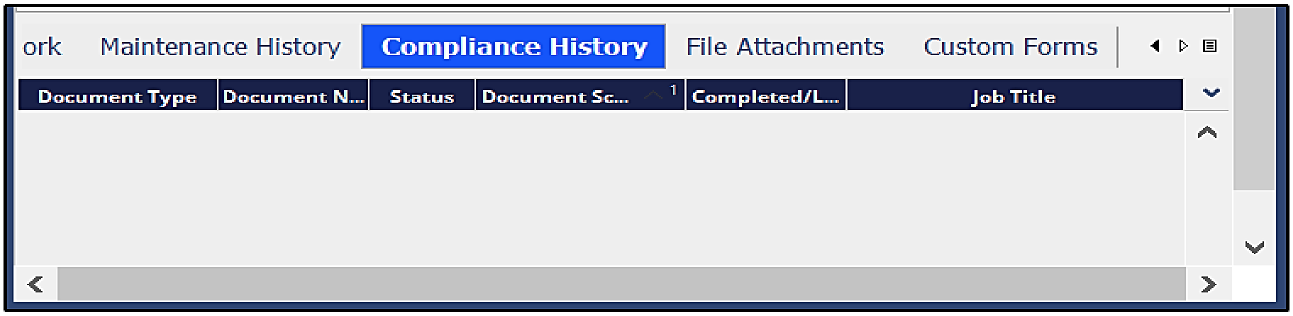
The fields on the **Maintenance History** tab are:

- **Document Number** – the maintenance document name and number.
- **Scheduled** – the scheduled date of the maintenance
- **Completed** – the date the maintenance was completed
- **Price** – the cost of the job
- **Status -** indicates whether the work is scheduled (SCHD or S), completed (CMPL or CP), closed (CLOS or CL) or cancelled (CANC or X).
- **Job Title** – the title of the maintenance as listed on the work order or service purchase order
- **F** – an icon in the column indicates the entries are made on the **Findings** tab of the **Work Order**. Double click on the work order to open the **Work Order** window.

Double click the document on the **Maintenance History** tab and it opens.

10.2.4 *Compliance History*

This tab shows all Compliance Documents linked to the structure. Click to select a document and click the Open icon to view the record.



10.2.5 *File Attachments Tab*

Refer to Item 21.2 File Attachment Tab section of this manual

10.2.6 Custom Forms Tab

Refer to Item 21.3 Custom Forms Tab section of this manual

10.1 Structure Lists Window

The **Structure Lists** window contains the structures created for the specified ship. Click on the dropdown menu in the fields on the **Search** tab to define the parameters for finding the desired spaces.

The fields on the Structures Search Navigator include the name of the **Ship** and the **Structure Index.**

The options on the menu bar and toolbar for this window are explained in this section.

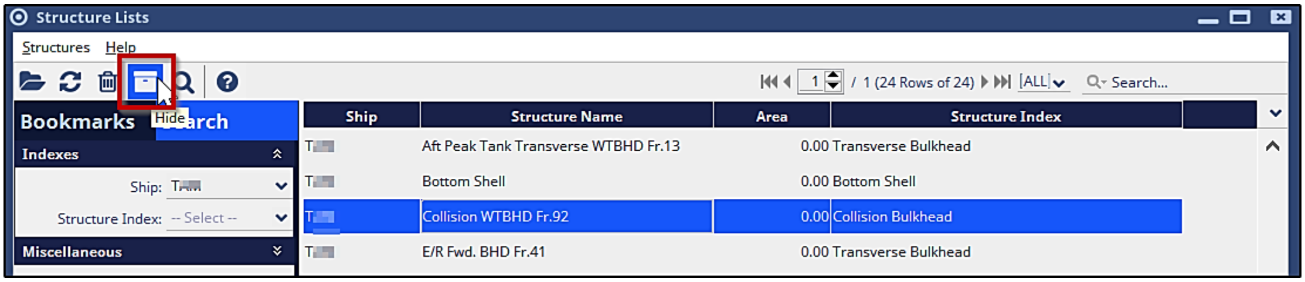
Option	Description
Space→	The **Space** menu contains options to manipulate a selected space.
Open	Select the **Open** option / button to open the space highlighted on the **Space Lists** window.
Refresh	Select the **Refresh** option / button to refresh the view on the window.
Delete	Select the **Delete** option / button to delete the space highlighted on the **Space Lists** window. Spaces can only be deleted if they have NOT been replicated. This option is only available for the central office.
Hide	Select the **Hide** option / button to hide the space highlighted on the **Space Lists** window.
Search	This toolbar icon works as a toggle to display or hide the **Bookmarks** and **Search** tabs of the **Space Lists** window.
Help	The option in the **Help** menu is **Help**. Select this option to open the online help.

The **Structures** Window includes Tabs for Standard Jobs, Miscellaneous Work, Maintenance History, File Attachments and Custom Forms. Structure statuses are either Active or Inactive.

10.2 *Hide Structures*

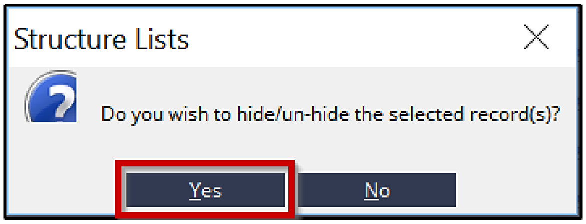
Structures that have been created cannot be deleted, but they can be hidden.

1. From the **Maintenance and Purchasing** module, select **Maintenance** gadget→ **Tools** → **Structures** to open the **Structure Lists** window. Click the **Search** tab after selecting the parameters for the search. Click the **Search** button to initiate the search. All the structures that meet the specified criteria are listed on the right side of the window for this specific ship.
2. Click to highlight the structure to be hidden.
3. Click the **Hide** button.



- A confirmation message box opens to verify that the structure is to be hidden.

4. Click the **Yes** button to close the message box and hide the selected structure.

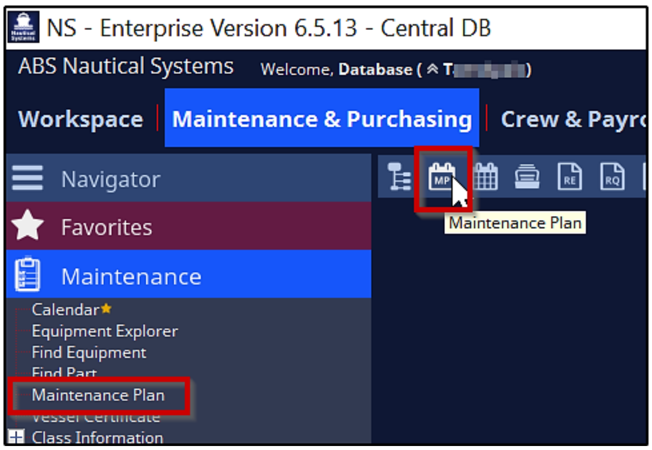


Section 11 Maintenance Plan

The **Maintenance Plan** is the centralized interface where the status of the ship's maintenance can be examined and coordinated.

Filters are used to query the scheduled jobs to enable crewmen to plan the maintenance.

Click the **Maintenance Plan** toolbar icon or Maintenance Plan from the Navigator pane to open the **Maintenance Plan**.



There is a prompt - "No materials usage was reported. Were parts consumed?" that appears when the system preference "**Prompt Users for Work Order Materials Consumption**" is set to "**Work Orders with Materials Required**" for both serialized and non-serialized parts.

11.1 *Concept*

The **Maintenance Plan** looks at:

- Standard Jobs
- Work Orders
- Service Requisitions
- Service Orders
- No Action Jobs

The **Maintenance Plan** lists overdue, current, and future maintenance of actual or projected standard jobs based on schedule date and filtered as required.

Counter based standard jobs have a job counter which accumulates running hours since the last time the maintenance was performed.

On the **Counter Setup** tab of the Equipment Detail is the **Average Daily Usage**.

NS Enterprise makes the following calculation:

(Counter Interval – Job Counter) / Average Daily Usage = Days to go

So, in this example, we find:

(1,500 – 835) / 9 = 73.9

NS Enterprise will schedule this job in approximately 74 days.

The job counter is updated when the running hours are updated. The job is scheduled based on the most current information when the **Maintenance Plan** is recalculated.

The calculation is straight forward for calendar-based maintenance intervals: the maintenance interval is added to the **Last Done** date and the job is placed in the **Maintenance Plan** schedule.

11.2 *Queries*

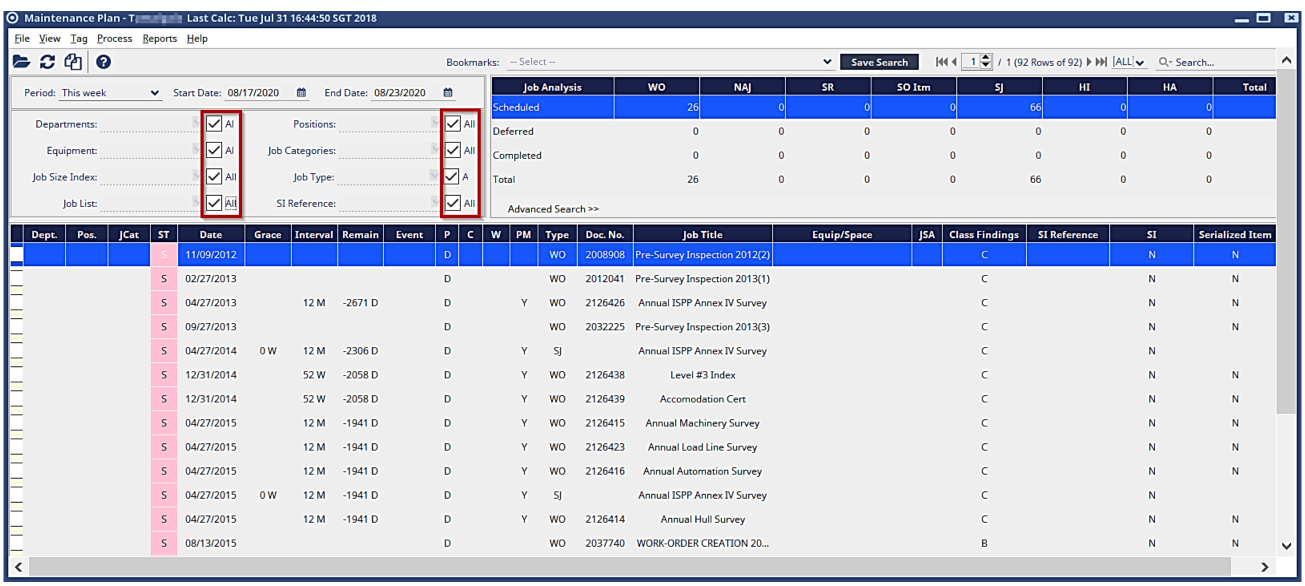
The **Maintenance Plan** has many filters to help narrow searches. Filters can be based on department, job category, date, position, or equipment. Almost every aspect of the maintenance is available to filter against.

Uncheck the **All** checkbox and click the dropdown menu of the filter/s to open a selection window.

Choose the items to filter for from the selection window and add them to the right side of the filter box. There is neither a minimum nor maximum for the number of filters that a user can select.

Click the **OK** button.

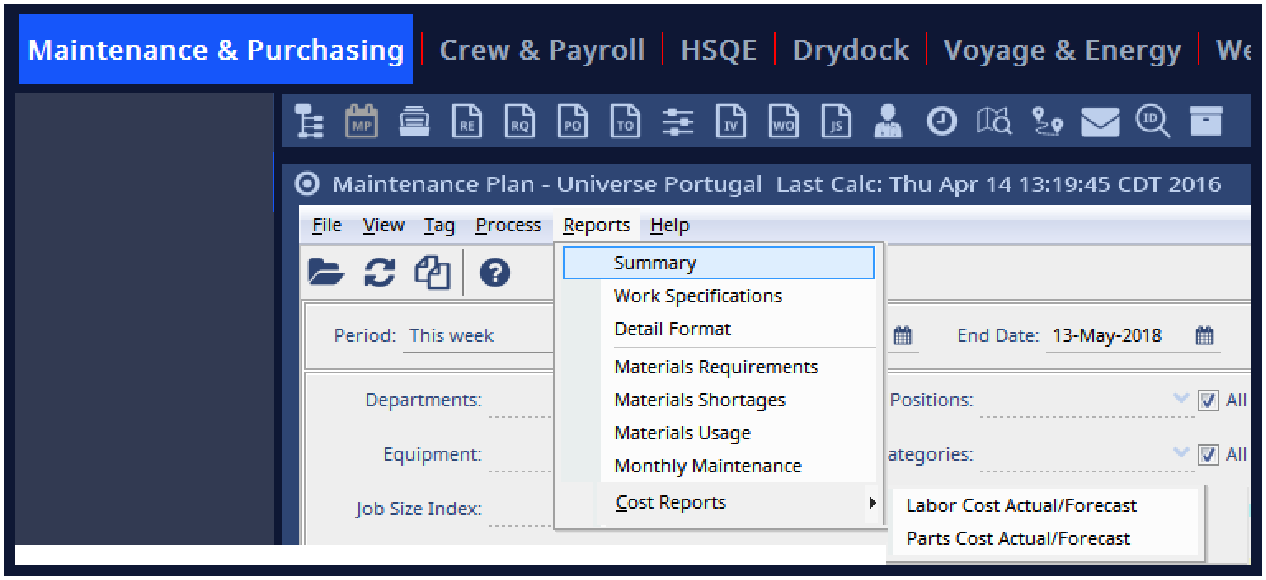
Choose a date range (this week, next 90 days, last month) or enter custom dates. The **Maintenance Plan** automatically defaults to the current week.



Click the **Refresh** button when all the filters are tagged, and a date range is selected. The filters are applied. Clicking the column headers will sort the data after it has been filtered. All column headers may be sorted.

11.3 *Reports*

Multiple reports can be accomplished and printed from the **Maintenance Plan**.



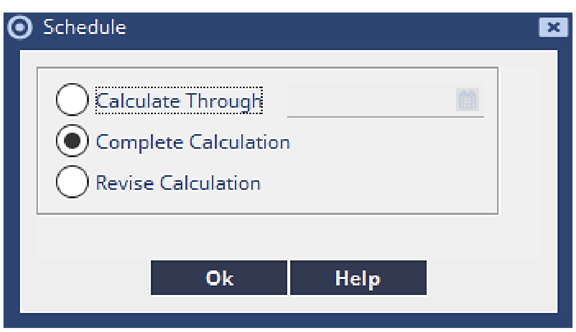
One method is choosing **Reports** from the **Maintenance Plan** menu bar and printing some of the preformatted reports. These reports detail the specified information, such as Materials Requirements, Materials Shortages or Materials Usage. The report can be for all jobs or only for the jobs which have been tagged in the **Maintenance Plan**.

Tagging filters and refreshing the **Maintenance Plan** can create a report with the “filtered” information.

11.4 *Recalculating*

The **Maintenance Plan** should be recalculated daily and more often if deemed necessary.

From the Navigator, select **Maintenance** gadget → **Tools** → **Recalculate Maintenance Schedule** to perform a user-initiated recalculation.

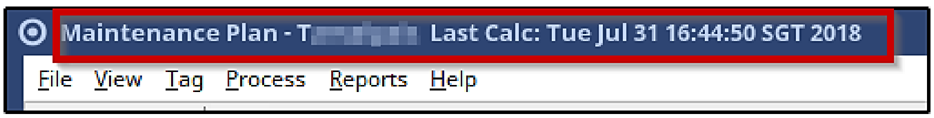


The 3 options include:

- **Calculate Through** – if selected, click on the calendar icon to select an end date.
- **Complete Calculation** – Completes the calculation for those jobs on the maintenance plan that are tagged/selected.
- **Revise Calculation** – for the user to determine a manual revision for each selected job on the maintenance plan.

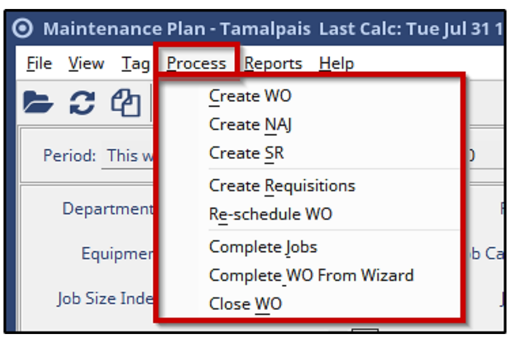
NS local system administrator can set up to recalculate jobs automatically each night.

The date of the last recalculation is shown in the topmost part of the **Maintenance Plan**.



11.5 *Process Menu Options*

There are several options under the Process menu of the Maintenance Plan:

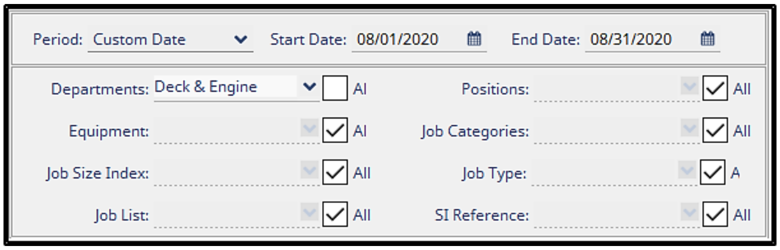


Option	Description
Create WO	Creates a WO from the selected Standard Job.
Create NAJ	Creates a No Action Job from the selected Standard Job that can be utilized for planning purposes.
Create SR	Creates a Service Requisition to be performed by an outside contractor.
Create Requisitions	Creates a Requisition from the selected WO based on the information on the Materials tab.
Re-Schedule WO	Creates a new Reschedule Request for the selected WO.
Complete Jobs	Completes the selected WO.

Complete WO from Wizard	Completes the selected WO using a Wizard.
Close WO	Closes the selected WO.

11.6 *Manage your Class Jobs*

Class Jobs can be displayed in the Maintenance Plan by selecting the appropriate filters.



This list can be printed and delivered at the Class Surveyor as a first thing when he boards the vessel.

11.7 *Create Worklists*

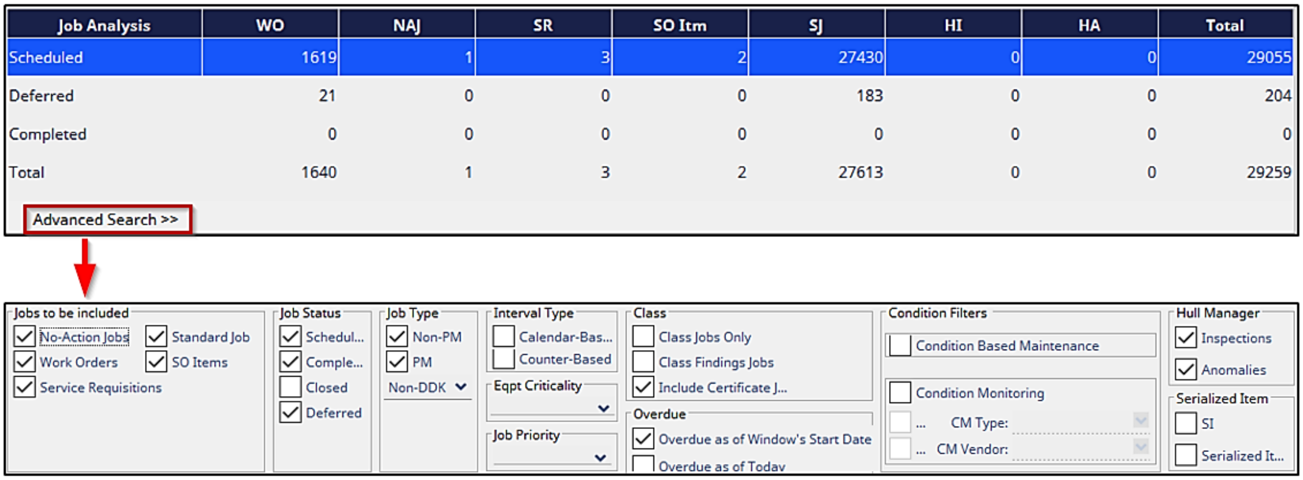
The **Maintenance Time Plan** can be filtered to print specific jobs or to allow personnel to view their jobs for a particular period as jobs are ready for distribution. There are several ways to filter these jobs.

> **NOTE**: Past due, uncompleted scheduled jobs are listed at the top of the list no matter what filter parameters are set unless the **Overdue Jobs** check box is unchecked. The **Status (ST)** column is highlighted in pink for these jobs. The **Display Overdue Jobs** check box is in the section displayed when the **Advanced Search** button is clicked.

1. Column Headings – Click on any of the column headings to sort by that column heading in ascending or descending order.
2. By Period – Click on the dropdown menu in the **Period** field to select a time frame. The scheduled jobs on the **Maintenance Plan** change to meet the time frame criteria. The **Start Date** and **End Date** fields also change to meet the time frame criteria.

   Click the **Refresh** button on the **Maintenance Plan** window toolbar to refresh the window after selecting the parameters.
3. By Department/Equipment/Position/Job Category – Click to uncheck the **All** box corresponding to **Departments**, **Equipment**, **Positions** or **Job Categories** fields to filter the scheduled jobs by one of these parameters.

   Click the **Refresh** button on the **Maintenance Plan** window toolbar to refresh the window after selecting the parameters.
4. By **Advanced Search** button section options – Click the **Advanced Search** toggle for more filter options.



Click the check box to select or unselect an option. Several options are checked by default.

Click the **Refresh** button on the **Maintenance Plan** window toolbar to refresh the window after selecting the parameters.

11.8 *Reschedule Work Orders, Service Requisitions, No Action Jobs or Service Purchase Orders*

Sometimes work orders, service requisitions, no action jobs or service purchase orders need to be rescheduled.

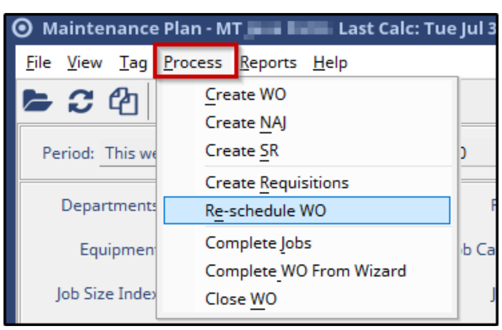
NOTE: Standard jobs cannot be rescheduled with this process.

1. Select a scheduled job from the job list on the **Maintenance Plan** window.

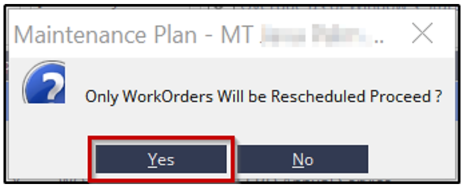
   -- OR –

   Click one of the options in the **Tag** menu on the **Maintenance Plan** window menu bar.

2. Click **Reschedule WO/SR/NAJ/SO** from the **Process** menu.

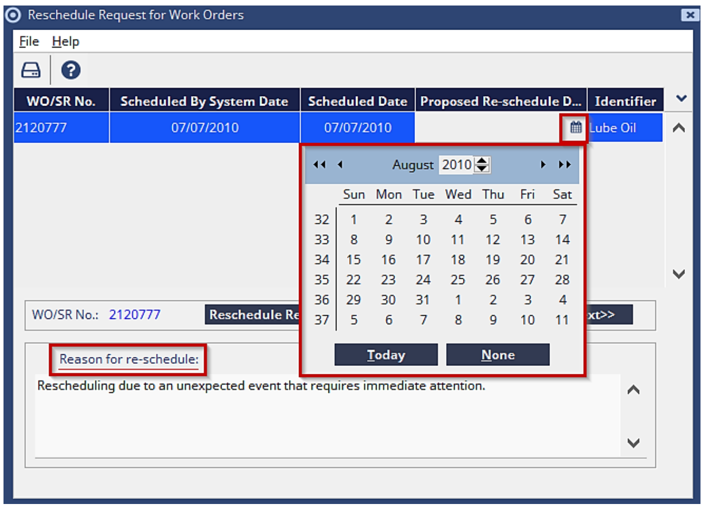


- A confirmation message will be shown on the screen, Click **Yes**.



- A **Reschedule Request for Work Orders** window opens.

3. Select a **Proposed Re-schedule Date** from the calendar. Enter the **Reason for Re-schedule**.



4. Click **Save.** This will automatically **Submit** the re-schedule request and pending for acceptance / approval.

NOTES:

- If multiple WOs are tagged none of the work orders were being submitted if the scheduled date of any of the selected work orders was later than the proposed reschedule date.
- Users can search for work orders using a filter criterion "Rescheduled Declined" on the work order search navigator screen.
- The system allows Work Orders to be rescheduled before system schedule date through the new system preference "**Allow Rescheduling Earlier than Scheduled by System Date**", This preference must be set to "**Yes**" for the functionality to take effect. Default value is "**No**".

11.9 *Complete and Close Work Orders*

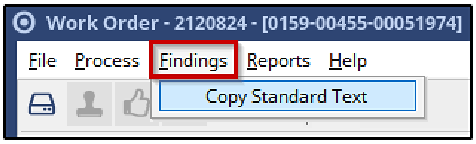
Scheduled jobs must be completed before they can be closed. The **Maintenance Plan** can be used to complete and close scheduled jobs.

11.9.1 *Complete a Work Order*

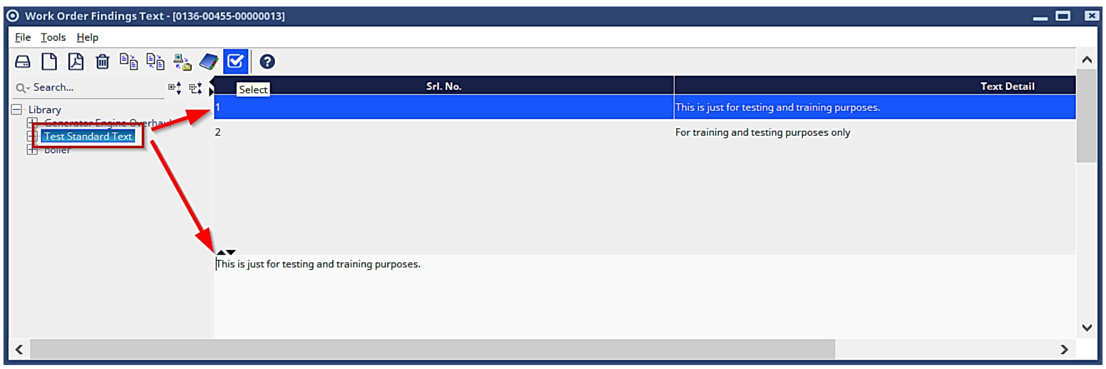
1. Open a scheduled workorder by double clicking on it.
2. Enter details on the appropriate tabs:

   a. **Findings** tab - to record the findings, if any.

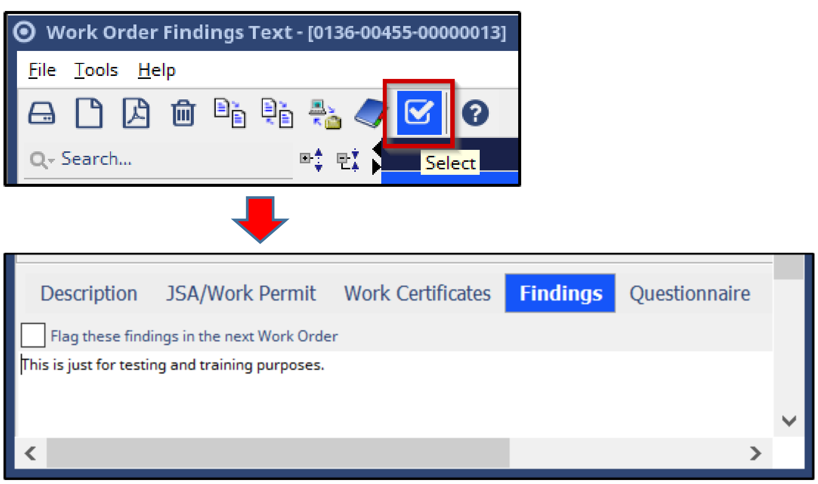
   - Type the applicable information on the tab OR click the **Copy Standard Text** button on the **Work Order** toolbar to copy previously accepted text.



   - The **Work Order Findings Text** window opens. Select text from the hierarchy panel on the left side of the **Work Order Findings Text** window. The text detail is displayed on the right panels of the **Work Order Findings Text** window.

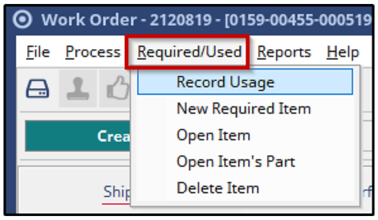


   - Click **Select** on the **Work Order Findings Text** toolbar. The text is copied to the **Findings** tab of the selected work order.

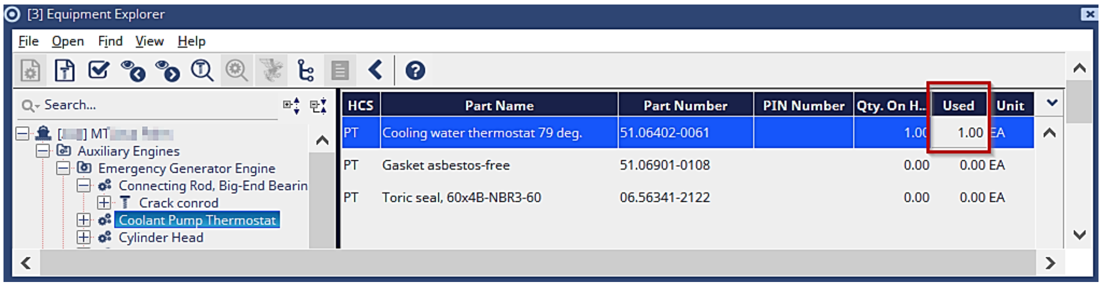


   b. **Materials** tab - to list the materials used to complete the work order.

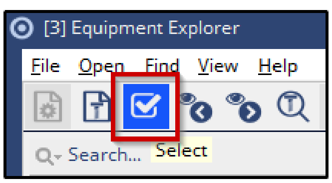
   - Click **Record Usage** tab on the **Work Order** toolbar. The **Equipment Explorer** window opens by default on the equipment selected on the work order.



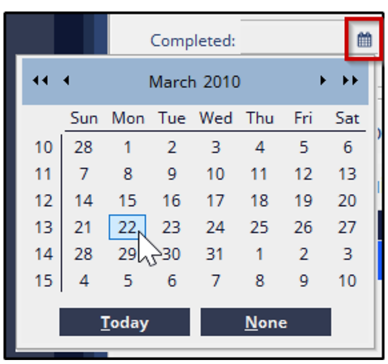
- Click through the hierarchy of the **Equipment Explorer** window to find the equipment and part used to complete the work order. Details of the highlighted equipment are shown on the right side of the window.
- Enter the number of the selected part used to complete the work order in the **Used** field.



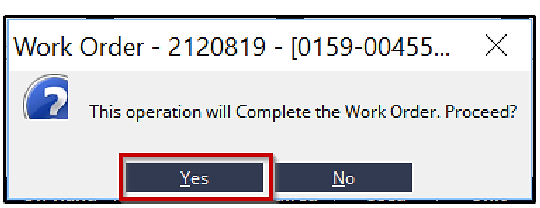
- Repeat steps until all materials used are recorded. The system "remembers" the parts marked even when another equipment is selected with different parts.
- Click **Select** on the **Equipment Explorer** toolbar. All parts with a value in the **Used** column are copied to the **Materials→Required/Used** tab of the **Work Order** window.



9. Click the **Completed** field on the **Work Order** window to enter the completion date once all information have been entered. A message box opens verifying that the work order is complete.

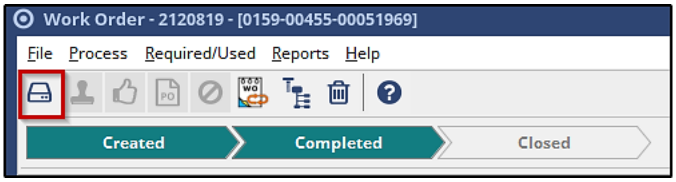


10. Click **Yes** to close the message box and enter the date into the **Completed** field.

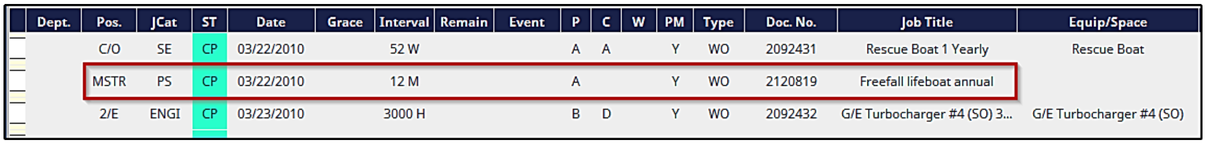


NOTES: A Work order can be completed with a date which is on or after the latest approval date of a linked JSA. If the JSA approval process is disabled, then the work order completion date should be on or after the latest completion date of linked JSA.

11. Click **Save** on the **Work Order** window to close the completed work order.



The **Maintenance Plan** window changes to display the completed work order. The **ST** field on this scheduled job is shaded green with a "CP".



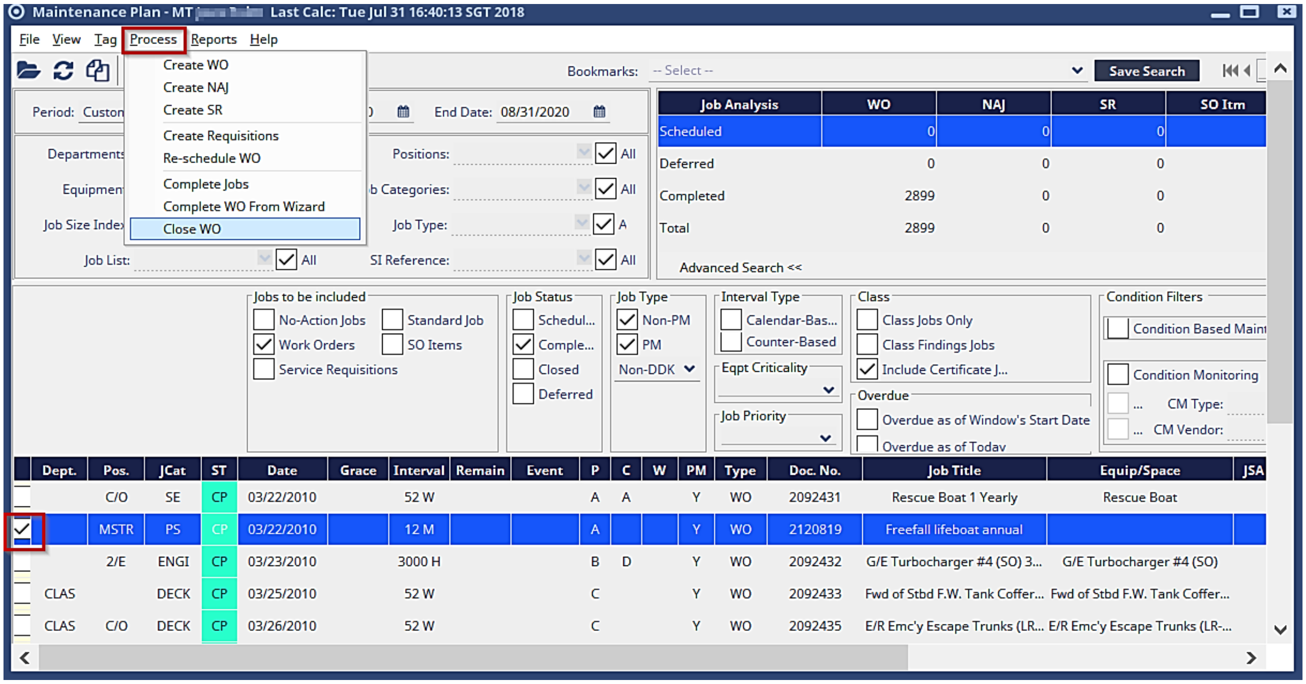
Dept.	Pos.	JCat	ST	Date	Grace	Interval	Remain	Event	P	C	W	PM	Type	Doc. No.	Job Title	Equip/Space
	C/O	SE	CP	03/22/2010		52 W			A	A		Y	WO	2092431	Rescue Boat 1 Yearly	Rescue Boat
	MSTR	PS	CP	03/22/2010		12 M			A			Y	WO	2120819	Freefall lifeboat annual	
	2/E	ENGI	CP	03/23/2010		3000 H			B	D		Y	WO	2092432	G/E Turbocharger #4 (SO) 3...	G/E Turbocharger #4 (SO)

NOTE: Click to select a scheduled job on the **Maintenance Plan** window if your organization does not require findings and materials to complete a job.
Then click **Process → Complete Jobs** from the menu bar. The selected job is displayed as completed on the **Maintenance Plan** window with a "CP" in the green shaded **ST** field.

11.9.2 *Close a Work Order*

Work orders **MUST** be complete before they can be closed.

1. Click the check box to select a completed work order. The **ST** field is shaded green with a "CP" for a completed work order.
2. Click **Process → Close WO** from the **Maintenance Plan** window menu bar. The closed work order is removed from the **Maintenance Plan** window.



NOTE: When closing a work order, the system will check to ensure that material usage has been recorded if the related system preference is enabled. If material usage has not been recorded a message will display requesting the information before closing the WO.

Section 12 Planning and Recording Maintenance

The **Maintenance Plan** is the centralized location where work can be planned and recorded. All scheduled maintenance is found here, as well as service requisitions, service purchase orders and previously entered corrective maintenance that is still outstanding.

12.1 *Planned Maintenance*

Opening the **Maintenance Plan** and choosing filters to zero-in on the maintenance for which a particular position or job category is responsible.

Click the **Refresh** button and the filters are applied.

The **PM** column indicates whether or not the job is planned. These could be standard jobs that are scheduled; or work orders, service requisitions or service purchase orders that were created from a standard job**.**

These line items are corrective maintenance if the PM column is empty.

The user can double click on any of these line items to see the work description and other details of the job.

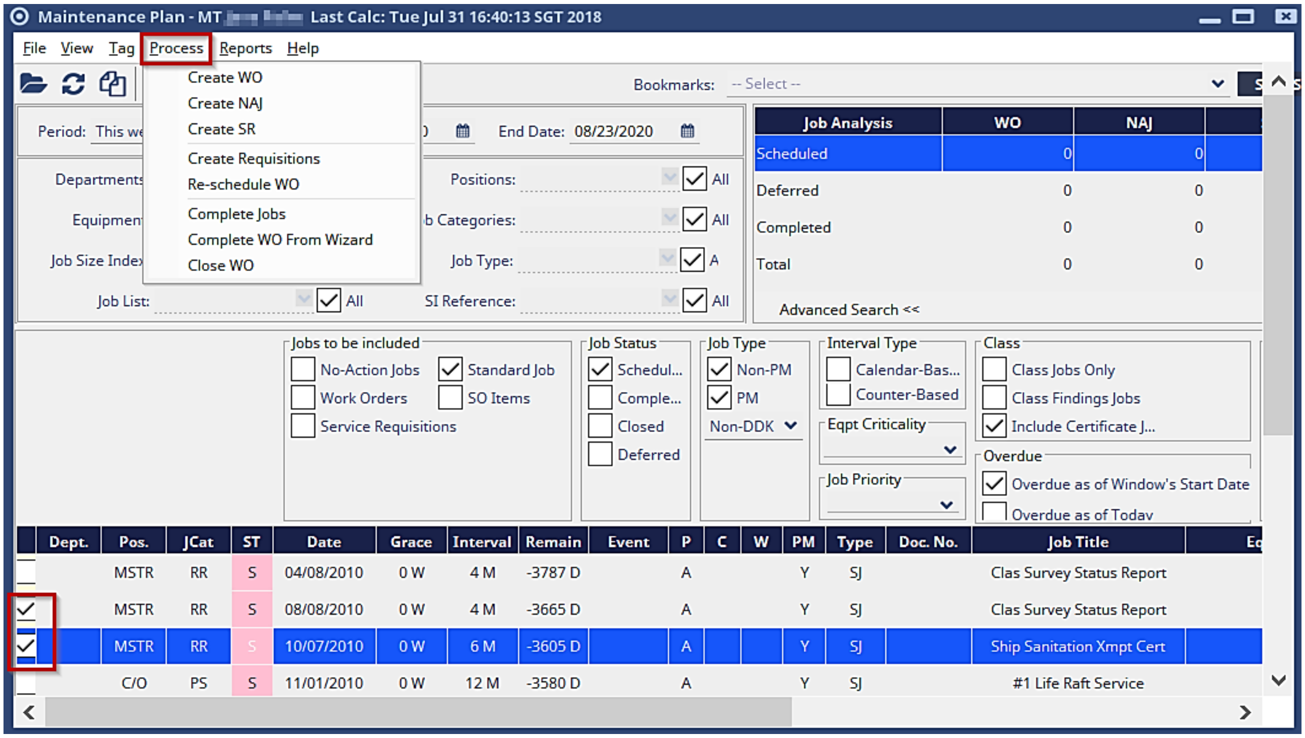
12.1.1 *Create a Work Order*

Tag one or more standard jobs in the **Maintenance Plan**. These are jobs that the user wants to have performed/scheduled.

Choose **Process** in the main menu bar.

The user can choose to create a work order, a no action job or a service requisition.

- **WO: Work Order** – This is work that the ship's staff performs.
- **NAJ: No Action Job** – NAJ is to be utilized for planning purposes, i.e. jobs associated to a budget or MOC which is still in the planning phase. The NAJ is changed to either a work order or service requisition once finalized, and work is to proceed.
- **SR: Service Requisition** – This is when the work is to be performed by an outside contractor. The work order becomes the requisition for the contractor.



The status changes to WO after clicking **Create WO** (or NAJ or SR depending on what type was selected).

12.2 *Corrective Maintenance*

NS uses the work order to capture corrective maintenance. A **corrective maintenance work order** is the same as a work order created from a standard job, except that a crewman fills out the job description, designates a scheduled date, link equipment and resources.

When creating a new **Work Order** document, the **Perform By** field has the same three options that have already been described in the previous **Planned Maintenance** section.

- WO: Work Order
- NAJ: No Action Job
- SR: Service Requisition

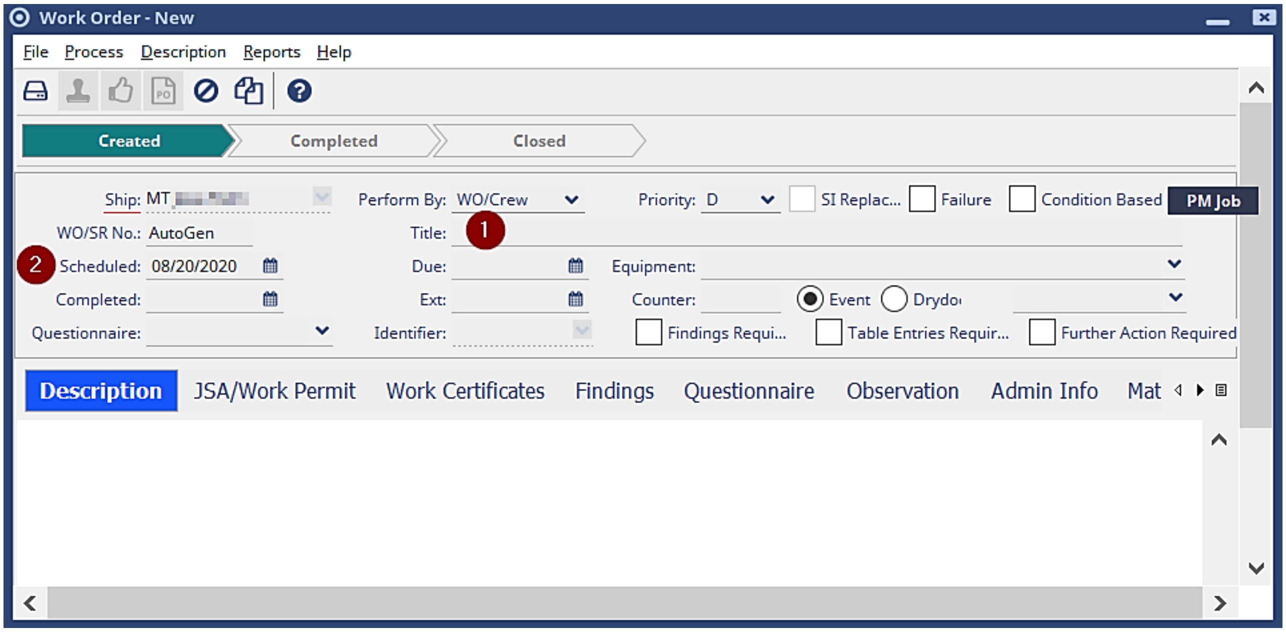
Work orders and no action jobs are contained in this section.

12.2.1 *Create a Work Order – WO/Crew or No Action Job*

From the Maintenance gadget, select **Documents → Create → Work Order**. This opens the **Work Order** document detail. Fill out the applicable fields in the main header.

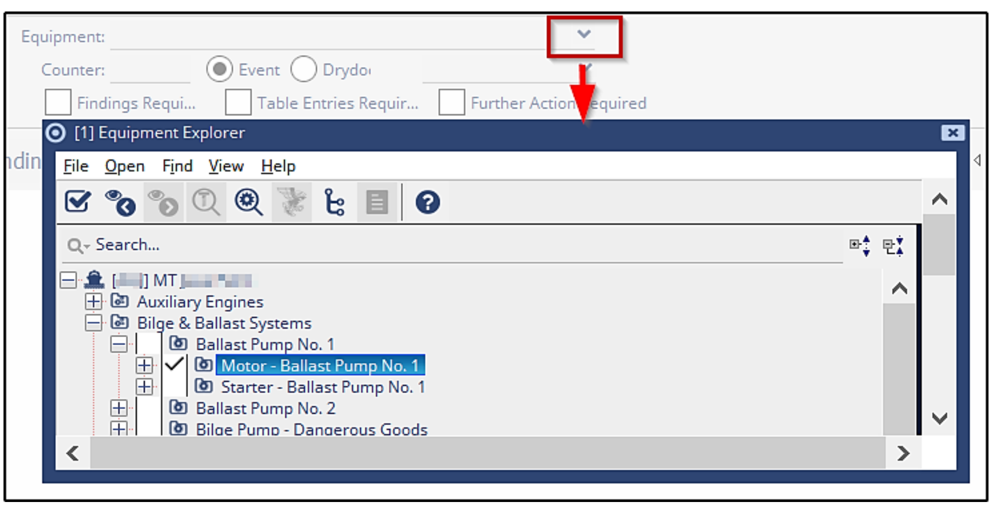
1. Give the work order a **Title**. Be sure that the title is descriptive to provide others with a brief indication as to the nature of the work. For instance, “Engine #1 Governor Change Out” is preferable to “#1 Engine Repairs.”

2. The **Scheduled Date** field automatically enters today's date, but this can be changed to any date. This date is used for placing the WO in the **Maintenance Plan.** The scheduled date must be set to when the work is expected to actually be performed with consideration given if materials are required or operations presently prevent this work from being conducted immediately.



3. Connect equipment to the work order. Click the dropdown menu at the end of the **Equipment** field and an **Equipment Explorer** window opens.

   a. Drill down through the hierarchy and tag the equipment to be associated to the Work Order. The unit (Parent) should also be linked to the work order when linking a work order to a component or maintained part. This ensures that all maintenance is recorded in the parent equipment maintenance history. Be sure to tag the Child before the Parent. Then click the **Select** button and the work order is linked to this equipment.

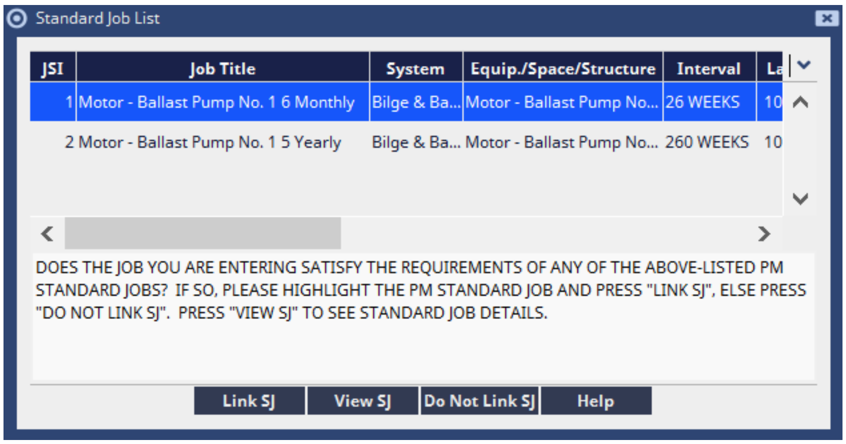


- A window opens if selected equipment has any standard jobs associated with that equipment, the user can link a standard job to the WO if any of the standard jobs encompasses the work planned to perform or schedule.

- Most often the user will choose to close the window or select **Do Not Link SJ**. This means the Work Order will be a non-PM job and it is not connected to any Standard Job.

- Linking a standard job to a work order adjusts the schedule for the standard job. If an equipment has a Standard Job linked to it, below pop-up will be displayed. Select the appropriate action.

- Linking a standard job to a work order adjusts the schedule for the standard job. If an equipment has a Standard Job linked to it, below pop-up will be displayed. Select the appropriate action.



b. The **Perform By** field identifies who will be performing the work. Designate the WO as **WO/Crew** or **No Action**.

c. Choose a **Priority** for the WO:

- **A -** Critical
- **B -** Urgent
- **C -** Important
- **D -** Normal

The work order defaults to **D.**

d. The next field is a **Failure** check box. Failure codes must be entered on the **Failure** tab if the box is checked. The **Failure** box is tagged only when equipment fails or breaks down. This includes failures in which equipment fails to meet operational parameters.

e. Click the **Event** radio button to link the work order to an event.

Description Tab

Enter the work to be performed. Be as complete as necessary, especially considering that this work may be performed in the future when original crewmen are no longer onboard.

The user can also link text from the text library to use as a template. Choose **Description → Copy Text** from the menu bar.

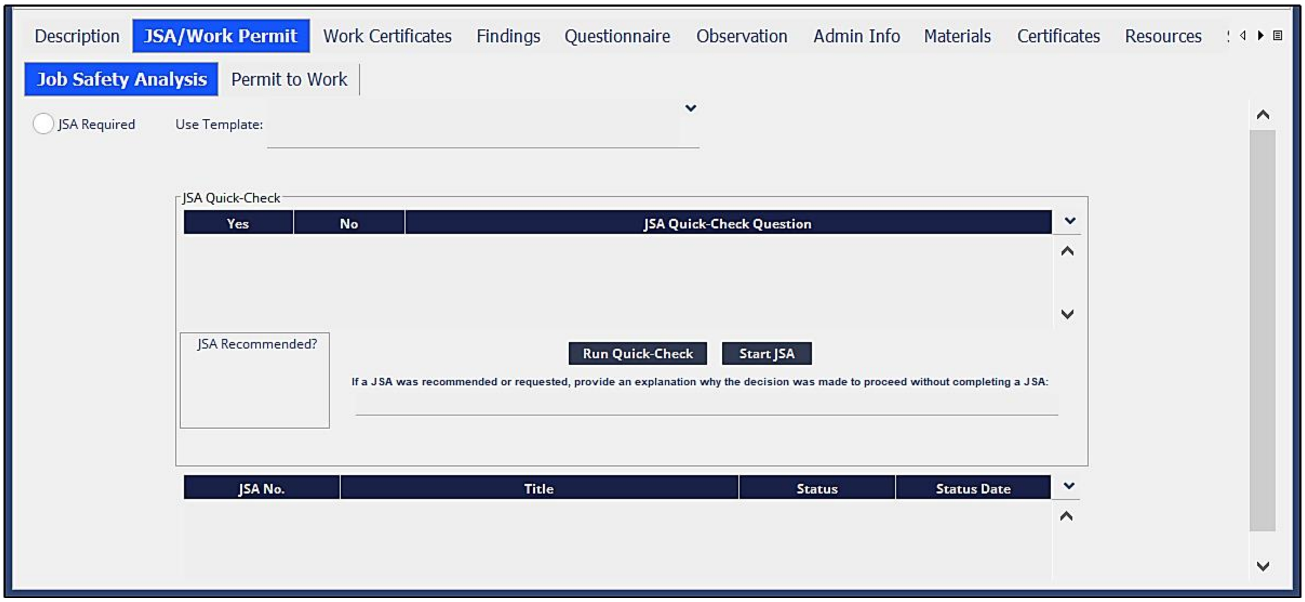
A **Job Description** text library opens where the user can choose a template as applicable.

Job Safety Analysis / Work Permit Tab

The **Job Safety Analysis (JSA)** feature includes custom risk matrices incorporated into a job safety worksheet that can be linked to work orders, service requisitions, service orders, equipment, maintained parts, spaces, and corrective action requests.

Permit to Work is used to provide controlled process for documentation and approval of necessary preparations before maintenance activities can be performed where applicable. It is considered an integrated part of the JSA workflow.

Refer to the HSQE manual for a detailed information on JSA and Permit to Work functionalities.



Work Certificates Tab

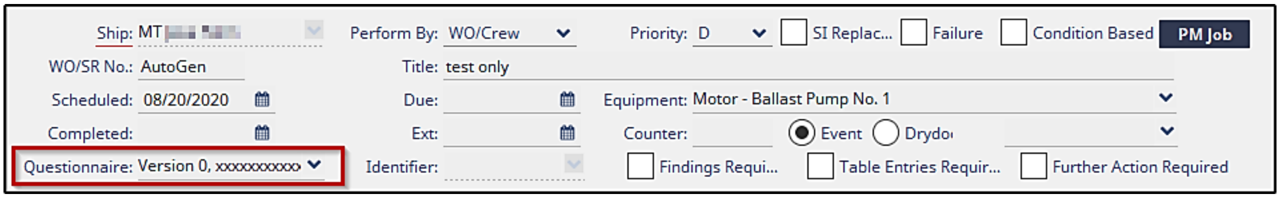
Displays all the certificates associated with the workorder.

Findings Tab

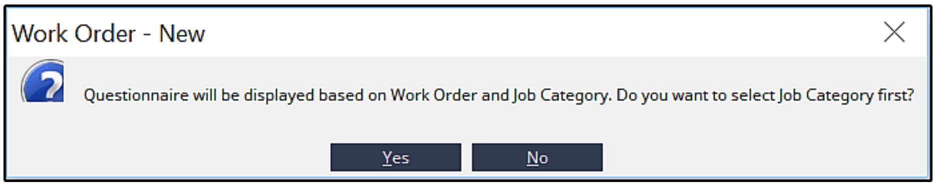
The **Findings** tab is where the user can write down all work performed and any relevant information that should be included in the work history. This is done when completing the WO.

Questionnaire Tab

This tab shows the details of the Questionnaire that was selected in the Questionnaire dropdown menu, which is located in the WO screen header.



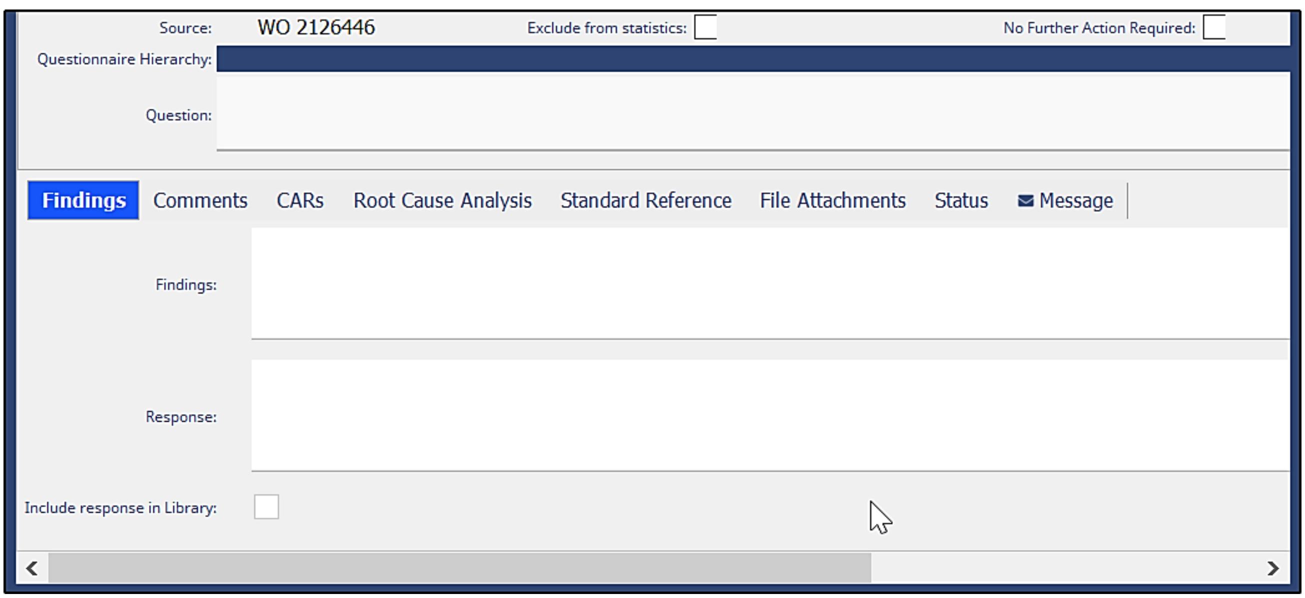
If the user has not yet selected a job category for the work and clicks the dropdown menu on the questionnaire field on the new work order screen a message will be shown as below:



Job Category is designated on the Admin Info Tab. Is user clicks Yes, and a job category is selected the dropdown menu for the questionnaire field becomes enabled. Selecting a questionnaire populates the Questionnaire tab with the questions/checklist associated to the questionnaire.

Observation Tab

Clicking on the Observation tab and selecting new will first save the work order and allow the user to create a finding and add their observation comments related to the questionnaire and a specific question.



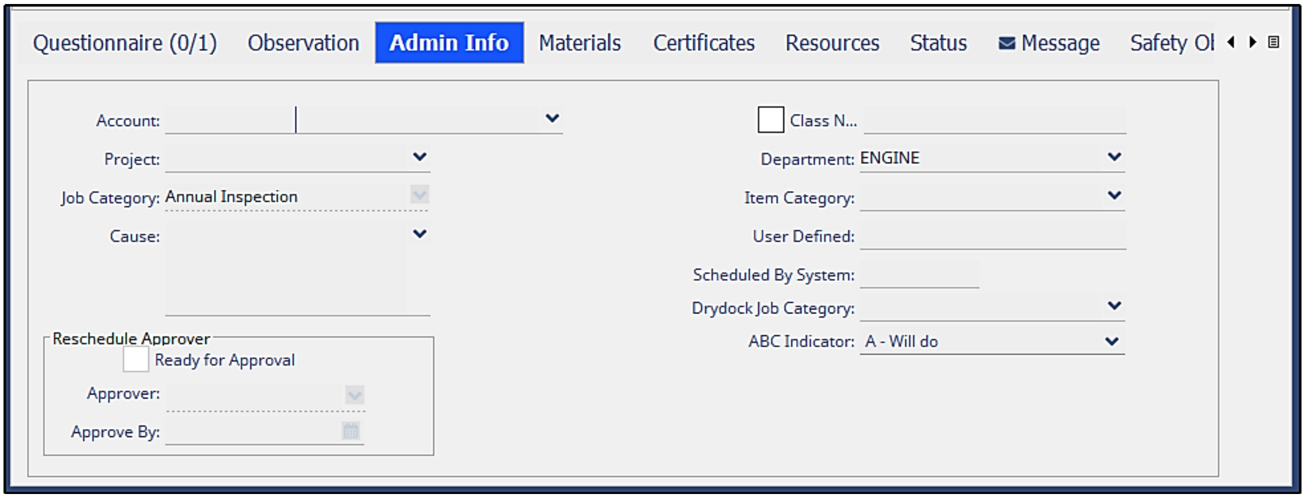
If a finding was previously created, it will be displayed as a row on the Observation tab.

Admin Info Tab

Go to the **Admin Info** tab. Designate a **Job Category** and **Cause**. The account code is automatically populated; if not, select the appropriate account code manually.

The user can link a **Project**, which are used to connect financially related WO's, requisitions, purchase orders and invoices that have a different budget.

The **Department** field is for the department that is responsible for completing the work order. Third party contractors generally do not have access to the ship's database so DO NOT use "Third Party" as a department; the department for overseeing the work should be entered instead.



Materials Tab

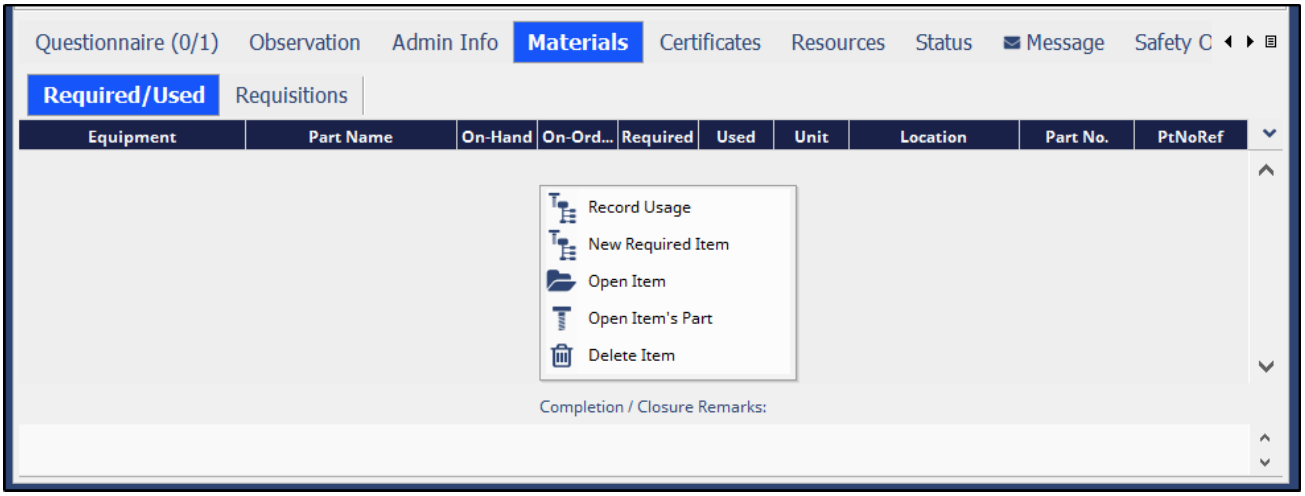
a. On the **Materials** tab, right-click on the field and choose **New Required Item**.

- This opens an **Equipment Explorer** window in the Purchasing view. The Purchasing View displays the spares for that equipment if there is equipment connected. The list starts at the top of the hierarchy if no equipment is connected.

b. Update the quantity of the spares required to complete the job.

- The item the user linked is listed in the **Required/Used** section of the **Materials** tab, as well as the current inventory level.

If necessary, create a requisition linked to the WO from the **Materials** tab for any missing items. See **Creating a Requisition from a Work Order** in the **Purchasing User Manual.**



Resources Tab

Refer to Item 21.4 Resources Tab section of this manual.

NOTE: All resources required to perform the work (including recording information in **NS**) must be listed.

Status Tab

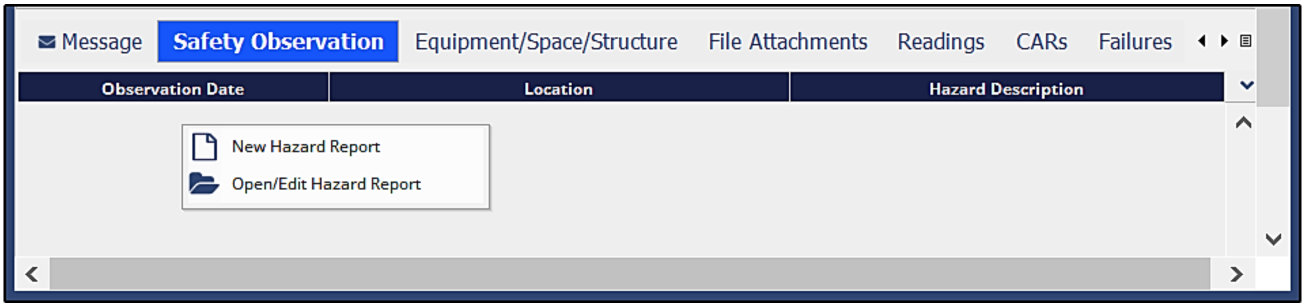
The status of the WO, as well as the date and identity of status changes, such as created, completed, and closed are listed on the **Status** tab.

Message Tab

Refer to Item 21.5 Messages Tab section of this manual.

Safety Observation Tab

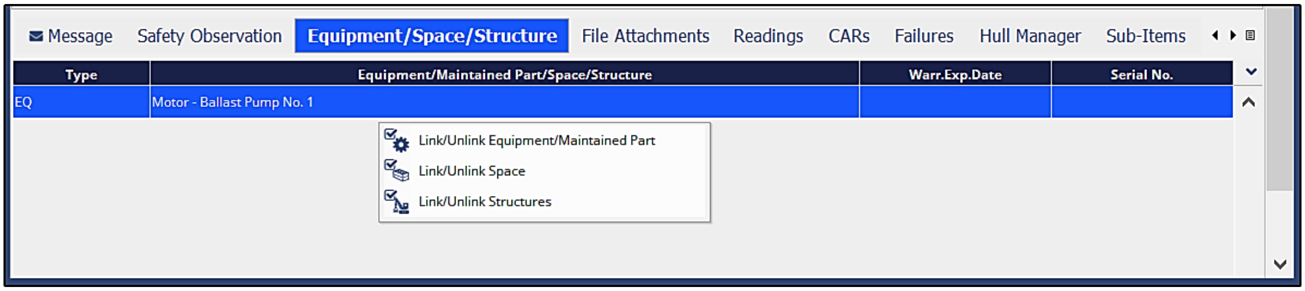
User can add a new or open a Hazard Report. On the Safety Observation tab, right-click on the field provided and select the appropriate action.



Equipment/Space/Structure Tab

The **Equipment** tab lists the equipment/space/structure that is connected in the Main Header.

a. On the Equipment/Space/Structure Tab, right-click on the field provided and choose **Link/Unlink Equipment/Maintained Part** to add more equipment. This does not change the account code but does put this WO into the maintenance history of the linked equipment. User may also link/unlink Space or Structure.



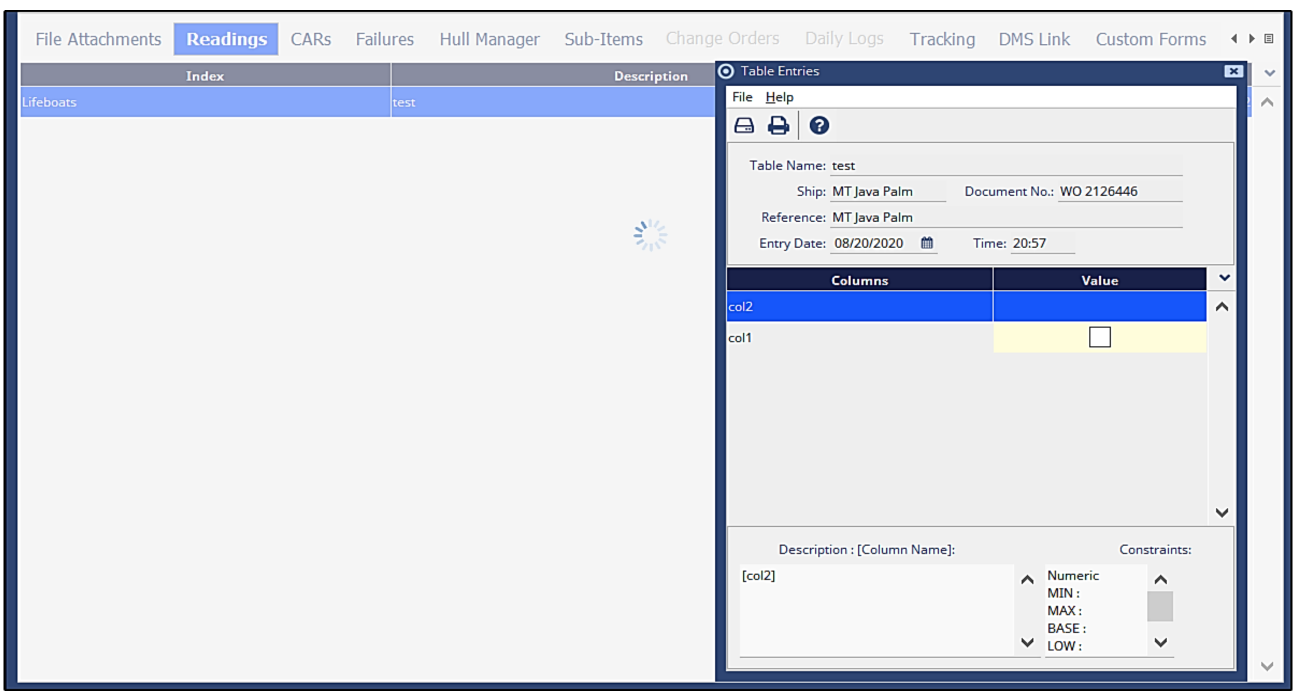
File Attachments Tab

Refer to Item 21.2 File Attachment Tab section of this manual

Readings Tab

The **Readings** tab contains tables that have been linked to the standard job from the **Tables Template Setup** window. These tables are used to record readings taken during the job.

Double click on a row to enter in the values for the item.



CARs Tab

The CARs tab listed all CARs associated to the work order. The CARs tab columns include:

- CAR Number
- Title of the CAR
- Type of CAR
- Corr/Verified
- Created Date
- Status
- Created by
- Class Findings
- Documents

Failures Tab

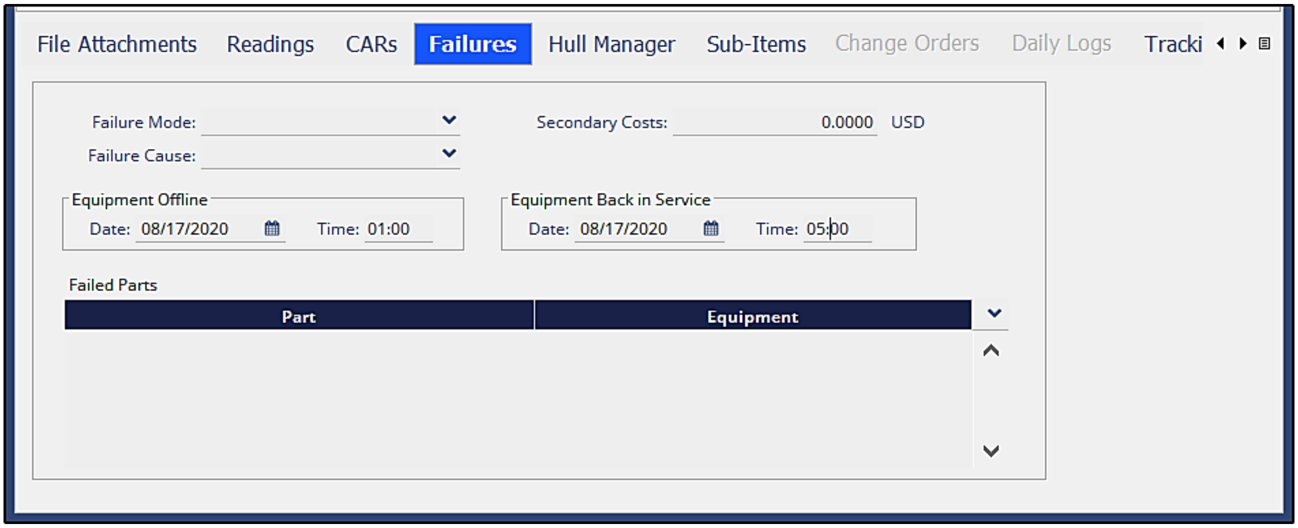
The **Failures** tab opens when the user tags the **Failure** check box in the Main Header.

NOTE: The Offline times shall be entered if equipment is taken offline during the job for all maintenance (Planned and/or Corrective). This information allows us to evaluate the equipment offline time in relation to man hours.

Select the **Failure Mode** and **Cause**.

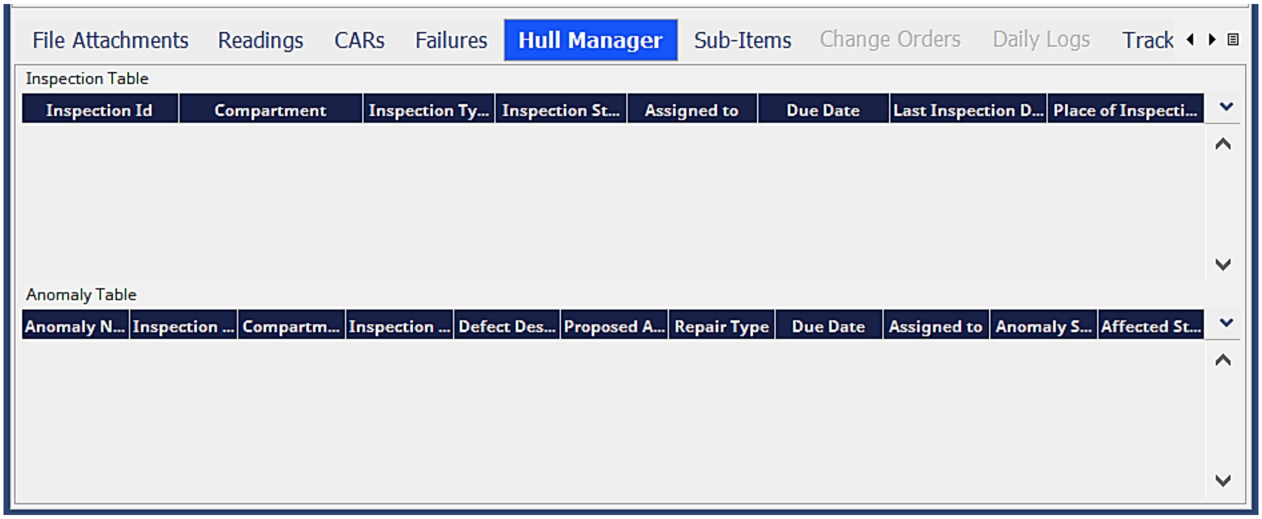
Connect the failed part to the work order for a more complete work history.

Click the right mouse button in the **Failed Parts** section and link the part that actually failed. Failed parts are different than *required parts*; required parts are those parts necessary to carry out the maintenance, as well as to restore inventory levels. The failed part is the actual part that failed.



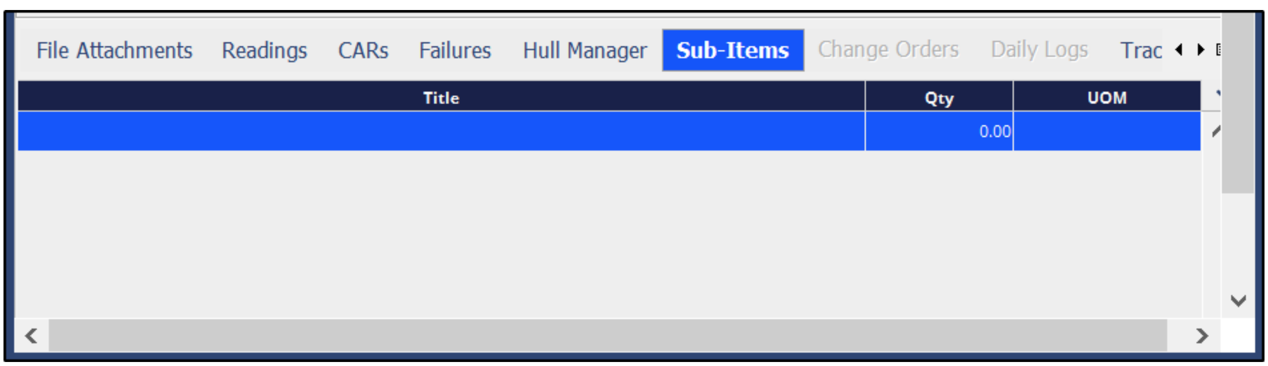
Hull Manager Tab

The **Hull Manager** tab lists inspections and anomalies associated with the work order. The information on this tab is system generated when anomalies are added in the **Hull Manager** module.



Sub-Items Tab

The **Sub-Items** tab is primarily used for **Drydock** jobs, but it can be used for other types of work. It explains how many of the part or equipment associated with the job are involved in the procedure.



The **Sub-Items** tab has a listing for removing the bearing shells but specifies that there are 2 – one upper and one lower that need to be removed.

The **Sub-Items** tab is a free form text tab.

Change Orders Tab

The **Change Orders** tab is associated with the Drydock records.

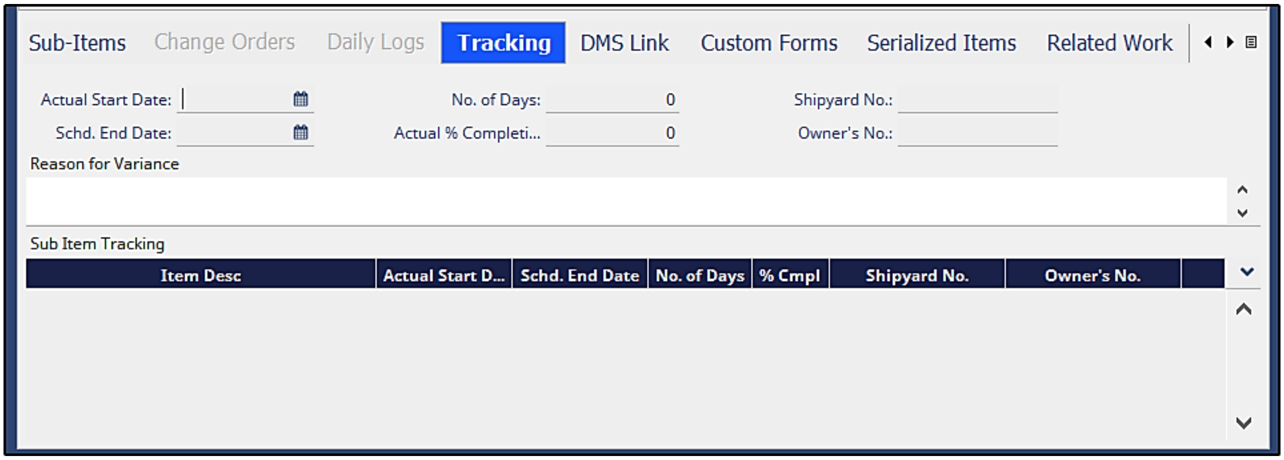
Daily Logs Tab

The **Daily Logs** tab is associated with the Drydock records.

Tracking Tab

The **Tracking** tab is primarily used for Drydock jobs, but it can be used to track the progress of other jobs. The functionality of making pre-payments on invoices based on percentage of job completion is only available with Drydock jobs.

The **Tracking** tab is used to track the progress of the work order or any sub-items of the service. These items are listed on the **Sub-Items** tab of the **Service Item** window. Any items listed on the **Sub-Items** tab are listed in the **Sub-Item Tracking** section of the **Tracking** tab



DMS Link Tab

Refer to Item 21.8 DMS Link Tab section of this manual.

Custom Forms Tab

Refer to Item 21.3 Custom Forms Tab section of this manual

NOTE: If the work order was created from a Standard job that had a custom form templated linked, it will copy to the work order when it is created.

Serialized Items Tab

The serialized items tab allows the user to link/unlink serialized items to the work order.

Related Work Tab

The **related work** tab displays work orders that are created as a result of the work order. To link a work order that is related to the selected/displayed work order, click on the process menu, and choose Link Work Order.

Save

Click the **Save** button when the WO is filled out completely. This closes the WO window.

The WO can be found again by performing a search from the Navigator or in the Maintenance Plan

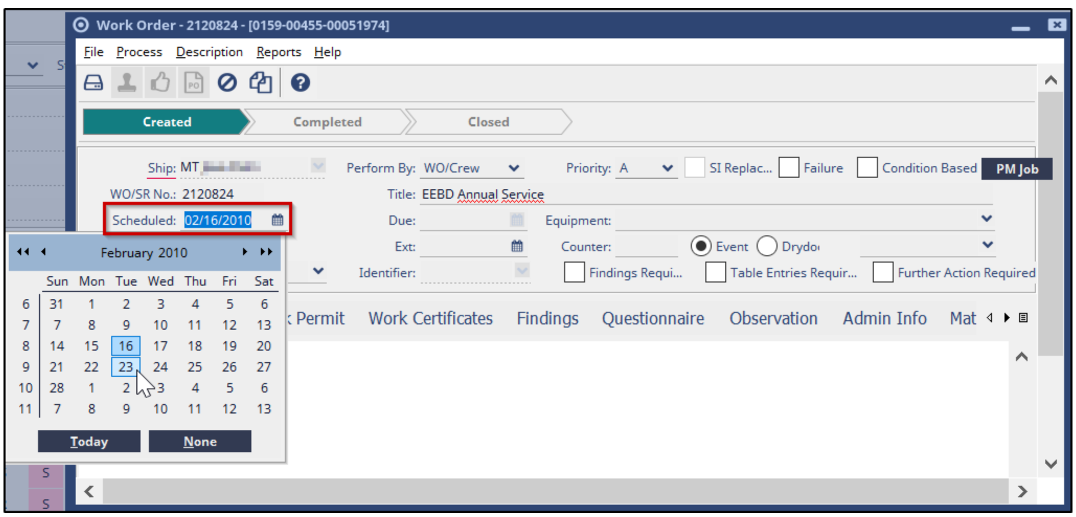
12.3 *Rescheduling a PM Work Order*

At times it may be necessary to reschedule a work order. Work orders that have been created from standard jobs need permission from the office to be rescheduled.

1. Open the work order that need to be rescheduled. Users can find the work order in the Maintenance Plan. Double click the work order to open it.

The user can also perform a search from the Navigator. From the **Maintenance** gadget, select **Documents → Search → Work Orders**. Select filters and click **Search**.

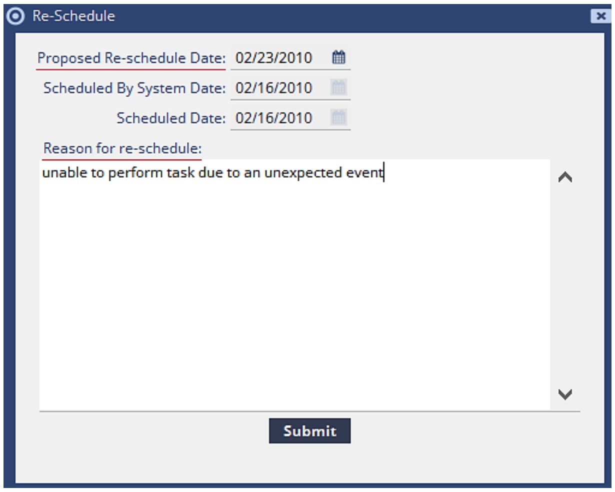
2 Click the button next to the **Scheduled** field. Choose a new Scheduled date.



NOTE:

- A work order can be rescheduled anytime. However, a maximum number of re-schedules can be set in the System Preference.
- When the deferral is based on length of deferral, the system looks at the total number of days a work order has been deferred from the original scheduled date rather than the latest scheduled date. This ensures the proper level of oversight and prevents a single user from deferring a work order indefinitely a few days at a time.

4. A window opens asking for the reason to reschedule. Enter an explanation and click **Submit**.



NOTE: A warning box opens if the user attempts to re-schedule a work order that has already been rescheduled.

5. The authorized user in the Office can find work orders with a rescheduling request. From the **Maintenance** gadget, select **Documents → Search → Work Orders**. Tag the **To be Re-scheduled** box and click **Search**.
6. Double click on the work order to open it. Choose **Process → Re-Schedule → Accept** or **Decline** from the menu bar.

A window opens asking for a **Reason for Acceptance** if user chooses **Accept**. Enter an explanation and click **Submit**. Note that the user can change the **Re-Schedule** date at this point.

A window opens asking for a **Reason for Decline i**f user chooses **Decline**. Enter an explanation and click **Submit**.

7. The work order is placed in the **Maintenance Plan** at the re-scheduled date.

12.4 *Completing a Work Order*

All work orders get completed after the work is performed regardless if the work order is for planned or corrective maintenance. Completing the work order changes its status from “Created” to “Completed”.

NOTE: Completing a work order cannot be undone

12.4.1 *Findings Tab*

Click on the **Findings** tab and enter information about the work performed. Every work order, whether planned or corrective, must have **Findings** entered.

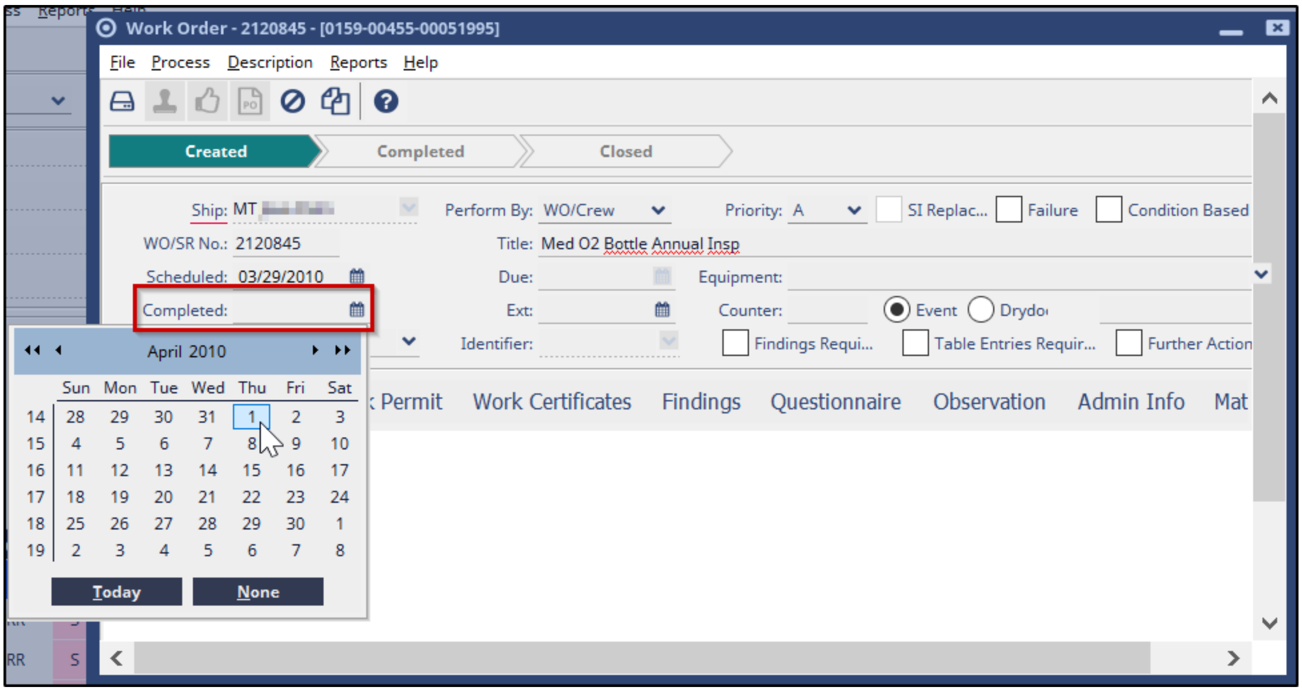
NOTE: Be sure to enter meaningful findings. Do not just enter “done” as this is not helpful in establishing useful maintenance history

12.4.2 *Resources Tab*

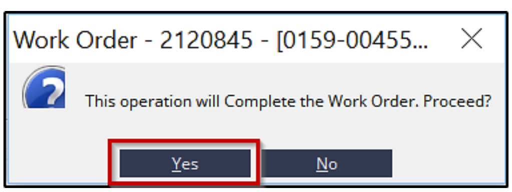
Refer to Item 21.4 Resources Tab section of this manual.

12.4.3 *Changing Status to Complete*

1. Click on the **Completed** date field and a **Calendar** window opens.
2. Select the completion date. This date cannot be in the future.



- A warning box opens. Completing a work order cannot be undone. If the user wants to complete the WO, then click **Yes**. This completes the work order.



12.5 ***Closing a Work Order***

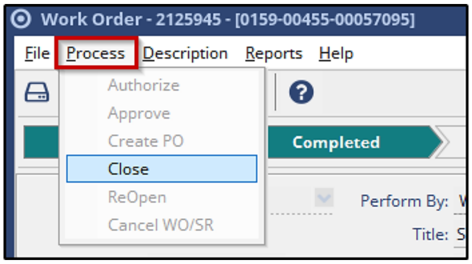
The final step in recording the maintenance performed is to **Close** the work order. It is the responsibility of the Chief Engineer to review all completed work and close each work order individually after confirming all required data is recorded.

1. From the **Maintenance** gadget, select **Documents → Search → Work Orders** to find work orders to be closed. By using the filters, users can select work orders that have been **Completed**. Remember that this search can be saved and put it on **user's Workspace** area for easy future access.

The work order could also be opened from the **Maintenance Plan** by filtering for **Completed Work Orders**.

This is the last opportunity to edit the **Findings** tab. The **Findings** tab is locked once the WO is closed.

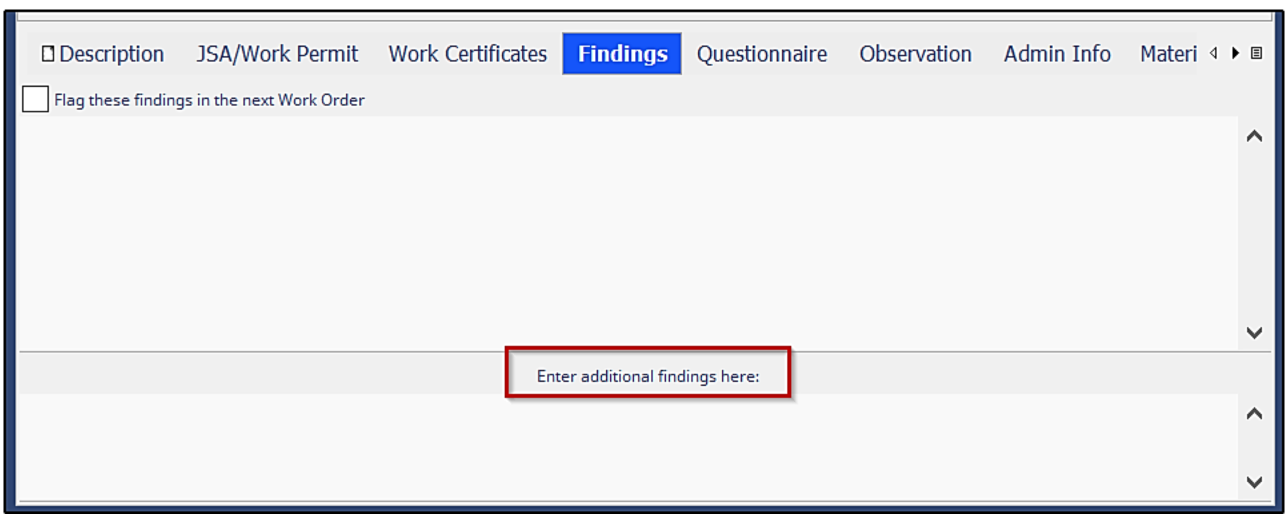
2. Go to **Process → Close** to close the work order**.**



The work order is now closed and will no longer appear in the **Maintenance Plan** unless the user filters for closed WO's.

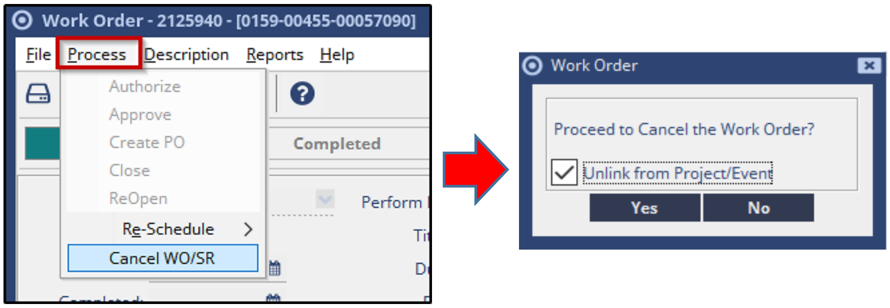
After the user closes the work order there may be additional findings that the user wishes to report.

Open the work order and choose the **Findings** tab. There is a field at the bottom of the tab labeled **Enter additional findings here**. The user can enter the information here.



12.6 *Cancel a Work Order*

Sometimes there may be a need to cancel an unscheduled work order. Work orders can be cancelled if they have not yet been completed. When an unscheduled work order is cancelled it gets hidden but can still be found in the system.



Instead of canceling a work order, the user can change the title, link different equipment, and reuse the document for the next unplanned maintenance action.

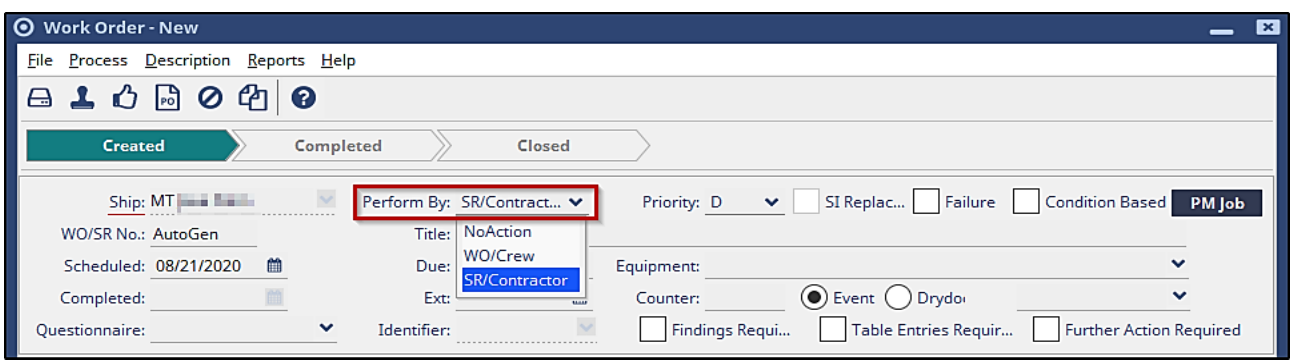
12.7 *Creating a Service Requisition*

Service Requisitions are a combination of a work order and a requisition. Service requisitions are used to schedule work that is to be performed by a contractor or technician, such as a service or troubleshooting call, an inspection or certification of equipment.

A service requisition is created when the user selects **SR/Contractor** in the **Perform by** field in creating a work order.

1. From the **Maintenance** gadget, select **Documents → Create → Work Order**.

2. Select **SR/Contractor** in the **Perform by** field. This creates a service requisition rather than a traditional work order.



- The biggest difference between a work order and a service requisition is that a service requisition needs to be both **Authorized** and **Approved**.

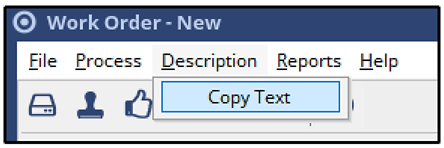
- The creation of a service requisition is more or less the same as the creation of a work order. However, there are a few differences.

12.7.1 *Description Tab*

The instructions written on the **Description** tab need to be extremely detailed and thorough. This is because the **Description** tab contains the information that potential vendors use to price the job, as well as to prepare for the work.

If the description is not complete, the contractor may not anticipate the complete scope of the job and may not be able to carry out the work.

1. Select **Description → Copy Text** from the menu bar.

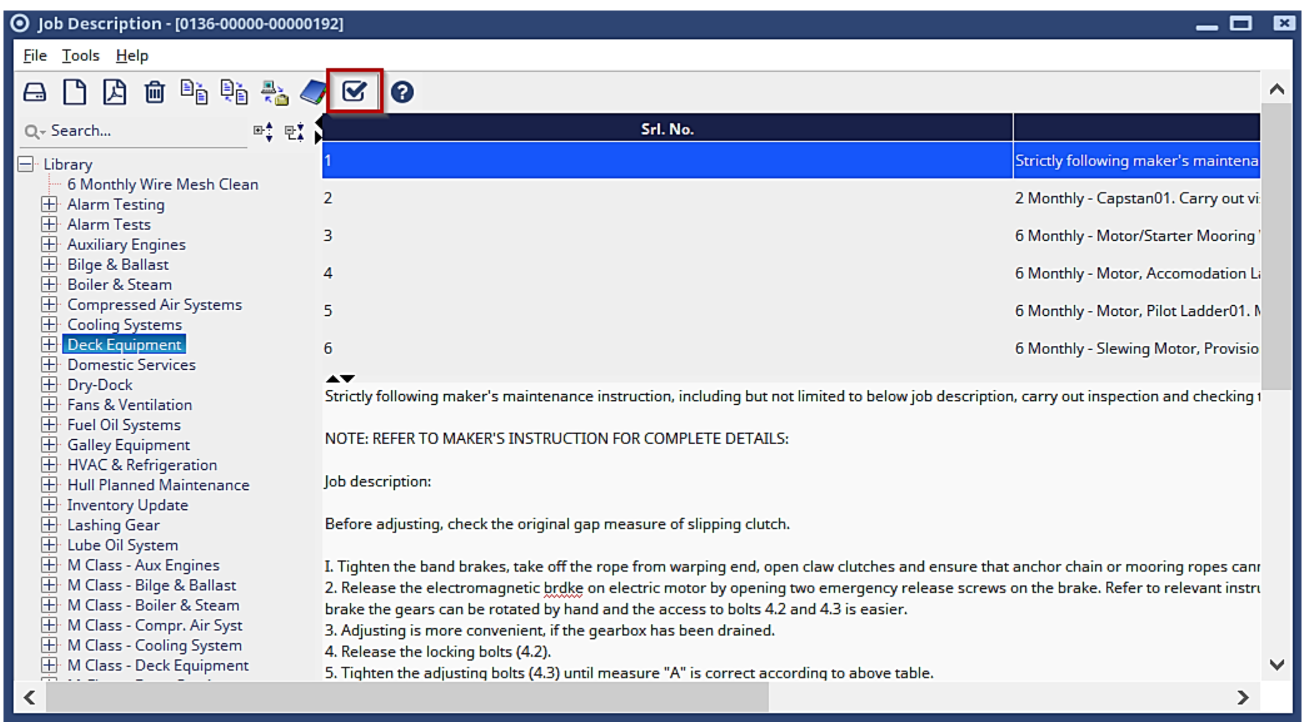


- A **Job Description** text library opens.

2. Drill down to find **SERVICE REQUISITION.**

3. Highlight it and select from one of the 3 templates available to the right.

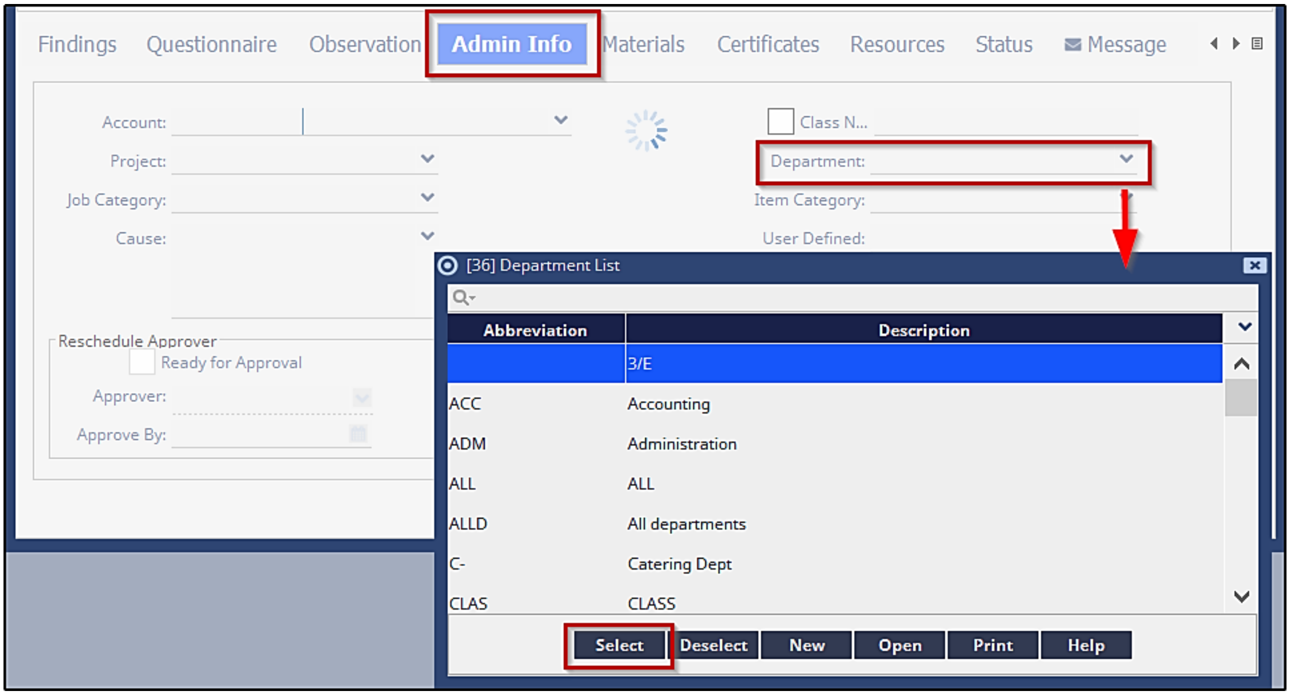
4. Highlight the desired template and click the **Select** button. This copies the template information to the **Description** tab. The **Job Description** can now be filled in, point by point, to ensure all relevant information is entered into the service requisition.



12.7.2 *Department Responsibility*

It is important to ensure the **Department** responsible for overseeing the contractor has been is set. The department also indicates who is responsible for the completing the service order item.

Click the **Admin Info** tab in the Service Requisition. Then click on the dropdown menu to select the **Department**.

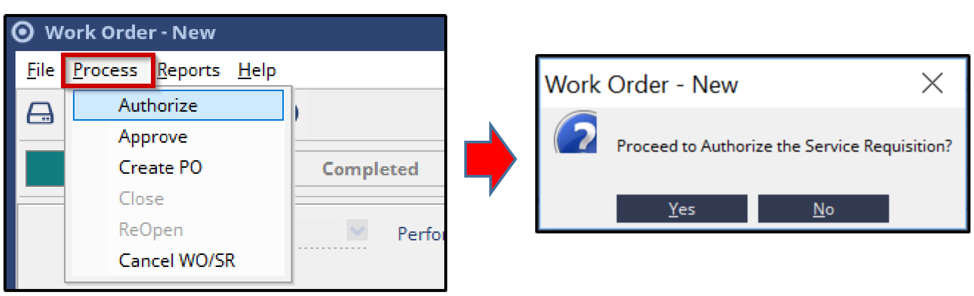


12.8 *Authorization*

Since a service requisition is a requisition as well as a work order, the service requisition needs to be authorized. Once the SR has been prepared, a message is sent to the Head of Department / Chief Engineer to review the SR for technical content. The HOD and/or Chief Engineer then send a message to the OIM for authorization of the service requisition.

From the **Maintenance** gadget, select **Documents → Search → Work Orders** to find service requisitions to be authorized. Select service requisitions that have been scheduled using the filters. Remember searches can be saved and put it on the **user's Workspace** area for easy future access.

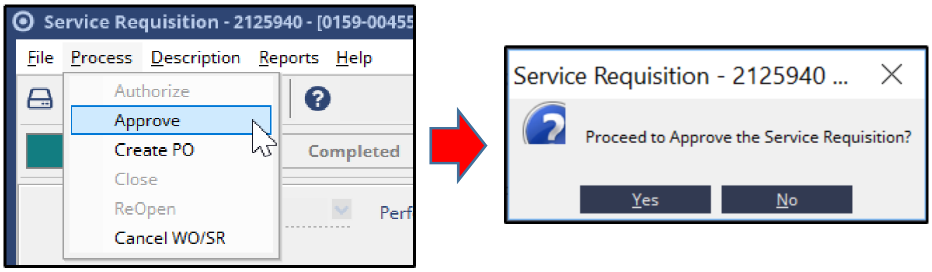
Authorization is the signal to the office that the requisition is ready for them to take action.



12.9 *Approval*

The **Approval** process takes place in the office. A service purchase order is created once the service requisition is approved. This is shown in the **Maintenance Plan**.

From the **Maintenance** gadget, select **Documents → Search → Work Orders**. Select service requisitions that have been authorized using the filters. Remember that searches can be saved and put it on the **user's Workspace** area for easy future access.

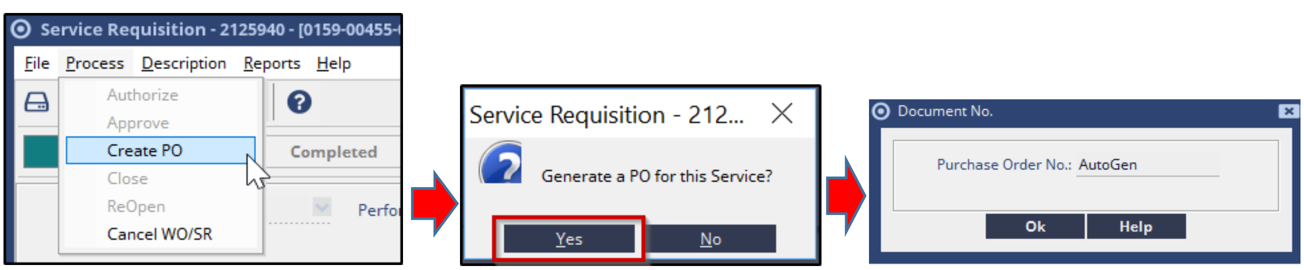


12.10 *Converting a Service Requisition into a Service Purchase Order*

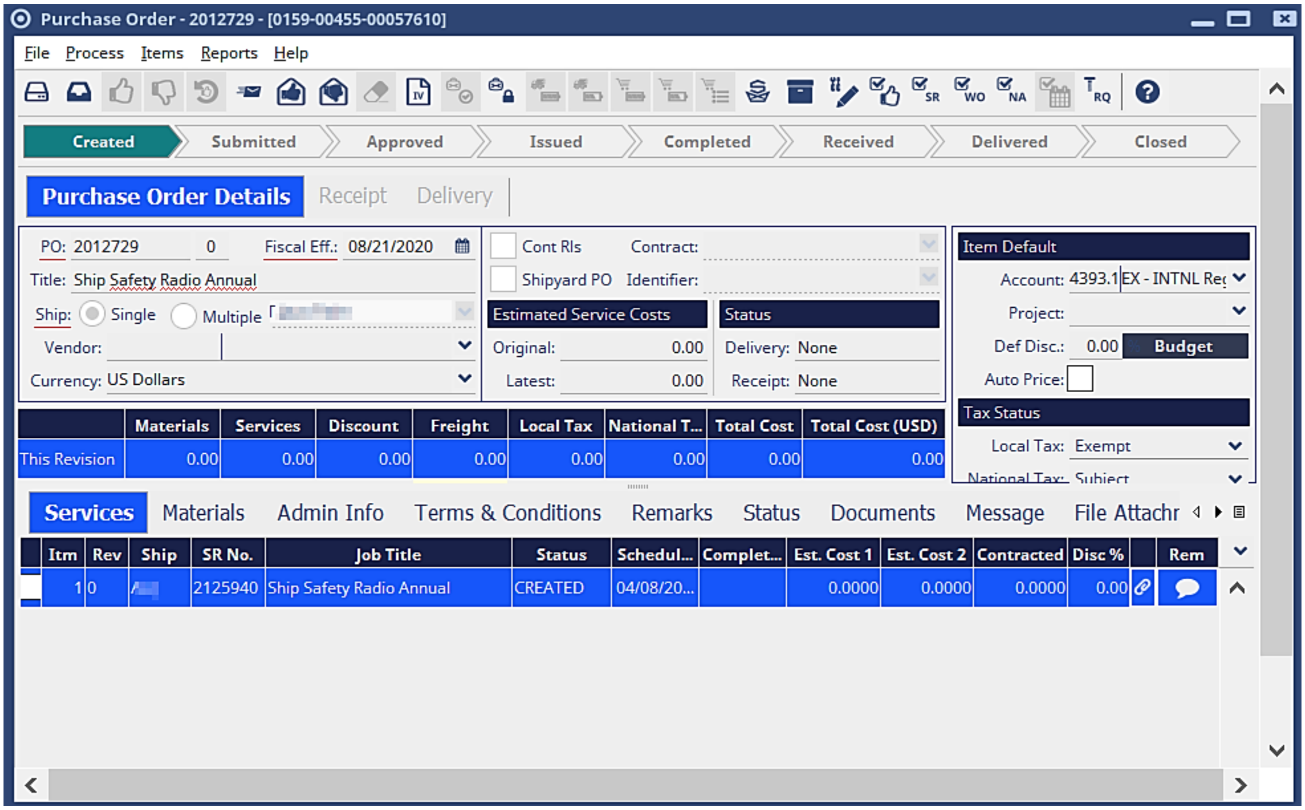
A service purchase order can be created when a service requisition is authorized and approved. This is a conversion process in which the service requisition is turned into a service purchase order. In other words, once a service requisition is converted into a service purchase order, it is listed as service order items (SO) in the work order search. The service requisition number is still listed in the query, however when the document is opened, it is a service order item on a purchase order.

The Service Requisition cannot be completed until the Service Purchase Orders is issued.

Purchase orders for materials and service purchase orders are on the **Purchase Order** window. The main distinction between them is which tab appears first when the **Purchase Order** window is opened. The **Service** tab is first on a service purchase order.



The **Materials** tab is first on a materials purchase order.



12.11 *Completing a Service Order*

Completing a service order is very similar to completing a work order. Please note that only Heads of Department, Chief Engineers or Technical Supervisors can complete a service order.

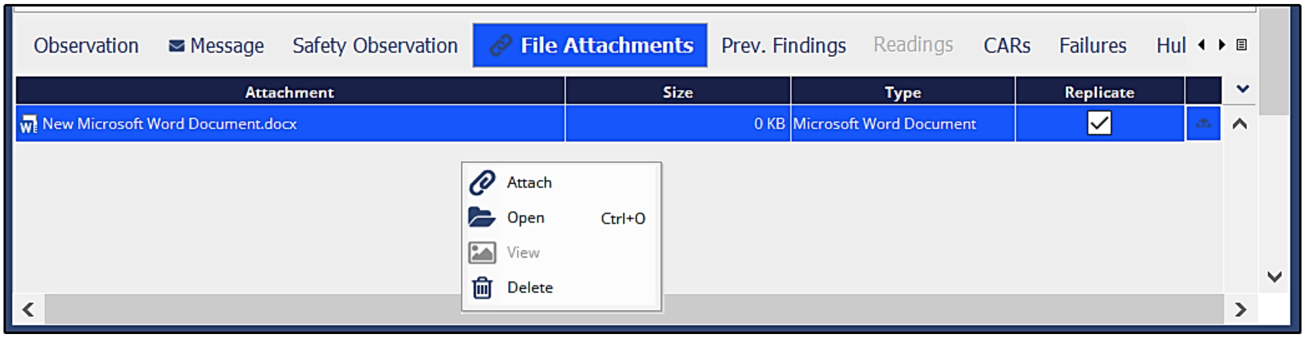
NOTE: Do not enter the **Completion Date** until all other information is entered. The service order is closed for editing once the **Completion** date is entered.

1. Open the service order from the **Maintenance Plan**.

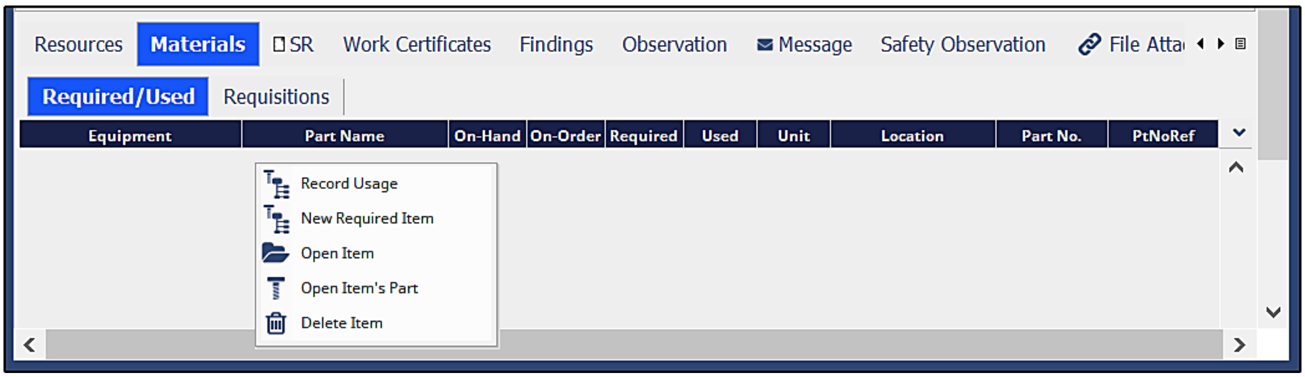
    - Notice that the detail is called a **Service Item** because it is a line item on a service purchase order. Completing the **Service Item** takes delivery of the line Item on the purchase order. A purchase order may have more than one service line item. They each need to be completed individually.

2. Enter findings on the **Findings** tab. This can be the text of the Contractors Service Report or a user defined report.

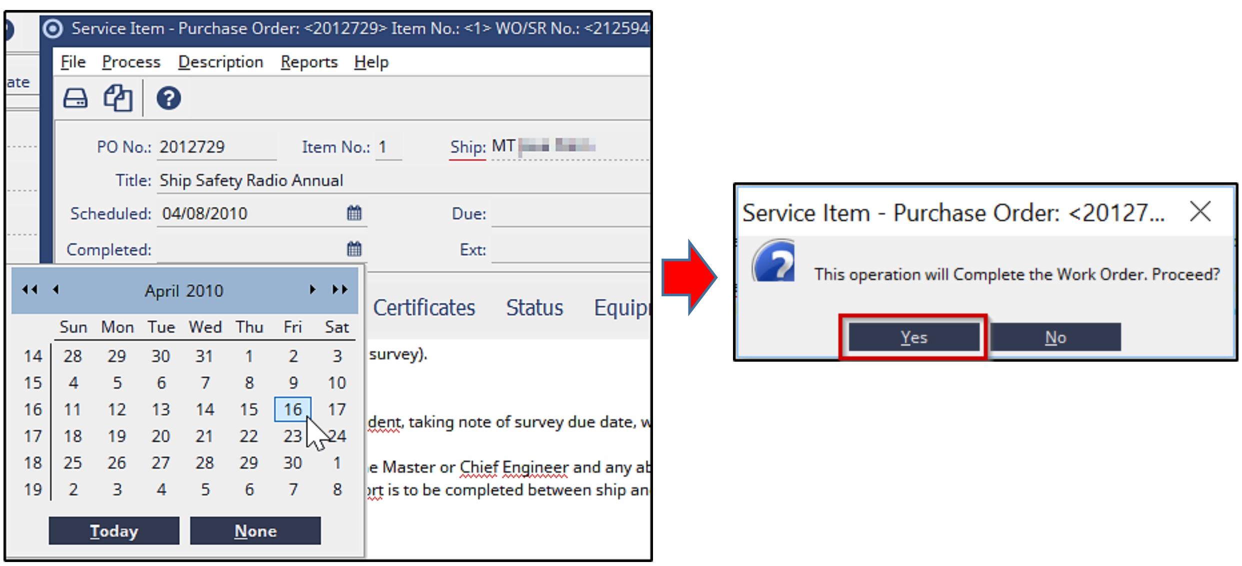
3. Attach the Contractors report as a file attachment. Go to the **File Attachments** tab, click the right mouse button in the tab and choose **Attach**.



4. Report any spares consumed on the **Materials** tab.



5. Click on the **Completed** date field and a **Calendar** window opens. Choose the completion date. This date cannot be in the future. The service item is closed for editing once a completion date is entered.

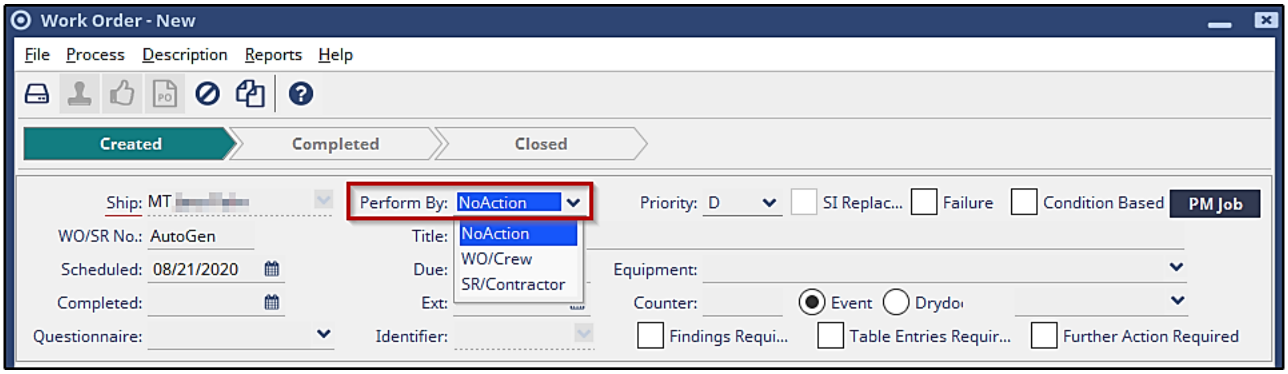


NOTE: If the **Completion Date** field is grayed out the user cannot complete the service item if the purchase order to which the service item is connected has not been issued.

12.1 *No Action Jobs*

No Action Jobs are jobs that are used as placeholders for jobs not assigned yet to a crew member or a contractor. They can also be used as reminders for jobs that they are not rescheduled based on an interval or running hours.

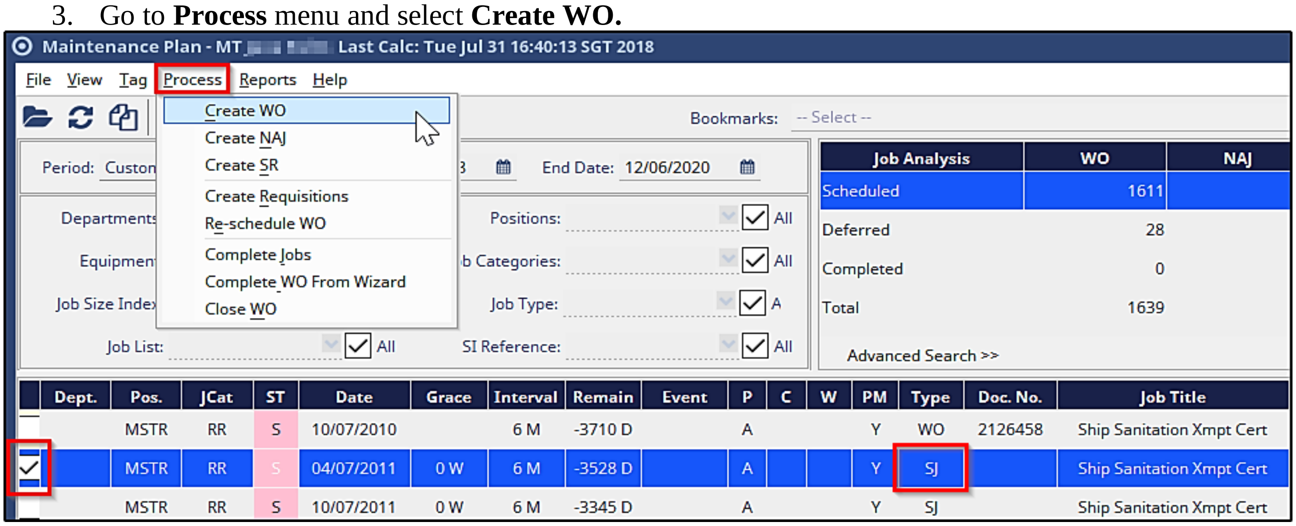
A job can be identified by the **Perform By** field where its value is **No Action** as per below:



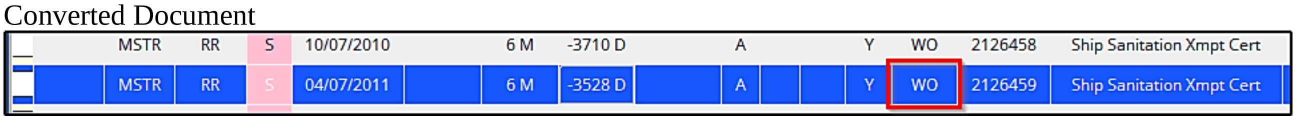
12.2 *Converting a Standard Job to Work Order*

A Standard Job is converted into a Work Order before it is carried out, to properly record all information that goes with the task. Follow below steps if also converting SJ to other forms (NAJ, SR. Just select the correct form in the Process menu.)

1. Go to **Maintenance & Purchasing** Module ➔ **Maintenance** ➔ **Maintenance Plan**
2. Search and tag the Standard to be converted into Work Order.
3. Go to **Process** menu and select **Create WO.**



Converted Document



Section 13 Maintenance Events

Event based maintenance consists of standard jobs that are neither calendar nor counter based but must be carried out when certain operations occur, such as dry docking or port calls. Users can organize this maintenance by creating a maintenance event and then connecting these jobs to the event within **NS.**

A **Maintenance Event** is used to organize related jobs, purchases, and services. The event can be compared to a folder holding a group of jobs, SO's or PO's that are planned for a particular time and place. All jobs within a maintenance event have the same scheduled date.

Create a maintenance event. Then connect work orders to the event. The Logistics Coordinator can connect purchase orders that are related to this work. Service orders are also connected.

Maintenance events can be linked to jobs either directly from the job window or from the maintenance event itself. The two most important features of the maintenance event are:

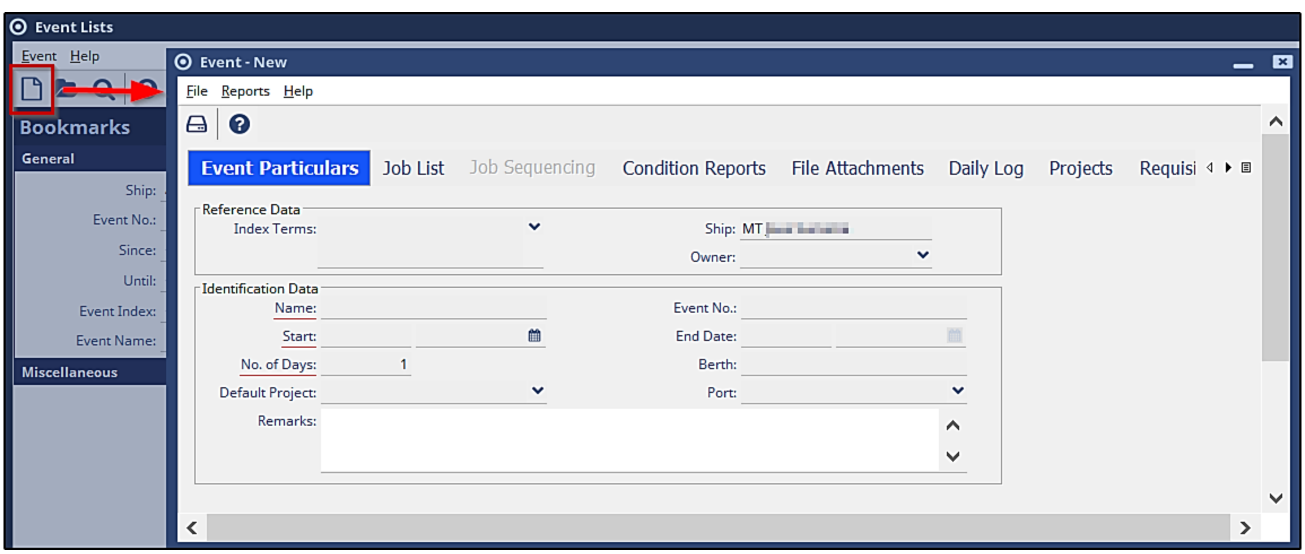
- Grouping and accessing any number of diverse maintenance tasks. The workload of jobs can be planned or searched within a particular event.
- Scheduling of any number of jobs together. **NS** automatically reschedules all the associated work when a single date is changed in a maintenance event. The system recalculates the Ship's Maintenance Plan to adjust to the change.

An event does not have to be a physical place. For instance, an event can be created called *Next Port Call*. Use the event to organize work or purchasing.

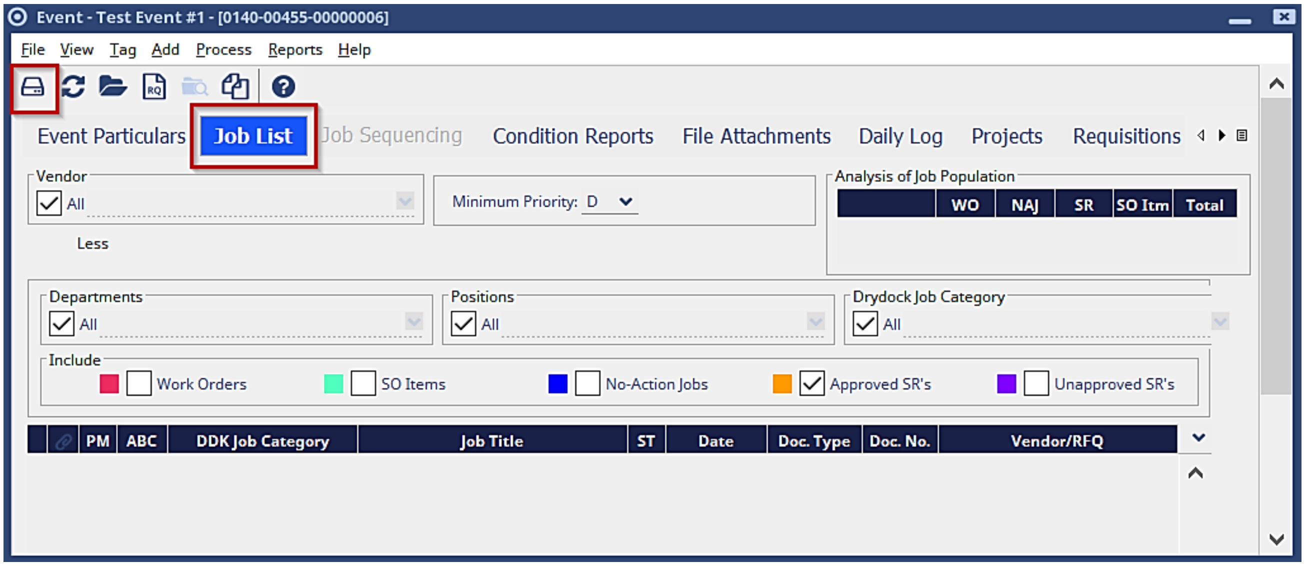
13.1 *Create a Maintenance Event*

1. Select **Documents → Search → Maintenance Events** from the **Maintenance** gadget on the Navigator.
   - Previously created maintenance events are listed on the **Event List** window. Use the **Search** function to find a particular event.

2. Click the **New Event** button on the **Event Lists** window. The **Event – New** window opens.



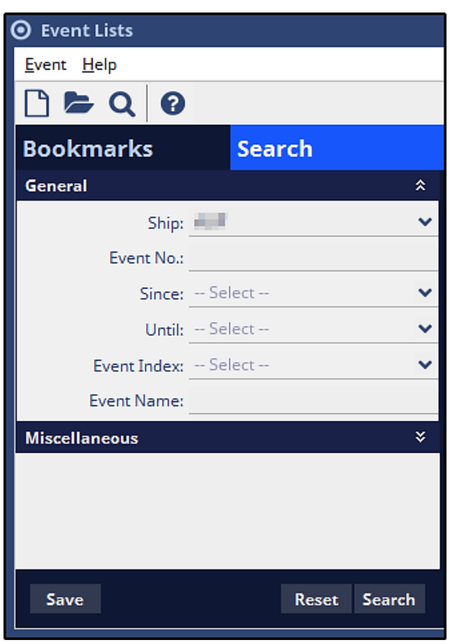
3. Enter the details concerning the event on the Events Particulars tab of the Events – New window.
4. Click the **Job List** tab to add jobs to the event.
5. Click the **Save** button to save the event and close the **Events – New** window.



13.2 *Search for a Maintenance Event*

1. Select **Documents → Search → Maintenance Events** from the **Maintenance** gadget on the Navigator.

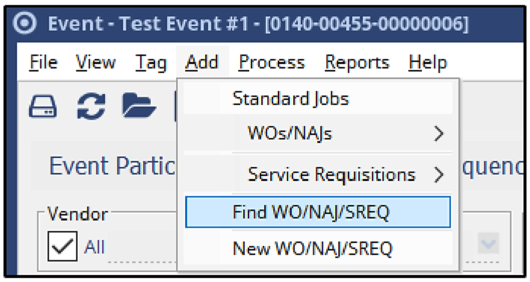
2. Tag various search terms or search for an event name. Use wildcards (*) to broaden the search. Use the "**Since**" function to search for events after a certain date. Click the Search Button. Search Results will display in the Event Lists window.



3. The fields that display in the search results include: Start Date, Port, Event Name, Number of Days and Number of Jobs.

13.3 *Link a Job to an Event*

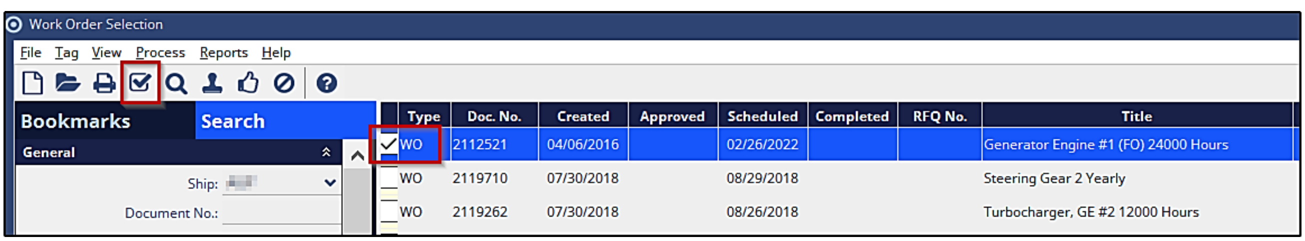
1. Search for the Maintenance Event and double click to open the Maintenance Event document from the Event Lists search results.
2. Click the **Job List** tab on the **Event** window. Jobs associated with this event are listed in the bottom section of the window.
3. Click **Add** from the **Event** menu bar. There are several items available to add to the job list of the event. For purposes of this example select **Find Work Order/SR/NAJ**. The **Work Order Selection** window opens.



4. Use the options available on the **Work Order Selection** window to locate the job to be added to the event.

   NOTE: Click the **Refresh** button on the **Event** toolbar or the **Search** button on the **Work Order Selection** window if there are no jobs listed on the right side of the **Work Order Selection** window.

5. Click in the check box to select the job to be added.
6. Click the **Select** button to add the job to the **Job List** tab on the **Event** window.



13.4 *Processing Jobs Associated with an Event*

1. Search for the Maintenance Event and double click to open the Maintenance Event document from the Event Lists search results.
2. Click the **Job List** tab on the **Event** window.
3. Use the various filters as necessary to locate the job to be processed.

4. Click the dropdown menu at the end of the selected field to select an option. A selection window opens. The information is different depending on the category selected; however, the functionality is the same.
5. Double click on a selection on the left side of the window to move it to the right side of the window. Continue making selections until all desired options are moved to the right side of the selection window.

   NOTE: Double click on an option on the right side of the window to move the selection back to the left side of the window to remove the selection.

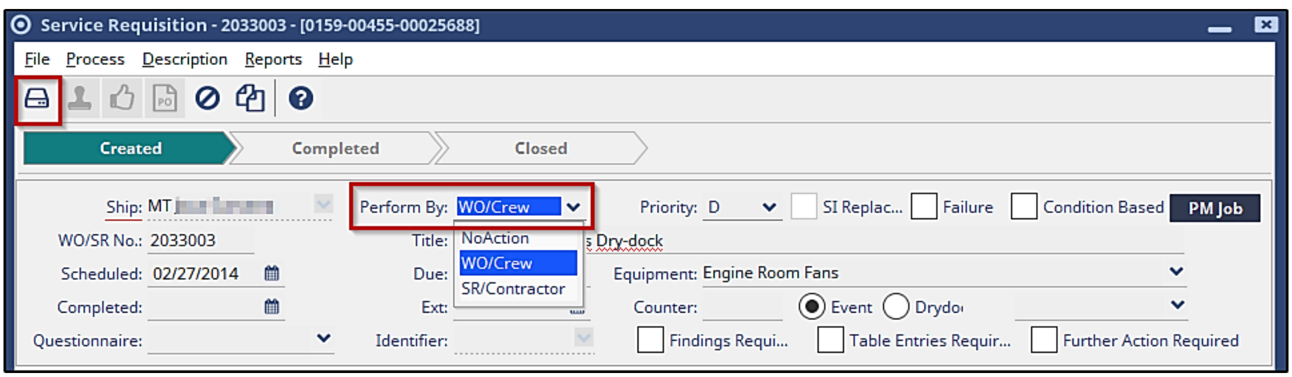
6. Click the **OK** button to close the selection window.
7. Click the **Refresh** button on the **Event** window to refresh the window after setting the parameters.

13.5 *Convert the Jobs to Work Orders*

NS adds the jobs to the event as service requisitions.

Open the service requisitions one by one and convert them to work orders by choosing **WO/Crew** in the **Perform By** field.

Click **Save** and move to the next SR until all are converted.



NOTE: The event can be edited to the correct date once the date of the Next Dry Dock is known and renamed something relevant. The maintenance can be entered as the jobs are carried out.

Section 14 Standard Jobs

System preferences can enable auto creation of documents. Contact your ABS Account Manager if you have questions on auto creation.

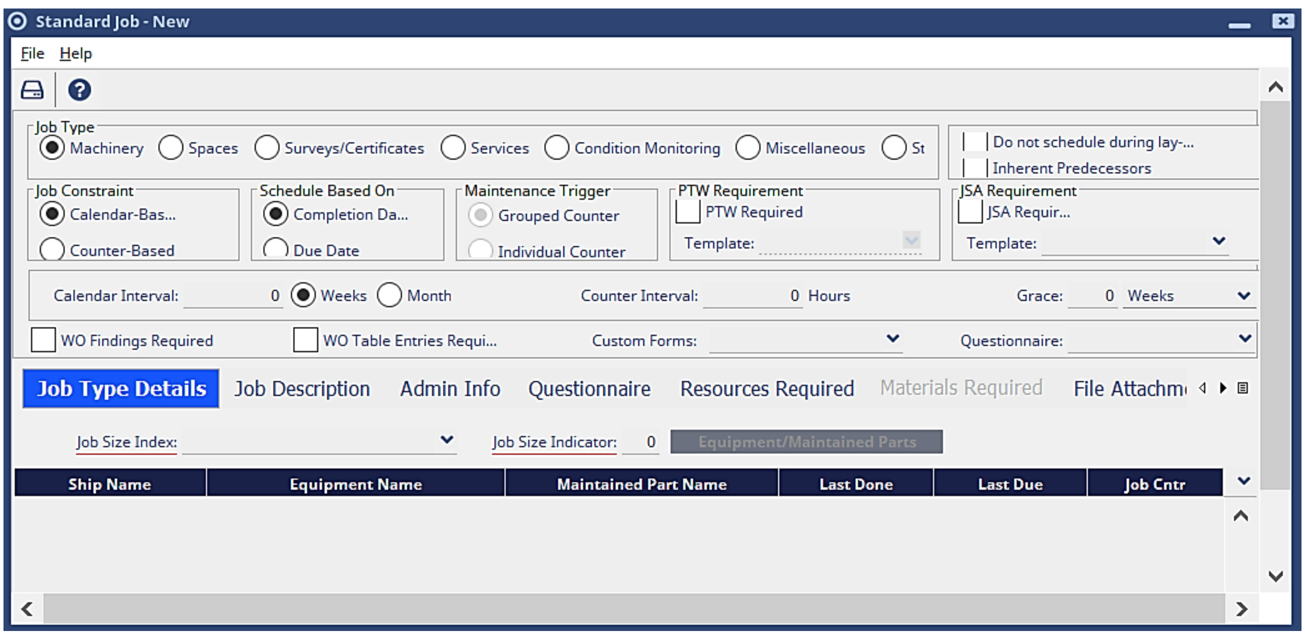
Standard Job to Work Order Conversion System Preferences below:

- Turn On Standard Job Auto Conversion
- Days to auto convert Machinery SJ to WO
- Days to auto convert Spaces SJ to WO
- Days to auto convert Structure SJ to WO
- Days to auto convert Survey SJ to WO
- Days to auto convert Miscellaneous SJ to WO
- Days to auto convert Services SJ to WO
- Days to auto convert Condition Monitoring SJ to WO

14.1 *Create Standard Job*

Select the **Maintenance** gadget→ **Documents**→ **Create** → **Standard Job** from the **Maintenance and Purchasing** module at the Fleet level to create a new standard job. Only authorized users can create standard jobs. The standard job created by the central office for the fleet is a general template for the actual job. Any or all options can be changed by the ship as necessary, but only by authorized users.

The **Standard Job – New** window opens.



The fields on the **Standard Job – New** window are:

Fields	Description
Job Type section:	Click a radio button in the **Job Type** section to select the type of job for the standard job. The options are: **Machinery** – These jobs are based on the ship's-maintained machinery equipment contained on the ship's hierarchy. The machinery equipment PM standard job combines the equipment name with an index term indicating the job size. The job schedule is based on either a calendar or running hour interval. **Spaces** – Spaces on the ship that are listed in the classification society and other regulatory body requirements need to be maintained. These spaces include cargo holds, service tanks and cabins. A standard job is created to perform this maintenance. The standard job name is a combination of the space name and an index term indicating the job size. The job schedule can only be based on a calendar interval. **Surveys/Certificates** – Regulatory requirements defined by organizations such as government agencies, coast guard and classification societies are another job type for standard jobs. These jobs are based on a survey index term and the job schedule can only be based on a calendar interval. **Services** – These are services provided to the ship to facilitate other work. For example, dry-dock services such as compressed air, shore power, tugs, dry-dock days and others. The dry-dock services are a significant portion of the overall dry-dock cost. The job schedule can only be based on a calendar interval. **Condition Monitoring** – These are jobs that monitor the condition of selected equipment according the condition monitoring types associated with the equipment. The job schedule is based on either a calendar or running hour interval. **Miscellaneous** – This is work of a general nature such as painting, sandblasting or anode replacement that is not associated with a specifically identifiable item on the ship like a piece of equipment or space. However, miscellaneous work can be cross-referenced with multiple items such as equipment or space so that when the standard job is completed these areas are automatically updated with maintenance history. The job schedule can only be based on calendar interval. **Structures** – Structures within compartments on the ship that are listed in the classification society and other regulatory body requirements need to be maintained. These structures include girders, brackets, and stiffeners. A standard job is created to perform this maintenance. The standard job name is a combination of the structure name and an index term indicating the job size. The job schedule can only be based on a calendar interval.
Do not schedule during lay-up period check box	The **Do not schedule during lay-up period** check box is related to the **Drydock** module. The check box is available on the **Standard Job** window regardless of whether the **Drydock** module is available or not.

<table>
<tr><th>Fields</th><th>Description</th></tr>
<tr><td>Inherent Predecessors check box</td><td>
Click the Inherent Predecessors check box to indicate that this job is an inherent predecessor.
The Inherent Predecessors check box is used to prioritize jobs within the same machinery or space. It tells NS how to schedule these jobs. All jobs under the same equipment are scheduled according to their Job Size Indicator. When the Inherent Predecessor is indicated on a job it means that a job with the larger size indicator covers the requirement of jobs with lesser indicator values. For example, when the larger job is completed, the smaller jobs are also credited.
All jobs under the same equipment or space MUST have the Inherent Predecessors check box checked for this procedure to work correctly.
The inherent predecessor is indicated when the standard job is created at the central office level, however it can be changed at the ship level.
This check box is only available for Machinery, Space or Structure job types.
</td></tr>
<tr><td>Job Constraint section</td><td>
Click a radio button in the Job Constraint section to select whether the standard job is calendar or counter based.

Calendar-Based – job intervals based on number of days, weeks, or months. This radio button is enabled for all job types.
Counter-Based - job intervals based on a single counter. This radio button is enabled if the Job Type is “Machinery” or “Condition Monitoring”.
Calendar vs. a Single Counter – standard jobs with a schedule based on a combination of calendar and a single counter. For example, a job can be scheduled for every 12 months or 3,000 hours whichever comes first. This radio button is enabled if the Job Type is “Machinery”.
One Counter vs. Another Counter – standard jobs with a schedule based on a combination of two counters. For example, a job can be scheduled for every 3,000 hours or 20,000 tons of fuel consumption whichever comes first. This radio button is enabled if the Job Type is “Machinery”.

The Job Constraint field restricts the modification of Job Constraint once a Standard Job has been created.
System Preference: Prevent change of job constraint between calendar and counter". If this preference is set to "No", only users that have the authorization "Edit Job Constraint" can edit the Job Constraint of the standard Job between calendar based and counter based. If this preference is set to "YES", the Job Constraint cannot be changed regardless of user authorizations.
</td></tr>
<tr><td>Schedule Based On section</td><td>Click a radio button in the Schedule Based On section to select whether the schedule is based on the completion date or the due date.</td></tr>
</table>

<table>
<tr><th>Fields</th><th>Description</th></tr>
<tr><td>Maintenance Trigger</td><td>The Maintenance Trigger section is used when the Job Type is “Condition Monitoring” and the Job Constraint is “Counter-Based”.

Click the radio button to select which counter is to be used for the job.

• Grouped Counter – this is the default value. Only one vessel can be selected. The Grouped Counter is used when multiple pieces of equipment are using a single counter. For example, the job is taking oil samples from engine support equipment and shafting when the main engine counter reaches a specified number. The selected counter determines when the standard job is scheduled on the Maintenance Plan. One standard job is created.

• Individual Counter – The Individual Counter is used when multiple pieces of equipment use the same counter interval. Multiple vessels and equipment can be selected. Each piece of equipment has its own counter, but these counters MUST have the same counter interval. A separate standard job is created for each piece of equipment.</td></tr>
<tr><td>PTW Requirement</td><td>The PTW Requirement section is used to indicate whether the job requires permit to work. Click the check box to indicate that it is.

Click the dropdown menu at the end of the Template field to select the PTW template to be used with the job.</td></tr>
<tr><td>JSA Requirement</td><td>The JSA Requirement section is used to indicate whether the job is required for Job Safety Analysis. Click the check box to indicate that it is.

Click the dropdown menu at the end of the Template field to select the JSA template to be used with the job.</td></tr>
<tr><td>Calendar Interval</td><td>Click in the Calendar Interval field to type the frequency in weeks or months that this job is to be performed. The maximum value is 999,999.

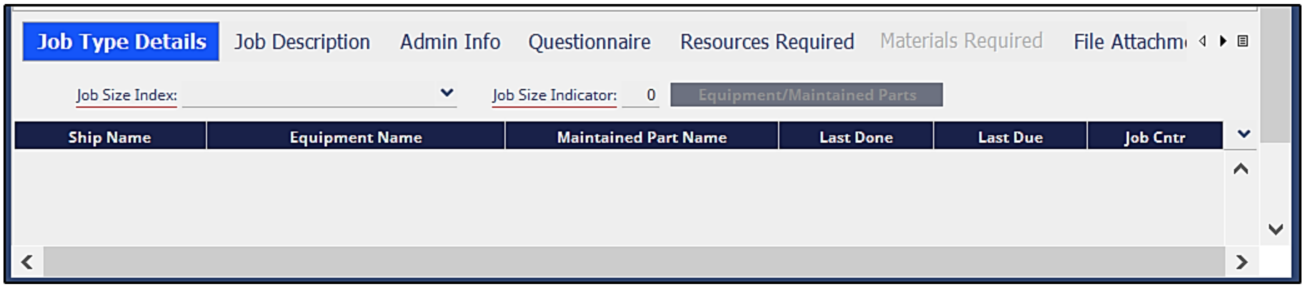
Click the radio button to indicate whether this value is in weeks or months.</td></tr>
<tr><td>Counter Interval</td><td>Click in the Counter Interval field to type the frequency in running hours that this job is to be performed. The maximum value is 999,999.</td></tr>
<tr><td>Grace</td><td>Click in the Grace field to type the number of weeks in excess of the interval period that is allowed for a grace period. The maximum value is 999,999.

The default value is zero.</td></tr>
</table>

14.1.1 *Job Type Details Tab*

The **Job Type Details** tab specifies information about the job such as job category, size and specific equipment, space, surveys/certificates, and ships. Fields on the **Job Type Details** tab change depending on the type of job selected, but the general information remains the same. All fields on the **Job Type Details** tab are REQUIRED.

Machinery Job Type



NOTE: The **Job Size Index** and **Job Size Indicator** fields MUST be completed before the **Equipment / Maintained Parts** button will work.

The fields on the **Job Type Details** tab for the **Machinery** job type are:

Field	Description
Job Size Index	Click the dropdown menu at the end of the **Job Size Index** field to select the job size index. The **Job Size Index List** window opens. Select a job size index term. Authorized users can create a new job size index term from this window.  **NOTE:** The job size index term becomes part of the job title. Double click on a selection to close the **Job Size Index List** window and copy the term into the **Job Size Index** field. Only one selection can be made. The **Job Size Indicator** field opens for editing. This is a required field.
Job Size Indicator	Click in the **Job Size Indicator** field to type a value. The **Job Size Indicator** defines the relationship of the job compared to other jobs under the same equipment or space. This rating is from 0 – 99. This is a required field.

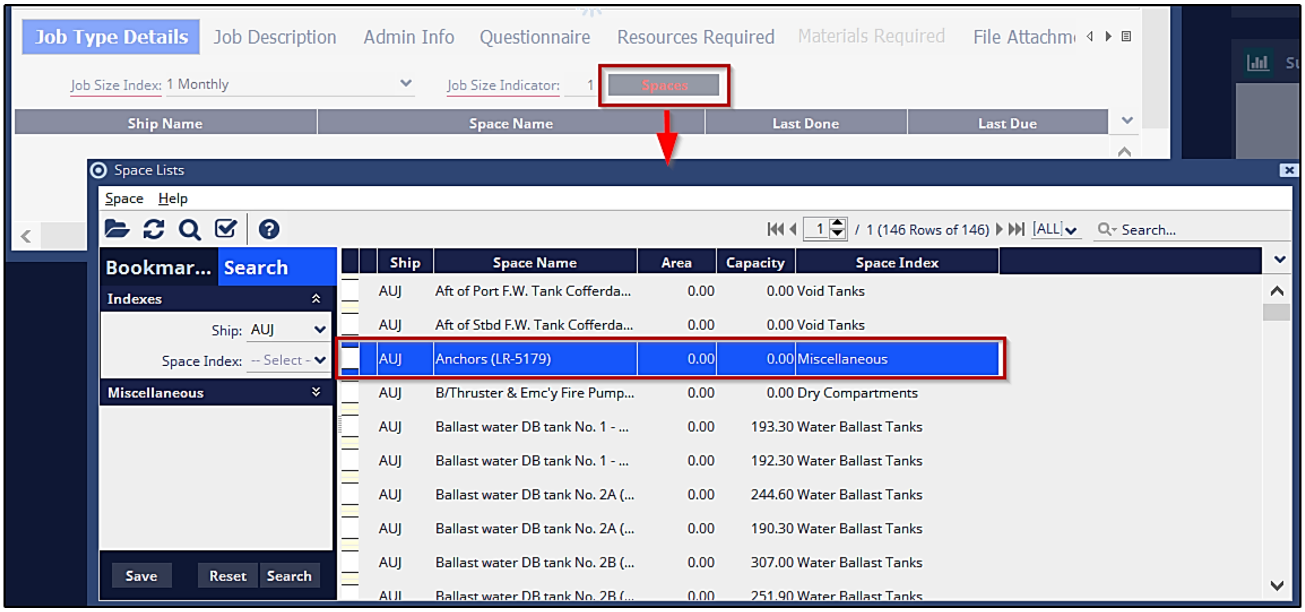
Field	Description
Equipment/Maintained Parts button	Click the **Equipment/Maintained Parts** button to add equipment or maintained parts to the job. The **Equipment Explorer** window opens with all ships identified in the fleet. Click the + sign in front of each ship to expand the hierarchy tree. Continue clicking the + sign in front of each item to view the equipment and parts for each ship. Click the check boxes preceding the equipment or maintained part to select. Click it again to unselect any equipment or part. Click the **Select** button on the **Equipment Explorer** window to close the **Equipment Explorer** window and add the items to the **Job Type Details** window. **NOTE:** Equipment and parts can be selected from multiple ships at the same time. However, each ship only sees their equipment and parts. This is a required field.
Last Done	Click the **Calendar** button at the end of the **Last Done** column to select the date this job was last done on this ship.
Last Due	Click the **Calendar** button at the end of the **Last Due** column to select the date this job is due to be done on this ship.
Job Counter	Click in the **Job Counter** column to type the number of hours on the equipment/maintained part job counter since the last time the job was done. **NOTE:** The **Job Counter** column is applicable if this is a counter-based job.

Spaces Job Type

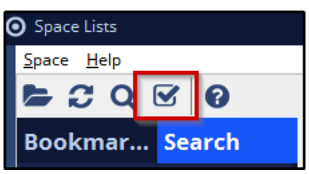
The fields on the **Job Type Details** tab for the **Spaces** job type are similar to the ones for the **Machinery** job type.

NOTE: The **Job Size Index** and **Job Size Indicator** fields MUST be completed before the **Spaces** button will work.

1. Click the **Spaces** button to select the spaces needed for the standard job. The **Space List** window opens.
2. Click the **Search** tab. Select the parameters to find the defined space. At least one parameter MUST be selected. Click the **Search** button at the bottom of the **Search** tab. All spaces meeting the selected parameters are listed on the right side of the window.
3. Click the check box preceding each defined space to select. Click the check box again to unselect any space. Multiple selections from multiple ships can be selected.

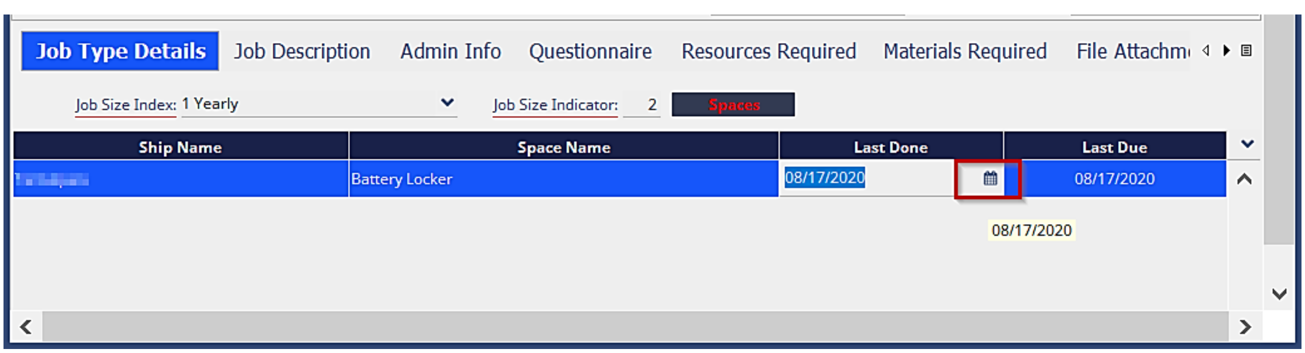


4. Click the **Select** button on the **Space List** window to close the window and add the spaces to the **Job Type Details** window.



5. Click the **Calendar** button at the end of the **Last Done** column to select the date this job was last done on this ship.

6. Click the **Calendar** button at the end of the **Last Due** column to select the date this job is due to be done on this ship.



Surveys / Certificates Job Type

The fields on the **Job Type Details** tab for the **Surveys/Certificates** job type are a little different from the previous tabs.

NOTE: The **Surveys/Certificates Index** and **Title** fields MUST be completed before the **Ships** button will work

1. Click the dropdown menu at the end of the **Surveys/Certificates Index** field to select an index term. The **Survey/Certificate Index** window opens. Authorized users can add new index terms from this window.

2. Click to highlight a survey or certificate.

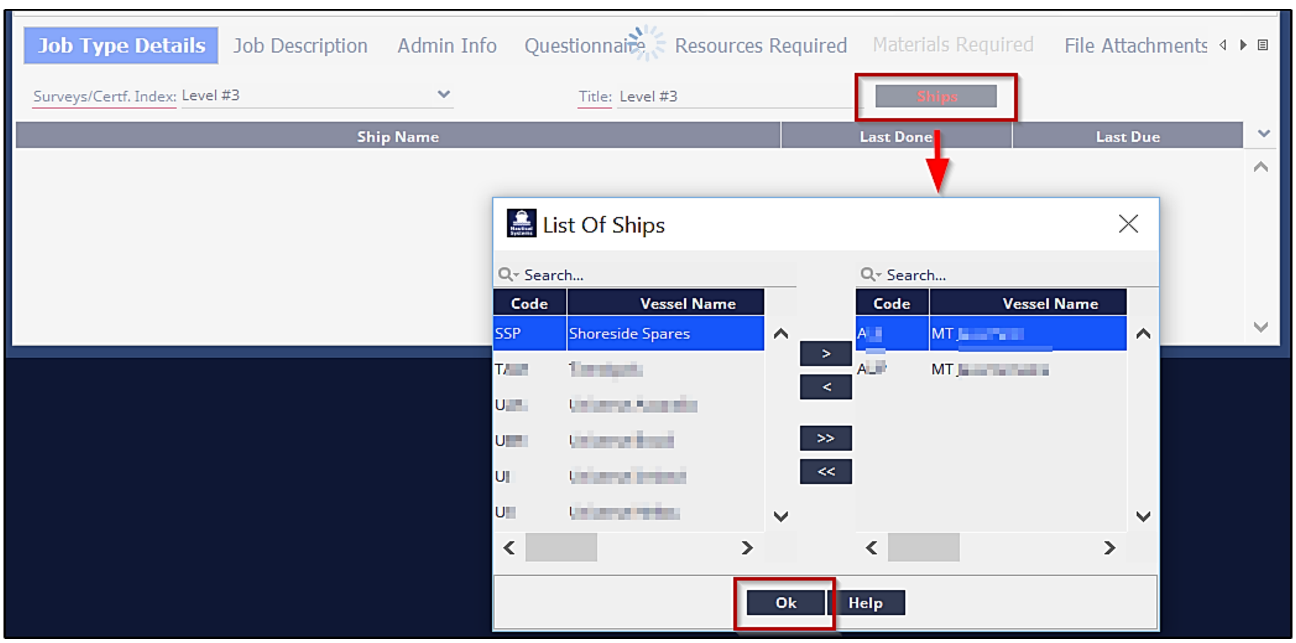
3. Click the **Select** button on the **Survey/Certificate Index** window to close the index window and add the selection to the **Surveys / Certificates Index** field. This selection is also entered into the **Title** field of the **Job Type Details** tab. The **Title** field can be edited.

NOTE: Surveys and certificates are defined on the **Surveys / Certificates Index** window. New surveys and certificates can be defined by authorized users from this window or from the **General Data** module.

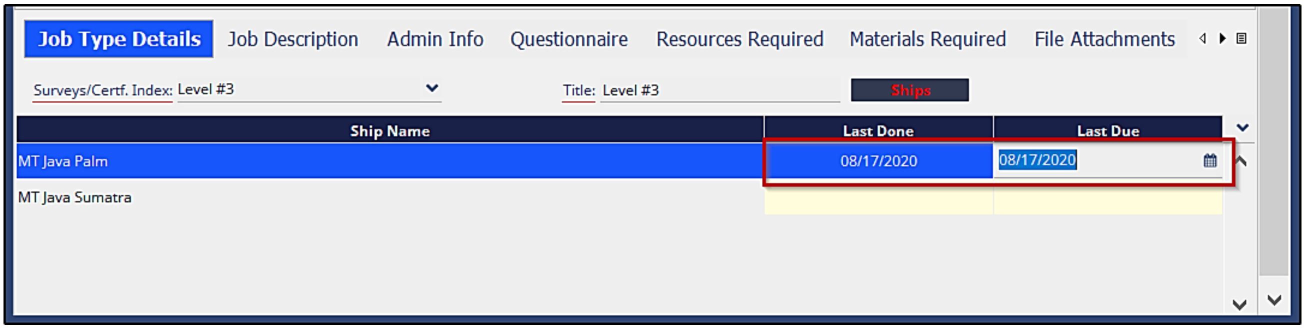
4. Click the **Ships** button to select the ships that the survey or certificate applies to. The **List of Ships** window opens with all the ships defined in the fleet.

5. Select a ship from the **List of Ships** window. Double click on a selection from the left side of the window to move it to the right side. Continue making selections until all ships to be included in this standard job are listed on the right side of the window.

6. Click the **OK** button on the **List of Ships** window to accept all selected ships, close the window and list the selected ship or ships on the **Job Type Details** tab.



7. Click the **Calendar** button at the end of the **Last Done** column to select the date this survey or certificate was last acquired on this ship.
8. Click the **Calendar** button at the end of the **Last Due** column to select the date this survey or certificate is due for this ship.



The fields on the **Job Type Details** tab for the **Services, Condition Monitoring** and **Miscellaneous** job types are similar to the ones for the **Surveys/Certificates** job type.

Services Job Type

Refer to the Surveys/Certificates Job Type process in this section, but this time, Service Index will be selected from the dropdown menu instead of Surveys/Certificates.

Condition Monitoring Job Type

Refer to the Surveys/Certificates Job Type process in this section, but this time, CM Type will be selected from the dropdown menu instead of Surveys/Certificates.

Miscellaneous Job Type

Refer to the Surveys/Certificates Job Type process in this section, but this time, Misc. Work Index will be selected from the dropdown menu instead of Surveys/Certificates.

Structure Job Type

Refer to the Machinery Job Type process in this section, but user will have to select Structures instead of Equipment / Maintained Part.

14.1.2 *Job Description Tab*

The **Job Description** tab contains an index term and text data selected from the **Job Description** window to describe the standard job.

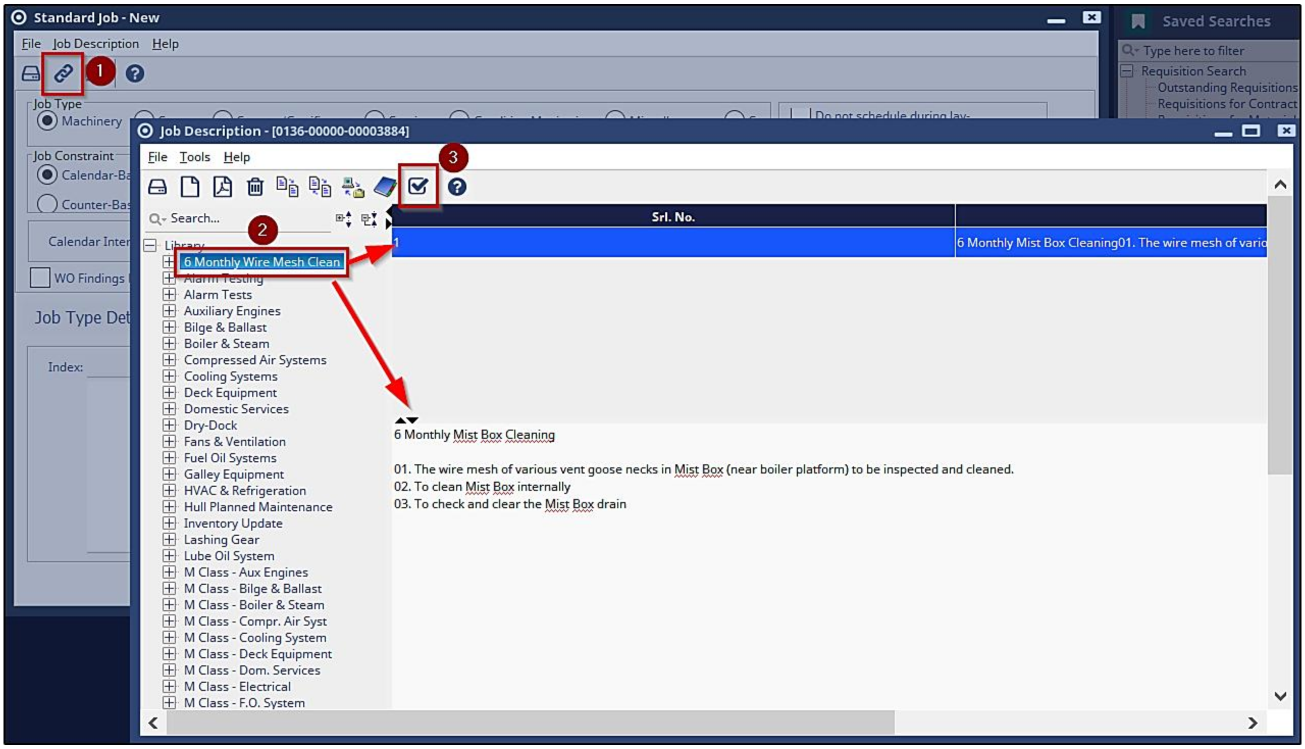
NOTE: Job description text MUST be defined prior to linking to the **Job Description** tab

1. Click the **Link** button from the **Job Description** tab toolbar.

   The **Job Description** window opens.

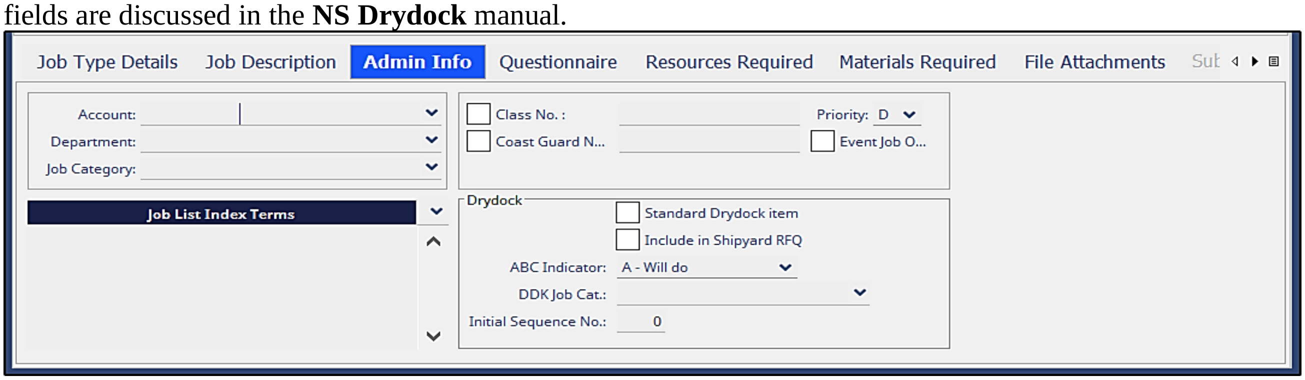
2. Click to highlight the job description index term and text detail to be added to the **Job Description** tab.
3. Click the **Select** button from the **Job Description** window toolbar to close this window and add the index term and text data to the **Job Description** tab.

This same procedure can be followed to open or change the index term and text data.



14.1.3 *Admin Info Tab*

The **Admin Info** tab contains general information regarding the standard job. This includes the department responsible for the job, account the job is charged to and job list index. Fields are available regarding the Drydock feature but are NOT available if this feature is not a part of the company's suite of **NS** modules. These fields are discussed in the **NS Drydock** manual.



The fields on the **Admin Info** tab are:

Field	Description
Account	There are two sections in the **Account** field. Either field can be filled first. The other field completes with referenced information from the **Available Accounts** window. Type the account number in the first section (shaded white) if it is known. The account name automatically fills the second section if this account has been created in the **Available Accounts** window. Click the dropdown menu at the end of the second section to open the **Available Accounts** window. Double click on the account that the job is charged to close the **Available Accounts** window and list the selection in the Account field. Once an account is associated with the job, this account number is the default number included in any requisition for this job.
Department	Click the dropdown menu at the end of the **Department** field for a list of departments. The **Department List** window opens. Double click on the department responsible for the job to close the **Department List** window and add the selection to the **Department** field.  **NOTE:** 1) When creating a new SJ based on machinery the department from the equipment copies to the SJ 2) When creating SJ based on maintained part the system copies the department from the parent equipment 3) When copying SJ to WO the department copies to WO 4) When linking Equipment to WO the department copies to WO from equipment.
Job Category	Click the dropdown menu at the end of the **Job Category** field for a list of job categories. The **Job Category List** window opens. Double click on the category of the job to close the **Job Category** window and add the selection to the **Job Category** field.
Class No. check box and field	Click in the **Class Number** check box to indicate that this job is required by the classification society. The field next to the check box opens. Type the number assigned to this job by the classification society in the **Class Number** field.
Coast Guard No. check box and field	Click in the **Coast Guard Number** check box to indicate that this job is required by the coast guard. The field next to the check box opens. Type the number assigned to this job by the coast guard in the **Coast Guard Number** field.

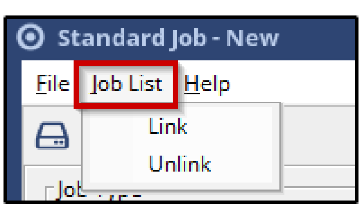
Field	Description
Priority	Click on the dropdown menu in the **Priority** field to select the priority of the job. The options are A, B, C and D with "A" being the highest priority. The default selection is "D". It is suggested that the value "A" be used to designate the jobs which are critical from a safety standpoint in connection with the ISM code requirements. "B" can be used to designate a job which is critical from an economic/quality standpoint, which is related to the goals of ISO. The "C" and "D" designations can be used for less critical jobs.
Event Job Only	Click the **Event Job Only** check box if this job is only associated with a maintenance event. Any job designated as an "Event Job Only" is ignored by the process functions in the **Maintenance Plan**. This means that the functions for creating work orders, no action jobs and service requisitions, as well as those for completing work orders and rescheduling jobs, do not have any effect on jobs designated "Event Job Only". Event Job Only jobs are skipped by these functions.
Job List Index Terms	Click the **Link** icon on the **Standard Job** window toolbar to link job list index terms to the **Job List Index Terms** section.

Field	Description
Drydock section	The **Drydock** section contains fields associated with a Drydock. **NOTE:** Fields in the **Drydock** section are not available if the **NS Drydock** module is not part of the suite of **NS** products. • Click to check the **Standard Drydock Item** check box to designate this job as a standard Drydock job. All standard jobs with this check box checked are listed when the **DDK Items** radio button is selected on the **Other Criteria** tab of the **Standard Job** query window. • Click to check the **Include in Shipyard RFQ** check box to include this job in the shipyard request for quotation as a job to be done by the shipyard. • Click on the dropdown menu at the end of the **ABC Indicator** field to select the priority of this job within the maintenance event. The options are: A – Will do – this job will be done during the drydocking event B – Might do – this job might be done during the drydocking event C – Contingency – this job probably will not be done; however, a quote is requested in case the job becomes necessary. D – Additional – this job will be done if there is additional time / budget left on the Drydock • Click the dropdown menu at the end of the **DDK Job Category** field to select the Drydock job category. • Type a number in the **Initial Sequence Number** field to establish the default order of the job within the **Drydock Job Category**. There may be several jobs within the Drydock event with the same Drydock job category. The **Initial Sequence Number** indicates the order this job appears in the event job list. This field is optional, and the sequence number can be changed.

Add Job List Terms to Admin Info Tab

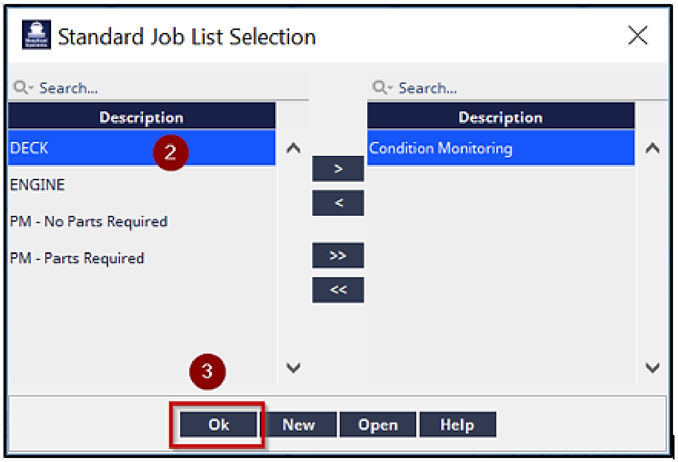
Job list terms are used for reporting purposes, job queries and to classify standard jobs. The standard job list is more customized than the job category index terms. These terms can be those that may only have meaning within individual organizations. Authorized users can add new job list terms from the **Standard Job List Selection** window or from the **General Data** module

1. Click the **Link** button from the **Admin Info** tab toolbar. The **Standard Job List Selection** window opens.



2. Double click on a job list index term on the left side of the **Standard Job List Selection** window to move the term to the right side of the window. Continue selecting terms and moving them until all desired terminology are listed in the right section of the window.

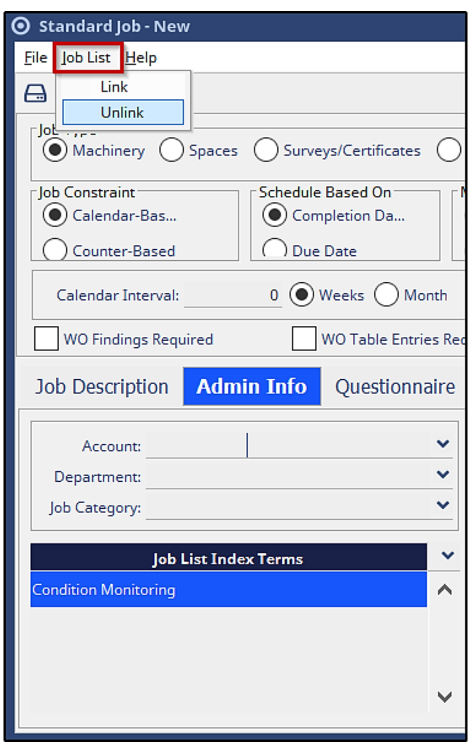
3. Click the **OK** button on the **Standard Job List Selection** window to accept all selections, close the window and list the job terms on the **Admin Info** tab.



Delete Job List Terms from the Admin Info Tab

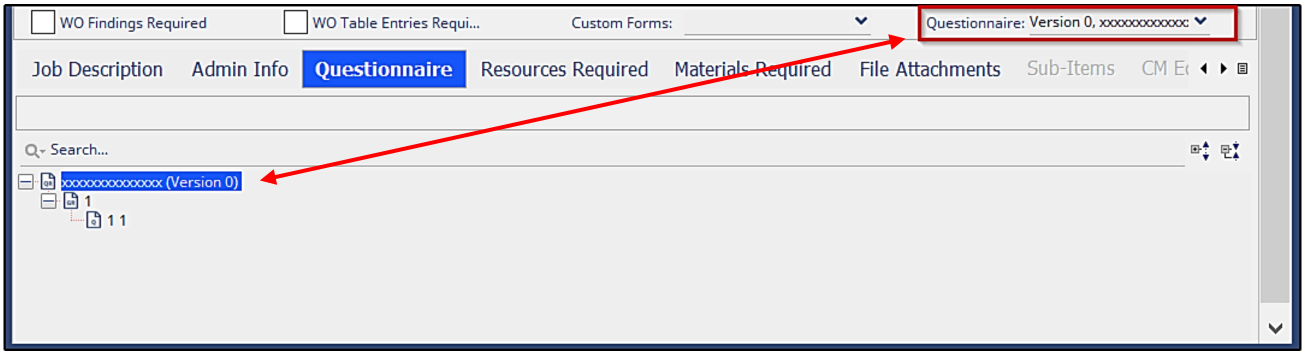
1. Click to highlight a job list term on the **Job List Index Terms** section of the **Admin Info** tab.

2. Click the **Unlink** button from the **Admin Info** tab toolbar. The highlighted job list term is removed from the **Admin Info** tab.



14.1.4 *Questionnaire Tab*

The **Questionnaire Document** tab lists the sections and sub-sections of the questionnaire selected in the header of the **Standard Job or Compliance Job** document. Questionnaires can also be versioned, and responses can be configured. The **Questionnaire Document** tab is also a tab on Audits, Inspections, Meetings and Drills. The system will pick up the version based on the scheduled date and which version is active. Once the questionnaire is copied it will not get updated again if the questionnaire has a newer version. However, the system allows questionnaire to be linked to existing standard job which do not have any assigned questionnaire yet.



See your local system administrator for how to create answer template for questionnaires and how to import a questionnaire

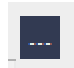
14.1.5 *Resources Required Tab*

The **Resources Required** tab is only available when the **Standard Job** is created. It becomes the **Resources** tab after the **Standard Job** is created.

The **Resources Required** tab is for specifying who will perform the job – the crew or an outside contractor. Positions, skills, and estimated man hours are indicated if the job is to be done by a crew member. Estimated cost is the only requirement if the job is done by an outside contractor. Specifics about the outside contractor are included in the work order or service requisition on the **Labor** tab.

The fields on the **Resources Required** tab are:

Field	Description
Skills	The **Skills** field can be completed whether the job is done by the crew or by an outside contractor. Click the dropdown menu at the end of the **Skills** field to select the skills necessary to perform this job. The **Skill Selection** window opens. Authorized users can add new skills from the **Skill Selection** window or the **General Data** module. Double click on the skill needed from the left side of the **Skill Selection** window to move it to the right side of the window. Continue moving selections to the right side of the window until all skills needed for this job are listed in the right section of the window. Click the **OK** button on the **Skill Selection** window to close the window, accept the selections made and list the skills in the **Skill** field on the **Resources Required** tab.
Estimated Cost	The **Estimated Cost** field is completed if the job is performed by an outside contractor. Click in the **Estimated Cost** field to type the approximate cost of the job in the default currency set in the **General Data** module.
Generate Estimate button	This button is NOT applicable for this tab. It becomes active after the job is created and the **Resources Required** tab becomes the **Resources** tab. *Error! Reference source not found.*
Usual Method of Execution	Click the radio button to select who normally performs this job – the crew or an outside contractor.  **NOTE:** This option can be changed on the ship level if necessary. Only authorized users can make this change.

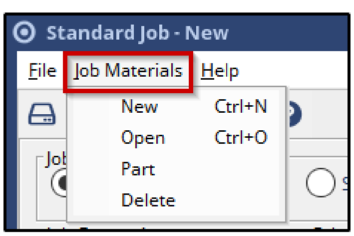
Field	Description
List Positions	Click the **Ellipse/browse** button  at the end of the table to list the positions on the crew necessary to perform this job. The **List of Crew Position Titles** window opens. Authorized users can add new crew position titles from the **List of Crew Position Titles** window or the **General Data** module. Double click on the position title needed from the left side of the **List of Crew Position Titles** window to move the selection to the right side of the window. Continue moving selections to the right side of the window until all position titles needed for this job are listed in the right section of the window. Click the **OK** button on the **List of Crew Position Titles** window to close the window, accept the selections made and list the positions in the table on the **Resources Required** tab. The **Estimated Man-Hrs**. column becomes active when the positions titles are listed on the table. Click in each column to list the estimated man hours this position title needs to perform the job.
Total Estimated Man Hrs.	**NS** automatically calculates the total estimated man hours needed to perform this job as the **Estimated Man-Hrs**. column is filled in the table.

14.1.6 *Materials Required Tab*

The **Materials Required** tab becomes active when the information in the **Job Type Details** tab is completed. Select the materials needed to complete the job on the **Materials Required** tab.

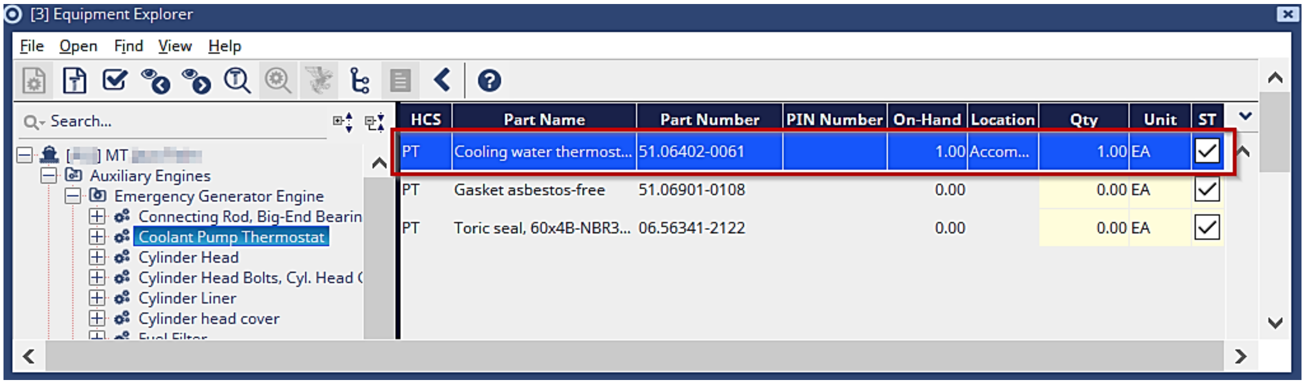
Add Job Materials to the Materials Required Tab

1. Click the **New** button on the **Standard Job – New** toolbar. The **Equipment Explorer** window opens listing all the ships designated on the **Job Type Details** tab when the **Equipment / Maintained Parts** section was completed.



2. Navigate through the **Equipment Explorer** to find the parts or materials needed for the job.

3. Click in the **Quantity** column of the parts listed in the right section of the **Equipment Explorer** window to type the quantity of the part needed for this job.

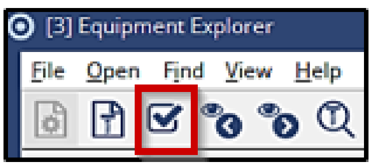


NOTE: Only parts with a non-zero value in the **Quantity** column are listed on the **Materials Required** tab even though all check boxes selecting the parts are checked by default.

4 Continue navigating through the **Equipment Explorer** window to select parts and materials needed for the standard job.

NOTE: **NS** keeps track of all selected parts even when the list of parts changes as users move through the hierarchy

5. Click the **Select** button on the **Equipment Explorer** toolbar when all parts and materials are selected to close the **Equipment Explorer** window and list the parts on the **Materials Required** tab.



Other Functions

The other options listed on the menu bar and toolbar of the **Materials Required** tab are:

Option	Description
Open	Click the **Open** option / button to open the **Standard Job Materials Requirements** window for the highlighted part. Change the quantity of the part needed in this window. This action also changes the quantity required on all the appropriate windows such as the **Materials Required** tab and the **Equipment Explorer**. The **Standard Job Materials Requirements** window displays the information contained on the **Parts** window for the selected part. The only field that can be edited on this window is the quantity required.
Part	Click the **Part** option / button to open the **Part** window for the highlighted part. This window displays basically the same information that is displayed on the **Standard Job Materials Requirements** window except these fields are editable for authorized users.

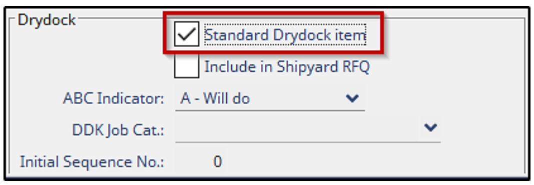
Option	Description
Delete	Click the **Delete** option / button to delete the highlighted part from the **Materials Required** tab.

14.1.7 *File Attachments Tab*

Refer to Item 21.2 File Attachment Tab section of this manual

14.1.8 *Sub-Items Tab*

The **Sub-Items** tab of the **Standard Job** window is available when the **Standard Drydock Item** check box is checked on the **Admin Info** tab.

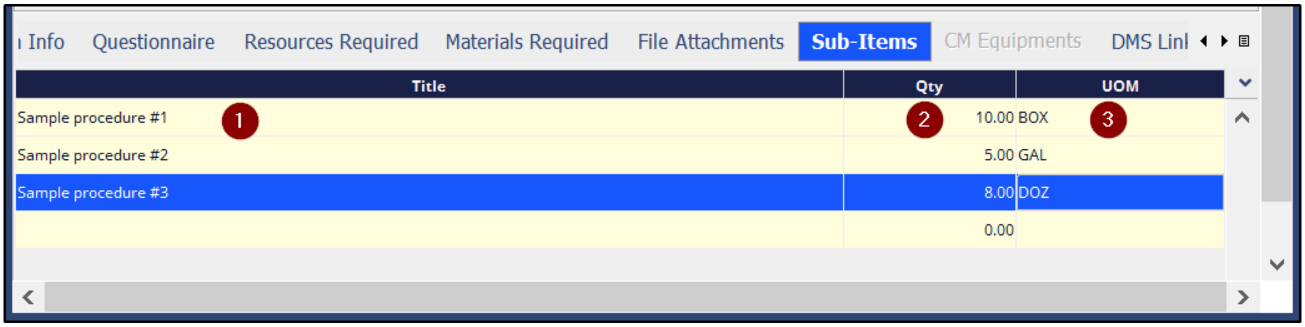


The **Sub-Items** tab explains how many of the part or equipment associated with the job are involved in the procedure. For example, the standard job for examining the pump and motor set. This is described in general on the **Description** tab of the standard job.

The **Sub-Items** tab can have a listing to check the pump but specifies that there are 3 pumps that need to be checked.

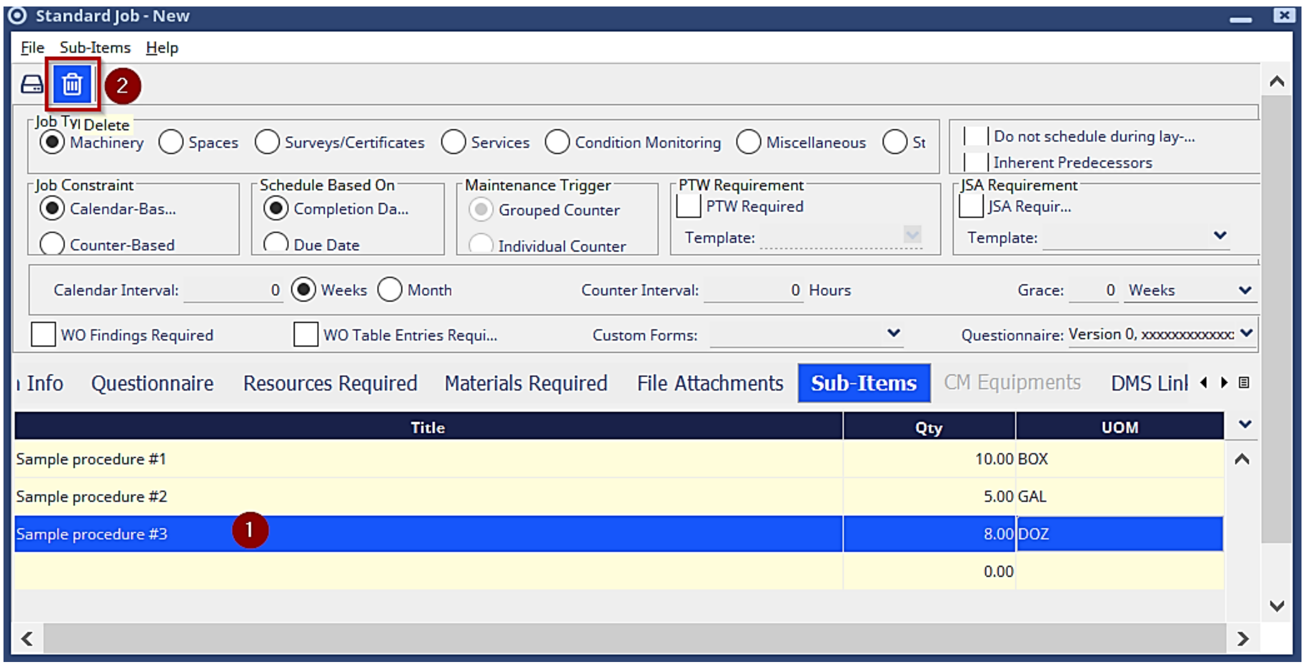
NOTE: The item on the **Sub-Item** tab should be labeled the same as the sub-job it is linked to on the **Description** tab. For example, "Check pump for leaks…" sub-job on the **Description** tab in the figure above has a list number of "A" preceding it. The item on the **Sub-Item** tab associated with this sub-job is listed as "A".

1. Type a procedure associated with the equipment or part in the **Title** column.
2. Type the quantity of the equipment or part associated with the procedure involved in the **Quantity** column.
3. Click on the dropdown menu in the **Unit of Measure** column to select the unit of measure used for the equipment or part. The dropdown menu in the **Unit of Measure** column is NOT visible until the field is clicked.

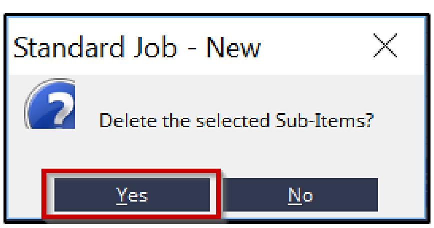


Delete an Item from the Sub-Items Tab

1. Highlight an item on the **Sub-Items** tab to be deleted.
2. Click the **Delete** button on the **Standard Job** window. A message box opens verifying the delete process.



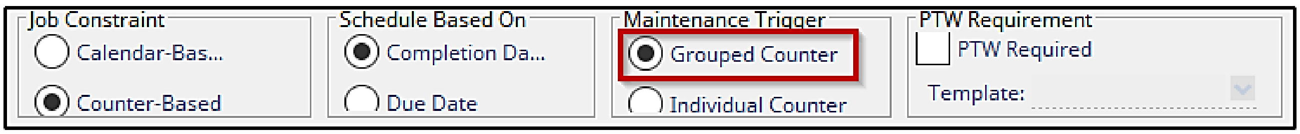
3. Click the **Yes** button to close the message box and delete the item.



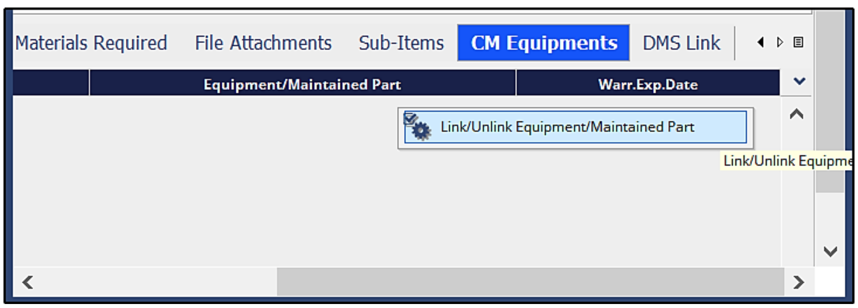
14.1.9 *CM Equipments Tab*

The **CM Equipments** tab is only available if the **Condition Monitoring** radio button is selected as the **Job Type** in the header of the **Standard Job** window. The **CM Equipments** tab lists equipment or spaces whose conditions are to be monitored for the selected condition monitoring type. The work order created from this standard job copies the equipment and spaces from the standard job by default. Additional equipment or spaces can be linked from the **Equipment / Spaces** tab on the work order as well.

The **Grouped Counter** radio button can be used in the **Maintenance Trigger** section in the header of the **Standard Job** window for equipment listed on the **CM Equipments** tab. The **Grouped Counter** selection is used when multiple pieces of equipment are using a single counter on a single vessel.



1. From the **CM Equipments** tab, right-click on the space provided and select **Link / Unlink Equipment / Maintained Part** option.

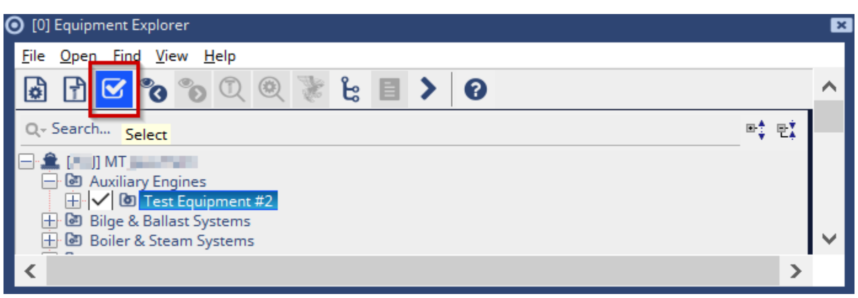


The **Equipment Explorer** window opens for the ships that were selected on the **Job Type Details** tab.

NOTE: Remember, only equipment that has been set up for condition monitoring can be selected on this tab

2. Navigate through the **Equipment Explorer** window to locate the equipment or maintained parts to be monitored.

3. Click the **Select** button on the **Equipment Explorer** toolbar to close the window and add the selections to the **CM Equipments** tab.



Using Grouped Counter Maintenance Trigger

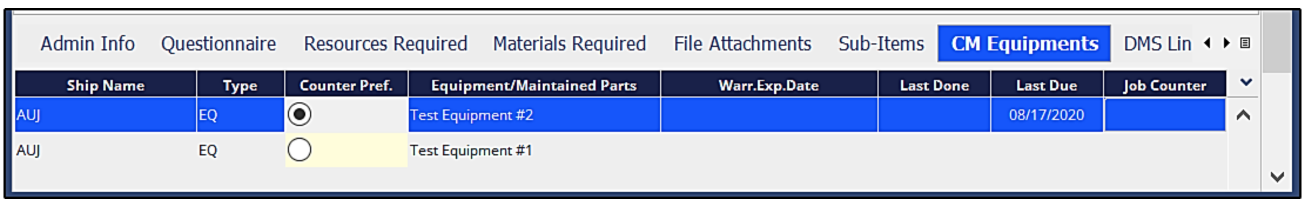
The **CM Equipments** window changes slightly when the **Grouped Counter** radio button is selected in the **Maintenance Trigger** section in the header of the **Standard Job** window. The **Grouped Counter** is used when multiple pieces of equipment are using a single counter. The selected counter determines when the standard job is scheduled on the **Maintenance Plan**. One standard job is created.

4. Add equipment to the tab.

5. Click the radio button in the **Counter Preferred** column to designate the counter to be used. The equipment listed first on the **CM Equipments** tab is selected by default as the counter preferred. However, this can be changed by clicking the radio button on another piece of equipment. Only one selection can be made. The **Last Done**, **Last Due** and **Job Counter** fields are only available for the counter preferred equipment.

6. Click in the **Last Done** and **Last Due** columns to select the appropriate dates. The **Calendar** button becomes available when the column is clicked.

7. Type the number of hours in the **Job Counter** field. This is the current reading on the counter preferred equipment. The job is scheduled when the running hours of the equipment are equal to the number of hours recorded in the **Counter Interval**.



14.1.10 *DMS Link Tab*

Refer to Item 21.8 DMS Link Tab section of this manual.

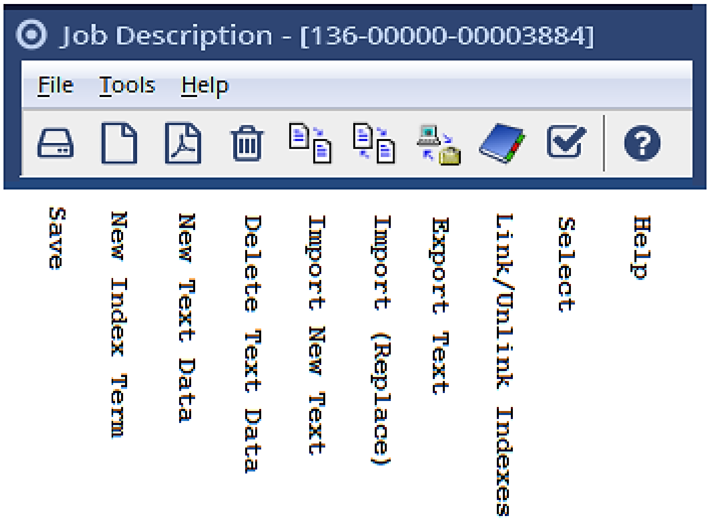
14.2 *Job Description Window*

Standard text that can be used for job descriptions throughout the **NS Enterprise** system are defined on the **Job Description** window. This text includes an index term to help find the text and text data that is commonly used. An index term can have several different pieces of text data. Text data can be instructions, notations or any other piece of information that can be shared regarding the job.

The **Job Description** window has three sections:

- List of job description index terms
- Job Detail section
- Text Data section

The options on the **Job Description** window menu bar and toolbar are:



Option	Description
File→	The **File** menu contains options to manipulate a file.
Save	Select the **Save** option / button to save any changes made on the **Job Description** window.
Tools→	The **Tools** menu contains options that are useful to add text to the **Job Description** window.
New Index Term	Click the **New Index Term** option / button to add a new job description index term to the **Job Description Index Term** section. Only authorized users can add new index terms.  **NOTE:** Index terms CANNOT be deleted. They can be hidden from view.
New Text Data	Click the **New Text Data** option / button to add new text data to the index term selected.  **NOTE:** The first 100 characters in the **Text Data** field are used as the **Text Detail**.
Delete Text Data	Click the **Delete Text Data** option / button to delete the text data of the text detail highlighted in the **Text Detail** section.

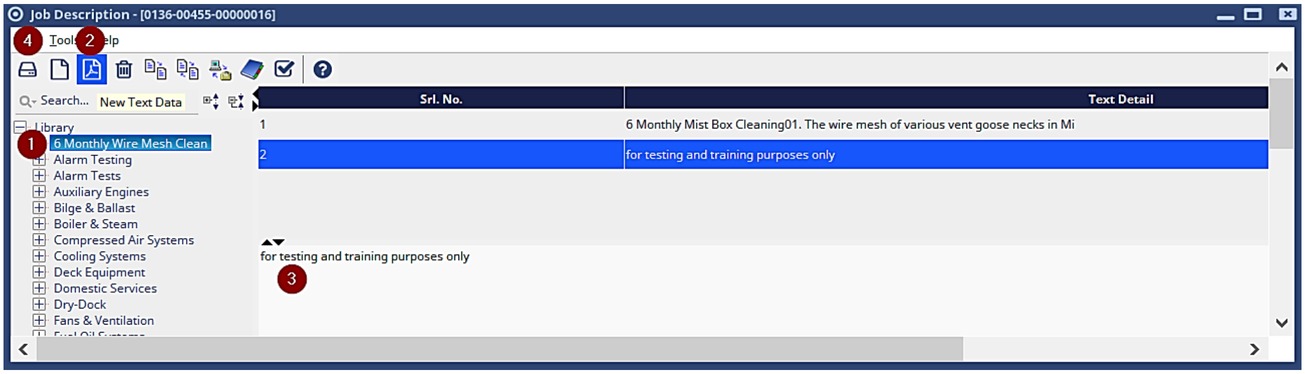
Option	**Description**
Import New Text	Click the **Import New Text** option / button to import information from another source into the **Job Description** window.  **NOTE:** Only data with a .txt extension can be imported.
Import (Replace)	Click the **Import (Replace)** option / button to replace existing text data.  **NOTE:** Only data with a .txt extension can be imported.
Export Text	Click the **Export** option / button to export the text data to another location as a text file.
Link / Unlink Indexes	Click the **Link / Unlink Indexes** option to copy text data from one **Job Description** index term to another.
	Click the **Select** button to close the **Job Description** window and add the selected job description index term and text data to the **Job Description** tab.
Help 	The option in the **Help** menu is **Help**. Select this option / button to open the online help.

14.2.1 *Add Text Data*

1. Select a job description index term from the **Job Description Index Term** section of the **Job Description** window.
2. Click the **New Text Data** button from the **Job Description** toolbar.

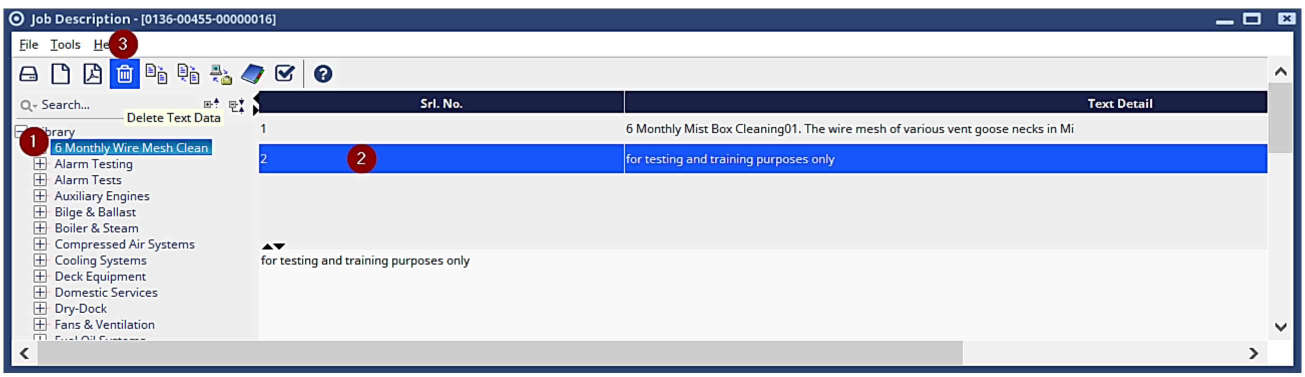
   NOTE: The previous text data disappears when the **New Text Data** button or option is selected, but it is NOT overwritten. This becomes evident when the **Save** button is clicked. A second text data selection is added to the **Text Detail** section of the **Job Description** window.

3. Type any text describing the procedures for the job. The text data section holds approximately 200 lines.
4. Click the **Save** button to save the information. A new entry is made to the **Text Detail** section.

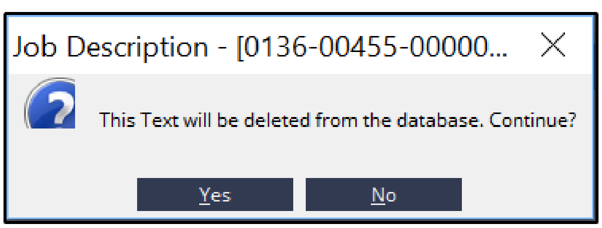


14.2.2 *Delete Text Data*

1. Select a job description index term from the **Job Description Index Term** section of the **Job Description** window.
2. Select the text from the **Text Detail** section to be deleted.
3. Click the **Delete Text Data** button from the **Job Description** toolbar. A delete confirmation message box opens.



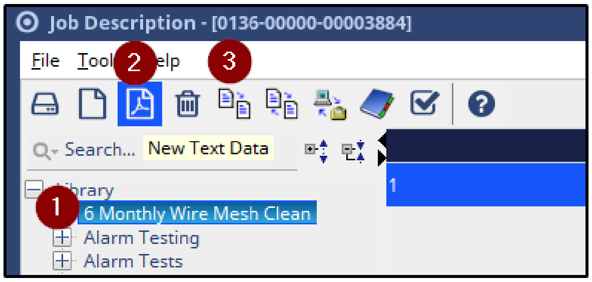
4 Click the **Yes** button on the message box to delete the selected text. The text detail and text data for the selected text are deleted.



14.2.3 *Import Text Data*

1. Select a job description index term from the **Job Description Index Term** section of the **Job Description** window.
2. Click the **New Text Data** button from the **Job Description** toolbar. The cursor appears in the **Text Data** section.

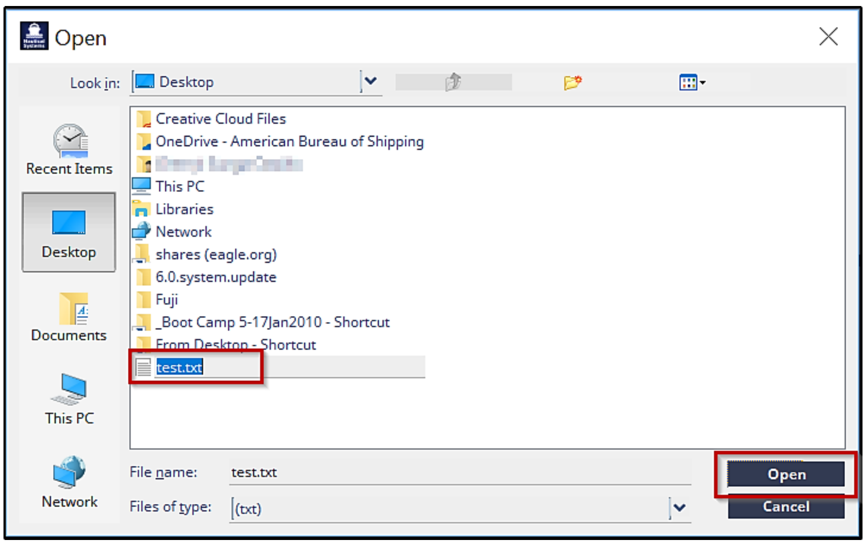
3. Click the **Import New Text** button from the **Job Description** toolbar. The **Open** window opens with files from the default directory.



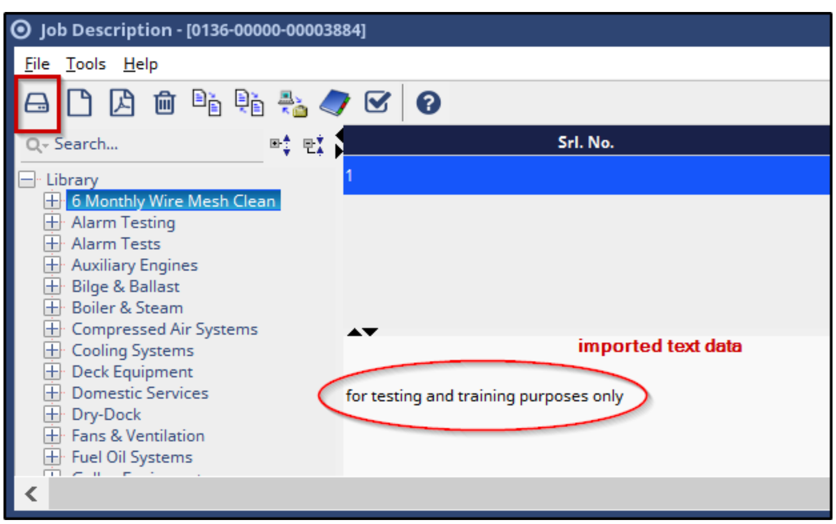
4. Browse the directories for the appropriate text file.

5. Select the text file.

6. Click the **Open** button on the **Open** window. The selected text from the file is displayed in the **Text Data** section of the **Job Description** window.



7 Click the **Save** button to save the imported data. A new entry is made to the **Text Detail** section.

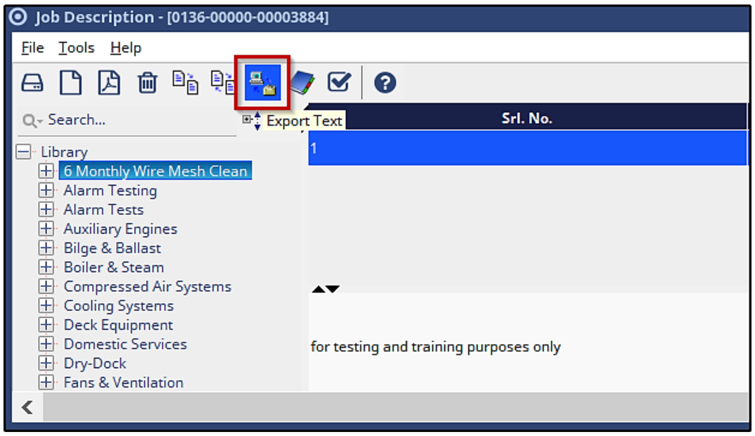


Add Imported Data to Existing Text Data

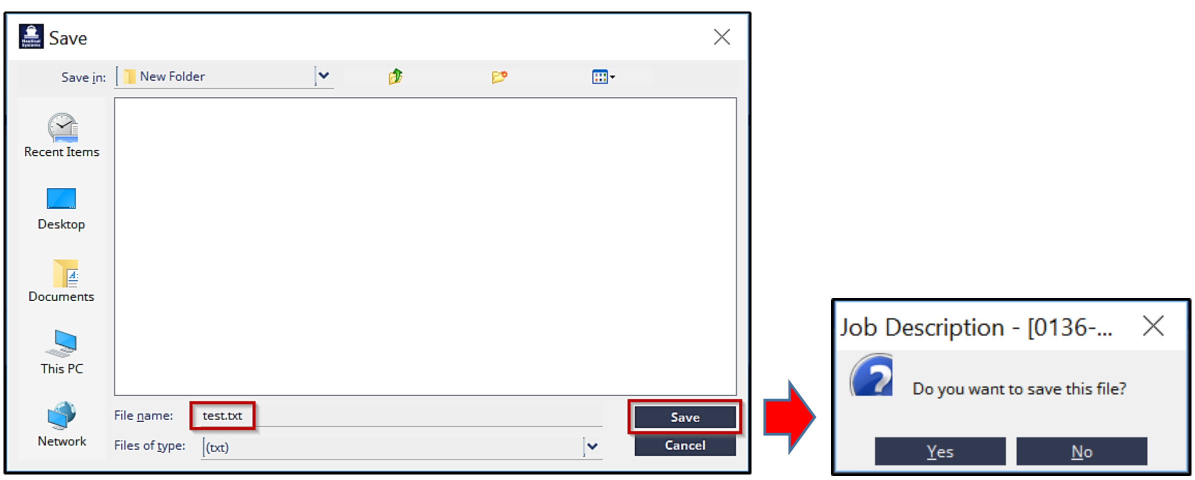
The imported text is added to any previous text contained in the text data section.

14.2.4 *Export Text Data*

1. Select a job description index term from the **Job Description Index Term** section of the **Job Description** window.
2. Click the **Export Text** button from the **Job Description** toolbar. The **Save** window opens with files from the default directory.

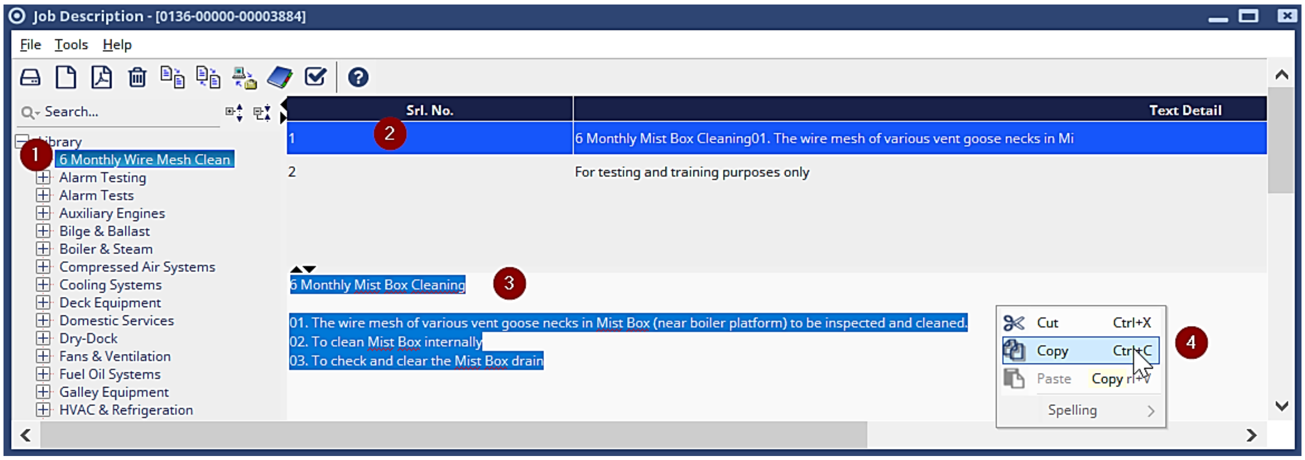


3. Browse the directories for the appropriate directory for the exported text data file.
4. Type the name of the text data file in the **File Name** field of the **Save** window. Be sure to give it a .txt extension.
5. Click the **Save** button. The selected text data from the **Job Description** window is copied as a text file to the selected directory. Click **Yes** to the Job Description message box.

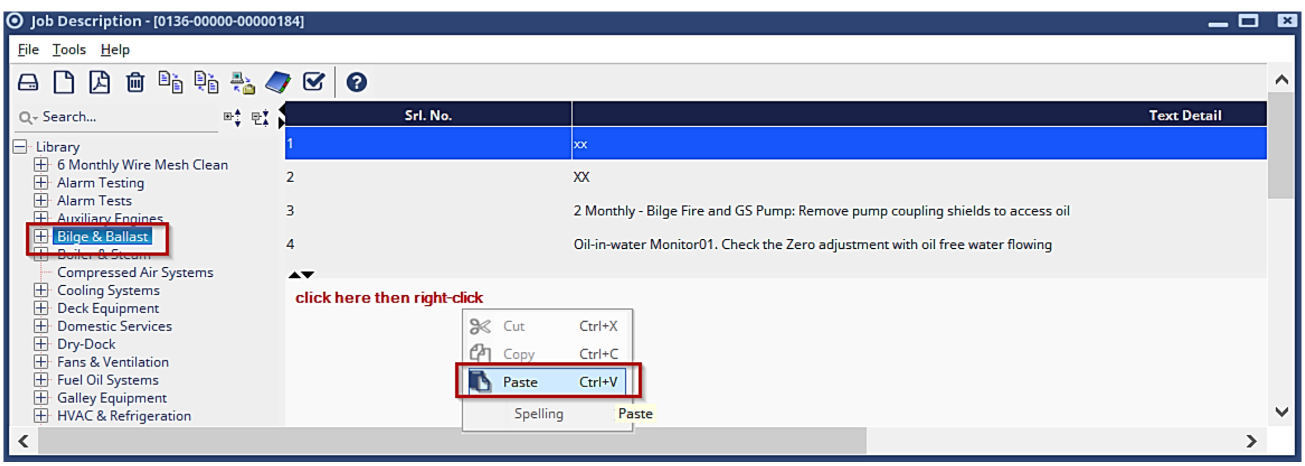


14.2.5 *Copy Text Data*

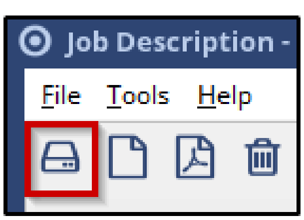
1. Select the job description index term from the **Job Description Index Term** section of the **Job Description** window whose text data is to be copied.
2. Select the **Text Detail** to be copied.
3. Highlight the text data in the **Text Data** section to be copied.
4. Right-click and select **Copy** from the options.



5. Navigate through the **Job Description Index Term** section to find the index term and **Text Detail** where the text data is to be copied.
6. Click in the **Text Data** section.
7. Right-click and select Paste from the options.



8 Click the **Save** button to save the copied data. A new entry is made to the **Text Detail** section.



14.3 *Standard Job Query*

All PM standard jobs for a ship can be located from the ship view of the **Maintenance and Purchasing module**.

A ship can only view its own standard jobs. It CANNOT view the standard jobs for other ships.

1. Select **Documents → Search → Standard Job** from the **Maintenance** gadget on the **Navigator** pane in the **Maintenance and Purchasing** module. The **Standard Job Query** window opens.
2. Click to select the parameters of the standard job to be located on the **Search** tab. The **Search** tab contains a number of options and sections for search criteria.
3. Click the **Search** button at the bottom of the **Search** tab of the **Standard Job Query** window to conduct a search for the standard jobs meeting the criteria of the options selected. The jobs meeting these criteria are listed on the right side of the **Standard Job Query** window when the search is completed.
4. Double click on a standard job listed from the search results to open the **Standard Job** window for that job.

The options / buttons on the **Standard Job Query** window menu bar and toolbar are:

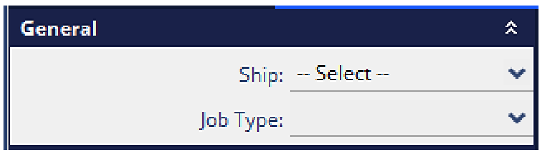
Options	**Description**
Standard Job→	The **Standard Job** menu contains options on manipulating the selected standard job.
Open	Select the **Open** option / button to open the highlighted standard job.  **NOTE:** Multiple tagged items cannot be opened. Only the HIGHLIGHTED document can be opened.
Delete	Click the **Delete** option / button to delete the standard job highlighted in the search results. A confirmation message box opens for verification that the job is to be deleted.  **NOTE:** Standard jobs can only be deleted before they are replicated. After replication they CANNOT be deleted.
Close	Select the **Close** option to close the **Standard Job Query** window.
Tag →	The ability to tag and make multiple standard jobs active or dormant. The **Tag** menu option works with the **Process** menu option. Click the check box preceding the standard jobs to select the jobs to be made dormant or active.
Tag All	Select the **Tag All** option to tag all standard jobs.

Options	Description
Untag All	Select the **Untag All** option to untag all selected standard jobs.
Process →	The ability to make multiple jobs active or dormant. The **Process** menu option works with the **Tag** menu option.
Make Selected Active	Select the **Make Selected Active** option to make all selected jobs active.
Make Selected Dormant	Select the **Make Selected Dormant** option to make all selected jobs dormant.
Edit JSA Requirement	 **NOTE:** JSA or job safety analysis is a feature included with the **HSQE** module. A company MUST have the **HSQE** module in its suite of **NS** products to use the JSA functionality in the **Maintenance** module. Contact the ABS Nautical Systems account manager for details. Click the check box preceding the standard jobs whose **Job Safety Analysis** requirement is to be changed. Select the **Edit JSA Requirement** option. The **Edit JSA Requirement** window opens. Click the **JSA Required** check box to indicate that a job safety analysis is required for this job. Click the dropdown menu at the end of the **Template** field to select a template. The **Template** search window opens. The **Ship** and **Template** fields are filled by default, so the **Template** search window opens with the templates meeting the parameters preselected on the right side of the window. Click to select a template. Click the **Select** button on the **Template** search window to close the window and add the selection to the **Edit JSA Requirement** window. Click the **OK** button to close the **Edit JSA Requirement** window and add the information to the selected standard jobs.
Reports→	The **Reports** menu contains general information reports pertaining to all standard jobs. Reports are created from the results of a query. Standard jobs MUST be listed on the right pane of the **Standard Job Query** window (search results) to run a report. Any report selected opens the **Report Options** window. Click the radio button to select where this report should be sent.
Advanced Search 	Click the **Advanced Search** button to open or close the **Bookmark** and **Search** tabs of the **Standard Job Query** window.

Options	Description
Help 	The option in the **Help** menu is **Help**. Select this option to open the online help.

There are five tabs to select specific criteria for the standard job query. Click the arrow on the right side of the section tab to expand the tab.

14.3.1 *General Section*



The fields in the **General** section of the **Standard Job Query** window are:

Field	Description
Ship	Click on the dropdown menu at the end of the **Ship** field to select which vessels' standard jobs are to be included in the query if the window is accessed at the fleet level. The name of the vessel is entered by default if the window is accessed at the ship level.
Job Type	Click on the dropdown menu at the end of the **Job Type** field to select which job type standard jobs are to be included in the query. Click the check box preceding all job types to be included in the query. Click the **OK** button to close and add the selections to the **Job Type** field.

14.3.2 *Job Criteria Section*

The fields on the **Job Criteria** section of the **Standard Job Query** window are:

Field	Description
Equipment	Click the dropdown menu at the end of the **Equipment** field to display a list of the ships (when at fleet level), equipment name and equipment code that have standard jobs associated with selected equipment. This includes any standard job for work to be done on equipment or maintained parts. Click the check box preceding the equipment to select. Continue selecting equipment until all equipment whose standard jobs are to be included in the search are selected. The check box MUST be checked to select – highlighting a part or equipment does NOT select it. Click the **OK** button to close the menu and add the selections to the **Equipment** field.
CBM Equipment	Click the dropdown menu at the end of the **CBM Equipment** field to locate standard jobs associated with condition monitoring equipment. The options listed are only those that have been designated as condition monitored. Click the check box preceding the equipment to select. Continue selecting equipment until all equipment to be included have been selected. Click the **OK** button to close the menu and add the selections to the **CBM Equipment** field.
Maintained Part	Click the dropdown menu at the end of the **Maintained Part** field to locate standard jobs associated with maintained parts. Click the check box preceding the maintained parts to select. Continue selecting parts until all parts to be included have been selected. Click the **OK** button to close the menu and add the selections to the **Maintained Part** field.
Space	Click the dropdown menu at the end of the **Space** field to locate standard jobs associated with spaces. Click the check box preceding the space to select. Continue selecting spaces until all spaces whose standard jobs are to be included in the search are selected. Click the **OK** button to close the menu and add the selections to the **Space** field.
Surveys	Click the dropdown menu at the end of the **Surveys** field to locate standard jobs associated with surveys. Click the check box preceding the survey to select. Continue selecting surveys until all surveys whose standard jobs are to be included in the search are selected. Click the **OK** button to close the menu and add the selections to the **Surveys** field.

Field	Description
Service	Click the dropdown menu at the end of the **Services** field to locate standard jobs associated with services. Click the check box preceding the service to select. Continue selecting services until all services whose standard jobs are to be included in the search are selected. Click the **OK** button to close the menu and add the selections to the **Services** field.
Miscellaneous Work	Click the dropdown menu at the end of the **Miscellaneous Work** field to locate standard jobs associated with miscellaneous work. Click the check box preceding the jobs to select. Continue selecting jobs until all jobs whose standard jobs are to be included in the search are selected. Click the **OK** button to close the menu and add the selections to the **Miscellaneous Work** field.
Condition Monitoring (CM) Type	Click the dropdown menu at the end of the **Condition Monitoring Type** field to locate standard jobs associated with types of condition monitoring. Click the check box preceding the monitoring types to select. Continue selecting monitoring types until all that are to be included in the search are selected. Click the **OK** button to close the menu and add the selections to the **Condition Monitoring Type** field.
Structure	Click the dropdown menu at the end of the **Structure** field to locate standard jobs associated with structures. Click the check box preceding the structures to select. Continue selecting structures until all that are to be included in the search are selected. Click the **OK** button to close the menu and add the selections to the **Structure** field.

NOTE:

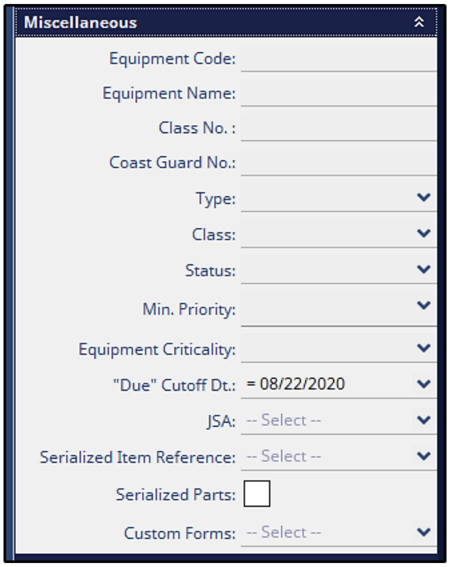
For Standard Job of type Surveys/Certificates, Services, Miscellaneous Work and Condition Monitoring, the title field is editable, depending on the “**Edit Standard Job**” authorization set.

14.3.3 *Indexes Section*

The fields on the **Indexes** tab of the **Standard Job Query** window are:

Field	Description
Job Size Index	Click the dropdown menu at the end of the **Job Size Index** field to select the job size index terms of the standard job. Click the check box preceding the job size to select. Continue selecting indexes until all job sizes whose standard jobs are to be included in the search are selected. Click the **OK** button to close the menu and add the selections to the **Job Size Index** field.
Department	Click the dropdown menu at the end of the **Department** field to select the department responsible for the standard job. Click the check box preceding the department to select. Continue selecting until all departments whose standard jobs are to be included in the search are selected. Click the **OK** button to close the menu and add the selections to the **Department** field.
Job Category	Click the dropdown menu at the end of the **Job Category** field to select the job category of the standard job. Click the check box preceding the job category to select. Continue selecting until all job categories whose standard jobs are to be included in the search are selected. Click the **OK** button to close the menu and add the selections to the **Job Category** field.
Job List	Click the dropdown menu at the end of the **Job List** field to select the job list index terms of the standard job. Click the check box preceding the job list index terms to select. Continue making selections until all job list index terms whose standard jobs are to be included in the search are selected. Click the **OK** button to close the menu and add the selections to the **Job List** field.
Job Description	Click the dropdown menu at the end of the **Job Description** field to select the job description index term of the standard job. Click the check box preceding the description to select. Continue selecting until all descriptions whose standard jobs are to be included in the search are selected. Click the **OK** button to close the menu and add the selections to the **Job Description Index** field.

14.3.4 *Miscellaneous Section*



The fields on the **Miscellaneous** tab of the **Standard Job Query** window are:

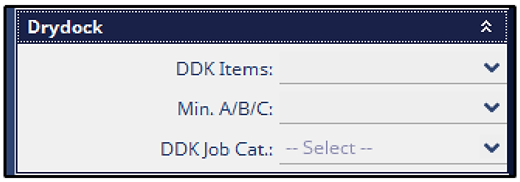
Field	**Description**
Equipment Code	Type the equipment code for the equipment
Equipment Name	Type the name of the equipment
Class Number	Type the classification number of the vessel in the **Class Number** field to search for jobs required by a classification society.
Coast Guard Number	Type the coast guard number of the vessel in the **Coast Guard Number** field to search for jobs required by the coast guard.
Type	Click on the dropdown menu on the **Type** field to select whether the standard job is calendar based or counter based. Click the appropriate check box. Click the **OK** button to close and add the selection to the **Type** field.

Field	Description
Class	Click on the dropdown menu on the **Class** field to select whether the standard job is: • Class job - classification required standard job • Non-class job - not a classification required job Click the appropriate check box. Click the **OK** button to close the and add the selection to the **Class** field. **NOTE:** Class jobs are indicated if a classification number is given on the **Admin Info** tab of the **Standard Job** window.
Status	Click on the dropdown menu on the **Status** field to select whether the status of the standard job is: • Active • Dormant Click the appropriate check box. Click the **OK** button to close the and add the selection to the **Class** field. **NOTE:** Users cannot mark a standard job as dormant if there is a scheduled work order associated with it. A validation message will be displayed to the user if he tries to mark the Standard Job as dormant having at least one active Work Order. User must cancel or complete the linked PM work order. **NOTE:** A dormant standard job can only be viewed from standard job query. NS Enterprise restricts the linking of Dormant standard jobs in the following areas: 1. Table Templates 2. Events 3. Dry dock 4. Work Orders 5. Standard Job as defined predecessor job

Field	Description
Min. Priority	Click the arrow on the **Min. Priority** field to select the minimum level of priority of the standard job. All jobs with a priority higher than the one selected are also displayed in the search results. The options are: • A – highest priority • B • C • D – lowest priority and default Click the selection to close option box and add the selection to the **Priority** field. Only one selection can be made.
Equipment Criticality	Click on the dropdown menu on the **Equipment Criticality** field to select the minimum level of criticality for the standard job. All jobs with a level of criticality higher than the one selected for this field are included in the search results. The options are: • A – ISM compliant • A+B – ISO compliant Click the appropriate check box. Click the **OK** button to close the and add the selection to the **Criticality** field.
“Due” Cutoff Date	Click on the dropdown menu on the **“Due” Cutoff Date** field to select the cutoff date for the standard job. Click the **Calendar** button at the end of the **“Due” Cutoff Date** field to select the date a standard job is due. Click the **OK** button to close the window and add the selection to the **“Due” Cutoff Date** field.
JSA	Click on the dropdown menu at the end of the **JSA** field to select the JSA template used for the standard job. Click the check box preceding the template to select. Continue selecting until all templates whose standard jobs are to be included in the search are selected. Click the **OK** button to close the menu and add the selections to the **JSA** field.
Serialized Item Reference	Click on the dropdown menu at the end of the **Serialized Item Reference** field to identify if it is a serialized piece of equipment or a serialized part.
Serialized Parts	Click the check box to include Standard Jobs for **Serialized Parts**.

Field	Description
Custom Forms	Click on the dropdown menu at the end of the **Custom Forms** field to select the Custom Form templates used for the standard job. Click the check box preceding the template to select. Continue selecting until all templates whose standard jobs are to be included in the search are selected. Click the **OK** button to close the menu and add the selections to the **Custom Forms** field.

14.3.5 *Drydock Section*



All the fields in the **Drydock** section are only available if the **Drydock** module is part of the **NS** suite of products.

14.4 *Standard Job Window – Ship View*

The ship view of the **Standard Job** window is slightly different than the **Standard Job** window on the fleet view. The basic information is the same because it applies across the fleet, but there are some fields and tabs that contain information that is specific to each ship.

Options	Description
File→	The **File** menu contains options to manipulate a file.
Copy Standard Job	Select the **Copy Standard Job** option / button to create a new standard job. The **Standard Job – New** window opens with all the parameters of the original standard job. All these parameters can be changed.  **NOTE:** Only authorized users can create a new standard job. The standard job created in this procedure only applies to this ship.
Save	Select the **Save** option / button to save any changes made on the **Standard Job** window.
Relog	

Options	**Description**
Job Description	The **Job Description** menu contains options pertaining to the **Job Description** tab.
Link	Select the **Link** option / button to link a job description to the job.
Open	Select the **Open** option / button to open the **Job Description** window. Authorized users can add new job descriptions or change information about a job description on this window.
Reports	The **Reports** menu contains options to generate different types of reports. Any report selected opens the **Report Options** window. Click the radio button to select where this report should be sent.
Print Standard Job	Select the **Print Standard Job** option to print all the information contained in the fields and tabs for the standard job in report form.
Standard Job Description	Select the **Standard Job Description** option to print just the basic information about the job and the job description.
Job Schedule	Select the **Job Schedule** option to print the basic information about the job and the scheduling information.
Help	The option in the **Help** menu is **Help**. Select this option to open the online help.

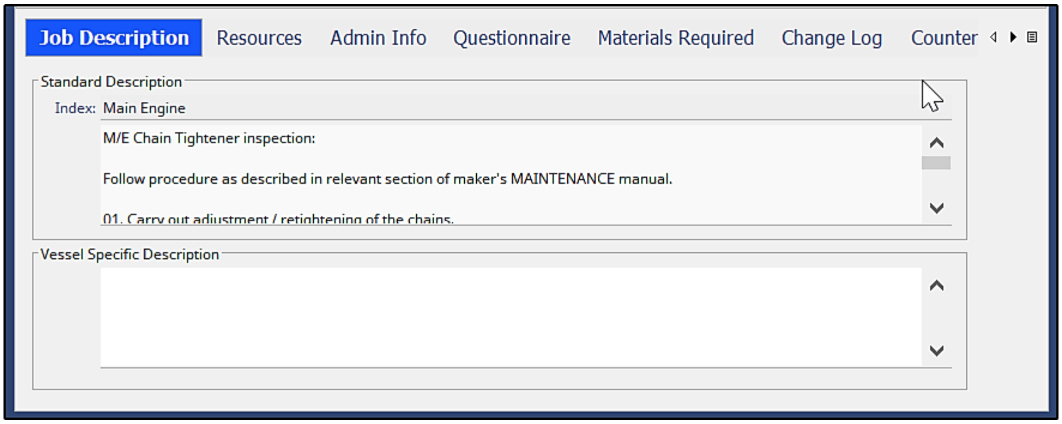
The fields on the **Standard Job** window – Ship view are completed from information provided when the job was created. This information was on the header portion of the **Standard Job – New** window as well as the **Job Type Details** tab. Authorized users can change much of the information in these fields or tabs.

The job type, name of the ship, system and equipment are displayed at the top of the **Standard Job** window. These fields are NOT editable.

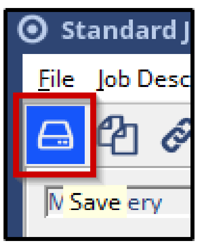
14.4.1 *Job Description Tab*

The **Job Description** tab on the **Standard Job** window has the information from the **Job Description** tab when the standard job was created. This information can be changed by authorized users.

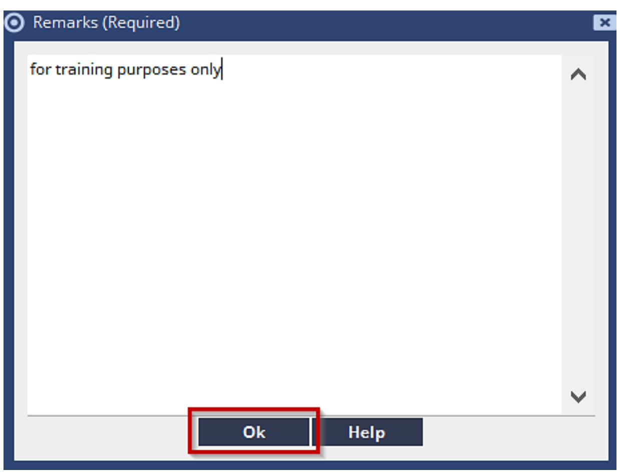
A **Vessel Specific Description** section has been added to the **Job Description** tab on existing standard jobs. This section is a free form text area to be used to add specific standard job addendums, comments, and notes by authorized users.



1. Type information in the **Vessel Specific Description** section of the **Job Description** tab.
2. Click the **Save** button. A **Remarks** window opens.



3 Add remarks regarding these instructions.



4. Click the **OK** button to close the **Remarks** window. The remarks are recorded on the **Change Log** tab.

Text from this section is added to the **Description** tab of the work order and the **Standard Job Report**.

14.4.2 *Resources Tab*

Refer to Item 21.4 Resources Tab section of this manual.

14.4.3 *Admin Info Tab*

The **Admin Info** tab on the **Standard Job** window has the information from the **Admin Info** tab when the standard job was created. This information can be changed by authorized users.

The **Standard Job Code** field is added to the **Admin Info** tab on the **Standard Job** window on the ship view. The **Standard Job Code** field is a 20 alpha numeric character that is unique to the vessel. The same code CANNOT be used more than once for the same vessel; however, the same code can be used on a different vessel. The **Standard Job Code** is the main field used to gather data for the **Key Standard Job Data** export.

Refer to Item 14.1.3 Admin Info Tab section of this manual, for a detailed explanation of each field and of the processes.

14.4.4 *Questionnaire Tab*

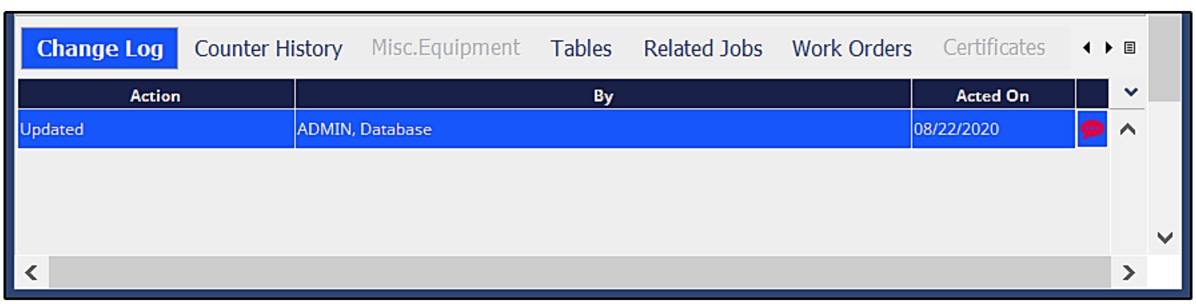
Refer to Item 14.1.4 Questionnaire Tab section of this manual.

14.4.5 *Materials Required Tab*

Refer to Item 14.1.6 Materials Required Tab section of this manual, for a detailed explanation of each field and of the processes.

14.4.6 *Change Log Tab*

The **Change Log** tab records any changes made to the standard job. A **Remarks** window opens when the **Save** button is clicked on an existing standard job when any changes have been made. The type of action, user and date of the change are system generated on the **Change Log** tab. An icon is added at the end of the row that contains any remarks that were entered by the user that were specific for the row. Click on the icon to open the **Remarks** window.



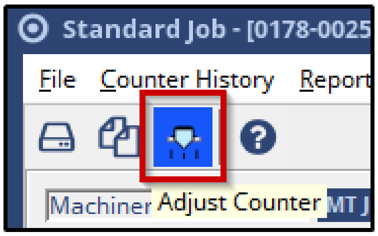
14.4.7 *Counter History Tab*

The **Counter History** tab is only available if the standard job is counter based. It displays history counter readings that have been recorded and keeps count of the number of running hours between maintenance jobs. An entry is made on the tab whenever the running hours on the piece of equipment is updated. The number of running hours displayed in the **Job Counter** field on the **Standard Job** window is taken from this tab.

> **NOTE:** The counter is automatically adjusted to zero whenever a work order or service purchase order is completed.

Sometimes the running hours listed on the **Counter History** tab are not correct. These hours can be adjusted by following these steps:

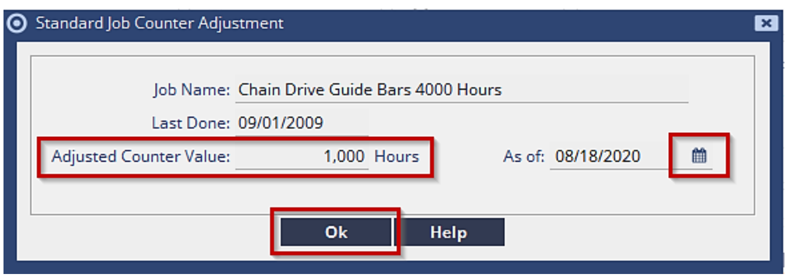
1. Click the **Counter History** tab.
2. Click the **Adjust Counter** button on the toolbar.



- The **Standard Job Counter Adjustment** window opens.

3 Click in the **Adjusted Counter Value** field to type the number of running hours needed for the adjustment.

4. Click the **Calendar** button at the end of the **As Of** field to set the date the running hours were adjusted.
5. Click the **OK** button on the **Standard Job Counter Adjustment** window to close the window and add the information to the **Counter History** tab.



The new line added to the **Counter History** tab reflects the date the reading was entered, the counter value entered on the **Standard Job Counter Adjustment** window is shown in the **New Counter Value** column and the number of hours added for this adjustment is in the **Hours Added** column.

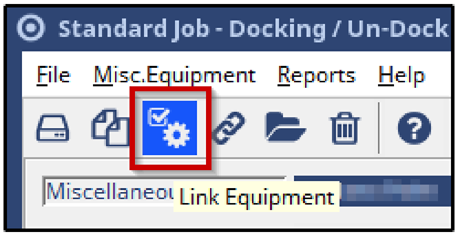
> **NOTE:** The adjusted counter value is NOT reflected on the **Job Counter** field of the **Standard Job** window until the changes have been saved. However, the **Standard Job** window closes when the job is saved and needs to be reopened from the **Standard Job Query** window.

14.4.8 *Miscellaneous Equipment Tab*

The **Miscellaneous Equipment** tab is only available for miscellaneous work standard jobs. Equipment associated with the miscellaneous work standard job is specified on this tab.

Link Equipment or Parts

1. Click the **Miscellaneous Equipment** tab.
2. Click the **Link Equipment** button from the **Standard Job** window toolbar.

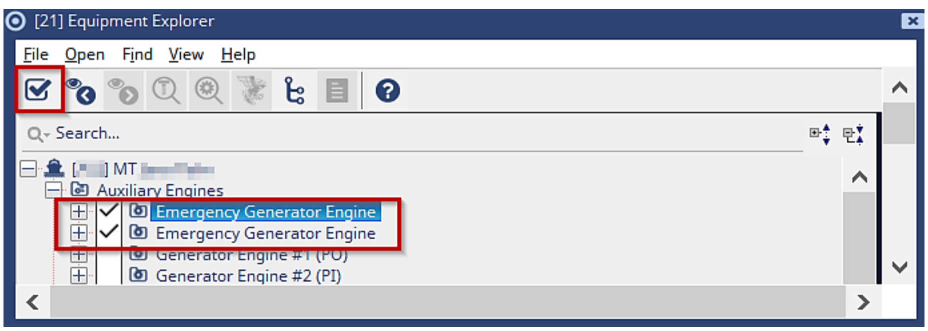


- The Equipment Explorer window opens.

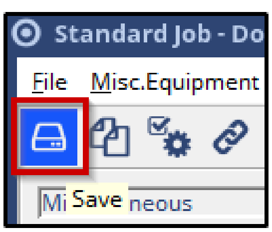
3. Drill down to the equipment/maintained part and tick the check boxes preceding the equipment or maintained part to select. More than one piece of equipment or maintained part can be selected at one time.

- Click the check box again to unselect any equipment or part.

4 Click the Select button on the Equipment Explorer window to close the Equipment Explorer window and add the items to the Miscellaneous Equipment tab.

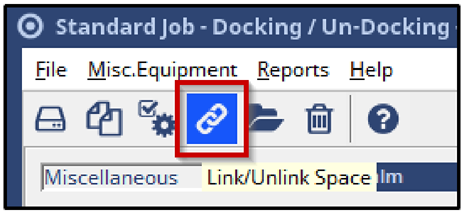


5 Click the Save button on the **Standard Job** toolbar to save the information.



Link/Unlink Space

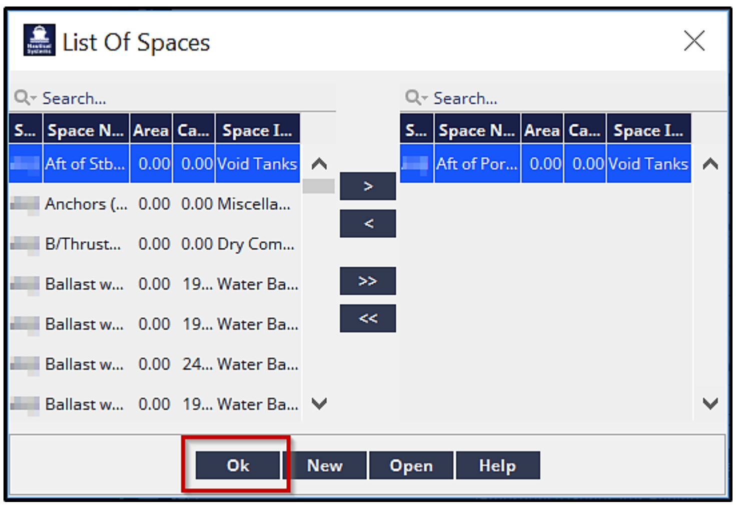
1. Click the Miscellaneous Equipment tab.
2. Click the **Link/Unlink Space** button from the **Standard Job** window toolbar.



The List of Spaces window opens with all the defined spaces.

3. Double click a space from the left side of the List of Spaces window to move the space to the right side of the window. Continue selecting spaces and moving them until all spaces needed for this miscellaneous work standard job are listed on the right side of the window.

4. Click the **OK** button to accept all selected spaces, close the List of Spaces window and list the space on the Miscellaneous Equipment tab of the Standard Job window.



- Click the double right arrow to move all spaces from the left side of the window to the right side of the window.

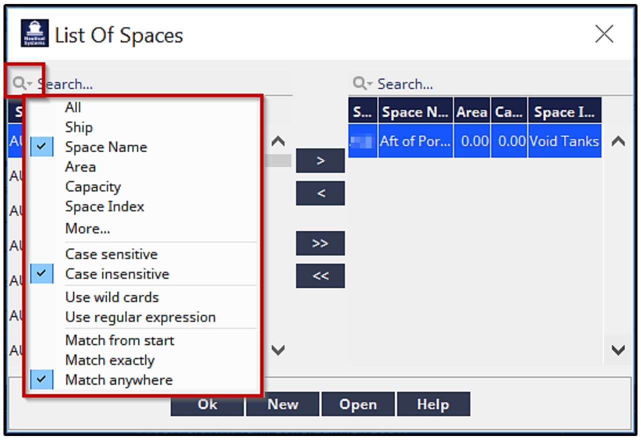
- Double click on a space from the right side of the window to move the space back to the left side of the window to unselect it.

Search for a Space

Some ships have an extensive list of spaces. The **List of Spaces** window contains a search field to help locate a space.

1. Click on the dropdown menu at the end of the **By** field on the **List of Spaces** window to select the category to search by.

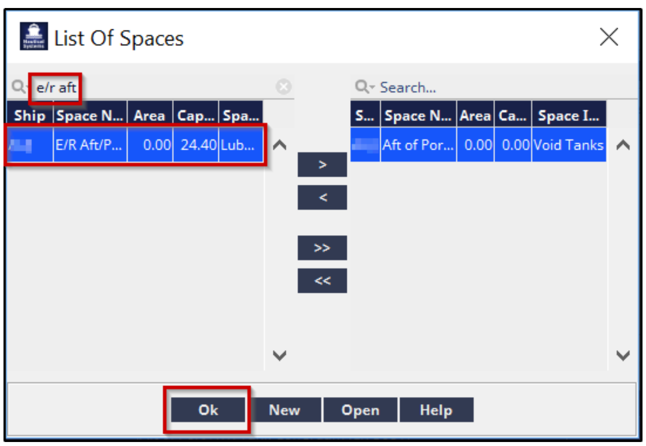
NOTE: The scroll bar at the bottom of column can be moved to reveal more columns.



2. Type the beginning letters or numbers of the category of the space to be located in the **Search** field. The cursor moves with every character typed to the space meeting the search criteria according to the letters or numbers typed.

3. Double click on that space to move it from the left side of the **List of Spaces** window to the right side of the window.

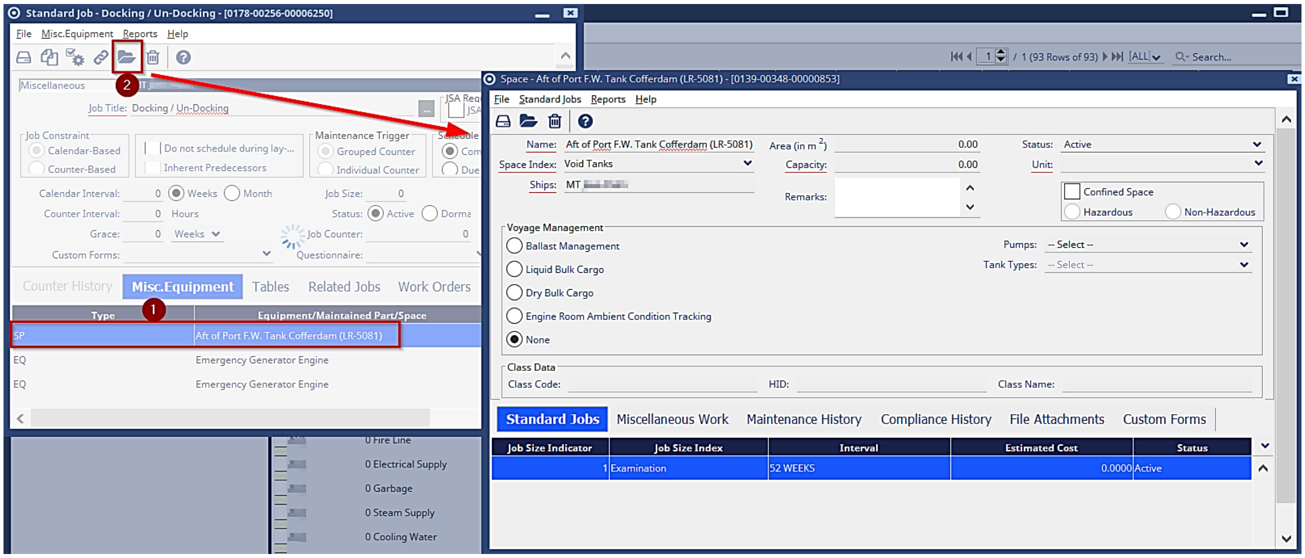
4. Click the OK button to accept all selected spaces, close the **List of Spaces** window and list the space on the **Miscellaneous Equipment** tab of the **Standard Job** window.



Open Equipment or Space Window

1. Go to the **Miscellaneous Equipment** tab and click to highlight equipment or space on the **Miscellaneous Equipment** tab.

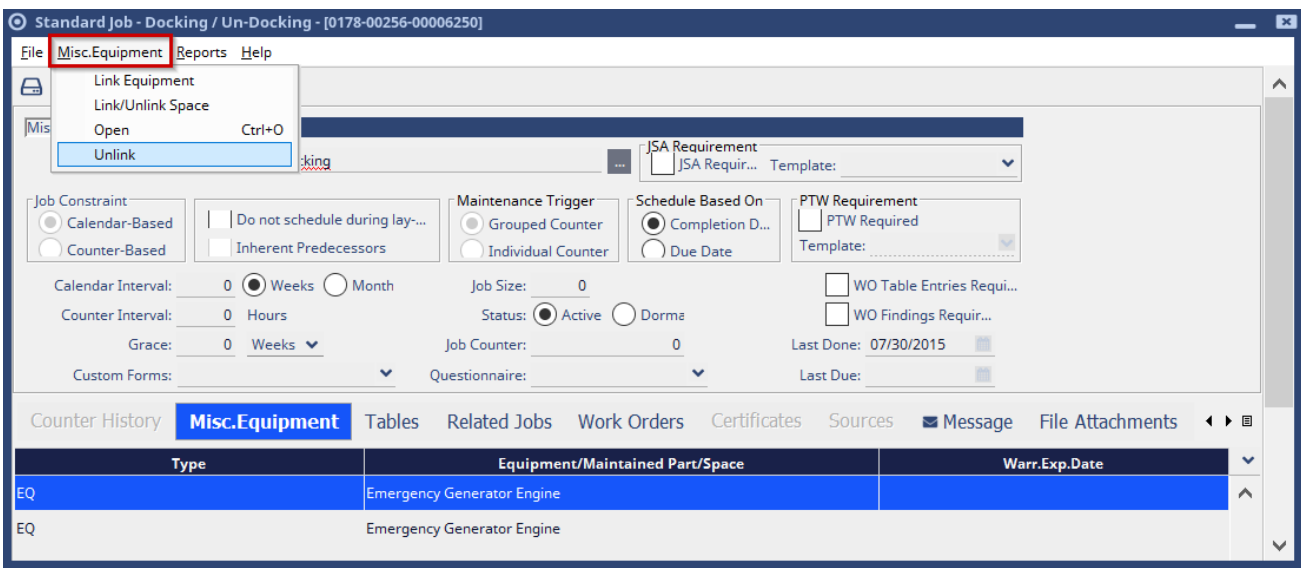
2. Click the Open button from the **Standard Job** window toolbar.



Unlink Selected Space or Equipment

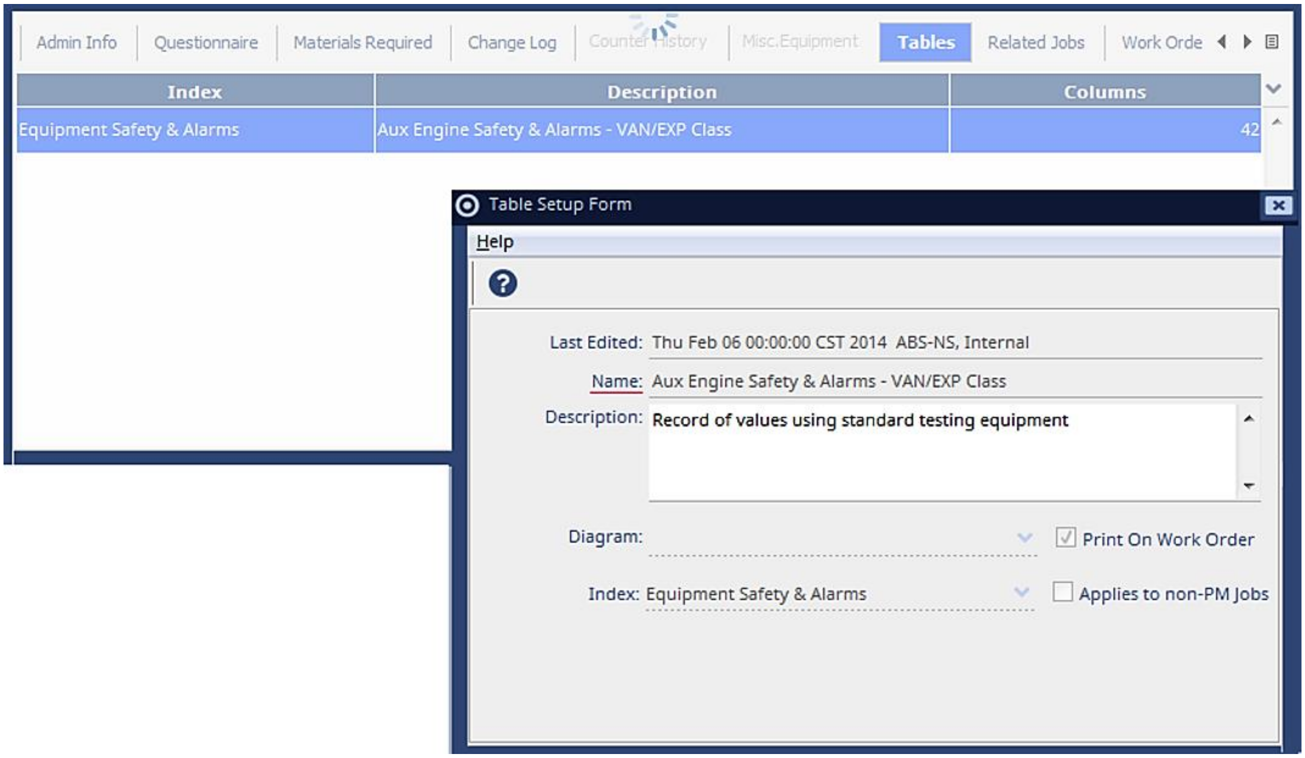
1. Go to the **Miscellaneous Equipment** tab and click to highlight equipment or space on the **Miscellaneous Equipment** tab.

2. Click the Unlink button from the **Standard Job** window toolbar.



14.4.9 *Tables Tab*

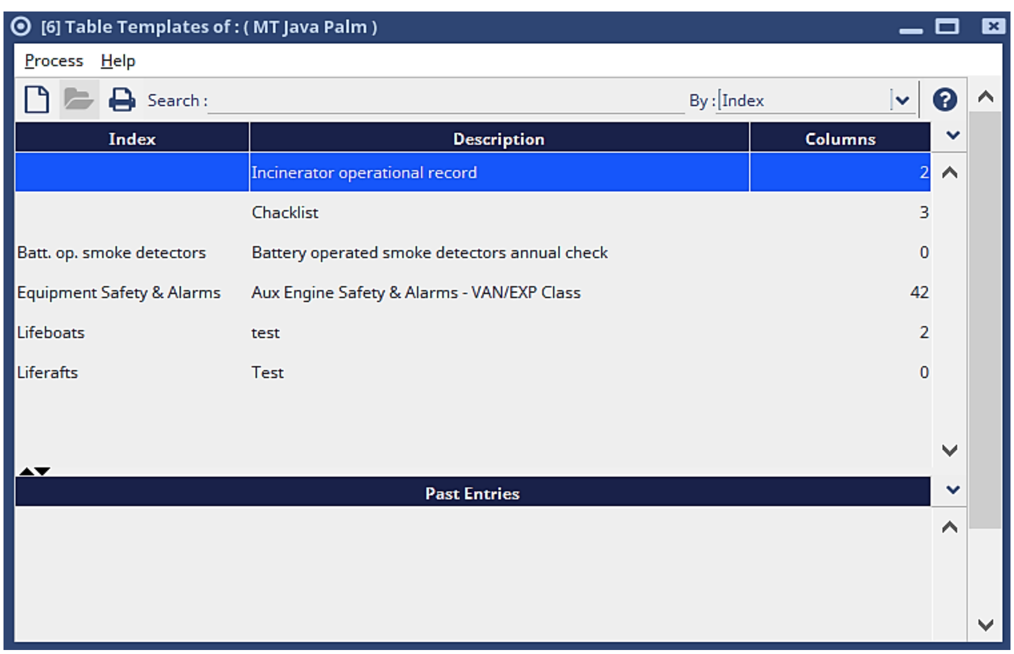
Any tables that have been created are listed on the **Tables** tab. These tables can contain any type of information that might be useful pertaining to the standard job. This information can include engine readings, types of measurements, temperature, and pressure.



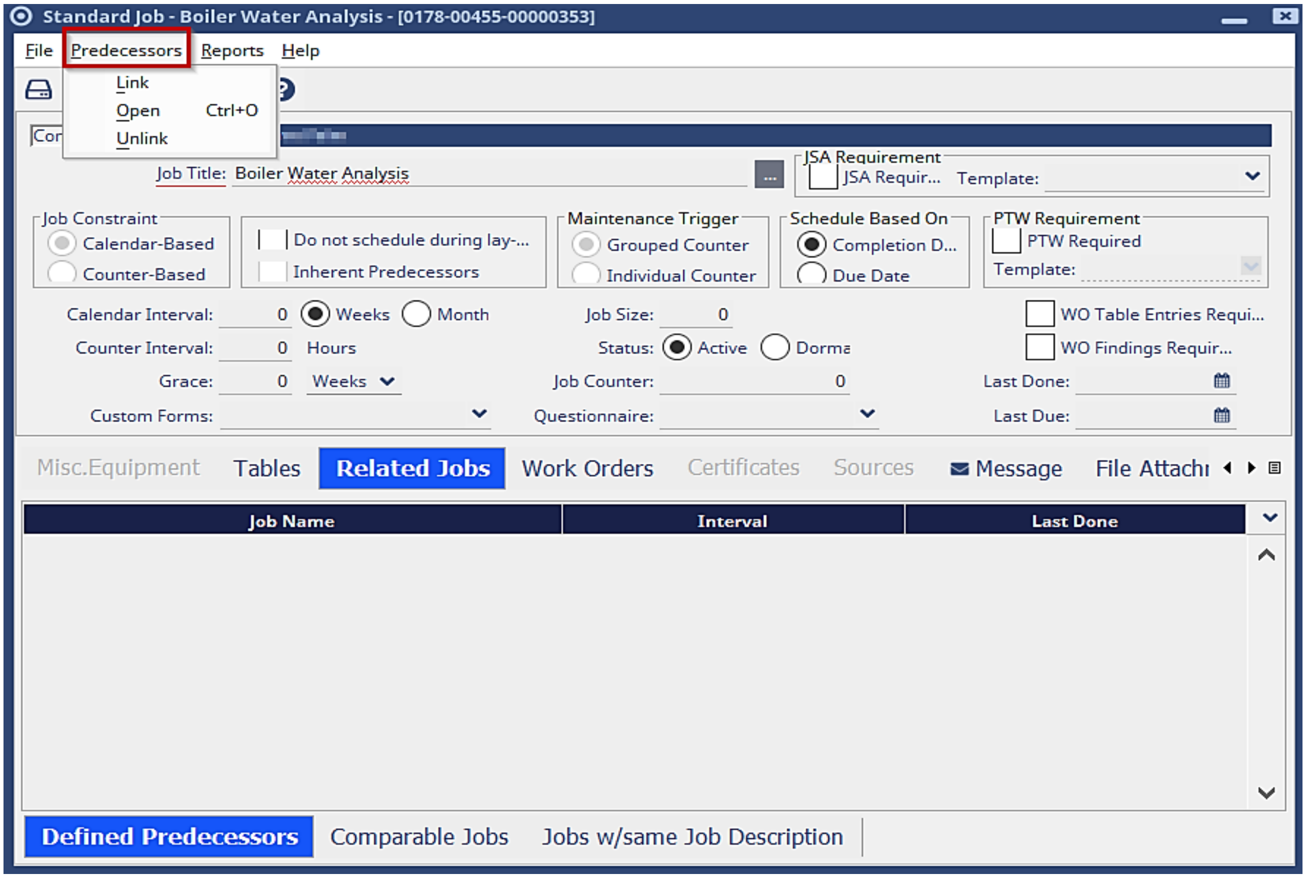
Tables are created at the fleet level and the properties of that table can be viewed at the ship level on this tab.

NOTE: Tables are only listed on this tab if the standard job has been linked to the table.

Select **Tools → Table Entries** from the **Maintenance** gadget on the **Navigator** pane of the **Maintenance** module window at the Ship level.



14.4.10 *Related Jobs Tab*



Jobs that are similar to this job can be listed on the **Related Jobs** tab. There are three sub-tabs at the bottom of this tab which have different parameters that define the jobs that are similar to this job.

NOTE: Job Description from Predecessor Jobs in PM Work Orders are system preference based. If user set the system preference to "Yes', then like defined predecessor job descriptions from inherent predecessor jobs will be copied to work orders. The default option is set to "No".

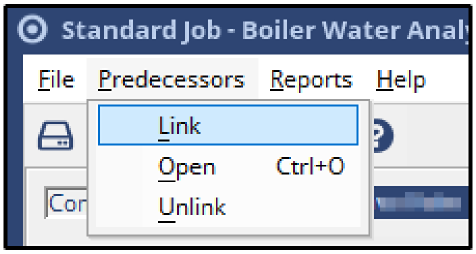
The three sub-tabs at the bottom of the **Related Jobs** tab are:

- Defined Predecessors
- Comparable Jobs
- Jobs with Same Job Description

Defined Predecessors Sub-Tab

The **Defined Predecessors** sub-tab displays all the jobs to be completed prior to the start of this job.

1. Click the **Link** button from the **Standard Job** window toolbar. The **Standard Job Query** window opens with all the standard jobs.

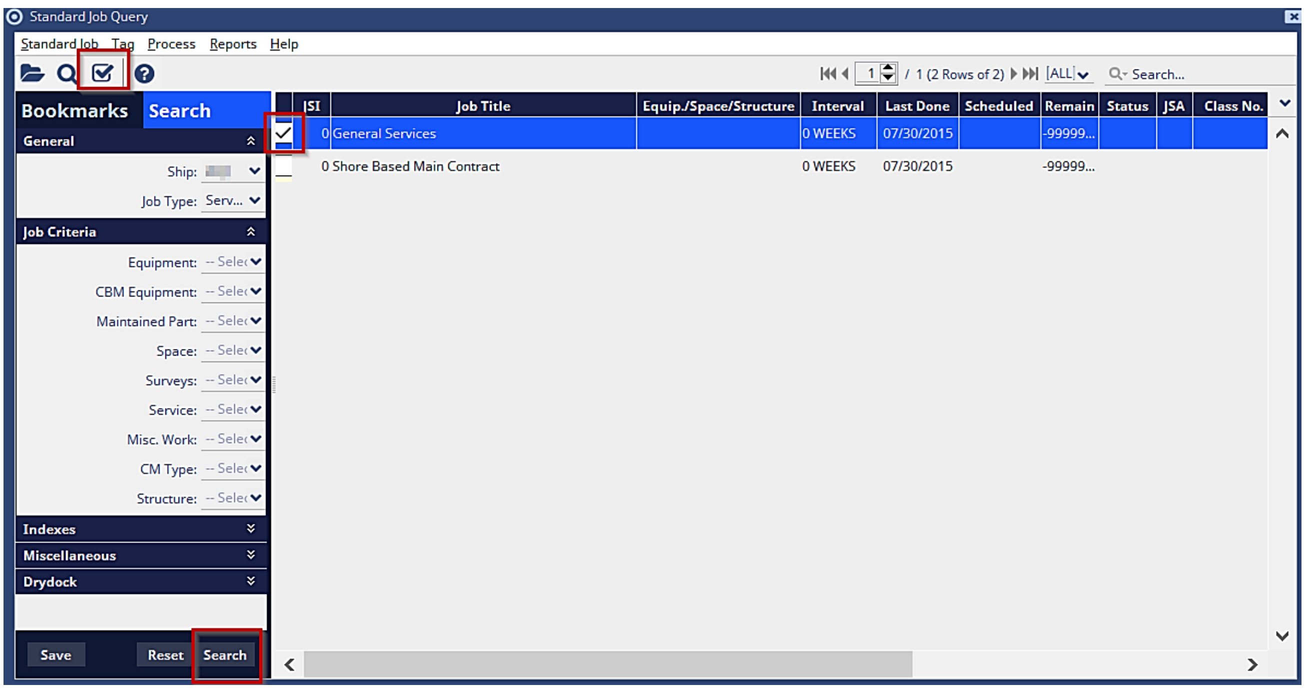


2. Select the parameters on the **Search** tab to find the predecessor jobs that are to be done prior to this standard job.

3. Click the **Search** button at the bottom of the **Search** tab to generate the search. The jobs meeting the parameters are listed on the right side of the **Standard Job Query** window.

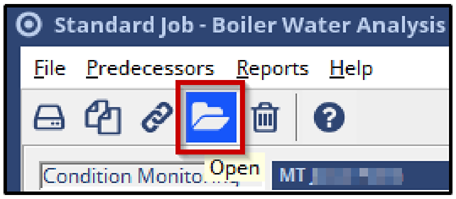
4. Click the check box to select the standard job that needs to be completed prior to starting this job. More than one selection can be made at a time.

5. Click the **Select** button on the **Standard Job Query** window. The **Standard Job Query** window closes, and the selected job(s) is listed on the **Related Jobs** tab → **Defined Predecessors** sub-tab.

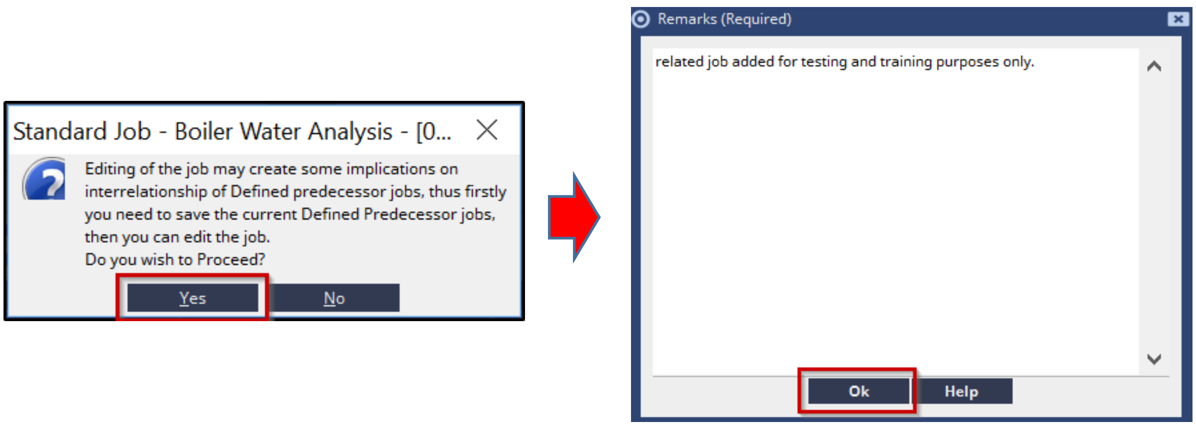


Open a Predecessor Job

1. Click to highlight a job on the **Related Jobs** tab → **Defined Predecessors** sub-tab.
2. Click the **Open** button from the **Standard Job** window toolbar. A message box opens warning that any changes made to this **Standard Job** window can have consequences for any jobs linked to it.



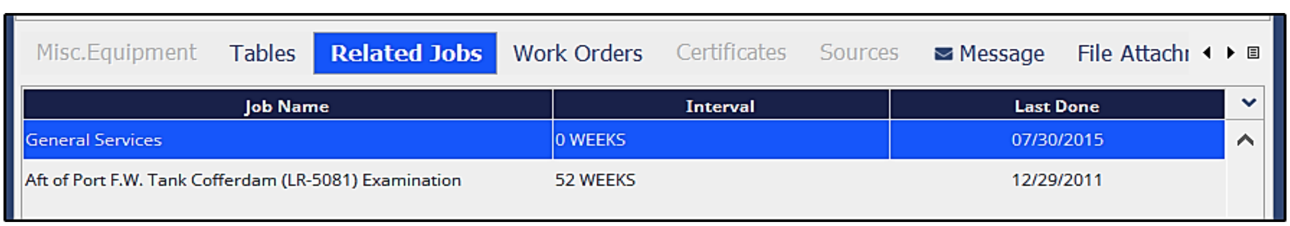
3 Click the **Yes** option to open the predecessor standard job. A **Remarks** window opens. Type the reason that the predecessor job is being added in the **Remarks** window. Click the **OK** button to close the **Remarks** window and open the **Standard Job** window.



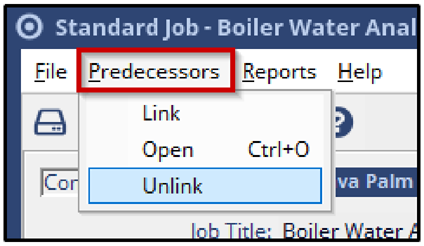
These remarks are listed on the **Change Log** tab of the original standard job.

Unlink a Predecessor Job

1. Click to highlight a job on the **Related Jobs** tab → **Defined Predecessors** tab.



2. Select **Predecessors**→ **Unlink** from the **Standard Job** window menu bar. A **Remarks** window opens. Type the reason why the predecessor job is being removed in the **Remarks** window. Click the **OK** button to close the **Remarks** window and remove the job from the **Related Jobs** tab → **Defined Predecessors** sub-tab.



Comparable Jobs Sub-Tab

Comparable jobs are those that are essentially the same and whose costs are about the same. For example, a pump overhaul in one location and pump overhauls on identical pumps in other locations would be comparable jobs. This is useful when planning a job because a review of the price history of all comparable jobs can give a good estimate of what the job might cost. These jobs can be on the same ship or on other ships within the fleet.

The definition of a comparable job depends on the type of standard job:

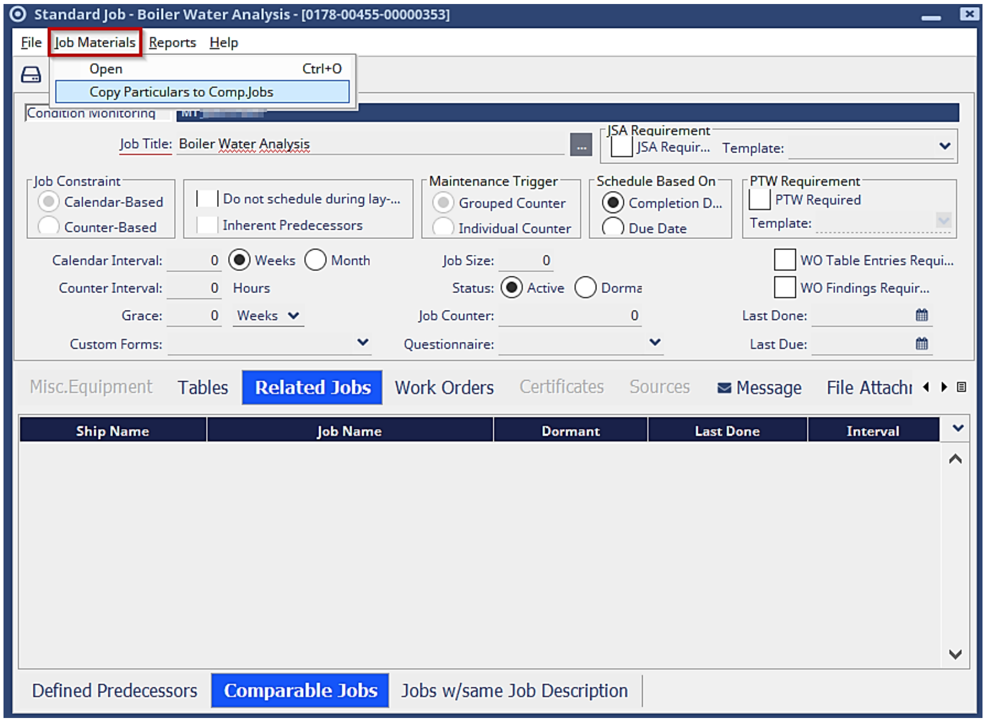
- Equipment or maintained parts based standard jobs are comparable if their equipment or parts are cross referenced or the same AND the job size index term is the same
- Survey or service based standard jobs are comparable if the ships are the same ship class and the jobs have the same survey index term or service index term
- Space based standard jobs are comparable if the ships are of the same ship class, the spaces have the same name AND the job size index term is the same
- Miscellaneous work based standard jobs are not comparable.

All standard jobs that meet any of the above criteria are listed on this tab.

Double click on a standard job listed on the **Comparable Jobs** sub-tab to view that job.

Copy Particulars to Comparable Jobs

The **Copy Particulars to Comparable Jobs** function should only be used in the initial setup of the standard jobs to prevent typing the same information to several jobs.



This function copies the following information from the original job on the **Standard Jobs** window to all the jobs listed on the **Comparable Jobs** tab.

- Interval
- Grace
- Priority
- Est. Man-hours
- "Inherent Predecessors" checkbox
- Job Description text
- Account
- Job Category
- Skills
- Position Titles (Grades)
- Department

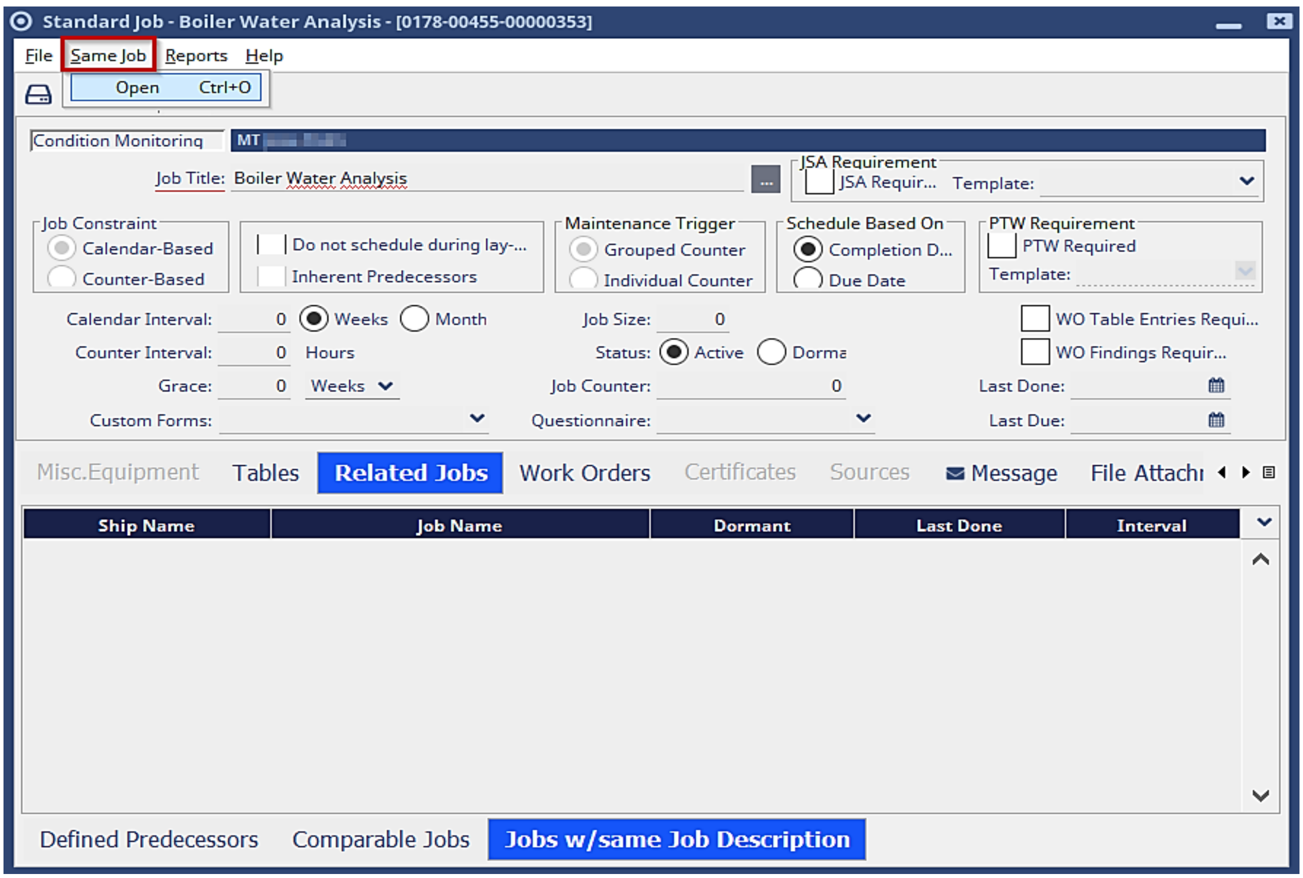
NOTE: BE CAREFUL! ALL of the information listed above is overwritten on ALL the standard jobs listed on the **Comparable Jobs** tab with the information on the original standard job.

Click the **Copy Particulars to Comparable Jobs** button on **Standard Jobs** toolbar.

NOTE: BE CAREFUL! No confirmation or warning is given. The procedure begins as soon as the **Copy Particulars to Comparable Jobs** button is pressed.

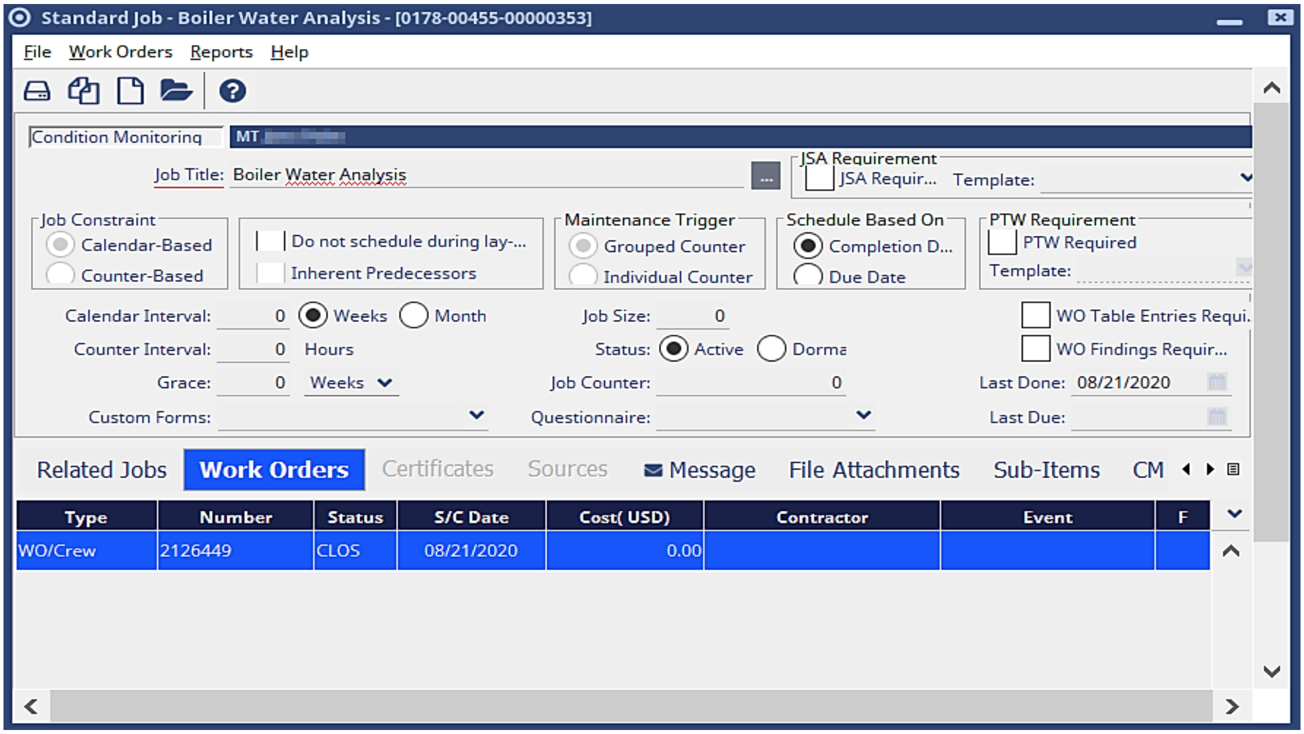
Jobs with Same Job Description Tab

The **Jobs with Same Job Description** tab contains all jobs that have the same text in the **Job Description** tab. This list of jobs is normally the same as the **Comparable Jobs** tab list. It can also include other jobs if the job description is generic. For example, several different types of pumps which are physically different can have the same general description. The description might be "open pump, check and replace worn ball bearings, etc." This description is general enough to apply to many different types of pumps even though the jobs might not be comparable by our definition.



14.4.11 *Work Orders Tab*

All work orders associated with this standard job are listed on the **Work Orders** tab. Work orders are added to this tab automatically when the **PM Job** button is clicked on the work order to associate the standard job to the work order.



New work orders for this standard job can also be created from this tab.

Open a Work Order

All work orders associated with the standard job are listed. Any of these work orders can be viewed and information on work orders that are still active can be edited. Information on cancelled or closed work orders CANNOT be changed.

Double click on a work order on the **Work Orders** tab to open the work order.

Create a New Work Order

New work orders can be created for the standard job from the **Work Orders** tab. Information from the standard job is automatically inserted into the work order. Most of this information can be edited.

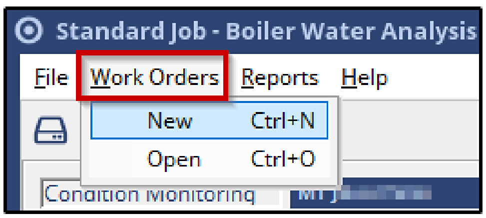
The information copied from the standard job to the work order includes:

- Ship name
- Title of work order
- Equipment
- Counter – if this is a counter-based job. This number is copied from the counter value of the last work order completed for this standard job.
- Due Date – if this is a calendar-based job. This date is calculated using the **Calendar Interval information** from the **Standard Job** window and the date it was last performed according to the last work order completed.

NOTE: Due Dates on new created Work Order (without a link to standard job) enables a user to provide a due date for non-PM work orders and track their overdue status vs. the due date in the maintenance plan.

- Description – the text on the **Job Description** tab of the standard job is copied to the **Description** tab of the work order.
- Admin Info – the information on the **Admin Info** tab of the **Standard Job** window is copied to the **Admin Info** tab of the work order.
- Materials - the information on the **Materials Required** tab of the **Standard Job** window is copied to the **Materials** tab of the work order.
- Labor - the information on the **Resources** tab of the **Standard Job** window is copied to the **Labor** tab of the work order.

Click the **New** button on the **Standard Jobs** toolbar. The **Work Order – New** window opens.



14.4.12 *Certificates Tab*

The **Certificates** tab is only available for Surveys/Certificates type of standard jobs. All certificates related to the standard job are viewable from this tab.

14.4.13 *Sources Tab*

The **Sources** tab lists the vendors who performed this job in the past and all related cost information.

14.4.14 *Messages Tab*

Refer to Item 21.5 Messages Tab section of this manual.

14.4.15 *File Attachments Tab*

Refer to Item 21.2 File Attachment Tab section of this manual.

14.4.16 *Sub -Items Tab*

The **Sub-Items** tab of the **Standard Job** window is available when the **Standard Drydock Item** check box is checked on the **Admin Info** tab.

Refer to Item 14.1.8 Sub-Items Tab section of this manual, for a detailed explanation of each field and of the processes.

14.4.17 *CM Equipments Tab*

Refer to Item 14.1.9 CM Equipments Tab section of this manual, for a detailed explanation of each field and of the processes.

14.4.18 *DMS Link Tab*

Refer to Item 21.8 DMS Link Tab section of this manual.

14.5 *Table Templates*

Maintenance of ships involves several items of information that must be entered and stored for reference. These are generally stored in a table format. **NS Enterprise** allows the user to create customized tables. Several different types of tables can be created as templates and used repeatedly without recreating a new table every time. Column lengths and widths can be set along with column headings and a range of values through the template. Equipment and spaces can be selected through the template to be included on the table. Access to certain templates can be given by ship and by work orders through the standard job.

Table templates are created at the **Fleet Level** from the **Maintenance and Purchasing** modules.

> **NOTE:** Export the information on a table for selected ships for a specified date range to an Excel spreadsheet.

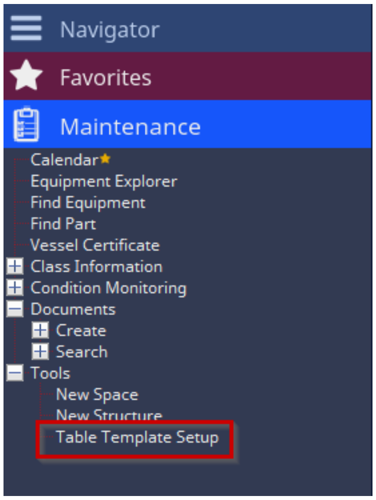
Entries are made to these tables on the ship level. This is done either from the **Maintenance and Purchasing** modules or from a work order.

14.5.1 *Create a Table Template*

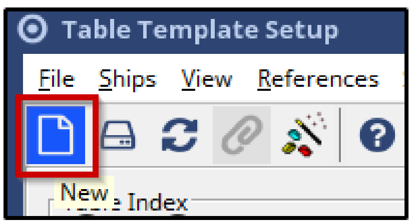
Templates for tables are created from the **Fleet** level.

> **NOTE:** A table can only be deleted if it has NOT been used. It CANNOT be deleted once it has been used.

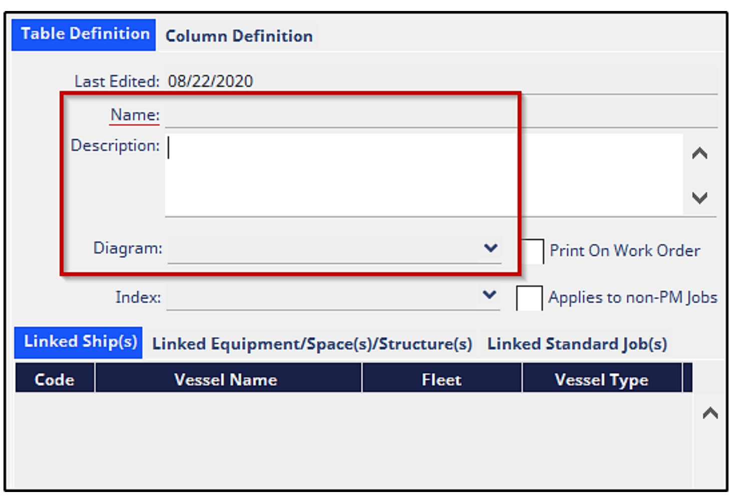
1. Select **Tools → Table Template Setup** from the **Maintenance** gadget on the **Navigator** pane in the **Maintenance** module. The **Table Template Setup** window opens. The right section of the window displays the setup for the template highlighted on the left section of the window if previously created tables are listed on the **Table Template Setup** window.



2 Click the **New** button on the **Table Template Setup** window toolbar. The information on the right side of the table template window is removed and no tables are highlighted on the left side of the window.



3. Type the name of the table in the **Name** field on the **Table Definition** tab of the **Table Template Setup** window. This is a REQUIRED field.
4. Type a description of the table in the **Description** field.
5. Click the dropdown menu at the end of the **Diagram** field to attach a diagram or any other visual aid to the table. Proceed to step 6 if no diagram is to be attached.

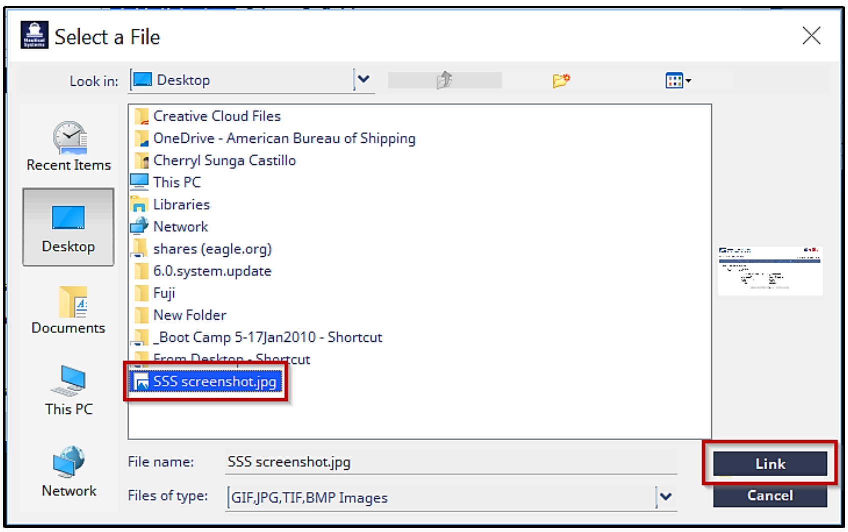


a. The **Select a File** window opens to the **NS Enterprise** directory. Find the file to be attached. The only file types that are displayed on this window are graphic files.

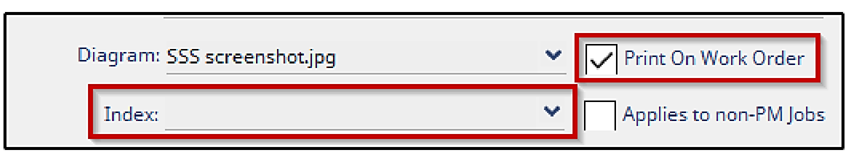
NOTE: Make a copy of the attachment into the **NS Enterprise** directory on the server. This ensures that the attachment is available to anyone accessing the table. The file is not available to the office or other workstations if the file is on the local hard drive.

b. Click to highlight the file to be attached. The file name is displayed in the **File Name** field on the **Select a File** window.

c. Click the **Link** button on the **Select a File** window to close this window and insert the file name in the **Diagram** field of the **Table Template Setup** window.



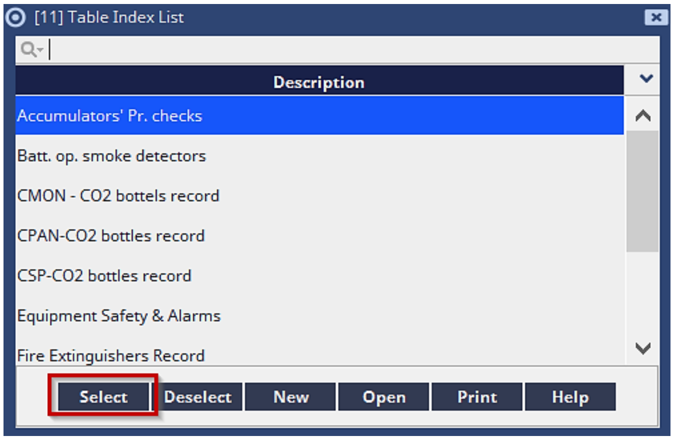
6. Click the **Print on Work Order** check box to print the graphic listed in the **Diagram** field with the work order using this table.
7. Click the dropdown menu at the end of the **Index** field to add a table index term. The **Table Index List** window opens. Index terms are used to build a list of keywords for classifying user defined tables. For example, these terms might include Logbooks or Tank Soundings.



Authorized users can create new index terms from this window.

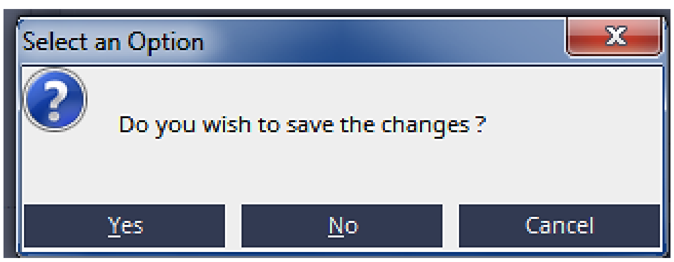
a. Click to highlight an index term on the **Table Index List** window.

b. Click the **Select** button to close the **Table Index List** window and add the term to the **Index** field on the **Table Template Setup** window.



8 Click the **Applies to non-PM Jobs** check box to include this table on the **Readings** tab of all non-preventive maintenance work orders.

9. The next steps will be to Link Ship(s), Equipment/Spaces/Structures or Standard Job(s). Before linking a message will display asking to save the template. Click Yes to close the message and proceed to linking appropriate records to the template.

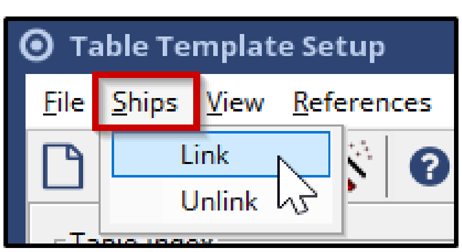


Link Ships to a Table Template

The **Linked Ship(s)** sub-tab at the bottom of the **Table Definitions** tab is used to link ships to the table. Linking a ship makes this table available to that ship for use. For example, the table that is created is for fuel oil consumption. A ship that is linked to this table can use it when a work order is created to record readings for fuel oil consumption.

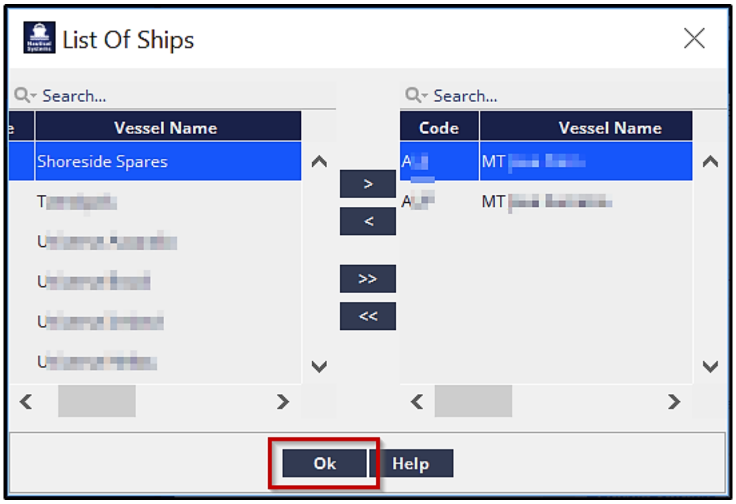
1. Click the **Linked Ship** sub-tab on the **Table Definition** tab if it is not already active.

2. Select **Ships → Link** from the **Table Template Setup** window menu bar. The **List of Ships** window opens.



3. Double click on a ship on the left side of the **List of Ships** window to move it to the right side of the window. Continue making selections until all that are to be included on the report are listed on the right side of the window.

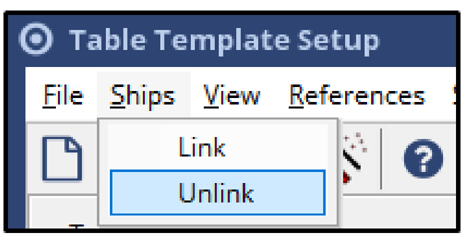
4. Click the **OK** button to close the **List of Ships** window and list the selections on the **Linked Ships** sub-tab.



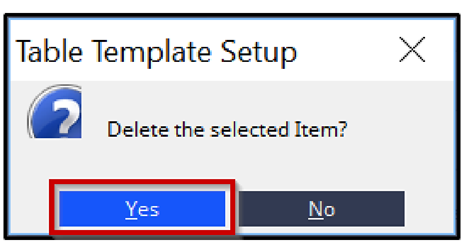
Remove a Ship from the Linked Ship sub-tab

1. Click to highlight the ship to be removed from the **Linked Ship** sub-tab.

2. Click **Ships → Unlink** from the **Table Template Setup** window menu bar. A confirmation message box opens.



3. Click the **Yes** button to delete the selected ship from the **Linked Ship** sub-tab.



NOTE: Only one ship at a time can be selected to be removed from the **Linked Ship** sub-tab.

4. Repeat steps until all ships that no longer use this table are removed from the **Linked Ship** sub-tab.

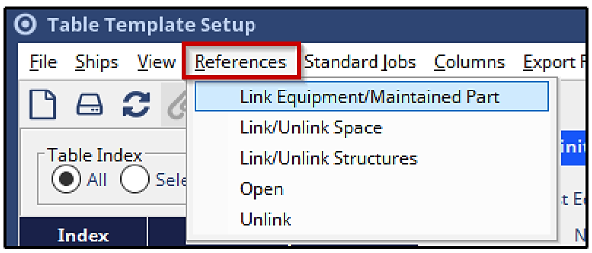
Link Equipment / Spaces / Structures to a Table Template

The **Linked Equipment / Spaces / Structures** sub-tab at the bottom of the **Table Definitions** tab is used to add equipment, spaces and / or structures to the table. This is a little different from linking ships or standard jobs to the table. The name of the equipment, space and / or structure is listed as a row on the table of the **Table Entries** window. For example, a table is created that takes readings from different pieces of equipment. This equipment can be linked on the **Linked Equipment / Spaces / Structures** tab so that they automatically appear on the table without having to type them in every time readings are taken.

Link Equipment or Maintained Part

1. Click the **Linked Equipment / Spaces / Structures** sub-tab on the **Table Definition** tab.

2. Select **References → Link Equipment / Maintained Part** from the **Table Template Setup** window menu bar.



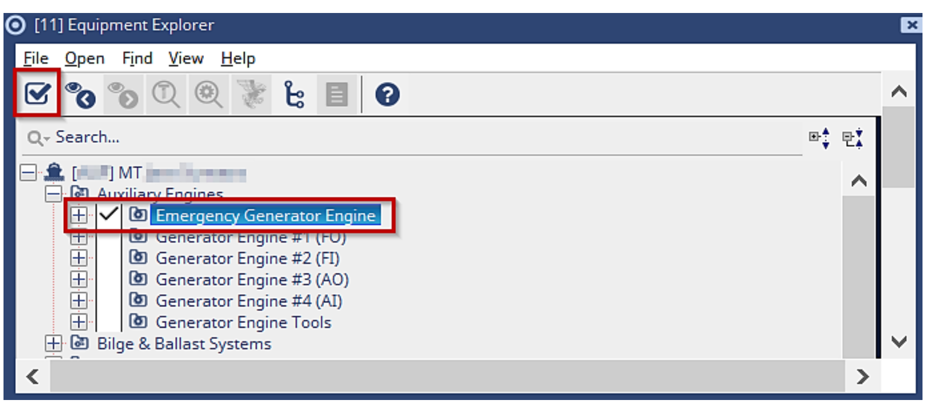
The **Equipment Explorer** window opens.

NOTE: Maintained parts listed under equipment can also be added to the table.

3. Drill through the **Equipment Explorer** window to find the equipment or maintained part to be listed on the **Linked Equipment / Spaces / Structures** sub-tab.

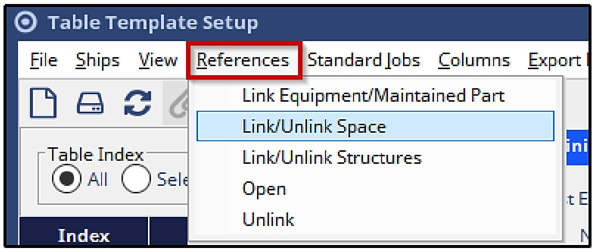
4. Click the check box preceding the equipment and/or parts. More than one selection can be made at one time.

5. Click the **Select** button on the **Equipment Explorer** window to close the **Equipment Explorer** window and add the selections to the **Linked Equipment / Spaces / Structures** sub-tab.

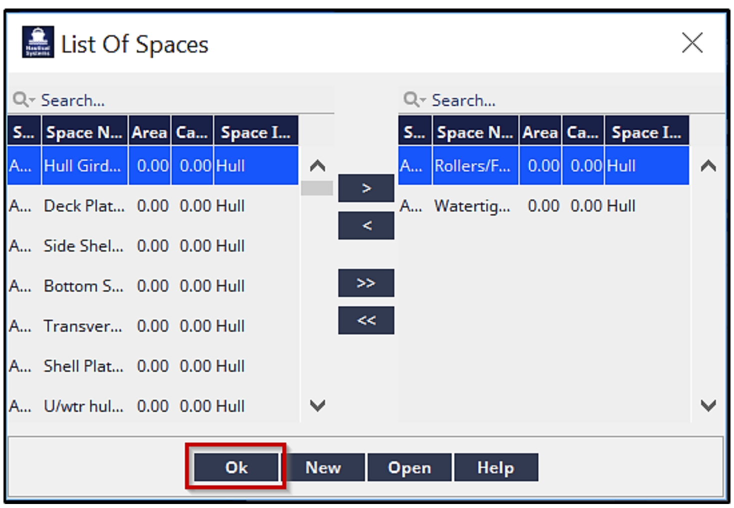


Link a Space

1. Click the **Linked Equipment / Spaces / Structures** sub-tab on the **Table Definition** tab.
2. Select **References → Link / Unlink Space** from the **Table Template Setup** window menu bar. The **List of Spaces** window opens. Authorized users can add a new space from this window.

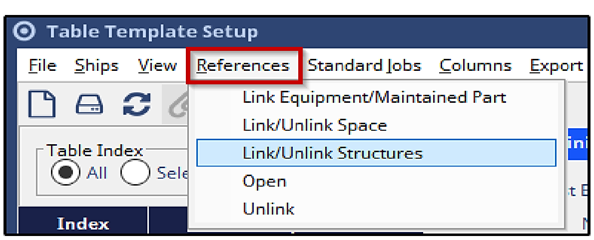


3. Double click on a space from the left side of the window to move it to the right side of the window. Continue selecting spaces and moving them until all spaces to be displayed on this table are listed on the right side of the window.
4. Click the **OK** button to close the **List of Spaces** window and list the space or spaces in the **Linked Equipment / Spaces / Structures** sub-tab of the **Table Template Setup** window.



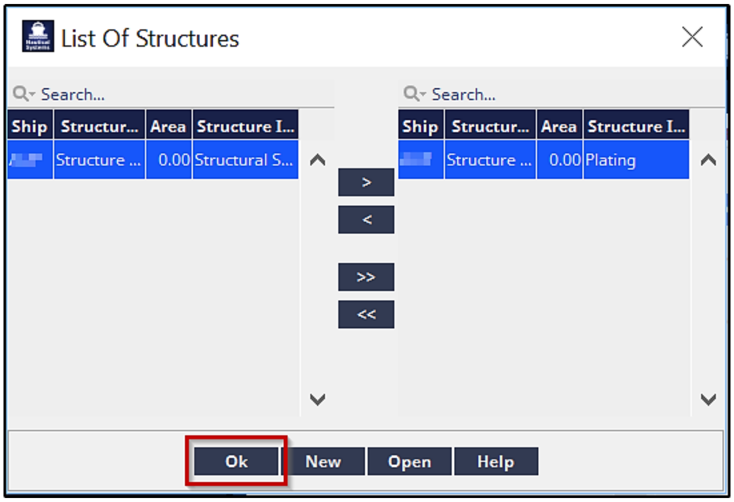
Link a Structure

1. Click the **Linked Equipment / Spaces / Structures** sub-tab on the **Table Definition** tab.
2. Select **References → Link / Unlink Structures** from the **Table Template Setup** window menu bar. The **List of Structures** window opens. Authorized users can add a new space from this window.



3 Double click on a structure from the left side of the window to move it to the right side of the window. Continue selecting structures and moving them until all structures to be displayed on this table are listed on the right side of the window.

4 Click the **OK** button to close the **List of Structures** window and list the structures in the **Linked Equipment / Spaces / Structures** sub-tab of the **Table Template Setup** window.



Remove Equipment, Space or Structure from Linked Equipment / Space / Structures Sub-tab

1. Click to highlight the equipment, maintained part, space or structure to be removed from the **Linked Equipment / Space / Structure** sub-tab.

2. Select **References → Unlink** from the **Table Template Setup** window menu bar. A confirmation message box opens.

3. Click the **Yes** button to delete the selected items from the **Linked Equipment / Space** sub-tab.

NOTE: Only one item at a time can be selected to be removed from the **Linked Equipment / Space / Structures** sub-tab.

4 Repeat steps until all spaces or structures no longer used by this table are removed from the **Linked Equipment / Space / Structures** sub-tab.

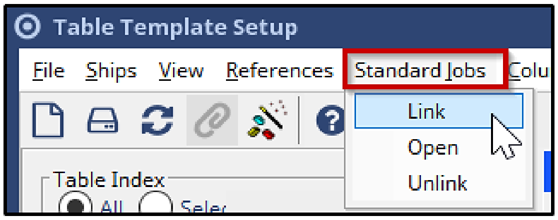
Link Standard Jobs to a Table Template

The **Linked Standard Jobs** sub-tab at the bottom of the **Table Definitions** tab is used to link standard jobs and in turn work orders to the table. Linking a standard job adds this table to the **Tables** tab on the **Standard Job** window and the **Readings** tab on the **Work Order** window. The **Linked Standard Jobs** sub-tab is only available when the **Applies to Non-PM Jobs** check box is NOT checked.

NOTE: A standard job for a ship can be linked to a table without the ship being linked to the same table. The table is listed on the standard job and any work orders associated with the standard job, but entries can only be made to the table from the **Readings** tab on the **Work Order** window. The table is not listed on the **Table Entries** window from **Tools → Table Entries** on the **Maintenance and Purchasing** module at the ship level.

1. Click the **Linked Standard Jobs** sub-tab on the **Table Definition** tab if it is not already active.

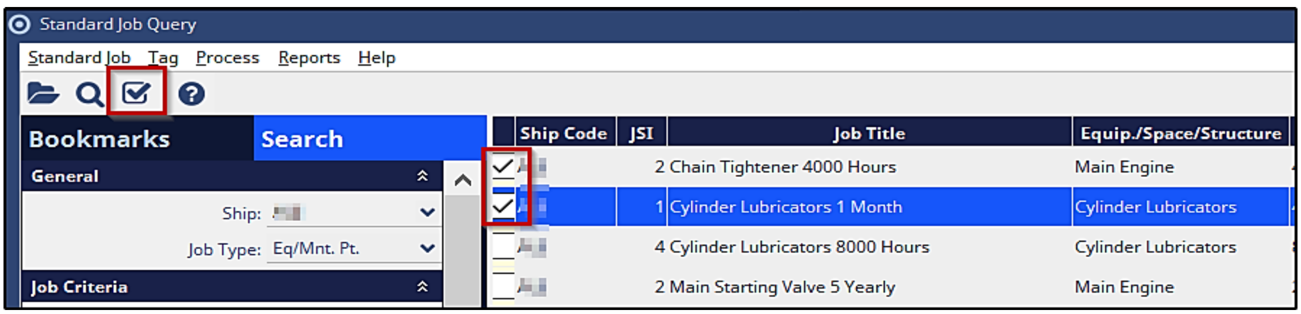
2. Select **Standard Jobs→Link** from the **Table Template Setup** window menu bar.



The **Standard Job Query** window opens. This **Standard Job Query** window lists all standard jobs created for all ships within the fleet. The **Ship Code** field in the results portion of the **Standard Job Query** window aids in the selection of a standard job by displaying the ship associated with the standard job without having to open the **Standard Job** window.

3. Click the check box preceding the standard job to select. More than one selection can be made.

4. Click the **Select** button on the **Standard Job Query** window to close the **Standard Job Query** window and add all the selected standard jobs to the **Linked Standard Jobs** sub-tab.



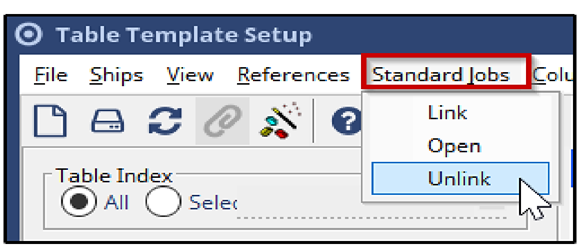
Link Work Orders Not Associated with a Standard Job to a Table

Tables can be linked to work orders that are not associated with a standard job. Click the **Applies to non-PM Jobs** check box in the upper fields of the **Table Definition** tab of the **Table Template Setup** window. This table is listed on the **Readings** tab of all work orders that are not associated with a standard job.

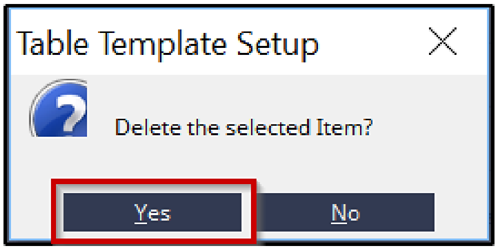
Remove Standard Jobs from the Linked Standard Jobs sub-tab

1. Click to highlight the standard job to be removed from the **Linked Standard Jobs** sub-tab.

2. Click **Standard Jobs → Unlink** from the **Table Template Setup** window menu bar. A confirmation message box opens.



3 Click the **Yes** button to delete the selected items from the **Linked Standard Jobs** sub-tab.



NOTE: Only one item at a time can be selected to be removed from the **Linked Standard Jobs** sub-tab.

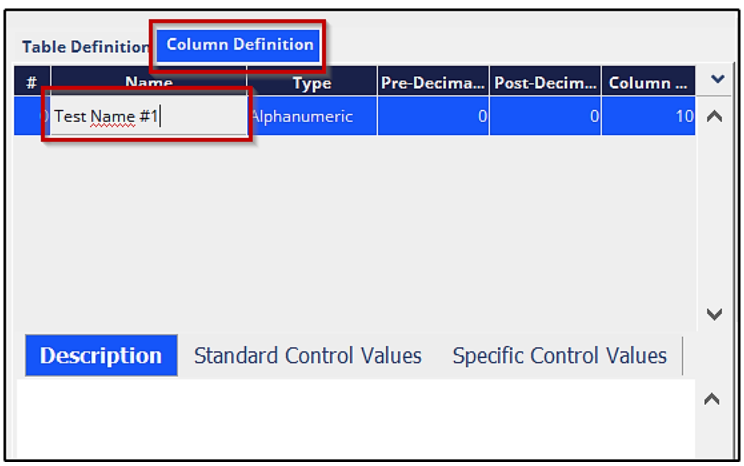
4 Repeat steps until all jobs no longer used by this table are removed from the **Linked Standard Jobs** sub-tab.

Column Definitions

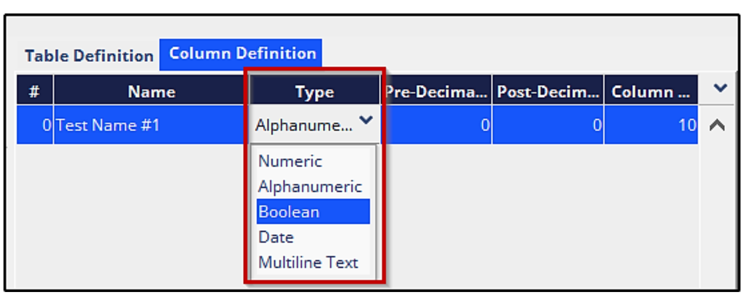
Columns for the table are created on the **Column Definitions** tab.

NOTE: Columns MUST be defined before table entries can be made at the ship level.

1. Click the **Column Definitions** tab on the **Table Template Setup** window.
2. Type the column heading for the first column in the **Name** column on the **Column Definitions** tab.



3. Click in the **Type** column for a drop-down list of choices. This list defines the type of characters in the column.

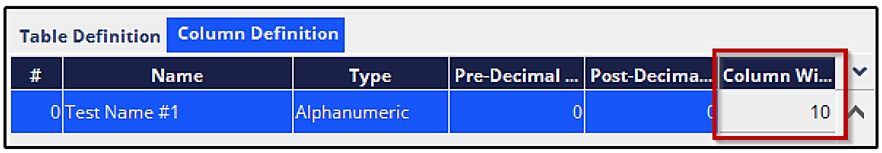


The options are:

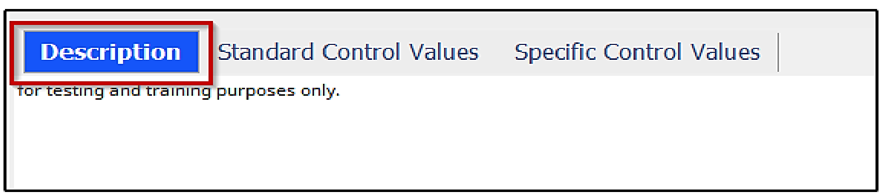
- Numeric – only numbers can be entered. The **Pre-Decimal Digits** and **Post Decimal Digits** columns open for input when **Numeric** is selected. The default value for the **Pre-Decimal Digits** column is 6.

  The **Standard Control Values and Specific Control Values** sub-tabs open for input for columns with a numeric type.
- Alphanumeric – letters and numbers can be entered.
- Boolean – adds a check box to the column.
- Date – adds a **Calendar** button when the column is clicked.
- Multi-line text – adds a **Remarks** button that opens a **Remarks** window when clicked. Multiple lines of text can be entered in the **Remarks** window.

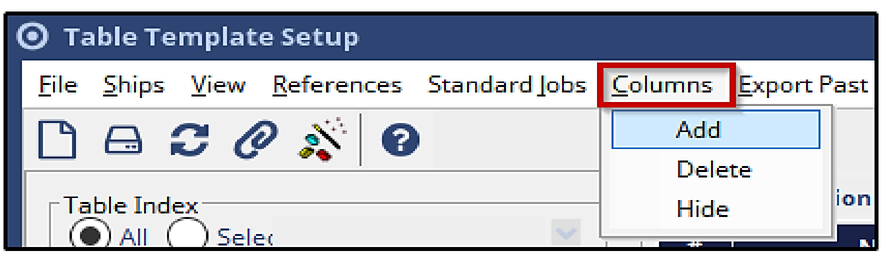
4. Click in the **Column Width** column to type the width of the column. The default value is 10.



5. Click in the **Description** sub-tab at the bottom of the **Column Definition** tab to type a description of the column.

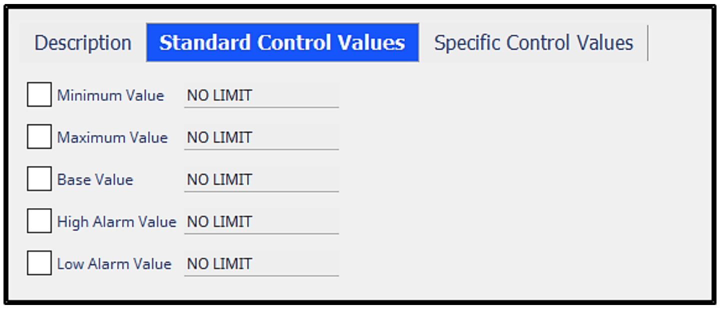


6. Click the **Add** button on the **Table Template Setup** window toolbar to add another column.



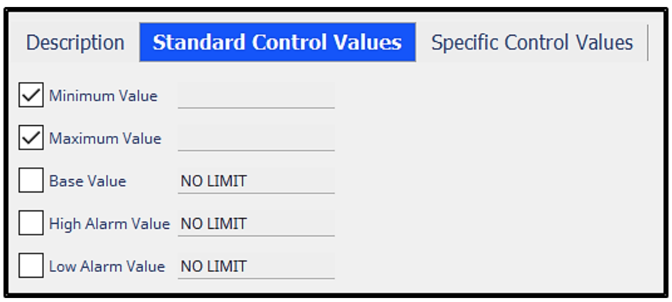
7. Repeat steps to add and define columns until all columns for the table are specified.

Standard Control Values Sub-tab



The **Standard Control Values** sub-tab is only available if the value in the **Type** column of the **Column Definitions** tab is "Numeric". The minimum, maximum, base, and alarm values for each column with a numeric type are set on the **Standard Control Values**.

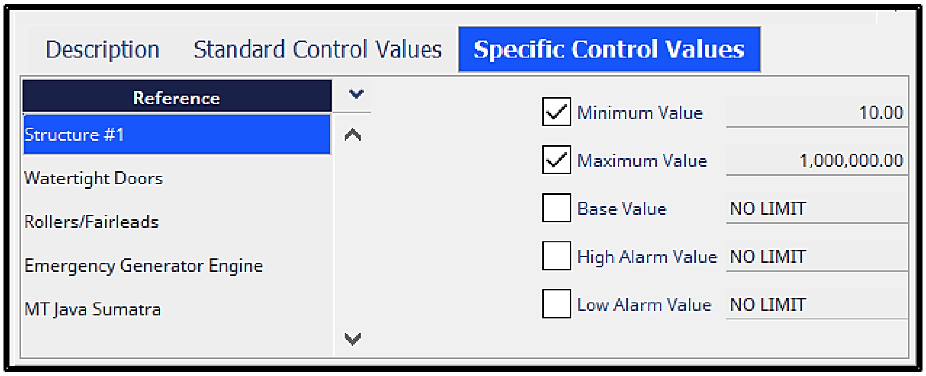
1. Click a column with a numeric column type.
2. Click the **Standard Control Values** sub-tab.
3. Click the check box preceding each field on the **Standard Control Values** sub-tab to set a value in the field following the field description. All fields do NOT need to be filled. Only check the boxes for the values needed.



- Minimum Value – type the minimum value accepted for this field. For example, if the minimum value is 100 then no value less than 100 is accepted in this field.
- Maximum Value – type the maximum value accepted for this field. For example, if the maximum value is 1000 then no value more than 1000 is accepted in this field.
- Base Value – type the average value for this field. This is used for reference purposes. These values are displayed on the **Table Entries** window when information is added to the table. This way the person entering values can see what the base value of this field is and determine if there might be a problem.
- High Alarm Value – type the high alarm value for this column. If the number entered in this column is this value or higher, there is a problem.
- Low Alarm Value – type the low alarm value for this column. If the number entered in this column is this value or lower, there is a problem.

4. Click the next column definition with a numeric column type.
5. Follow step 3 to set the control values for this column. Repeat steps until the standard control values are set for all columns with a numeric column type.

Specific Control Values Sub-tab



The **Specific Control Values** sub-tab defines the minimum, maximum, base, and alarm values for each column of a row on the table. Like the **Standard Control Values** sub-tab, it is only available if the value in the **Type** column of the **Column Definitions** tab is "Numeric".

NOTE: These control values are defined for each row of the table. The values set for the first row do NOT set the values for all rows in the table.

The rows on the table are defined by information entered on the **Linked Ships** and **Linked Equipment / Spaces** sub-tabs on the **Table Definition** tab.

1. Click the row name in the **Reference** section of the **Specific Control Values** sub-tab.

2. Click the check box preceding the value to be entered on the right side of the **Specific Control Values** sub-tab to set a value in the field following the field description. All fields do NOT need to be filled. Only check the boxes for the values needed.

   - Minimum Value – type the minimum value accepted for this field. For example, if the minimum value is 100 then no value less than 100 is accepted in this field.

   - Maximum Value – type the maximum value accepted for this field. For example, if the maximum value is 1000 then no value more than 1000 is accepted in this field.

   - Base Value – type the average value for this field. This is used for reference purposes. These values are displayed on the **Table Entries** window when information is added to the table. This way the person entering values can see what the base value of this field is and determine if there might be a problem.

   - High Alarm Value – type the high alarm value for this column. If the number entered in this column is this value or higher, there is a problem.

   - Low Alarm Value – type the low alarm value for this column. If the number entered in this column is this value or lower, there is a problem.

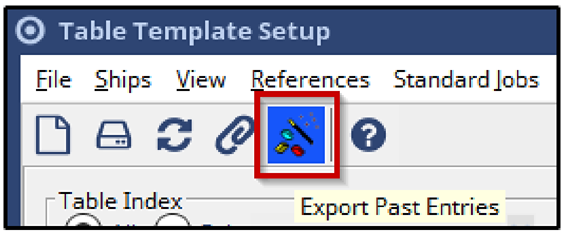
3. Click the next row name in the **Reference** section to define the values for the columns in that row.

4. Continue defining values for all rows named in the **Reference** section until all control values are defined. REMEMBER – setting the values for one row do NOT set the values for the other rows in the table.

14.5.2 *Export Past Entries*

Export past table entries for selected ships for a selected time frame to an Excel spreadsheet are available at the fleet and ship levels, but at different capacities. The Fleet level option allows information from multiple ships to be exported whereas the ship level option allows only the information for that ship to be exported.

1. Select the table whose entry information is to be exported from the left side of the **Table Template Setup** window.
2. Click the **Export Past Entries** button on the **Table Template Setup** window toolbar.



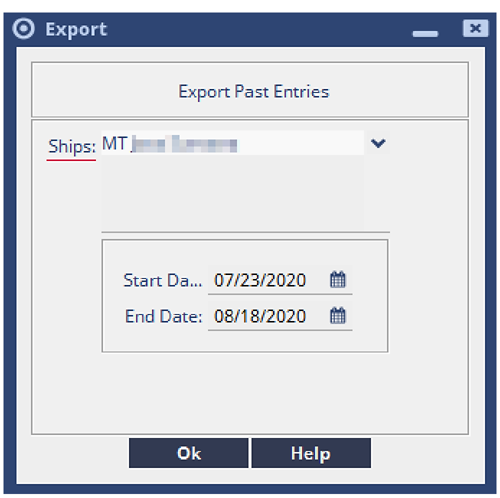
- The **Export** window opens.

3 Click the dropdown menu at the end of the **Ships** field to select the ships whose table information is to be exported.

NOTE: The **Ship** field is automatically filled with the name of the ship if this procedure is done from the ship level.

- The **List of Ships** window opens.

4. Double click on a ship from the left side of the **List of Ships** window to move it to the right side of the window. Continue selecting and moving ships until all ships whose past entries for the selected table are to be exported are selected.
5. Click the **OK** button to close the **List of Ships** window and add the selections to the **Ships** field on the **Export** window.
6. Click the **Calendar** button at the end of the **Start Date** field and the **End Date** field to select the date range for the report.
7. Click the **OK** button. An Excel spreadsheet opens containing the information from the selected table.



14.5.3 *Modify a Table*

A table is restricted from modification if it has been used. Items can only be added to the table, but NOT deleted or removed if a table has been used. Otherwise, the integrity of the information entered on the table when it was used prior to modification is compromised.

Ships, equipment, spaces, standard jobs, and columns can be added to a table even if it has been used.

14.5.4 *Make Table Entries*

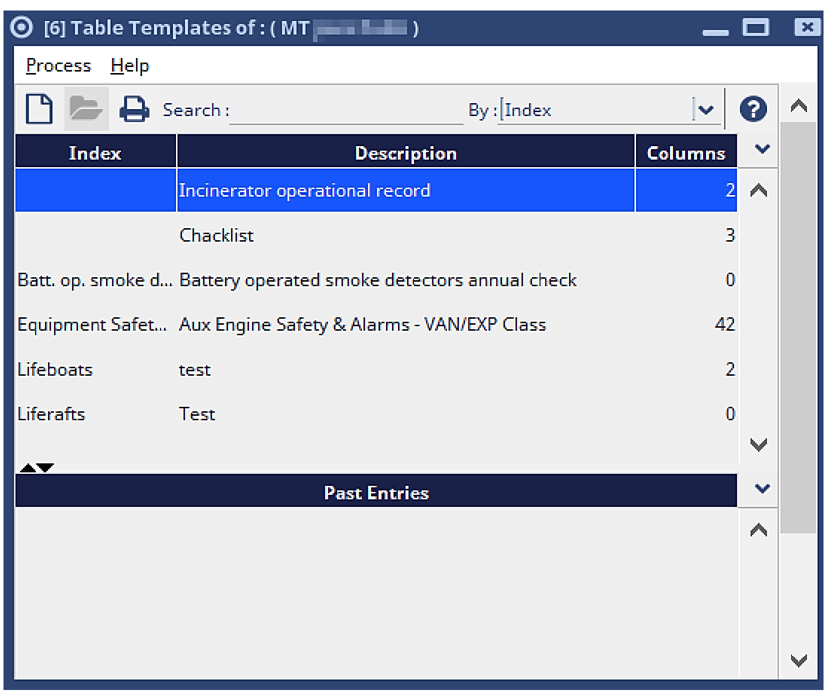
Entries to a table are made on the Ship level. There are two places where these entries can be made:

- **Tools → Table Entries** from the **Maintenance** gadget on the **Navigator** pane in the **Maintenance** module. This option is available if the ship is listed on the **Linked Ships** sub-tab on the **Table Template Setup** window.
- **Readings** tab on the **Work Order** window – This option is available if the standard job that the work order is associated with is listed on the **Linked Standard Jobs** sub-tab on the **Table Template Setup** window.

The table is also available on the **Readings** tab of a work order not associated with a standard job if the **Applies to non-PM jobs** check box has been checked on the **Table Template Setup** window.

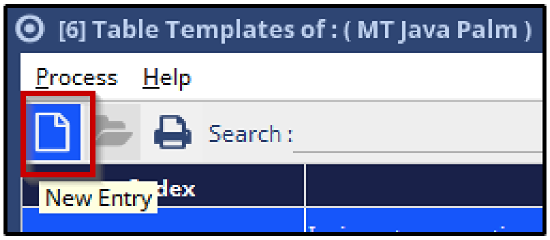
Table Entries from Tools →Table Entries

The **Table Templates of** window opens when **Tools → Table Entries** is selected from the **Maintenance** gadget on the **Navigator** pane in the **Maintenance** module on the ship level.



The **Table Templates of** window displays all tables available to this ship. It also displays past entries to each table in the lower portion of the window when the table is highlighted in the top section. Select a table entry, click the **Open** button on the **Table Templates of** window toolbar and the **Table Entries** window opens with the entries that were made to this table on that date.

1. Select a table on the top section of the **Table Templates of** window.
2. Click the **New** button on the toolbar to add entries to the table. The **Table Entries** window opens.



NOTE: The table name and name of the ship entering information are automatically entered and CANNOT be edited. The defined columns and rows are listed on the table. A description of the column with the control values for the first column are listed in the lower section of the **Table Entries** window.

3. Click the **Calendar** button at the end of the **Entry Date** field to change the date on the table. The default value is the current date.
4. Click in the **Time** field to change the time. The default value is the current time.
5. Fill in the appropriate information in the table.
6. Click the **Save** button on the **Table Entries** window to save the table.

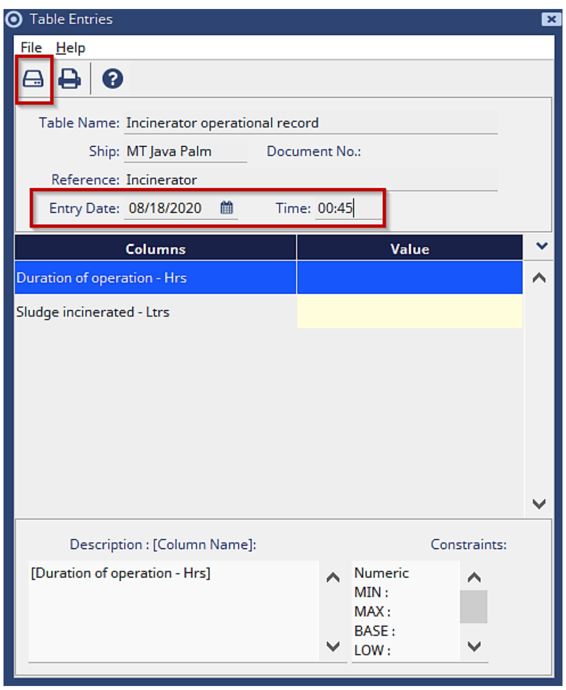
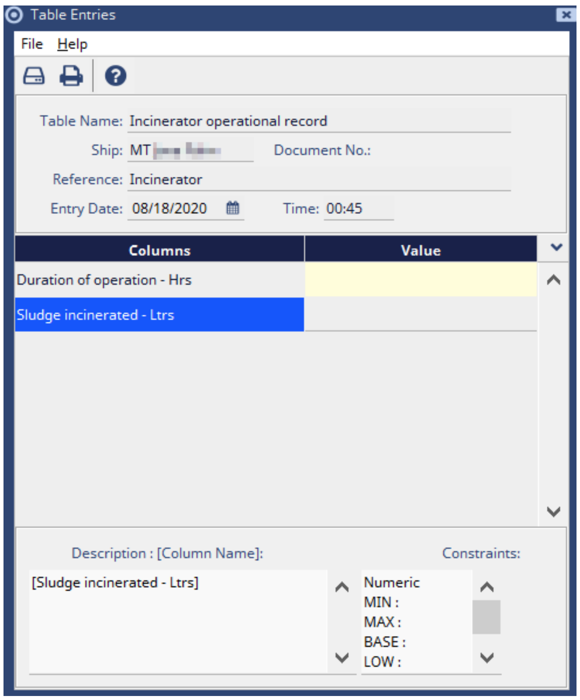


Table Entries from a Work Order

Table entries can be made from the **Readings** tab of a work order if the table is linked to the work order through a standard job or from the **Applies to non-PM Jobs** check box.

Only the tables associated with the work order can be opened from the **Work Order** window.

1. Double click on the table listed on the **Readings** tab of the work order. The **Table Entries** window opens.



NOTE: This **Table Entries** window is similar to the one opened from the **Maintenance and Purchasing** module except the work order number is also listed on this window.

2. Click the **Calendar** button at the end of the **Entry Date** field to change the date on the table. The default value is the current date.
3. Click in the **Time** field to change the time. The default value is the current time.
4. Fill in the appropriate information in the table.
5. Click the Save button on the Table Entries window to save the table.

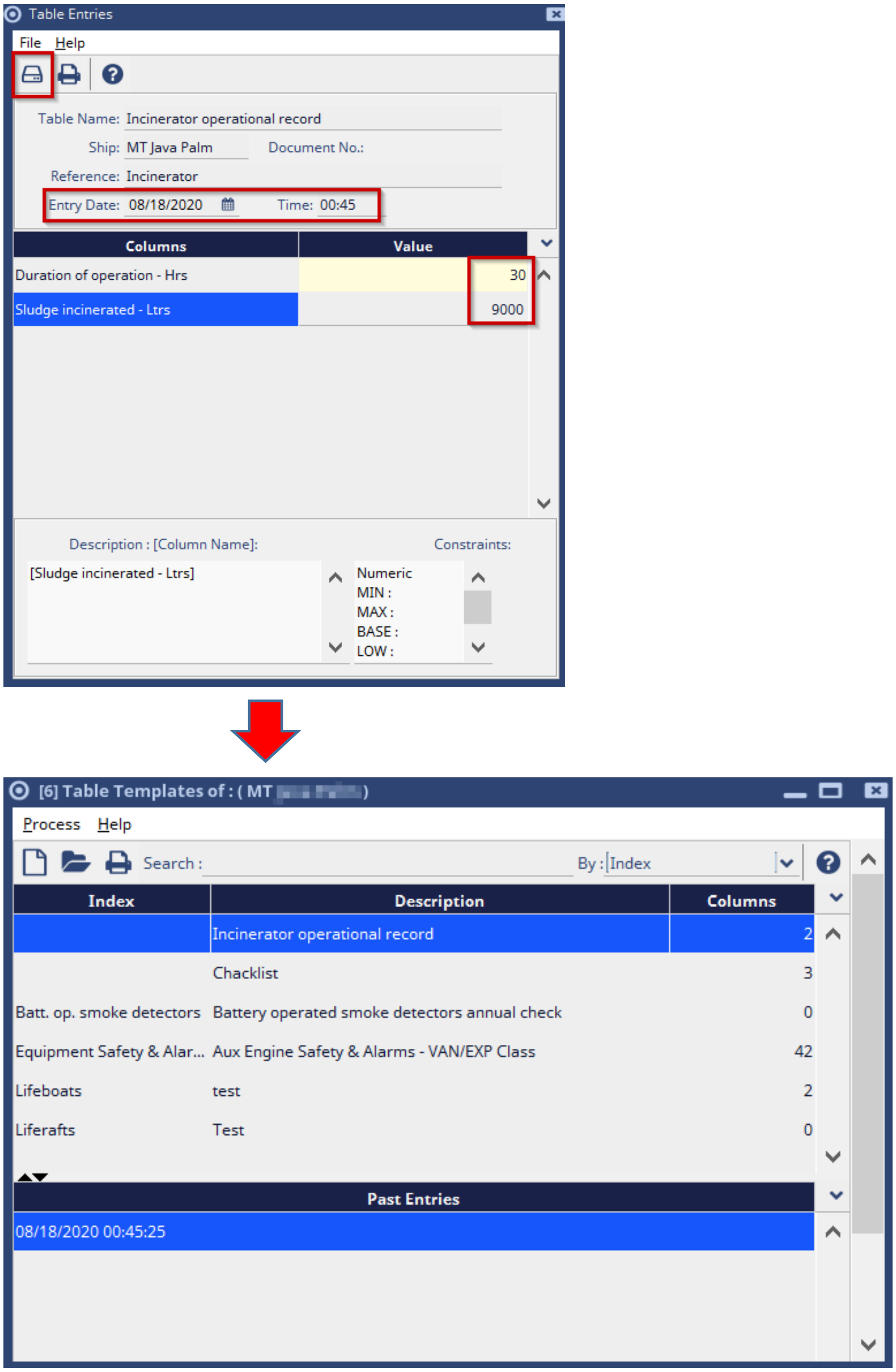


Table Entries
File Help
Table Name: Incinerator operational record
Ship: MT Java Palm
Document No.:
Reference: Incinerator
Entry Date: 08/18/2020
Time: 00:45
Columns
Value
Duration of operation - Hrs
30
Sludge incinerated - Ltrs
9000
Description : [Column Name]:
Constraints:
[Sludge incinerated - Ltrs]
Numeric
MIN :
MAX :
BASE :
LOW :
[6] Table Templates of : (MT)
Process Help
Search :
By : Index
Index
Description
Columns
Incinerator operational record
2
Checklist
3
Batt. op. smoke detectors
Battery operated smoke detectors annual check
0
Equipment Safety & Alar...
Aux Engine Safety & Alarms - VAN/EXP Class
42
Lifeboats
test
2
Liferafts
Test
0
Past Entries
08/18/2020 00:45:25

Section 15 Running Hours

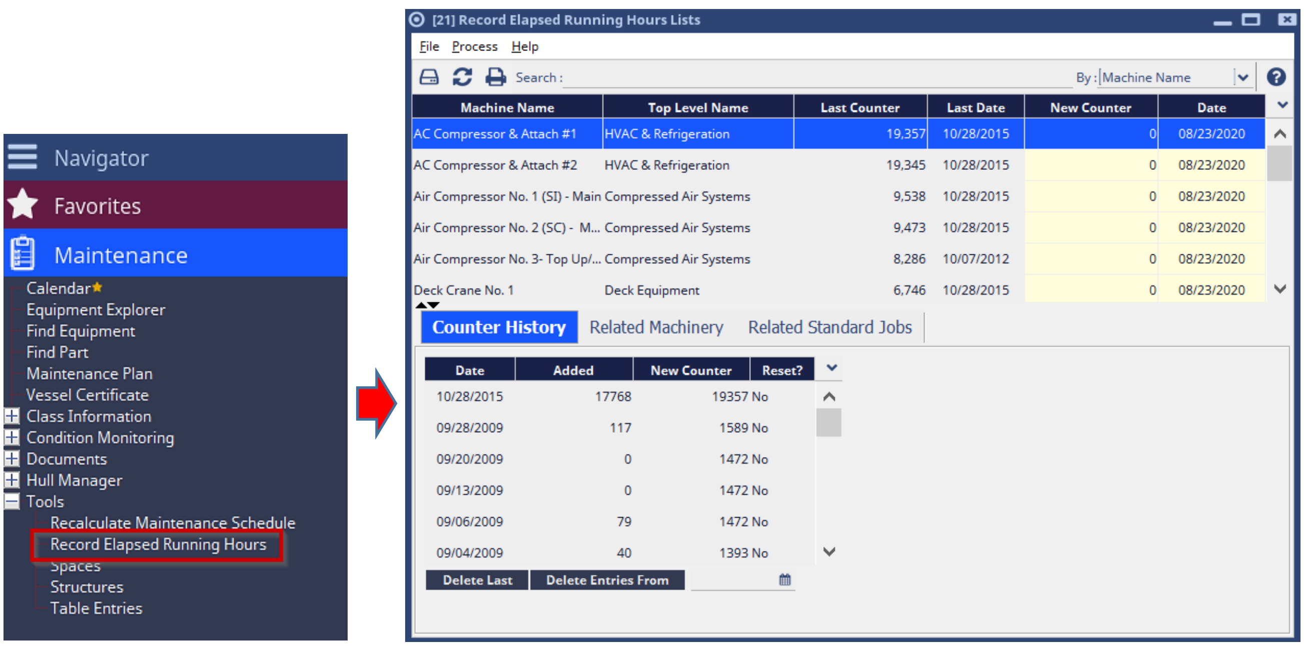
Running hours need to be updated regularly. The more often the running hours are updated, the more accurately the **Maintenance Plan** can predict when standard jobs should be scheduled. The Maintenance Supervisor (Chief Engineer), 1st Engineer and Chief Mechanic have permissions to update Running Hours.

15.1 *Updating Running Hours*

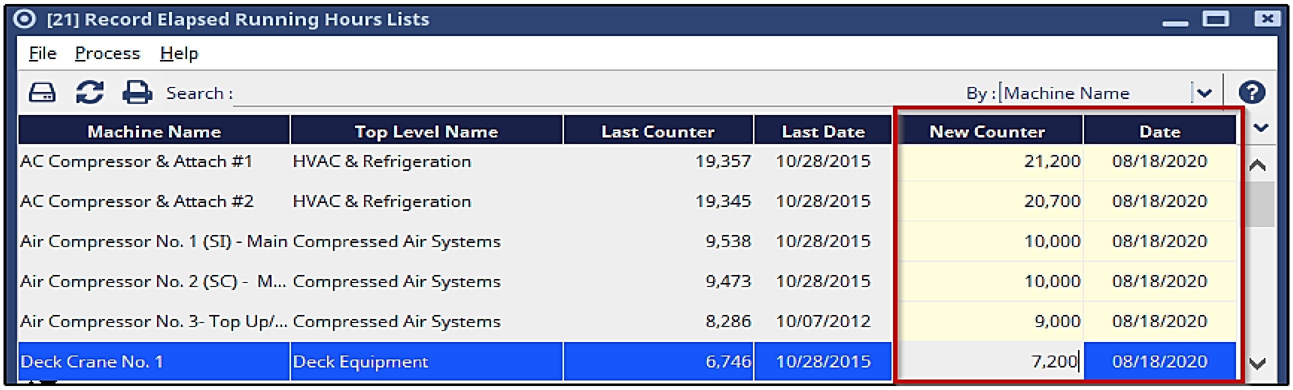
Running hours are only updated on equipment to which a counter based standard job is linked. Running hours should be updated weekly. They should be updated for each piece of equipment, whether or not the counter has changed. This is for more accurate scheduling.

1. Go to **Tools → Record Elapsed Running Hours** in the **Maintenance** gadget on the Navigator to update current running hours.

   - A window opens where running hours can be recorded.



2. Highlight the equipment and enter the counter reading and the date.
3. Ensure counter readings for all equipment are entered, whether or not the counter has changed since the last entry. The counter may not have changed, but the date has changed, and **NS** needs this information to accurately schedule counter based standard jobs.



NOTE:

Record Elapsed Running Hour List screen will not include the Units which are marked as Inactive.

15.2 *Correcting Running Hours*

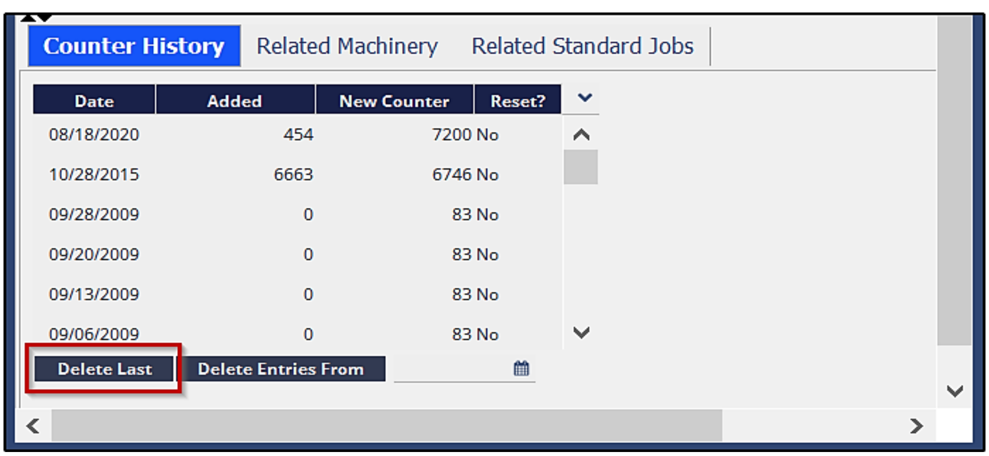
Sometimes the wrong counter reading is entered, but not discovered until the next week when the next set of readings is entered. The user can correct this easily in **NS**.

1. Choose **Tools → Record Elapsed Running Hours** in the **Maintenance** gadget on the Navigator.

2. Click the **Counter History** tab.

3. Click the **Delete Last** button to delete the update entries one by one until the user returns to the last correct entry.

4. Enter the current correct value and date as described in the previous section.



Section 16 Landing Orders

Landing Order is the document used to facilitate and record the movement of Serialized items.

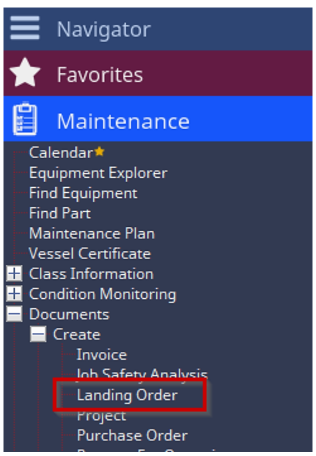
The destination can be a warehouse, another rig, or a vendor.

It includes the below workflow stages:

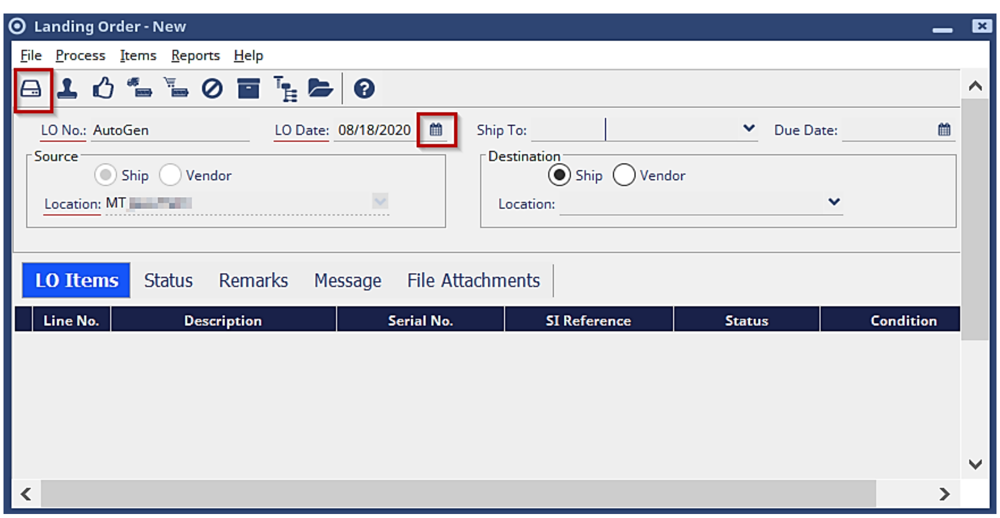
- External approval before the shipment (optional)
- Shipment tracking
- Transit tracking
- Delivery tracking

16.1 *Create Landing Orders (LO)*

1. Select the **Maintenance** gadget → **Documents** → **Create** → **Landing Order** from the **Navigator** pane on the **Maintenance** module. The **Landing Order – New** window opens.



2. Click the **Calendar** button at the end of the **LO Date** field to select the date for the Landing Order.
3. Complete all applicable fields and tabs.
4. Click the **Save** button on the **Landing Order** window toolbar to save the Landing Order.



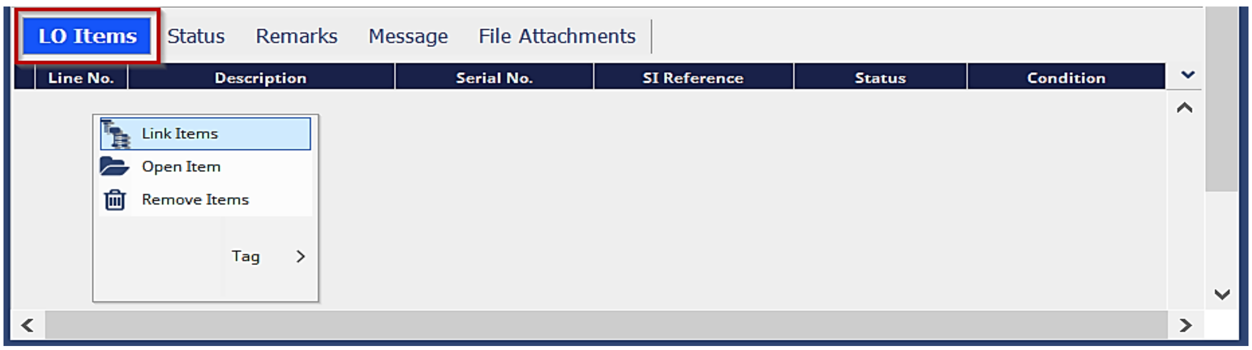
16.2 *Link/Unlink Items to LO*

Select **Maintenance** gadget→ **Search** → **Landing Orders** from the **Navigator** pane on the **Maintenance and Purchasing** module from the ship view to open the **Landing Orders Search** window.

1. Click the **Search** tab after selecting the parameters for the search. Click the **Search** button to initiate the search. All the landing orders that meet the specified criteria are listed on the right side of the window for this specific ship.

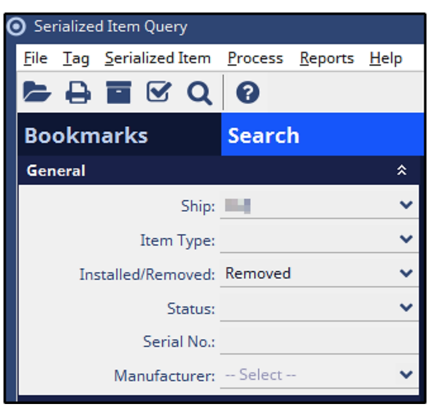
2. Double click on the Landing Order to open the Landing Order window to Link/Unlink items.

3. Right-click on the LO Items tab and choose **Link Items** to open the **Serialized Item Query** Navigator window.

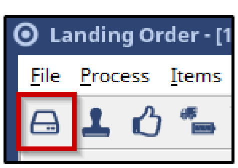


4. On the **Serialized Item Query** window enter in the filter criteria and click on the **Search** Button. By default, the **installed/removed** field will be populated with the value of **Removed**.

5. Find the item to be linked by highlighting the row and clicking the select toolbar icon. Selecting the item from the **List** window closes the Serialized Item query window and returns the value to the **LO Items** Tab.



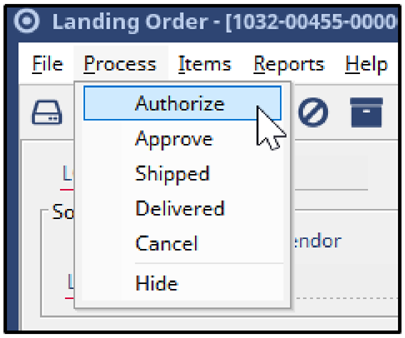
6. Click the **Save** button on the **Landing Order** window toolbar to save the changes on the Landing Order.



16.3 *Authorize LO*

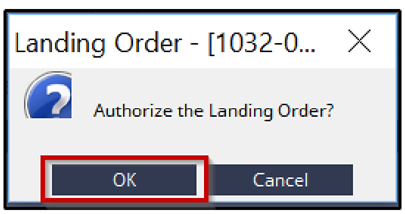
1. Select **Maintenance** gadget→ **Search** → **Landing Orders** from the **Navigator** pane on the **Maintenance and Purchasing** module from the ship view to open the **Landing Orders Search** window. Click the **Search** tab after selecting the parameters for the search. Click the **Search** button to initiate the search. All landing orders that meet the specified criteria are listed on the right side of the window for this specific ship.

2. If only authorizing a single landing order, double click on a **Landing Order** in the **List** window to open the **Landing Order**. From the Process menu select Authorize.

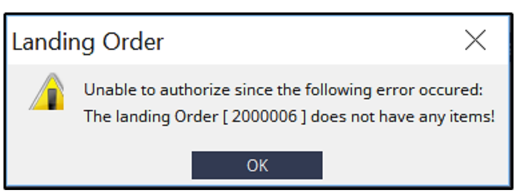


- A message will display asking if this is the Landing Order is to be authorized.

3. Click the **OK** button to **authorize** the Landing Order.



NOTE: If the Landing Order contains no line items a message will display.



4. If authorizing multiple Landing Orders from the Landing Order List Window, check the box preceding the Landing Order and from the Process menu select **Authorize**.

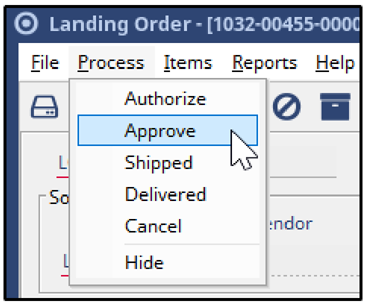
5. A message will display asking to Proceed with Authorization. Click the **OK** button to **authorize** the selected Landing Orders.

NOTE: If the selected Landing Orders does not contain any linked items or is missing information a message will appear to correct the selected documents before trying the steps again to authorize.

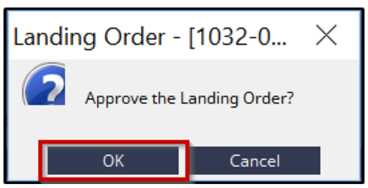
16.4 *Approve LO*

1. Select **Maintenance** gadget→ **Search → Landing Orders** from the **Navigator** pane on the **Maintenance and Purchasing** module from the ship view to open the **Landing Orders Search** window. Click the **Search** tab after selecting the parameters for the search. Click the **Search** button to initiate the search. All of the landing orders that meet the specified criteria are listed on the right side of the window for this specific ship.

2. If only approving a single landing order, double click on a **Landing Order** in the **List** window to open the **Landing Order**. From the Process menu select **Approve.** A message will display asking if this is the Landing Order is to be approved.



3. Click the **OK** button to **approve** the Landing Order.



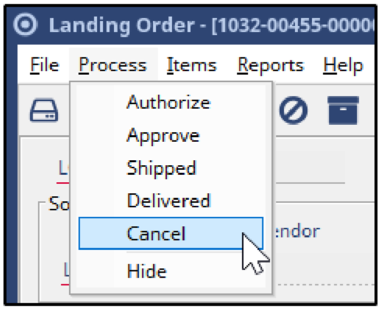
4. If approving multiple Landing Orders from the Landing Order List Window, check the box preceding the Landing Order and from the Process menu select **Approve.** A message will display asking if the selected documents are to be approved**.**

5. Click the **OK** button to **approve** the selected documents.

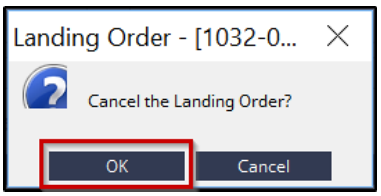
16.5 *Cancel Landing Order*

1. Select **Maintenance** gadget→ **Search → Landing Orders** from the **Navigator** pane on the **Maintenance and Purchasing** module from the ship view to open the **Landing Orders Search** window. Click the **Search** tab after selecting the parameters for the search. Click the **Search** button to initiate the search. All the landing orders that meet the specified criteria are listed on the right side of the window for this specific ship.

2. If only cancelling a single landing order, double click on a **Landing Order** in the **List** window to open the **Landing Order**. From the Process menu select **Cancel.** A message will display asking if this is the Landing Order is to be cancelled.



3. Click the **OK** button to **cancel** the Landing Order.



4. If cancelling multiple Landing Orders from the Landing Order List Window, check the box preceding the Landing Order and from the Process menu select **Cancel.** A message will display asking if the selected documents are to be cancelled**.**

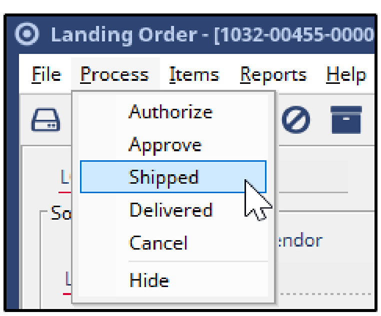
5. Click the **OK** button to **cancel** the selected documents.

NOTE: Cancelled documents on the search list screen are visually distinctive (using a strikethrough font) from other records displayed on the search results.

16.6 *Ship & Deliver LO*

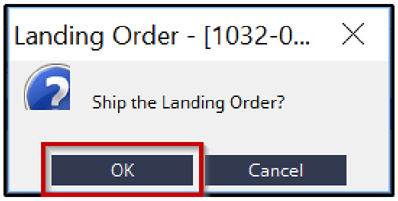
1. Select **Maintenance** gadget→ **Search → Landing Orders** from the **Navigator** pane on the **Maintenance and Purchasing** module from the ship view to open the **Landing Orders Search** window. Click the **Search** tab after selecting the parameters for the search. Click the **Search** button to initiate the search. All the landing orders that meet the specified criteria are listed on the right side of the window for this specific ship.

2. If only shipping a single landing order, double click on a **Landing Order** in the **List** window to open the **Landing Order**. From the Process menu select **Shipped.**



- A message will display asking if this is the Landing Order is to be shipped.

3. Click the **OK** button to change the Landing Order to **Shipped**.



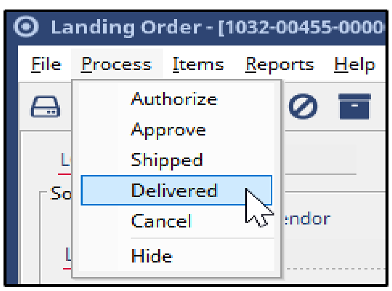
4. If changing the status on multiple Landing Orders from the Landing Order List Window, check the box preceding the Landing Order and from the Process menu select **Shipped.** A message will display asking if the selected documents are to be changed to **Shipped.**

5. Click the **OK** button to change the status to **Shipped** on the selected documents.

NOTE: Before a Landing Order status can be changed to a status of delivered it must be in a status of shipped.

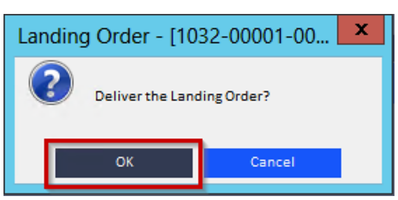
6. Select **Maintenance** gadget→ **Search** → **Landing Orders** from the **Navigator** pane on the **Maintenance and Purchasing** module from the ship view to open the **Landing Orders Search** window. Click the **Search** tab after selecting the parameters to search for Landing Orders in a status of **Shipped**. Click the **Search** button to initiate the search. All the landing orders that meet the specified criteria are listed on the right side of the window for this specific ship.

7. If only delivering a single landing order, double click on a **Landing Order** in the **List** window to open the **Landing Order**. From the Process menu select **Delivered.**



- A message will display asking if this is the Landing Order has been delivered.

8. Click the **OK** button to change the Landing Order to **Delivered**.

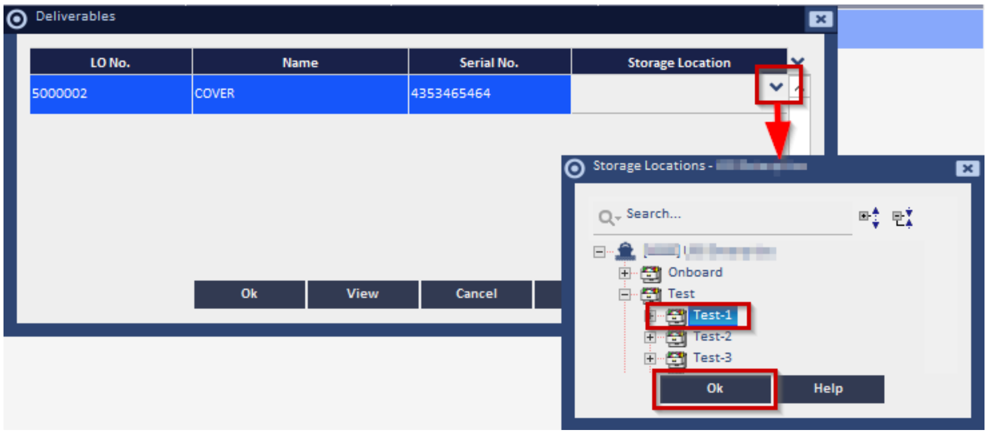


9. If changing the status on multiple Landing Orders from the Landing Order List Window, check the box preceding the Landing Order and from the Process menu select **Delivered.** A message will display asking if the selected documents are to be changed to **Delivered.**

10. Click the **OK** button to change the status to **Delivered** on the selected documents.

- The Deliverables window will be shown on screen.

11. Click dropdown menu under the **Storage Location** column to assign a location for the deliverables.
12. Click **Ok** to close the Storage Location window.
13. Click **Ok** to close the Deliverables window.



16.7 *Search for LO*

1. Select **Maintenance** gadget→ **Search** → **Landing Orders** from the **Navigator** pane on the **Maintenance and Purchasing** module from the ship view to open the **Landing Orders Search** window.
2. The fields on the **Landing Order** window are:

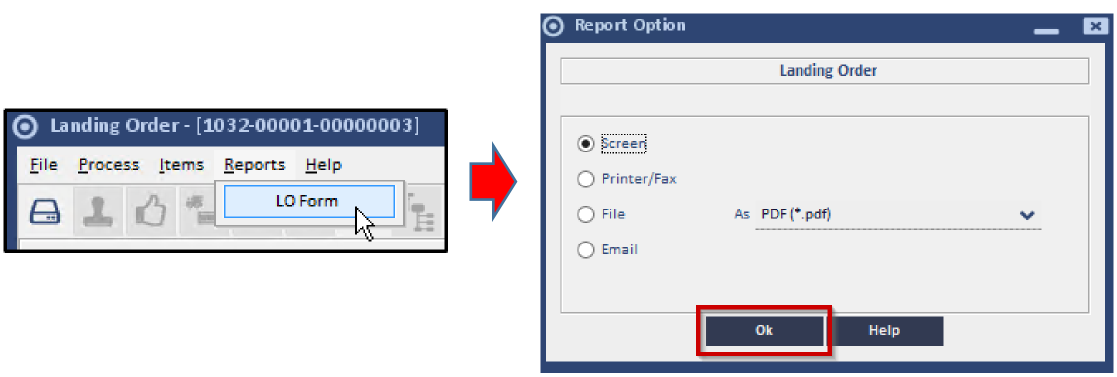
Field	**Description**
General Section	
Source Ship	The vessel or warehouse the item is being shipped from
Source Vendor	The vendor the item is being shipped from.
Destination Ship	The vessel or warehouse the item is being shipped to
Destination Location	The name of the ship or vendor where the Landing Order is being delivered.
LO No.	Landing Order Number, this can be entered in manually or automatically generated by the system.
SI Status	Status of the part or equipment, e.g. Repair Ashore

Field	Description
Status	This is a search for the Landing Order (LO) status.
SI Reference	SI Reference of the part or equipment
Authorizer	The name of the seafarer that authorized the Landing Order.
Approver	The name of the seafarer that approved the Landing Order.
Date Range Section	
Created	The date the Landing Order was created.
Authorized	The date the Landing Order was authorized.
Approved	The date the Landing Order was approved.
Shipped	The date the Part or Equipment listed on the Landing Order was shipped.
Delivered	The date the Part or Equipment listed on the Landing Order was delivered.

3. Select search criteria and click on the **Search** button to have the search results display in the List window to the right of the navigator pane.

16.8 *Landing Order Report Form*

1. Select **Maintenance** gadget→ **Search** → **Landing Orders** from the **Navigator** pane on the **Maintenance and Purchasing** module from the **ship** view to open the **Landing Orders Search** window.
2. Click the **Search** tab after selecting the parameters for the search. Click the **Search** button to initiate the search. All the landing orders that meet the specified criteria are listed on the right side of the window for this specific ship.
3. Double click to open the selected Landing Order.
4. From the process menu, select **Reports→LO Form**. Select the report option and click the OK button.



Section 17 Job Safety Analysis (JSA)

Job Safety Analysis (JSA) feature includes custom risk matrices incorporated into a job safety worksheet that can be linked to work orders.

JSA is used to identify, analyze and record:

1. The steps to be taken to perform a specific job
2. The existing or potential safety and health hazards associated with each step
3. The recommended action or procedures to eliminate or reduce these hazards, and the risk of workplace injury or illness

Job safety analysis information is on the Job Safety Analysis tab of the work order.

Configuration and setup for Job Safety Analysis includes index terms and creating a risk matrix. See your local system administrator for information how these are created/maintained.

17.1 *JSA Templates*

Any **JSA** document can be used as a template for other JSA documents. **Note:** Only authorized users can create a template. For more details on JSA templates see the HSQE User Manual.

Templates can be used as a "jump start" to creating other JSA documents that may be using the same matrix, steps to complete tasks or safeguards. All the information on the template is editable. Specific information has been deleted from the template such as the vessel, voyage, and JSA Number, as well as the participants, any documents, attachments, remarks, messages, work orders, equipment, spaces, and corrective action requests.

NOTES:

- Templates have a **Change Log** tab instead of a **Status** tab. Entries are made on the **Change Log** when changes are made to the template and it is resaved as the same template.

- There is an authorization in authorization profiles that allows users to open a template and make changes will save the changes as a new JSA and not make changes to the original template**.**

17.2 *Perform JSA Quick Check-Questions*

Authorized users can create or edit the questions listed on the **JSA** quick-check questions that are displayed on the **Work Order** window. These questions, which will recommend a user if a JSA for a given work order needs to be carried out**; JSA** needs to be generic to fit any job safety situation.

ABS Consultants will assist local administrator with creating the Quick Check Questions at initial implementation and then are maintained by local system administrator.

Quick-Check Questions can be created to determine if a JSA for a given workorder is required. This can be done in **General Data.** (***Refer to the HSQE manual for the details on creating JSA Quick-Check Questions***)

NOTE: The questions are only displayed on the **Work Order** window if the "**JSA Quick-Check Required**" system preference is set to "**Yes**".
NOTE: Questions can be added or deleted; the order of the questions cannot be changed.

Select **Maintenance** gadget→ **Documents** → **Search** → **Work Order** on the **Navigator** pane of the **Maintenance and Purchasing module**.

1. Find the Work Order, open it and navigate to the Job Safety Analysis tab
2. Answer the JSA Quick-Check questions with either **Yes** or **No** selecting the appropriate option.
3. Click the **Run Quick-Check** button.
4. You will notice that **JSA Recommended?** box is now displaying **Yes,** meaning that a JSA is recommended.
5. JSA process should start from this point.

NOTES:

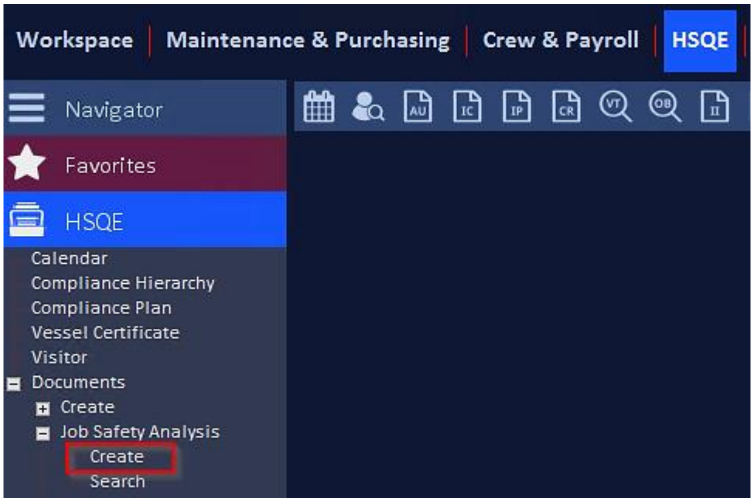
- The questions are only displayed on the **Work Order** window if the "JSA Quick-Check Required" system preference is set to "**Yes**".
- Questions can be added or deleted; the order of the questions cannot be changed.

17.3 *Create a Job Safety Analysis Document*

A **JSA** document can be created from the **HSQE** tab or from the **Work Order** window in the **Maintenance** module.

A JSA can be created in three options. All three options follow the same process when it comes to accomplishing the JSA document, they just differ in the manner of how these are started.

1. Select **Documents** → **Job Safety Analysis** → **Create** from the **HSQE** gadget on the **Navigator** pane of the **HSQE** module.

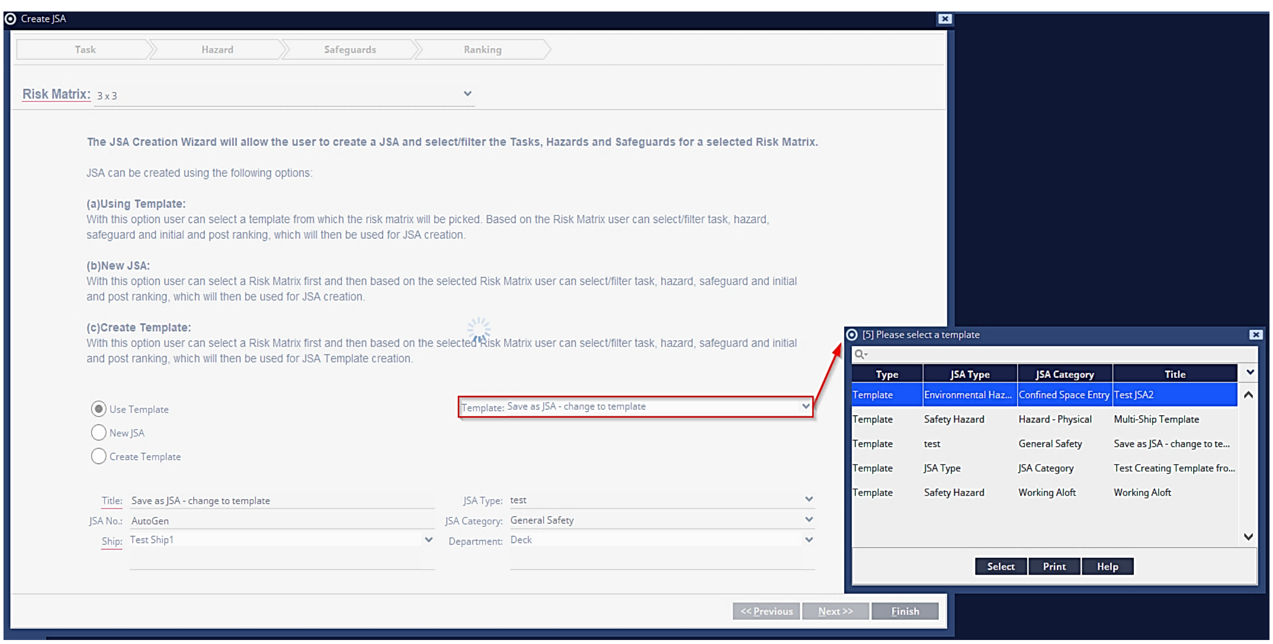


2. On the Create JSA screen, 3 options are available:

- Using Template
- New JSA
- Create Template

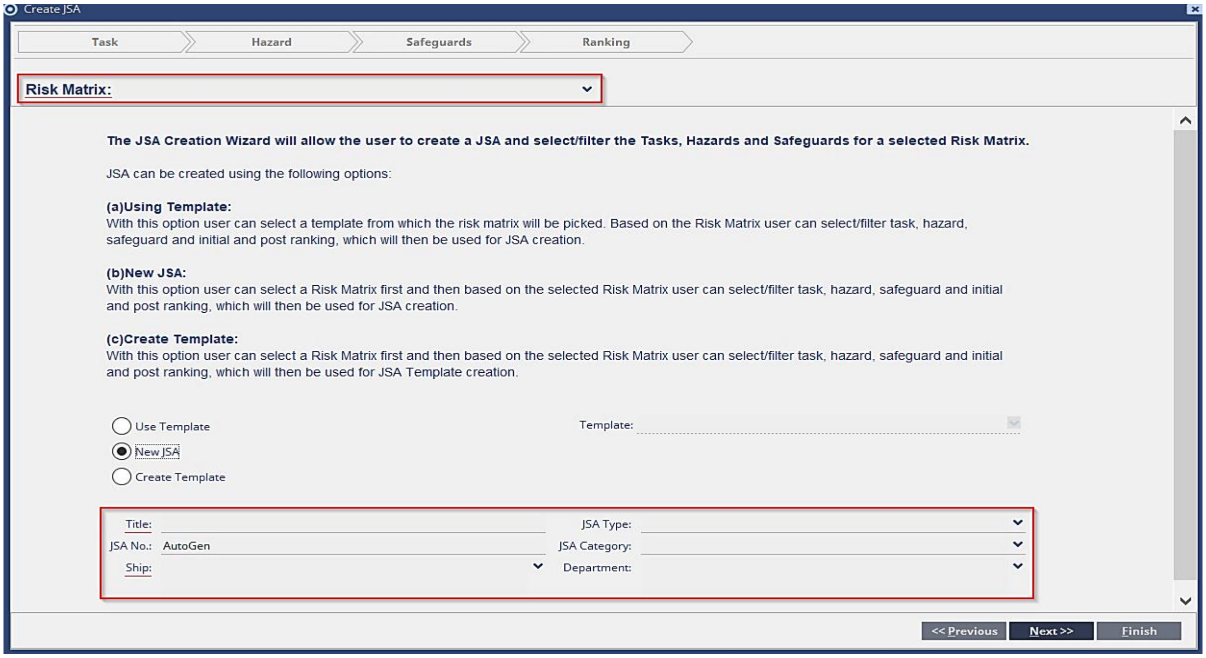
17.3A Using Template option

Below is the Create JSA screen **Using Template**. User needs to select a template from the dropdown menu. This is the only step different from the other two options – New JSA and Create Template. Once a template is selected, the system populates the fields with information already setup in the template.



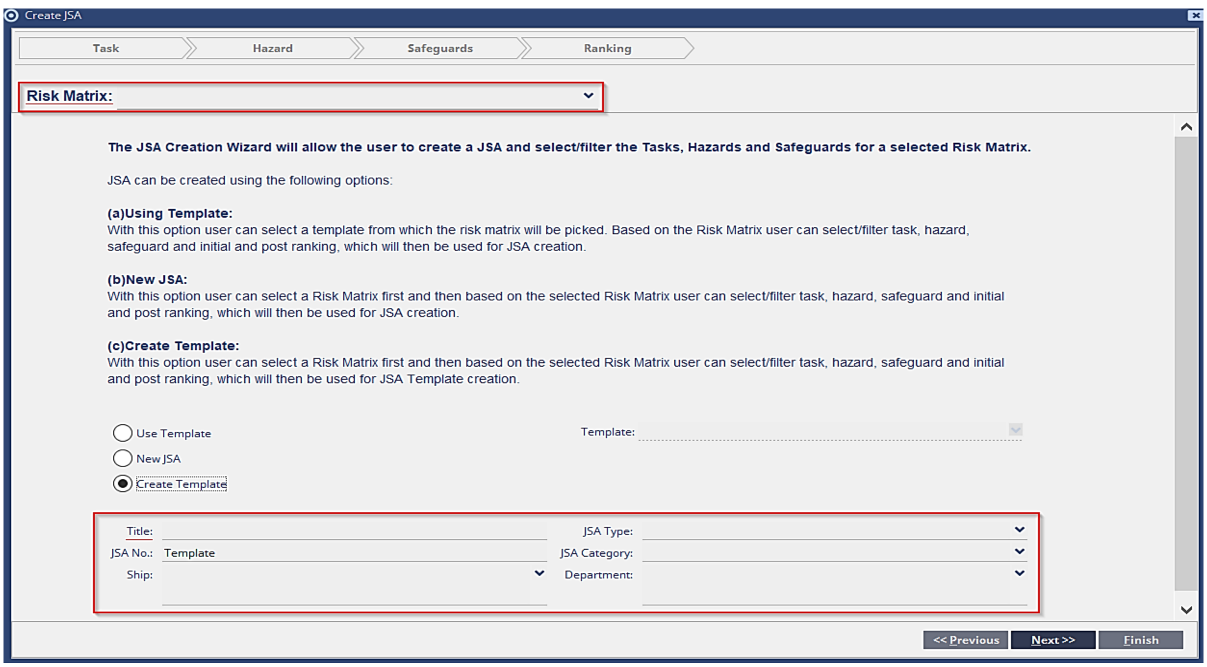
17.3B New JSA option

Below is the Create JSA screen using **New JSA**. User needs to manually select and input all field information. JSA No. can be Auto generated or manually entered depending on the System Preference setup.



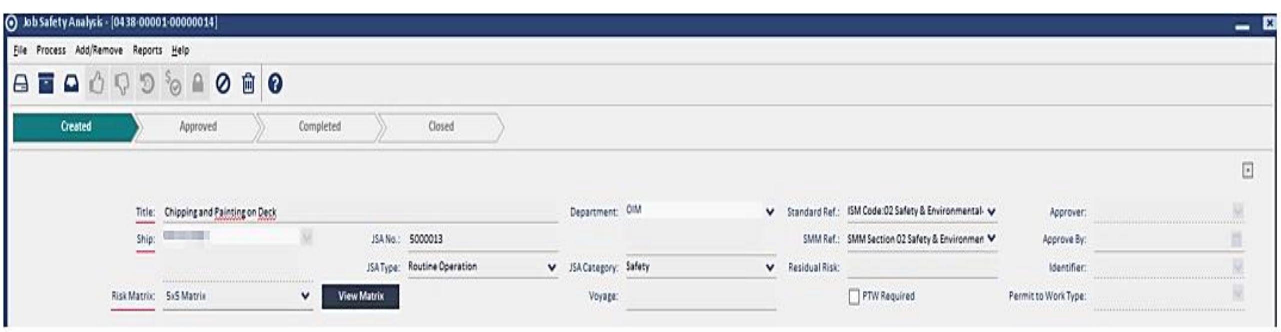
17.3C Create Template option

Below is the Create JSA screen using **Create Template**. User needs to manually select and input all field information. JSA No. is set as **Template.**



Field Name	Description / Action
Risk Matrix	Select the Risk Matrix from the dropdown menu.
Title	Enter a Title for the New JSA.
JSA No.	This is driven by System Preference. It could be system generated or manually entered.
JSA Type	Click the dropdown menu at the end of the **JSA Type** field to select the type of **JSA** document. The **JSA Type List** window opens. Double click on a selection to close the **JSA Type List** window and add the selection to the **JSA Type** field.
JSA Category	Click the dropdown menu at the end of the **JSA Category** field to select the category that the **JSA** document is part of. The **JSA Category List** window opens.
Ship	The **Ship** field is automatically filled if the document is created from the **Ship** level. Click the dropdown menu at the end of the **Ship** field to add a vessel to the document if it is created from the **Fleet** level. The **Select Ship** list window opens. Double click on a vessel to close the **Select Ship** window and add the selection to the **Ship** field.
Department	Click the dropdown menu at the end of the **Department** field to select the name of the department(s) affected by the JSA. More than one department can be selected. The **Department Selection** window opens. Double click on a department on the left side of the window to move the selected department to the right-hand side. Continue selecting and moving departments until all departments affected by this JSA are listed on the right side of the **Department Selection** window Click **OK** on the **Department Selection** window to close this window and add the selections to the **Department** field.
Next	Click this button to move to the next step.
Finish	Click this button once done providing the required information.

Below are the other fields in a newly created JSA, apart from the ones mentioned in the previous table.



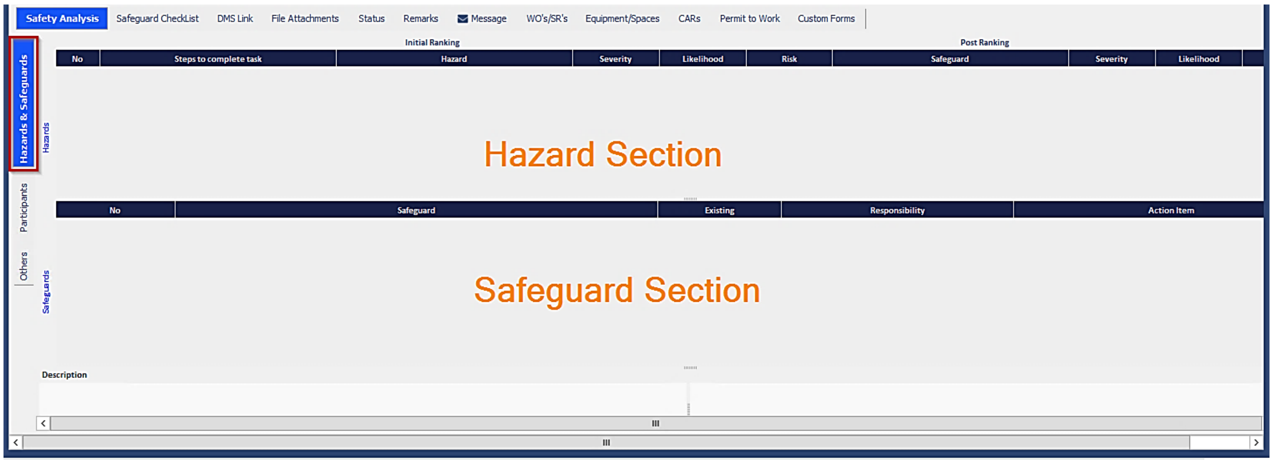
Field	Description
Approver	Populates with the Approver Name set up in the JSA Document Approval Setup configuration.
Approve by	Date when the JSA is approved.
Identifier	The identifier is used when configuring approvals for JSA documents.
SMM Reference	Click the dropdown menu at the end of the **SMM Reference** field to open the **SMM Reference List** window. Double click on the appropriate safety management reference on the **SMM Reference List** window. The window closes, and the selection is added to the **SMM Reference** field. There is a system preference that when configured allows the SMM Reference field to be an index term or a text field. The SMM Reference added in Questionnaire is copied to Findings.
Voyage	The **Voyage** field is automatically populated with the appropriate voyage name / number if the **Voyage** module) is part of your **NS** suite of products. The system uses the **Ship** and **Event Date** fields to determine which voyage to select for the **Voyage** field. Click the dropdown menu at the end of the **Voyage** field to change the automatic selection. The **Voyage Lists** window opens. Double click on a selection to close the **Voyage Lists** window and add the selection to the **Voyage** field.
Standard Reference	Click the dropdown menu at the end of the **Standards Reference** field to select a reference. The **Standards Reference** window opens. • Highlight the desired text description. Click **Select** on the **Standards Reference** window. The window closes, and the selection is added to the **Standards Reference** field.
Residual Risk	
Permit to Work Type	Select the PTW type from the dropdown menu.
PTW Required checkbox	Determines if the JSA requires PTW or not. If this box is ticked, the Permit to Work Type dropdown menu will be activated.
View Matrix button	Click **View Matrix** to display the matrix selected in the **Risk Matrix** field.

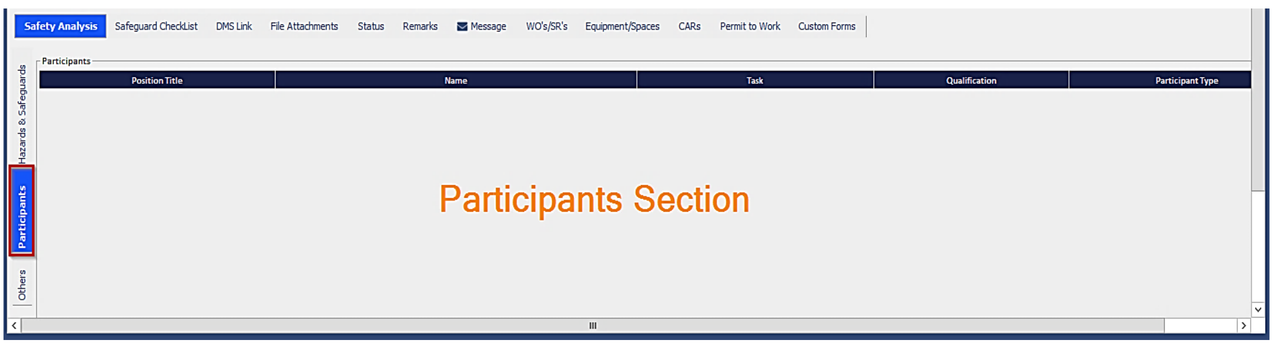
NOTE: **Post Risk Ranking Enabled, JSA Quick Check Required** and **JSA Approval Process Enabled** must all be set to **Yes** in **System Preferences** from the **System Administration** module to see the necessary information.

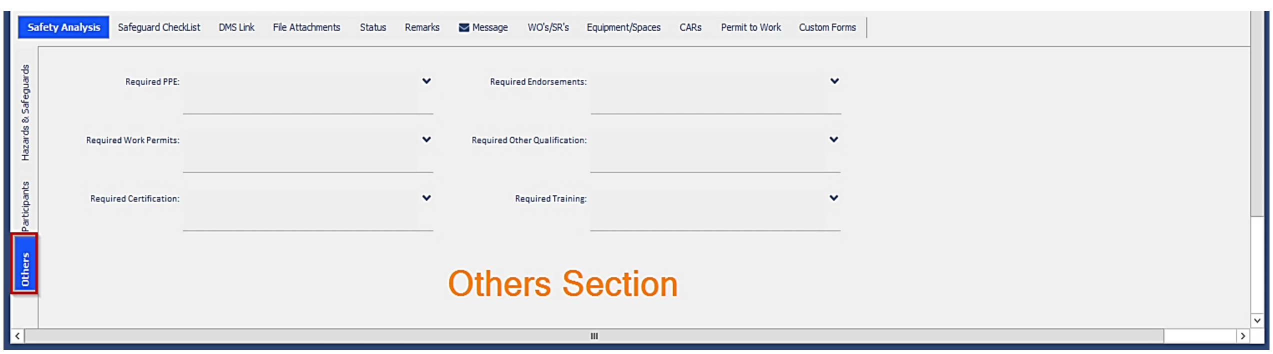
17.3.1 *Safety Analysis Tab*

NOTE: Information cannot be added to the **Safety Analysis** tab unless a matrix has been selected in the **Risk Matrix** field.

The **Safety Analysis** tab contains the important information associated with the **JSA**. It is divided into several sections.



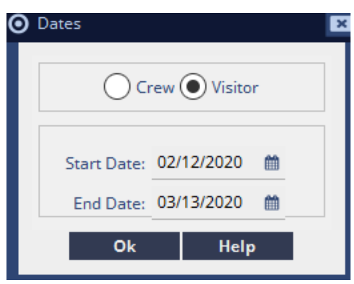




The fields on this tab are:

Section	Field	Description
Hazards and Safeguards **sub-tab** *Hazards section*		The **Hazards** section of the **Safety Analysis** tab contains steps to complete the task and the hazard associated with the step. It is divided into the following two sections: • The **Initial Ranking** section contains the steps within a task, the possible hazards associated with the step, the severity of the hazard, the likelihood of the hazard occurring, and the safeguards needed to reduce the risk. • The **Post Ranking** section is completed if the "Yes" option is selected for the **Post Risk Ranking Enabled** system preference. **NOTE:** There is a system preference "**Require hazard to Complete JSA**" that a can be set to require hazards for a specific JSA.
Initial Ranking	Steps to Complete Task	Enter steps to complete the task in the **Steps to Complete Task** column by clicking Add/Remove button from the menu bar and selecting Add Task/Hazard.
Initial Ranking	Hazard	Enter the hazard associated with the step in the **Hazard** column by clicking Add/Remove button from the menu bar and selecting Add Task/Hazard.
Initial Ranking	Severity	Click in the **Severity** column for a dropdown menu of the severity levels as defined by the matrix selected in the **Risk Matrix** field. Select the level of severity of the hazard. **NOTE:** Another row is added to the **Hazards** section when a severity level is selected.
Initial Ranking	Likelihood	Click in the **Likelihood** column for a dropdown menu of the likelihood levels as defined by the matrix selected in the **Risk Matrix** field. Select the level of likelihood that the hazard can occur.
Initial Ranking	Risk	The value in the **Risk** column is inserted by the system according to the intersection of the **Severity** level and **Likelihood** level on the selected risk matrix. This value is the **Risk Label** that was defined when the matrix was created.
Post Ranking	Safeguard	Enter the safeguard that can be implemented to reduce the risk associated with the hazard in the **Safeguard** column by clicking Add/Remove button from the menu bar and selecting Add Safeguard.

Section	Field	Description
Post Ranking	Severity	The **Severity** column in the **Post Ranking** portion of the **Hazards** section is only available if the "**Yes**" option is selected for the **Post Risk Ranking Enabled** system preference. Click in the **Severity** column for a dropdown menu of the severity levels as defined by the matrix selected in the **Risk Matrix** field. Select the level of severity of the hazard with the safeguard implemented.
Post Ranking	Likelihood	The **Likelihood** column in the **Post Ranking** portion of the **Hazards** section is only available if the "**Yes**" option is selected for the **Post Risk Ranking Enabled** system preference. Click in the **Likelihood** column for a dropdown menu of the likelihood levels as defined by the matrix selected in the **Risk Matrix** field. Select the level of likelihood of the hazard occurring with the safeguard implemented.
Post Ranking	Risk	The value in the **Risk** column is inserted by the system according the intersection of the **Severity** level and **Likelihood** level on the selected risk matrix. This value is the **Risk Label** that was defined when the matrix was created.
Hazards and Safeguards sub-tab *Safeguards section*		The **Safeguards** section on the **Safety Analysis** tab is used to specify if the safeguards exist, the position title responsible for implementing the safeguards and the actions taken to implement the safeguard.
	No.	Number sequence
	Safeguard	The **Safeguard** column is completed as safeguards are entered in the **Hazards** section.
	Existing	Click in the **Existing** column for a drop-down menu of options to indicate whether the safeguard exists or not.
	Responsibility	Type the position responsible for implementing the safeguard in the **Responsibility** column.
	Action Item	Type the action taken to implement the safeguard in the **Action Item** column.

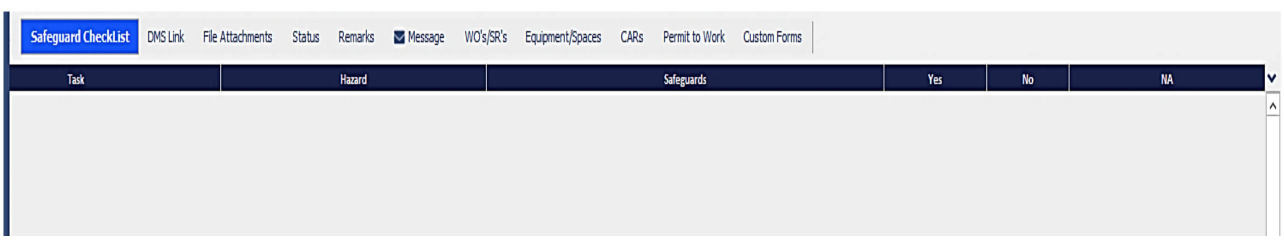
Section	Field	Description
Participants sub-tab		Participants needed to accomplish the tasks listed on the **JSA** in the **Participants** section. If users do not have the Crewing Module, they must use the Crewing Interface in order to populate Participants tab. Right click the **Add** on the **Participants** sub-tab. Enter the Start Date and End Date.  The **Crew List** window opens. Tick the check box preceding the seaman to select. Continue selecting seamen until all that are needed for the safety analysis are selected. Click **Select** from the **Crew List By Date** window toolbar to close the window and add the selections to the **Participants** section. The personnel window for a seaman can be viewed by double clicking on a seaman listed in the **Participants** section. A seaman can be removed from the **Participants** section by repeating the steps for adding a seaman and unchecking the selected seaman. Furthermore, user can add any external visitor who were involved in the Job Safety Analysis activity, by following the same steps in adding a crew member as participant, but this time selecting the Visitor radio button. 
	Position Title	The **Position Title** field is completed by the system when participants are added.
	Name	The **Name** field is completed by the system when participants are added.
	Task	Click on the **Task** column to type the task that the seaman will perform.

Section	Field	Description
	Qualification check box	Click the **Qualification** check box to indicate that the seaman's qualifications have been verified.
	Participant Type	Indicates the type of participant the crew/visitor is.
Others sub-tab	Required Personal Protective Equipment (PPE)	Click the dropdown menu at the end of the field to select any personal protective equipment needed. The **PPE Selection** window opens. Double click on a selection on the left side of the window to move it to the right side. Continue making selections until all equipment needed are listed on the right side of the window. Click **OK** to close the **PPE Selection** window and add the selections to the **Required Personal Protective Equipment** field. **Personal Protective Equipment** is defined as index terms.
	Required Endorsements	Click the dropdown menu at the end of the **Required Endorsements** field to select any endorsements that are needed. The **List of Endorsements** window opens. Double click on a selection on the left side of the window to move it to the right side. Continue making selections until all endorsements needed are listed on the right side of the window. Click **OK** to close the **List of Endorsements** window and add the selections to the **Required Endorsements** field.
	Required Work Permits	Click the dropdown menu at the end of the **Required Work Permits** field to select any certificates that are needed. The **Work Permit Selection** window opens. Double click on a selection on the left side of the window to move it to the right side. Continue making selections until all certificates needed are listed on the right side of the window. Click **OK** to close the **Work Permit Selection** window and add the selections to the **Required Work Permits** field.
Others sub-tab	Required Other Qualifications	Click the dropdown menu at the end of the **Required Other Qualifications** field to select any qualifications or skill sets that are needed. The **Skill Selection** window opens. Double click on a selection on the left side of the window to move it to the right side. Continue making selections until all qualifications or skill sets needed are listed on the right side of the window. Click **OK** to close the **Skill Selection** window and add the selections to the **Required Other Qualifications** field.

Section	Field	Description
	Required Certification	Click the dropdown menu at the end of the **Required Certification** field to select any required certificates. The **List of Certificates** window opens. Double click on a selection on the left side of the window to move it to the right side. Continue making selections until all required certificates are listed on the right side of the window. Click **OK** to close the **List of Certificates** window and add the selections to the **Required Certification** field.
	Required Training	Click the dropdown menu at the end of the **Required Training** field to select any required training. The **List of Training** window opens. Double click on a selection on the left side of the window to move it to the right side. Continue making selections until all required training is listed on the right side of the window. Click **OK** to close the **List of Training** window and add the selections to the **Required Training** field.

17.3.2 *Safeguard Checklist*

The **Safeguard Checklist** tab shows the Task, Hazard and Safeguard details found in the Safety Analysis tab.



17.3.3 *DMS Link*

Refer to Item 21.8 DMS Link Tab section of this manual.

17.3.4 *File Attachments Tab*

Refer to Item 21.2 File Attachment Tab section of this manual

17.3.5 *Status Tab*

The **Status** tab is system populated as the JSA document progresses through its lifecycle.

17.3.6 *Remarks Tab*

The **Remarks** tab is a free for text field.

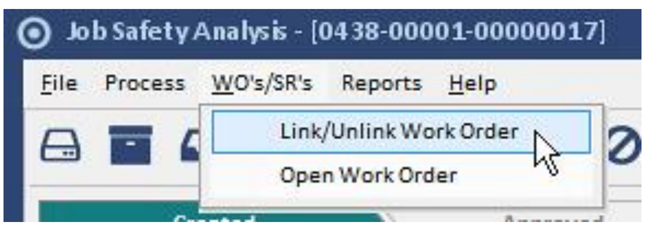
17.3.7 *Message Tab*

Refer to Item 21.5 Messages Tab section of this manual.

17.3.8 *WO's/SR's Tab*

The **WO's/SR's** tab allows the user to link/unlink any related work orders, service requisitions or service orders to the **JSA** document.

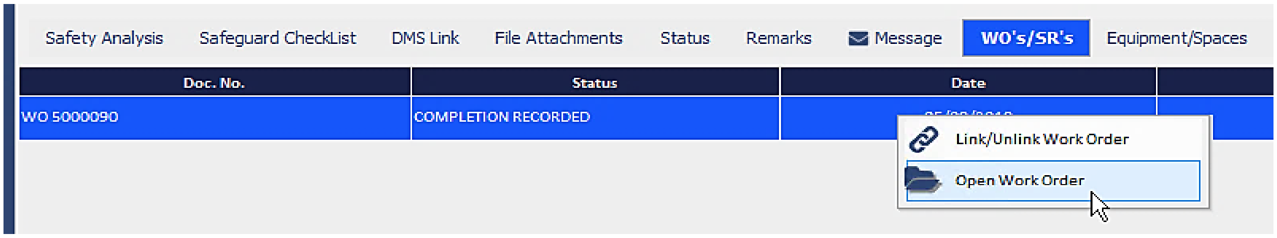
1. Right-click on the **WO's/SR's** field and select the action OR click **WO's/SR's** from the menu bar and select the action.



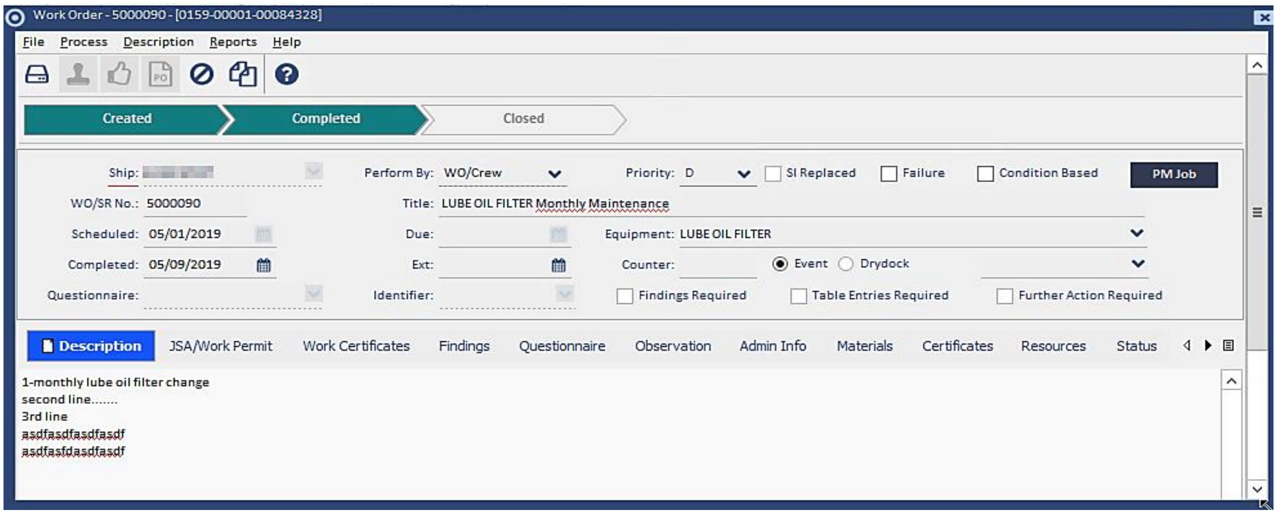
2. To **Link/Unlink Work Order**, select Link/Unlink Work Order from the options. The **Work Order Selection** window will be shown on screen. Tick the box preceding the WO and click **Select** icon from the toolbar.

3. To **Unlink**, follow the steps in Linking WO's/SR's, but this time, **Untick** the box preceding the WO.

4. To Open Work Order, select the Work Order from the options. Right-click and select **Open Work Order.**



5. The Work Order will be shown on screen.



17.3.9 *Equipment/Spaces Tab*

See Item #21.6 Equipment/Space/Structure Tab under Section 21 Miscellaneous part of this manual for the equipment/space/structure tab details.

17.3.10 *CARs Tab*

The **CAR's** tab is used to link any related CARs to the **JSA** document or create a new corrective action request for the **JSA**. **NS** can assign CARs to specific personnel and / or auto generate messages to responsible personnel.

1. Click **Link / Unlink CAR** button on the **JSA** window toolbar to link or unlink existing CARs to the incident. The **All Corrective Action Requests (CAR's)** window opens.
2. Complete fields on the **Search** tab of the **All Corrective Action Requests (CAR's)** window to find the CAR's associated with the JSA.
3. Click the check box next to the CAR(s) associated with the JSA on the **All Corrective Action Requests (CARs)** window to select. More than one selection can be made.
4. Click **Select** on the **All Corrective Action Requests (CARs)** window to close this window and add the selections to the **CAR's** tab.

5. Double click on any corrective action request listed on the **CAR's** tab to open the **Corrective Action Request (CAR)** window for that selection.

Create a New CAR from the JSA Document

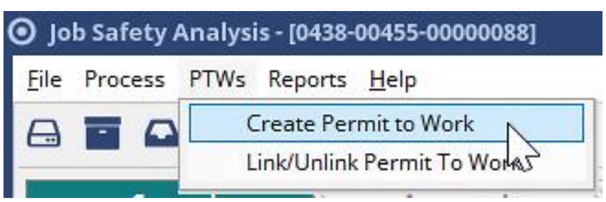
1. Click **New CAR** on the **JSA** window toolbar. The **Corrective Action Request (CAR) New** window opens
2. See Creating Corrective Action Requests Manually in this manual for details on completing this window.

   NOTE: Any CAR created from the **JSA** window is automatically linked to the JSA. It is displayed on the **CAR's** tab as soon as **Save** is clicked on the **Corrective Action Request (CAR)** window.

17.3.11 *Permit To Work*

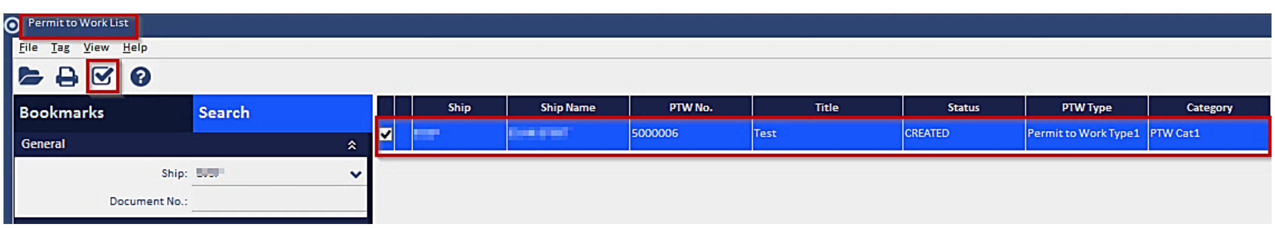
Permit To Work is used to provide controlled process for documentation and approval of necessary preparations before maintenance activities can be performed where applicable. It is considered an integrated part of the JSA workflow.

1. Right-click on the **Permit To Work** field and select the action OR click **PTWs** from the menu bar and select the action.



2. To Create Permit To Work, follow the steps in ***Section 18.3 Item #2 onwards.***

3. To **Link/Unlink Permit To Work**, select Link/Unlink Permit To Work from the actions. The **Permit to Work List** window will be shown on screen. Tick the box preceding the PTW and then click the **Select** icon from the toolbar.



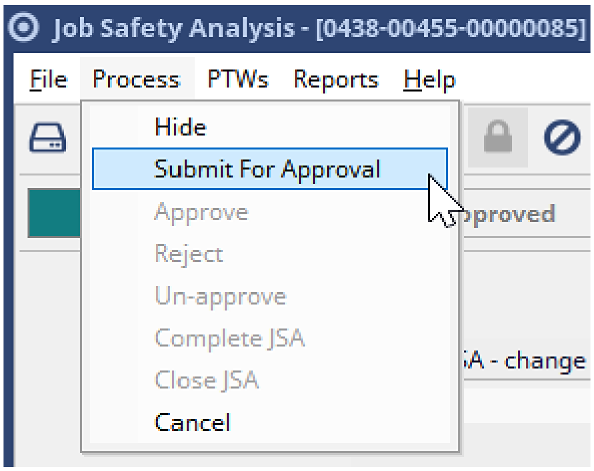
4. To **Unlink**, follow the steps in **Linking Permit To Work**, but this time, **Untick** the box preceding the Permit To Work.

17.3.12 Custom Forms Tab

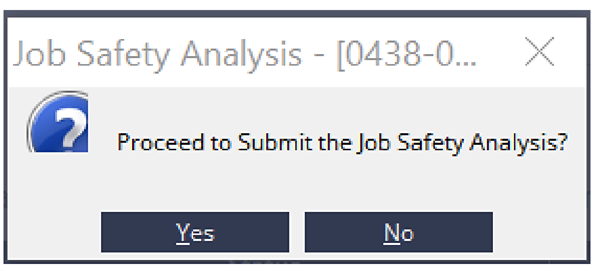
Refer to Item 21.3 Custom Forms Tab section of this manual.

17.4 Submit a Job Safety Analysis for Approval

1. Click **Submit for Approval** from the **JSA** window toolbar.



2. A message box opens. Click **Yes** to close the message box and complete the submission for approval or rejection process.

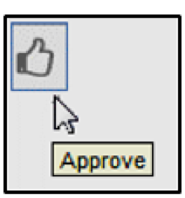


3. If approving the JSA, then the **Submit** button is grayed out, the **Approve** button is activated on the toolbar and the status of the document is changed to "**Submitted**".

If user rejects the approval, the JSA reverts to "**Created**" status.

17.5 Approve / Un-approve a Job Safety Analysis Document

1. Click **Approve** on the **JSA** window toolbar. A message box opens.

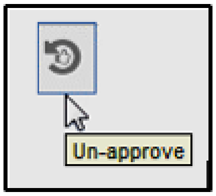


2. Click **Yes** to close the message box and complete the approval process.

The **Approve** button is grayed out, the **Un-Approve** and **Complete JSA** buttons are activated on the toolbar and the status of the document is changed to "**Approved**".

NOTE: JSA documents that have been approved can be unapproved.

3. Click **Un-approve** on the **JSA** window toolbar. A message box opens.

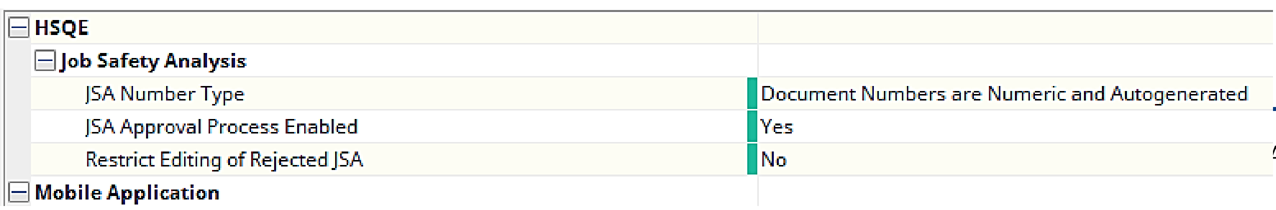


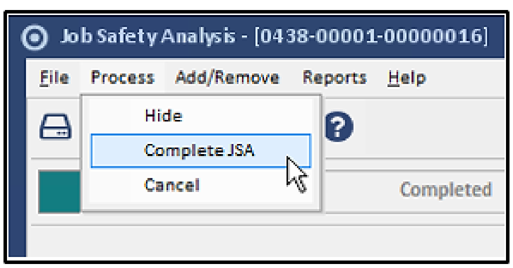
4. Click **Yes** to close the message box and complete the un-approval process.

The **Un-approve** button is grayed out, the **Approve** button is activated on the toolbar and the status of the document is changed to "**Un-Approved**".

5. The **Remarks** icon at the end of the **Un-Approved** row on the **Status** tab can be clicked to open the **Remarks** window. A reason must be given for the un-approval.

   NOTE: A system preference can be set to restrict editing or rejected JSA. Contact your System Administrator to set this preference.



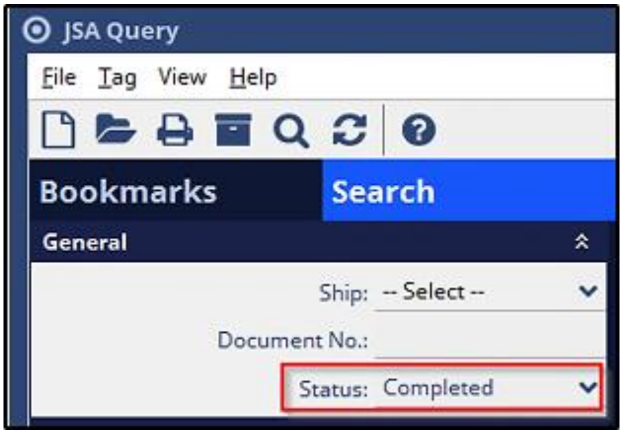


2. Click **Yes** to close the message box and complete the document.

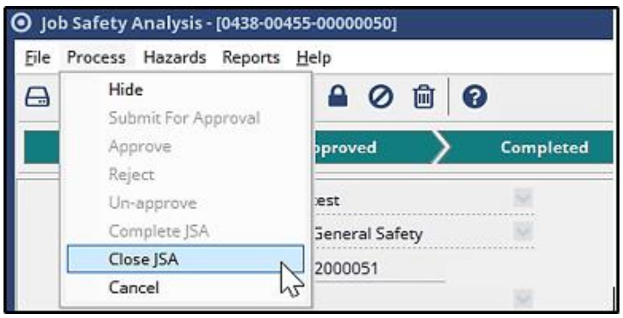
All process buttons are grayed out on the toolbar and the status of the document is changed to "**Completed**".

17.7 *Close Job Safety Analysis Document*

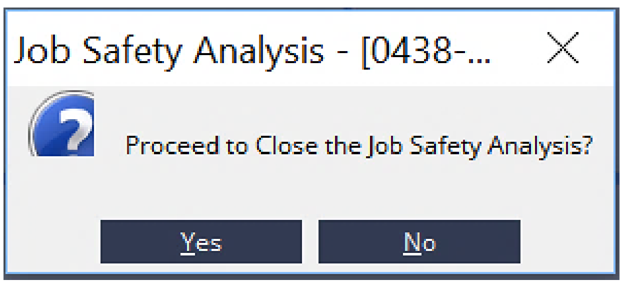
1. Closing a JSA Document means the JSA has been verified / completed.
2. Search for completed JSAs on the JSA Search Navigator Pane.



3. Open the JSA to be closed. Click **Process** from the menu bar and select **Close JSA**.

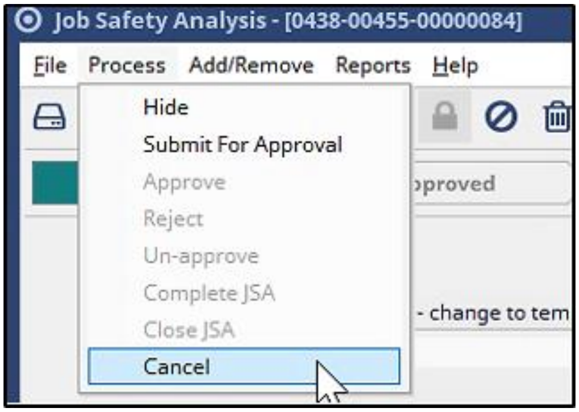


4. Click **Yes** to close the message box and complete/close the document.

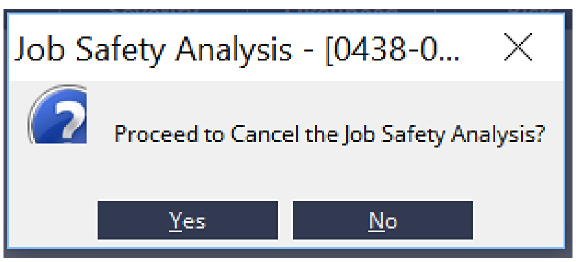


17.8 *Cancel Job Safety Analysis Document*

1. Search for JSAs on the JSA Search Navigator Pane.
2. Open the JSA to be cancelled. From the **Process** menu on the JSA document, select **Cancel**. A message box opens.



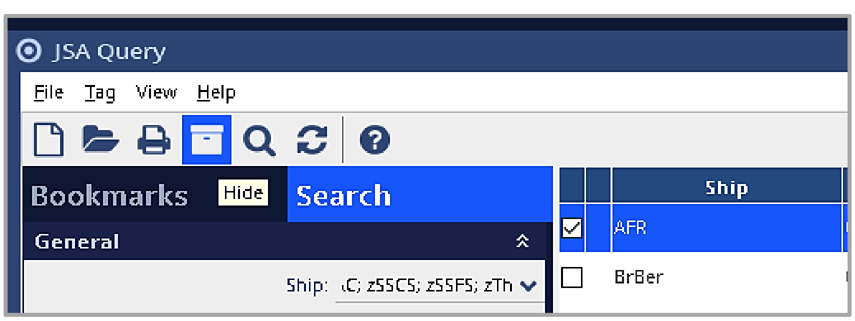
3. Click **Yes** to close the message box and cancel the document.



17.9 *Hide a Job Safety Analysis Document*

JSA documents can be hidden from the **JSA** window or from any of the JSA list windows.

1. Click **Hide** on the **JSA** window toolbar. A message box opens.

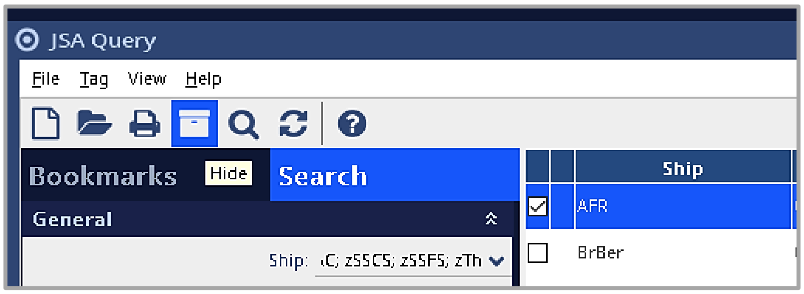


2. Click **OK** to hide the document.

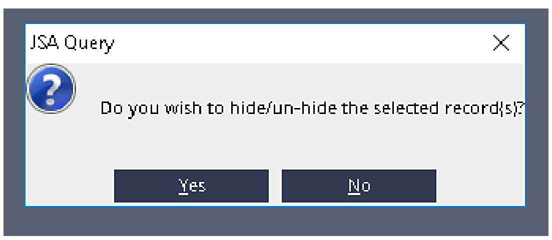
All buttons are grayed out on the toolbar, all fields are disabled, a **red** box with the "Hidden" label is in the upper right corner of the document and the status of the document is changed to "Hidden".

NOTE: **Multiple** JSA documents can be hidden at one time from the **JSA Query** window.

3. Run a query on the **JSA Query** window. A list of JSA documents is listed on the right side of the window.
4. Click the check box preceding all the documents to be hidden.
5. Click **Hide** on the list window toolbar. A message box opens.



6. Click **Yes**. The selected documents are removed from the window.



17.9.1 *View Hidden Job Safety Analysis Documents*

Hidden JSA documents can be viewed once they have been hidden.

1. Click **Toggle Hidden Record Display Mode** from the **Navigator** pane toolbar in the **HQSE** module.

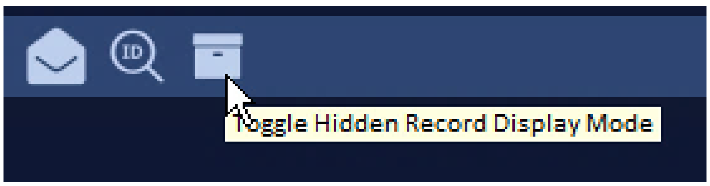
2. Select **Documents → Job Safety Analysis → Search** from the **HSQE** gadget on the **Navigator** pane of the **HSQE** module. The **JSA Query** window opens.

3. Complete the fields on the **Search** tab of the **JSA Query** window to find the JSA documents that are hidden.
4. Click **Search** (bottom of the **Query** window) to initiate a search. A list of documents meeting the search criteria opens on the right side of the window. The hidden documents are indicated with the **Hide** symbol preceding the document.

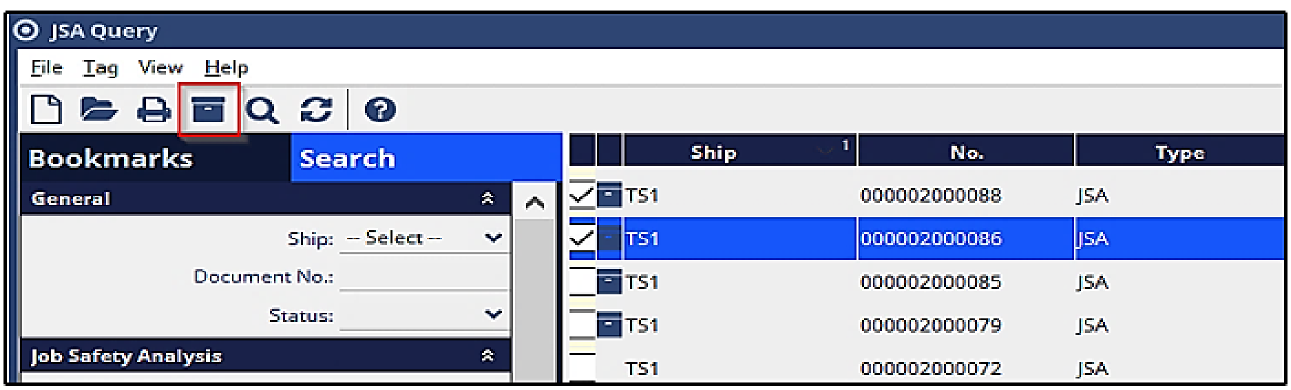
17.9.2 *Unhide Job Safety Analysis Documents*

Previously hidden JSA documents can be unhidden. Unhiding a document is different from viewing a hidden one as unhiding replaces the document in the list window without using the toggle process.

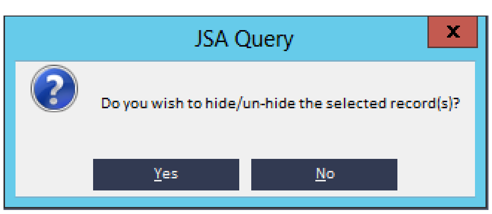
1. Click **Toggle Hidden Record Display Mode** from the **Navigator** pane toolbar in the **HSQE** module.



2. Select **Documents → Job Safety Analysis → Search** from the **HSQE** gadget on the **Navigator** pane of the **HSQE** module. The **JSA Query** window opens.
3. Click **Search** button at the bottom of the Search Query screen.
4. Click the check box preceding the document to be unhidden. More than one selection can be made.
5. Click the **Hide/Un-Hide button** on the **JSA Query** window toolbar. A hide/un-hide message box opens.



6. Click **Yes** to close the message box and unhide the selected hidden documents. The **Hide** symbol is removed from the hidden documents and they are restored.



Section 18 Project Management

Projects are a way of grouping financially related documents. A project has its own budget and account codes.

Companies typically use projects for capital improvements that have a separate budget and to capture information related to insurance claims.

Projects can be linked to various documents on the **Admin Info** tab of the document. Please see the Purchasing User Manual for more information on Projects.

Section 19 Maintenance Reports

There are many types of reports throughout the **Maintenance and Purchasing** module associated with different windows. These reports are explained in the sections regarding those windows. The maintenance reports explained in this section are the ones generated from the **Maintenance** module. The maintenance report listings in the **Reports** gadget for both Fleet level and Ship level include – **Maintenance Reports, RCM Reports** and **Other Reports**.

This section focuses on both those categories. The **Purchasing Reports** and the **Inventory Reports** are discussed in the **NS Enterprise Purchasing** module manual.

All Maintenance and Financial reports have the following options available:

- **Screen** – displays the formatted report on the screen. Click the **OK** button to generate the report. The report displays on the monitor when it is complete.
- **Printer/Fax** – sends the report to the assigned printer. The **Print** window opens when the report is complete to select the printer.
- **File** – the field next to the **File** radio button opens when this option is selected. Click on the dropdown menu to select the type of format for the saved report. Click the **OK** button. The **Save As** window opens to select the directory where the report is to be saved.
- **Email -** The **Email** option allows the user to attach the report to a MS Outlook message.

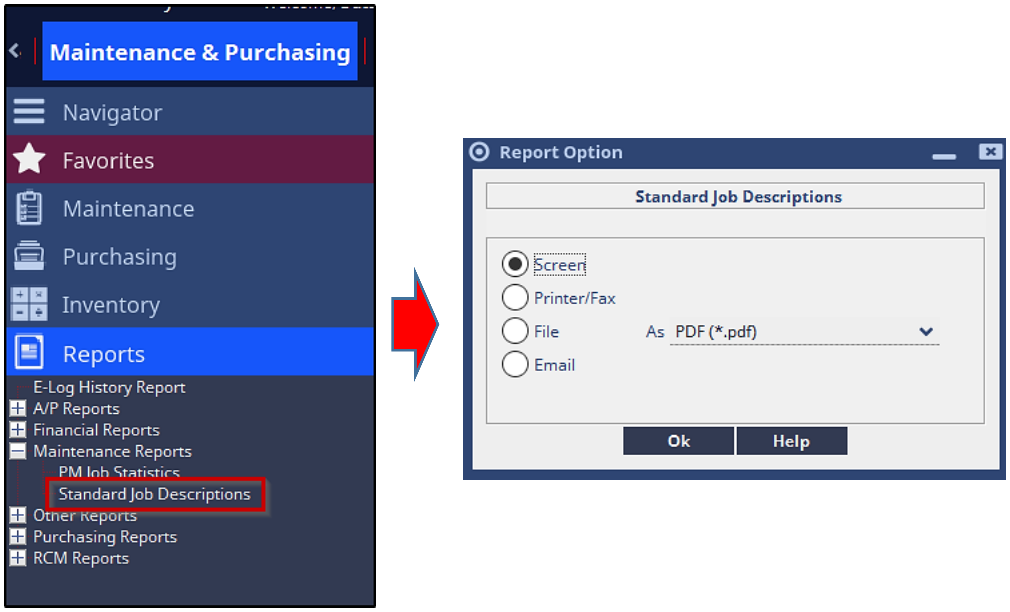
19.1 *Fleet Level Reports*

The maintenance reports available at the fleet level include information for all ships listed within the **NS Enterprise** system for this organization. All reports are generated from a **Reports** gadget from both the ship and fleet level.

Select a report from the **Reports** gadget on the **Navigator** pane in the **Maintenance** module. The **Report Options** window opens for user to select report parameters.

19.1.1 *Standard Job Descriptions Report*

Select **Maintenance & Purchasing module → Reports → Maintenance Reports → Standard Job Descriptions** to open the **Report Option** window for the **Standard Job Descriptions** report.

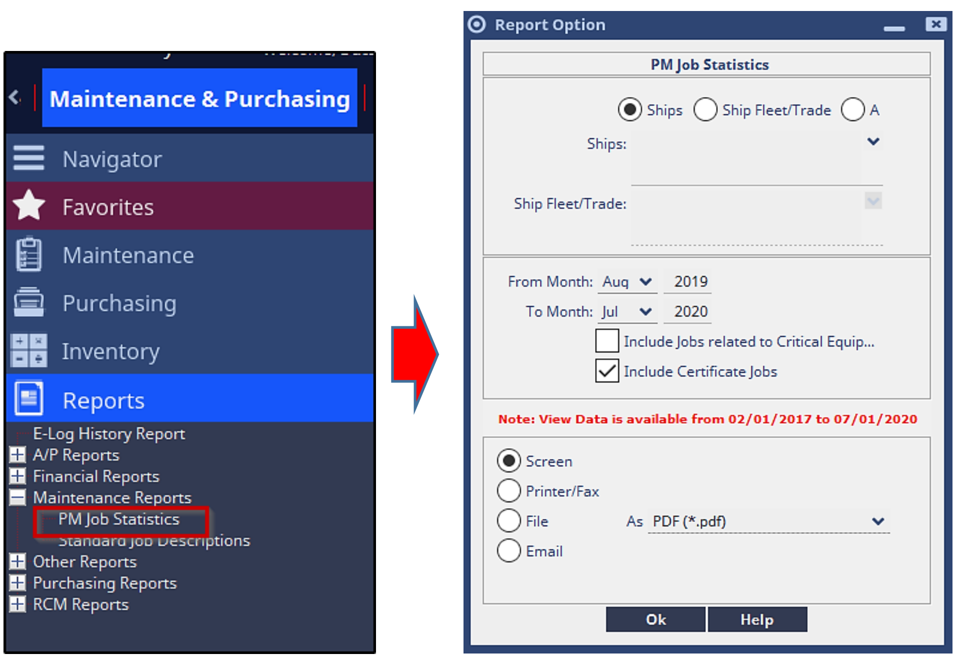


The **Standard Job Descriptions** report provides a complete listing of all job description text in the system. The descriptions are listed in alphabetical order by their **Job Description Index Term**. The text is listed followed by a list of the preventive maintenance standard jobs where the text is used.

Click the radio button to select where the report is to be sent. The options are: **Screen, Printer/Fax, File or Email**.

19.1.2 *PM Job Statistics Report*

Select **Maintenance & Purchasing module → Reports → Maintenance Reports → PM Job Statistics** to open the **Report Option** window for the **PM Job Statistics** report.



The **PM Job Statistics** report provides an analysis of the total number of preventive maintenance jobs, the number of those that are overdue and the percentage of the total jobs that are overdue by ship or by fleet within a specified time. The ships and time period are selected by the user on the **Report Option** window.

This report also includes the ability to exclude the Survey Certificate jobs. The scheduled date calculation for Work orders **(if any were rescheduled)** will use the scheduled date of the Work Order than the system scheduled date.

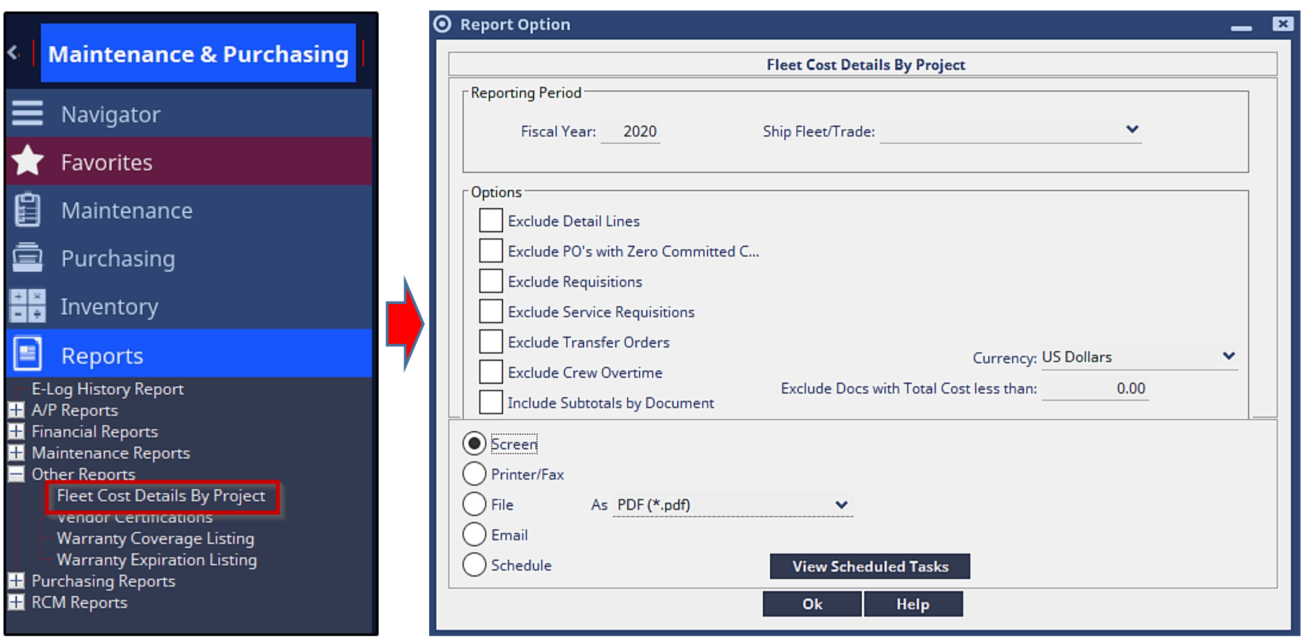
1. Click the radio button to select which ships are to be included in the report. “All” is selected by default. The **Ships** field becomes available when the **Ships** radio button is selected. The dropdown menu on the **Ship Fleet/Trade** field becomes available when the **Ship Fleet / Trade** radio button is selected.

   Click the dropdown menu to select the ships or fleets to be included in the report.
2. Select the dates to be included in the report by clicking on the dropdown menu on the **From Month** and **To Month** fields to select the months and clicking the fields following the months to select the year.
3. Click the **Include Jobs related to Critical Equipment** check box to include the standard jobs that have equipment with critical parts.
4. Click the radio button to select where the report is to be sent. The options are:

Screen, Printer/Fax, File or Email.

19.1.3 *Fleet Cost Details by Project*

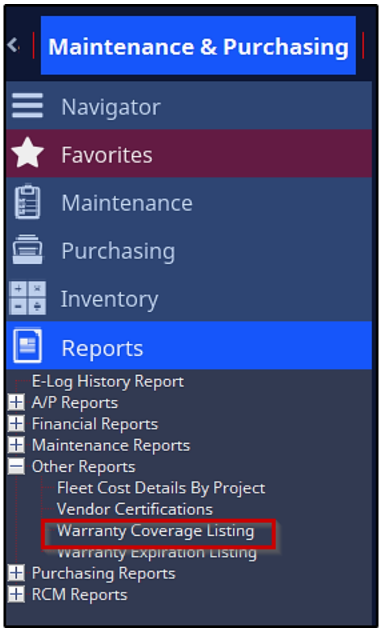
Select **Maintenance & Purchasing module → Reports → Other Reports → Fleet Cost Details By Project** to open the **Report Option** window for the **Fleet Cost Details By Project** report.

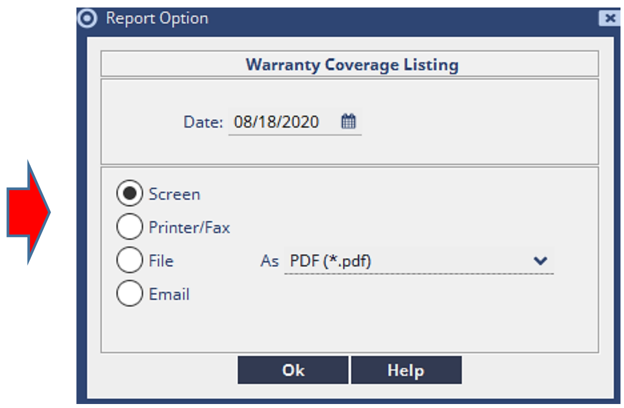


The **Fleet Cost Details by Project** report provides an analysis of all project costs for the entire fleet by ship. Projects are associated with purchasing. See ***Fleet Cost Details by Project*** in the **Other Reports** portion of the **Reports** section of the **NS Enterprise Purchasing module** manual for details on this report.

19.1.4 *Warranty Coverage Listing Report*

Select **Maintenance & Purchasing module → Reports → Other Reports → Warranty Coverage Listing** to open the **Report Option** window for the **Warranty Coverage Listing** report.





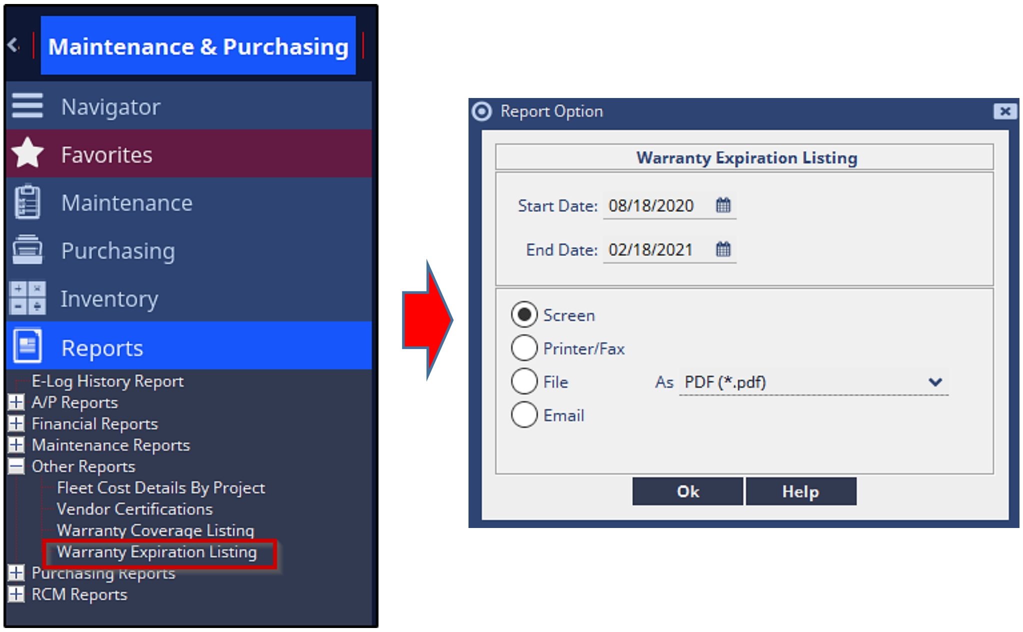
The **Warranty Coverage Listing** report lists all equipment covered under warranty as of the specified date. The report also includes a warranty expiration date.

Click the radio button to select where the report is to be sent. The options are:

Screen, Printer/Fax, File or Email.

19.1.5 *Warranty Expiration Listing Report*

Select **Maintenance & Purchasing module → Reports → Other Reports → Warranty Expiration Listing** to open the **Report Option** window for the **Warranty Expiration Listing** report.

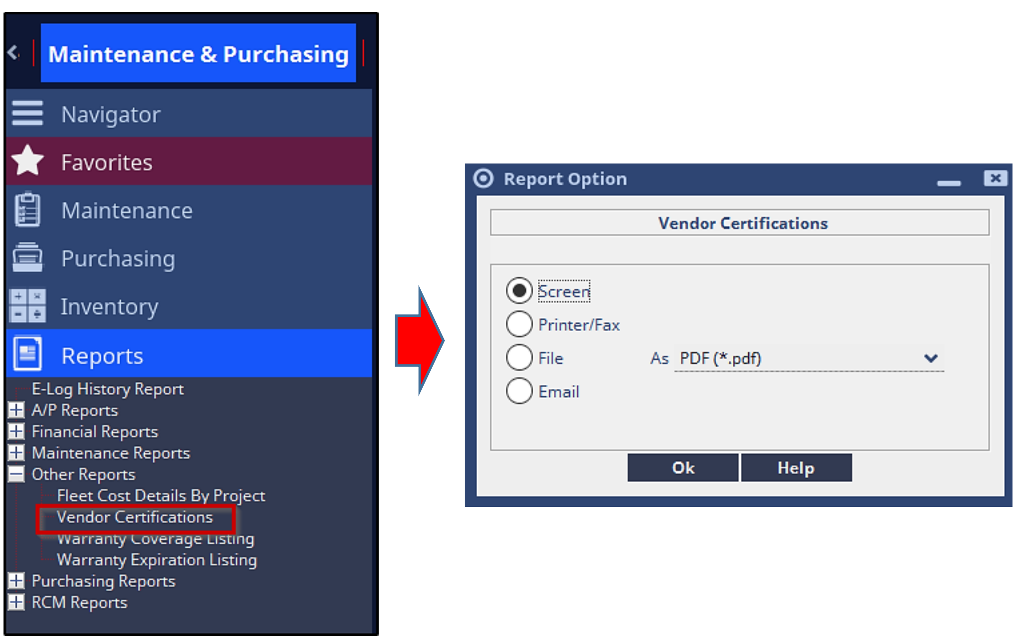


The **Warranty Expiration Listing** report lists all equipment whose warranties are in effect as of a specified start date but will expire as of the specified end date. The default value for the start date is the current date and the default value for the end date is six months from that date.

Click the radio button to select where the report is to be sent. The options are: **Screen, Printer/Fax, File or Email**.

19.1.6 *Vendor Certifications Report*

Select **Maintenance & Purchasing module → Reports → Other Reports → Vendor Certifications** to open the **Report Option** window for the **Vendor Certifications** report.



The **Vendor Certifications** report displays the certifications of the vendors listed in **NS Enterprise**. Some organizations are required to collect certifications of their vendors, such as “Minority owned”. These certifications are listed on the **Certificates** tab of the **Company** window for each vendor.

Click the radio button to select where the report is to be sent. The options are: **Screen, Printer/Fax, File or Email**.

19.2 *Ship Level Reports*

The maintenance reports available at the ship level only include information for that ship. There are two sets of reports for maintenance at the ship level. Some are listed under the **Maintenance Reports** option on the **Reports** gadget on the **Navigator** pane in the **Maintenance** module and more are listed under **Other Reports**.

All the reports are created from a **Reports Option** window. This window looks a little different from report to report, but the basic procedure is the same.

Select a report from the **Reports** gadget on the **Navigator** pane in the **Maintenance** module. The **Report Options** window opens.

Click the radio button to select where this report should be sent. The options are: **Screen, Printer/Fax, File or Email.**

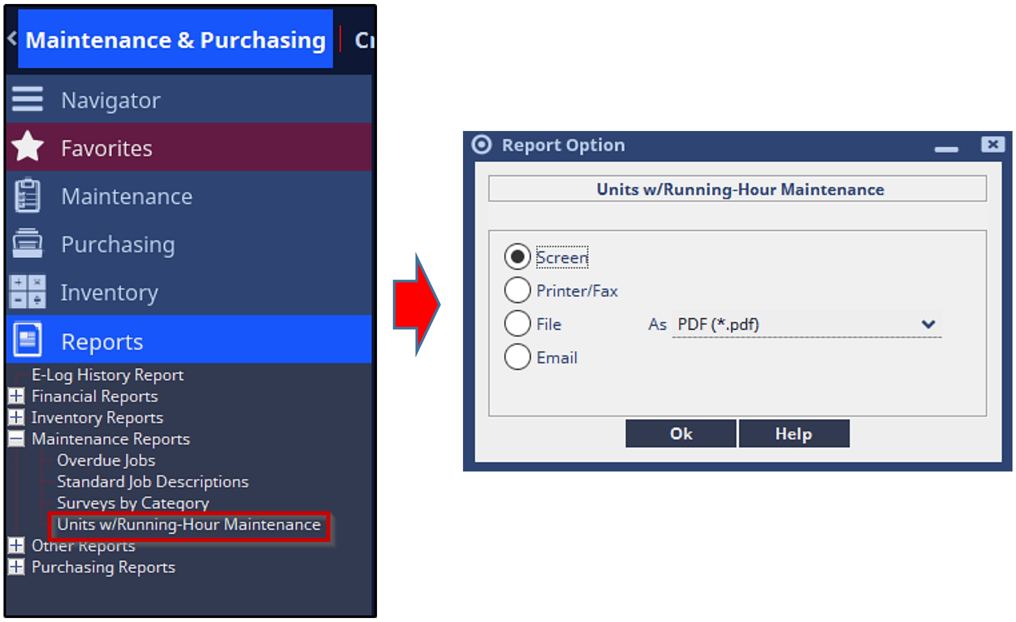
19.2.1 *Purchasing Reports*

See the Purchasing Manual for more details concerning these reports.

19.2.2 *Maintenance Reports*

Units with Running Hour Maintenance Report

Select **Maintenance & Purchasing module → Reports → Maintenance Reports → Units with Running Hour Maintenance** to open the **Report Option** window for the **Units with Running Hour Maintenance** report.

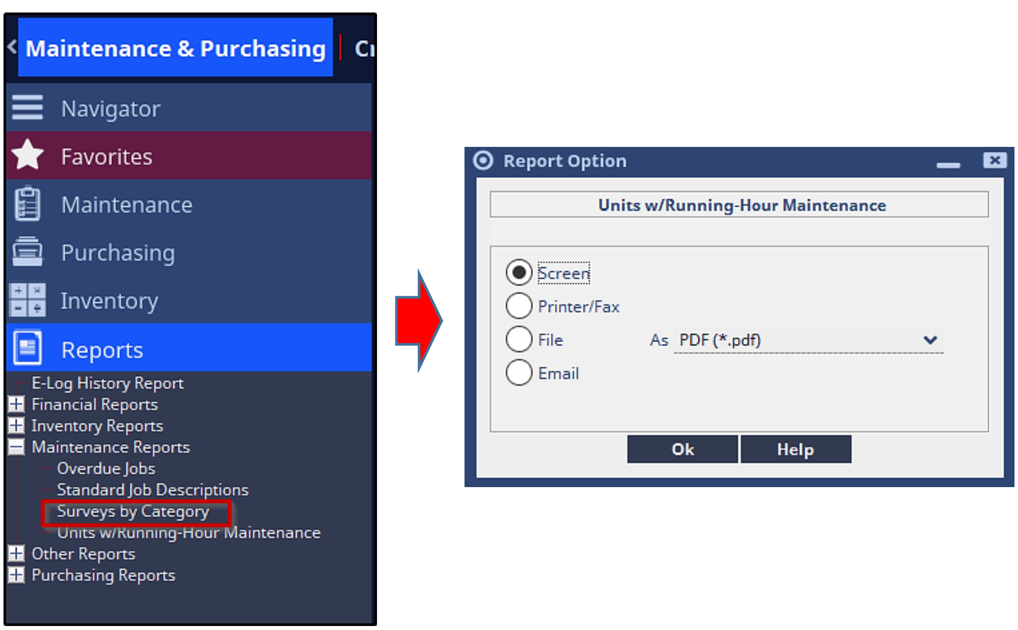


The **Units with Running Hour Maintenance** report is a listing of all equipment currently included in the running hour log.

Click the radio button to select where the report is to be sent. The options are: **Screen, Printer/Fax, File or Email**.

Surveys by Category Report

Select **Maintenance & Purchasing module → Reports → Maintenance Reports → Surveys by Category** to open the **Report Option** window for the **Surveys by Category** report.



The **Surveys by Category** report lists all the surveys for the ship. It is basically the **Update Surveys and Certificates** window in report form.

Click the radio button to select where the report is to be sent. The options are: **Screen, Printer/Fax, File or Email**.

Standard Job Descriptions Report

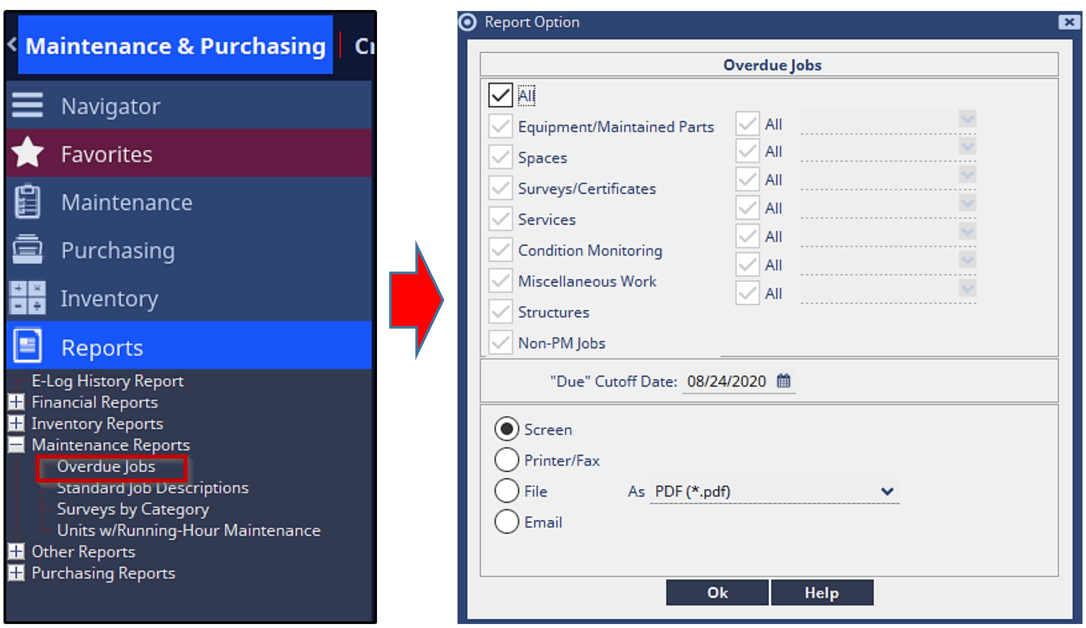
Select **Maintenance & Purchasing module → Reports → Maintenance Reports → Standard Job Descriptions** to open the **Report Option** window for the **Standard Job Descriptions** report.

The **Standard Job Descriptions** report at the ship level is the same as the **Standard Job Descriptions** report at the fleet level except it only provides a listing of job description text for this ship. The descriptions are listed in alphabetical order by their **Job Description Index Term**. The text is listed followed by a list of the preventive maintenance standard jobs where the text is used.

Click the radio button to select where the report is to be sent. The options are: **Screen, Printer/Fax, File or Email**.

Overdue Jobs Report

Select **Maintenance & Purchasing module → Reports → Maintenance Reports → Overdue Jobs** to open the **Report Option** window for the **Overdue Jobs** report.



On the overdue jobs report at ship level the Deferred status 'D' will display if there is at least one accepted deferral.

The **Overdue Jobs** report lists the selected job types that are overdue as of a selected date.

1. Click the check box to select the type of standard jobs to be included on the report. The default selection is “All”. Uncheck the check box preceding “All” to open the other check boxes for selection.

Click the check box preceding the jobs to be included on the report. The All check box following the selection is checked by default. Uncheck this check box to click the dropdown menu at the end of the field to select which types of the selected job type are to be included on the report.

Continue making selections until all job types that are to be included on the report are selected.

2. Click the **Calendar** button at the end of the **Due Cutoff Date** field to select the due date of the jobs to be included on the report.
3. Click the radio button to select where the report is to be sent. The options are: **Screen, Printer/Fax, File or Email**.

19.2.3 *Financial Reports*

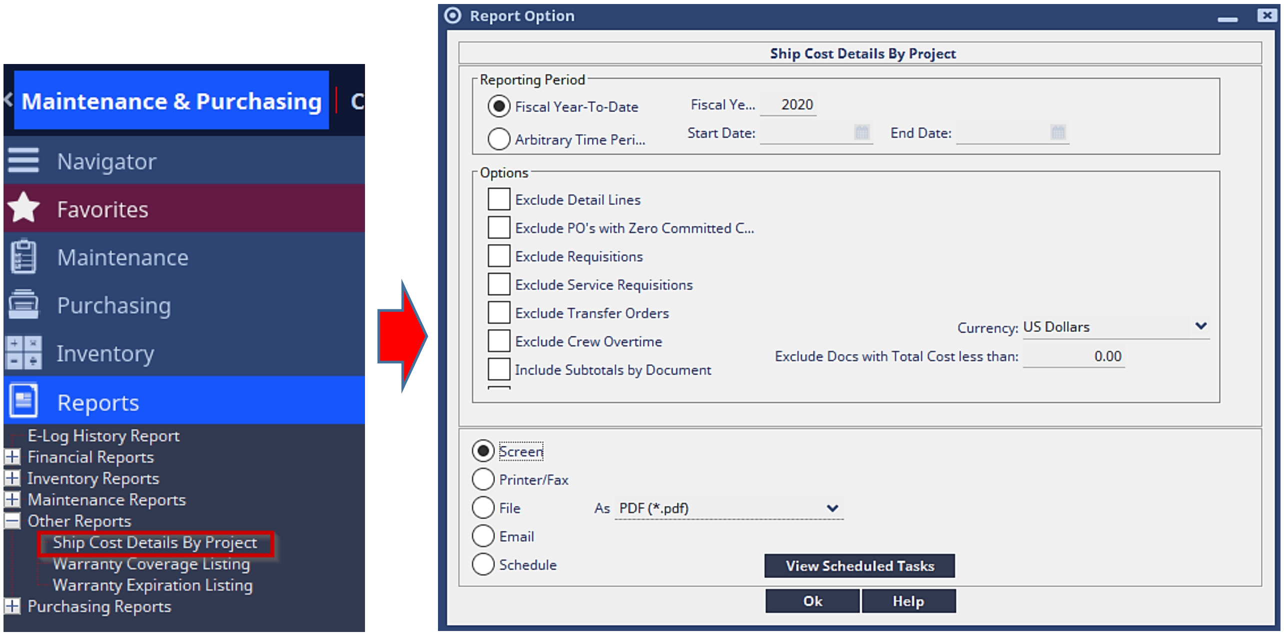
See the **Financial Report** section of this document for more details on these reports.

Ship Cost Details by Account	The **Ship Cost Details by Account** report is based on purchase orders and service purchase orders and the **Ship Actual Cost Details** report is based on actual costs (invoices).
Ship Actual Cost Details	The **Ship Actual Cost Details** report is based on the fiscal effective dates of the invoices not of the purchase orders and includes Invoices, Transfer Orders and Payroll (Overtime) information.
Complete Vessel Cost Report	This report is generated from the Ship view of the **Maintenance and Purchasing** module. The **Complete Vessel Cost** report is used to manage the current workload and material purchases.
Ship Cost Summary by System	The **Ship Cost Summary by System** report is a breakdown of the actual, estimated, committed and total costs of the purchase orders, transfer orders, requisitions, and service requisitions within a specified time frame by machinery system
Open Project Status	The **Open Project Status** report is available at the fleet level with the name "**Fleet Open Project Status**" and at ship level with the name "**Open Project Status**".
Accruals as of Date	

19.2.4 *Other Reports*

Ship Cost Details by Project Report

Select **Maintenance & Purchasing module → Reports → Other Reports → Ship Cost Details by Project** to open the **Report Option** window for the **Ship Cost Details by Project** report.



The **Ship Cost Details by Project** report provides an analysis of all project costs for a ship. Projects are associated with purchasing. See ***Ship Cost Details by Project*** in the **Other Reports** portion of the **Reports** section of the **NS Enterprise Purchasing module** manual for details on this report.

Warranty Coverage Listing Report

Select **Maintenance & Purchasing module → Reports → Other Reports → Warranty Coverage Listing** to open the **Report Option** window for the **Warranty Coverage Listing** report.

The **Warranty Coverage Listing** report at the ship level is the same as the one at the fleet level except the information only applies to this ship. It lists all equipment covered under warranty as of the specified date. The report also includes a warranty expiration date.

Click the radio button to select where the report is to be sent. The options are: **Screen, Printer/Fax, File or Email**.

Warranty Expiration Listing Report

Select **Maintenance & Purchasing module → Reports → Other Reports → Warranty Expiration Listing** to open the **Report Option** window for the **Warranty Expiration Listing** report.

The **Warranty Expiration Listing** report at the ship level is the same as the one at the fleet level except the information only applies to this ship. It lists equipment whose warranties are in effect as of a specified start date but will expire as of the specified end date. The default value for the start date is the current date and the default value for the end date is six months from that date.

Click the radio button to select where the report is to be sent. The options are: **Screen, Printer/Fax, File or Email**.

19.3 *Reliability Centered Maintenance Reports*

The **Reliability Centered Maintenance** reports are generated from two separate areas:

- **RCM Reports** option from the **Reports** gadget on the **Navigator** pane at the fleet level in the **Maintenance** module
- **Work Order Search** window

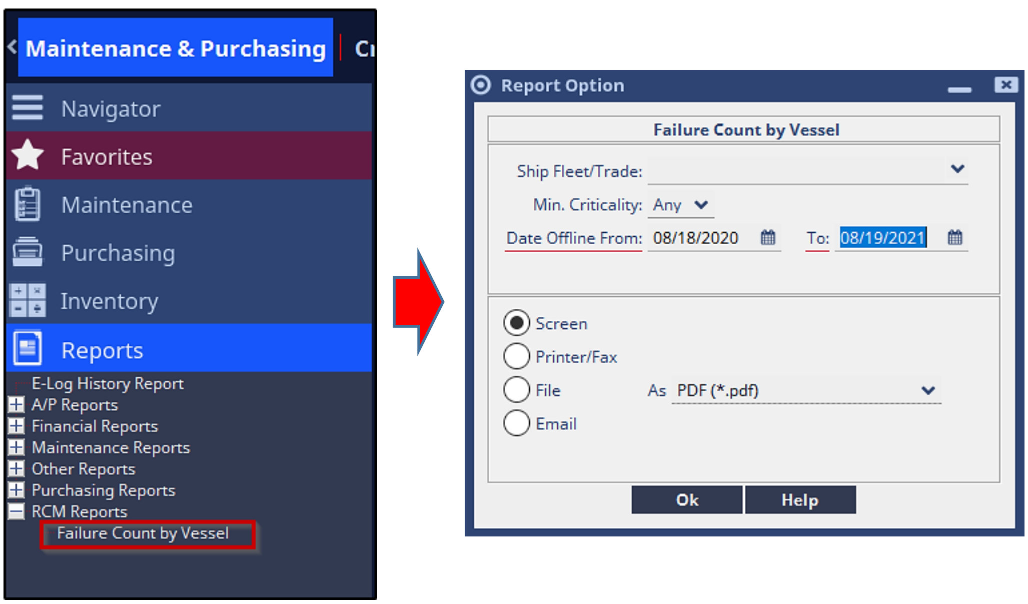
All the reports are created from a **Reports Option** window. This window looks a little different from report to report, but the basic procedure is the same.

Click the radio button to select where this report should be sent. The options are: **Screen, Printer/Fax, File or Email.**

19.3.1 *Failure Count by Vessel*

The RCM report created from the **Reports** gadget on the **Navigator** pane in the **Maintenance** module at the fleet level is the **Failure Count by Vessel** report.

Select **Maintenance & Purchasing module → Reports → RCM Reports → Failure Count by Vessel** to open the **Report Option** window for the **Failure Count by Vessel** report.



The **Failure Count by Vessel** report displays the number of failures at the selected criticality per fleet within the specified dates. The header on the report contains the name of the fleet and the dates included on the report. The columns on the report are ship name, ship code, number of failures and total number of failures.

1. Click the dropdown menu at the end of the **Ship Fleet / Trade** field to select the fleet or trade to be included on the report.
2. Click on the dropdown menu at the end of the **Minimum Criticality** field to select the minimum level of criticality to be included on the report.

3. Click the **Calenda**r buttons in the **Date Offline From** and **To** fields to select the date range that the vessels were offline for the report.
4. Click the radio button to select where the report is to be sent. The options are: **Screen, Printer/Fax, File or Email.**

19.3.2 *RCM Reports from the Work Order Search Window*

There are only two RCM reports on the **Work Order Search** window and one option to export the failure data. RCM reports are only created from work orders, service requisitions or no action jobs that are created because of failures. The **Failure** check box MUST be checked on the work order, service requisition or no action job for it to be classified as a failure.

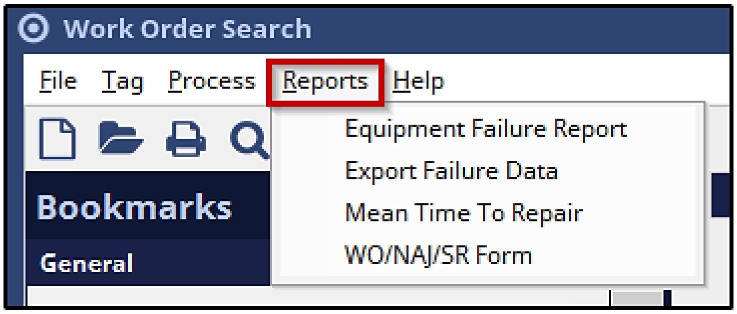
Select **Documents →Search → Work Orders** from the **Maintenance** gadget on the **Navigator** pane in the **Maintenance** module at either the fleet or ship levels.

> **NOTE:** The RCM reports accessed from the fleet level contain information regarding all ships within the fleet. The reports accessed from the ship level contain only the information regarding the ship it is accessed from.

The **Work Order Search** window opens.

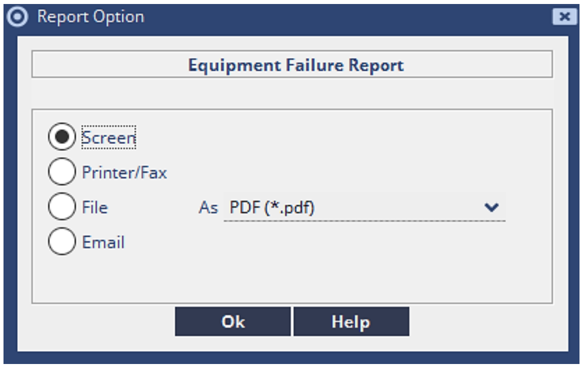
> **NOTE:** The RCM reports generated from the **Work Order Search** window use the results from a work order query to create the reports. A query MUST be run before any information is available for the reports.
>
> Only the work orders, service requisitions and no action reports with the **Failure** check box checked in the header are used to create the reports.

Click **Reports** from the **Work Order Search** window menu bar to view menu options.



Equipment Failure Report

The **Equipment Failure** report displays work orders and service requisitions created because of an equipment failure listed in the work order query results. The report columns include the ship name, work order / service requisition number, system and equipment that failed, failure cause, failure mode, date offline and when it was back in service.

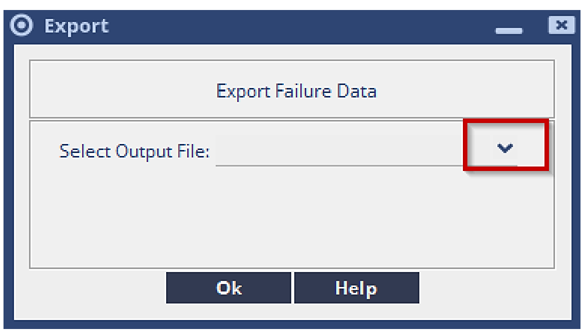


Click the radio button to select where the report is to be sent. The options are: **Screen, Printer/Fax, File or Email**.

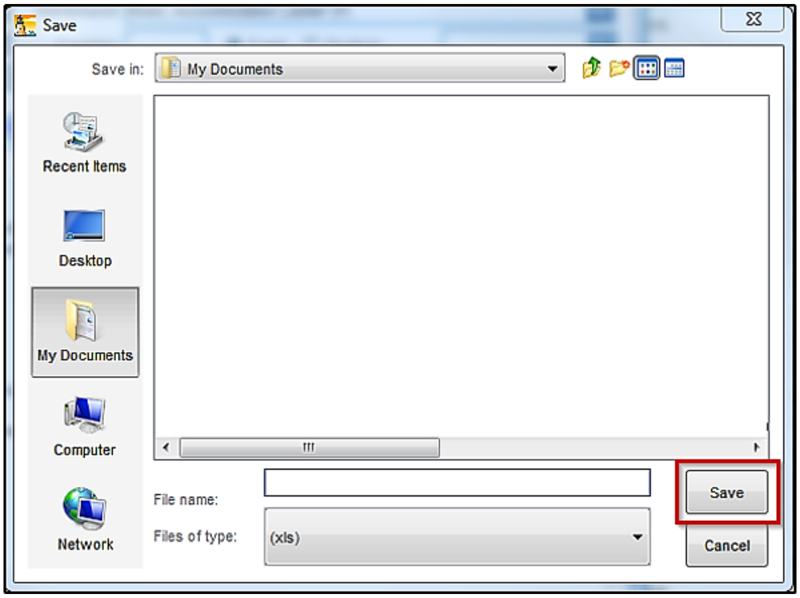
Export Failure Data

The **Export Failure Data** option is not a report. It offers the option to export failure data from the work order query to an Excel spreadsheet. An **Export** window opens when this option is selected from the **Work Order Search** window.

Click the dropdown menu at the end of the **Select Output File** field to open the **Save** window.

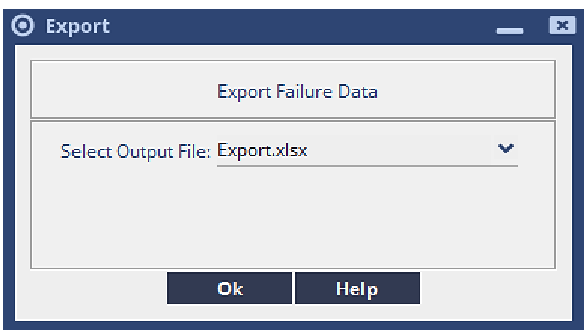


Type the path/file name of the .xls file where the information is to be exported in the **File Name** field on the **Save** window.



Click the **Save** button to close the **Save** window and copy the name of the file to the **Select Output File** field on the **Export** window.

Click the **OK** button on the **Export** window to start the export process. An **Export Progress** window opens displaying the progression of the export process.

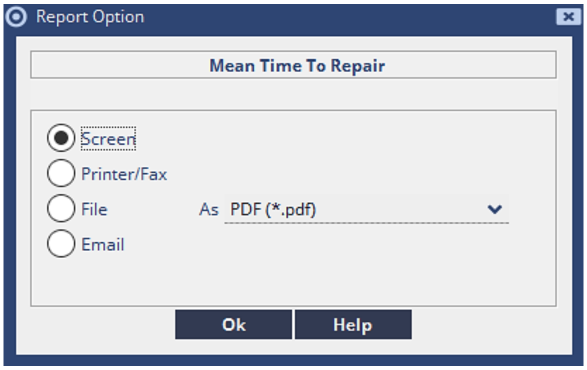


A **Notepad** window opens when the process is complete displaying the Export_Failure_Data.log. This log describes whether the export process was successful and what problems, if any, were encountered.

Locate the .xls or .xlsx file from where it was saved to open the Excel spreadsheet with the failure data.

Mean Time to Repair Report

The **Mean Time to Repair** report displays the mean time to repair a failure on systems and equipment from the work order query results. The mean time to repair is defined as the ratio between the cumulative time to repair and the number of failures over the period of time selected by the user. This period of time is selected on the **Failure Data** tab of the **Work Order** window.

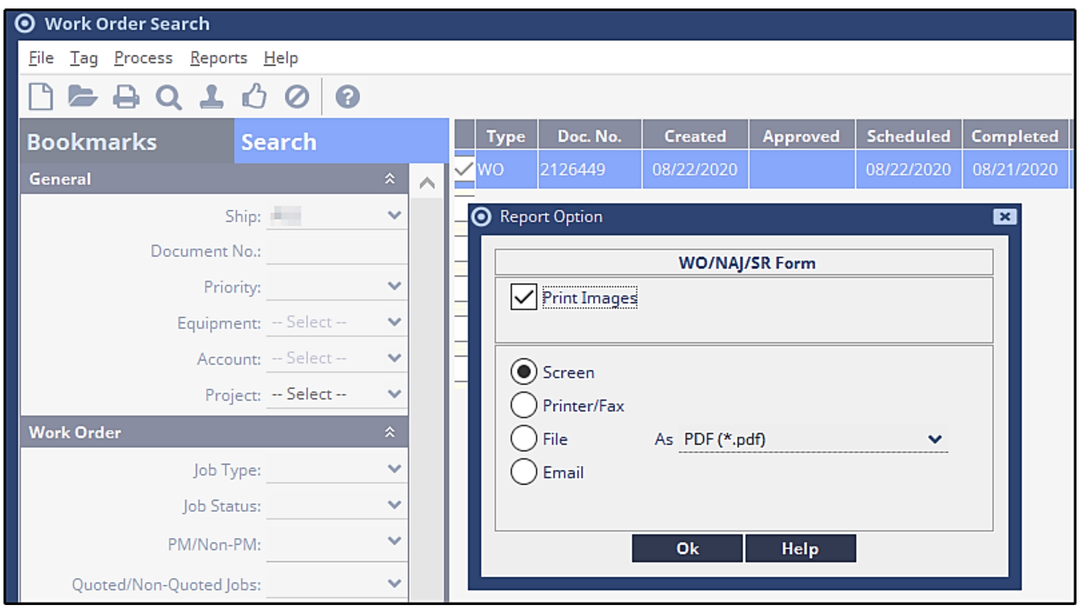


The report columns include the ship name, system and equipment that failed, failure cause, criticality, and mean time to repair.

Click the radio button to select where the report is to be sent. The options are: **Screen, Printer/Fax, File or Email**.

WO/NAJ/SR Form

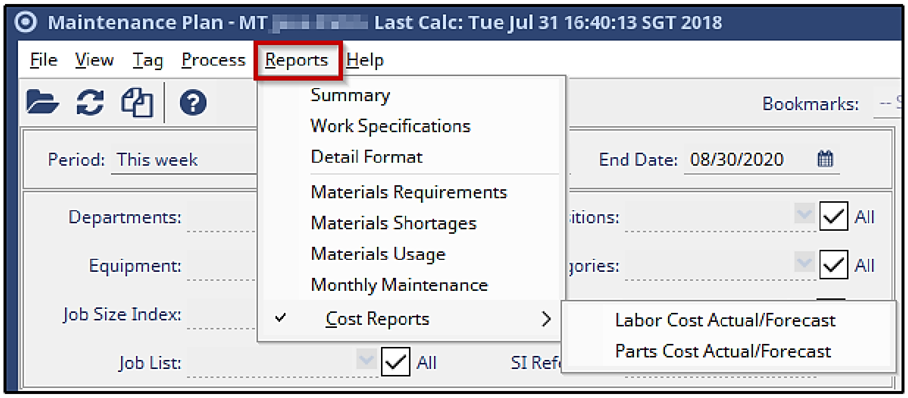
Perform the WO search and tag a workorder in order to obtain a report for this. The report simply shows the Workorder/Service Requisition Form.



Click the radio button to select where the report is to be sent. The options are: **Screen, Printer/Fax, File or Email**.

19.4 *Maintenance Plan Reports*

There are several maintenance-related reports found in the Maintenance Plan window. These are found in **Reports** from the menu bar. This is at Ship Level and will only show report information related to the ship.



Menu option: Reports→	The **Reports** menu contains options to generate different types of reports. Any report selected opens the **Report Options** window. Click the radio button to select where this report should be sent. The options are: • **Screen** – displays the formatted report on the screen. Click the **OK** button to generate the report. The report displays on the monitor when it is complete. • **Printer/Fax** – sends the report to the assigned printer. The **Print** window opens when the report is complete to select the printer. • **File** – the field next to the **File** radio button opens when this option is selected. Click on the dropdown menu to select the type of format for the saved report. Click the **OK** button. The **Save As** window opens to select the directory where the report is to be saved. • **Email** - The **Email** option allows the user to attach the report to a MS Outlook message
Summary	The **Summary** option is a report that displays the information on the **Maintenance Plan** window in report form for all tagged jobs.
Work Specifications	The **Work Specifications** option is a report displaying specifics about each tagged job. These specifics include the job category and job title.
Detail Format	The **Detail Format** option is a detailed report on all tagged jobs.
Materials Requirements	The **Materials Requirements** option is a summary report of all the materials required for the tagged jobs.
Material Shortages	The **Material Shortages** option is a summary report of material shortages of the tagged jobs. The shortages are calculated by compiling the job material requirements and then subtracting the available inventory levels.

Materials Usage	The **Materials Usage** option is a summary report of all the materials used in the tagged jobs.
Monthly Maintenance	The **Monthly Maintenance** option is a report displaying the maintenance that is due for the next month.
Cost Report – Labor Cost Actual/Forecast	On the Maintenance Plan: This report displays the crew labor cost, vendor cost, and the total cost for various documents like SO, SR, WO, SJ for both the actual labor cost and forecasted costs
Cost Report – Parts Cost Actual/Forecast	On the Maintenance Plan: This report allows users to more efficiently forecast parts requirements for upcoming maintenance or report the cost of parts consumed for completed maintenance.

19.5 *Inventory Reports*

The following **Inventory** reports are at **ship** level. See the **Purchasing** User Manual for more details on these reports.

Equipment Particulars	The **Equipment Particulars** report prints the details about each piece of equipment listed in the hierarchy. This report also includes the names of the systems with all equipment within that system listed below it.
Equipment Hierarchy	The **Equipment Hierarchy** report is a condensed version of the **Equipment Particulars** report. This report only lists the systems, the equipment in those systems, descriptions, bar code, ID code, model number, serial number, and manufacturer.
Spares List by Equipment	The **Spares List by Equipment** report lists the total inventory of the ship.
Spares List by Location	The **Spares List by Location** report is the same as the **Spares List by Equipment** report except that the report is divided by storage locations instead of equipment.
Ship's Storage Locations	The **Ship's Storage Locations** report lists all the defined storage locations on the ship and their ID codes
Inventory Adjustment	The **Inventory Adjustment** report lists all adjustments to inventory, additions, and usage, between specified dates. This includes reconciliations, work orders, transfer orders and purchase orders.
Inventory Cost	The **Inventory Cost** report lists the ship inventory with the available cost data. This includes the part name, description, location, unit price and extended price.
Quick Inventory Cost	The **Quick Inventory Cost** report is the summary that is provided on the **Inventory Cost** report. This is a summary of the total cost of all items on the **Inventory Cost** report, number of items on that report, the date the **Quick Inventory Cost** report was created, and the inventory valuation method used

Inventory Items with no Price	The **Inventory Items with no Price** report lists all the parts that contain no price data
Shelf Life Expiration Listing	The **Shelf Life Expiration Listing** report lists the maintained parts whose expiration dates are reached as of the specified date on the **Report Options** window
SI Inventory Cost	
Parts Manual by Equipment (in standard, barcode, or extended format)	The **Parts Manual by Equipment** report lists all parts and/or consumable items included in the ship's hierarchy regardless of whether they have inventory records

Section 20 Financial Reports for Budgeting Purposes

NS Enterprise has the capability to create financial reports for budgeting purposes. This analysis provides management with a real time view of expenditures over any user-specified time period. It also allows budgets to be established for each applicable combination of vessel and account. These reports relate to the development and analysis of data for the purpose of evaluating performance, internal planning and decision making.

Most of the financial reports are on the fleet level for a financial “snapshot” of all vessels; however, there are a few that are at the ship level. All these reports are generated from the **Maintenance and Purchasing** modules. There are two types of financial reports on the fleet level – **Accounts Payable** reports and **Financial** reports.

See the **Purchasing** User Manual for more details on these reports.

Section 21 Miscellaneous Items

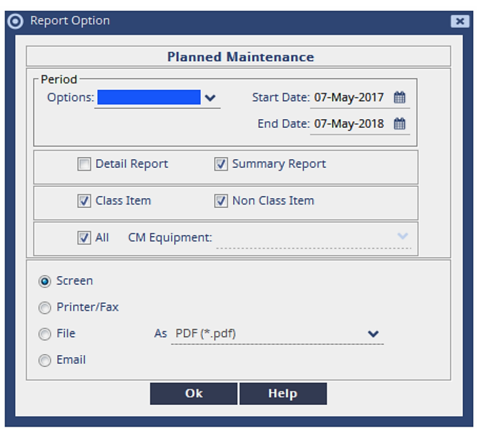
21.1 *Reports – Machinery Health*

Below tables explain the items/fields found in the **Equipment View** and **Report View** tabs in **Section 7.2 – Machinery Health**

Reports→	The **Reports** menu is available at **ship** level and contains reports that are associated with condition monitoring. Any report selected opens the **Report Options** window. Click the radio button to select where this report should be sent. The options are: • **Screen** – displays the formatted report on the screen. Click the **OK** button to generate the report. The report displays on the monitor when it is complete. • **Printer/Fax** – sends the report to the assigned printer. The **Print** window opens when the report is complete to select the printer. • **File** – the field next to the **File** radio button opens when this option is selected. Click on the dropdown menu to select the type of format for the saved report. Click the **OK** button. The **Save As** window opens to select the directory where the report is to be saved. • **Email --** The **Email** option allows the user to attach the report to a MS Outlook message

<table>
<tr>
<td>Planned Maintenance</td>
<td>
The Planned Maintenance report lists standard jobs that were completed, unscheduled work orders and failure work orders for all equipment for a specified time frame.
The other fields on this Report Option window are:

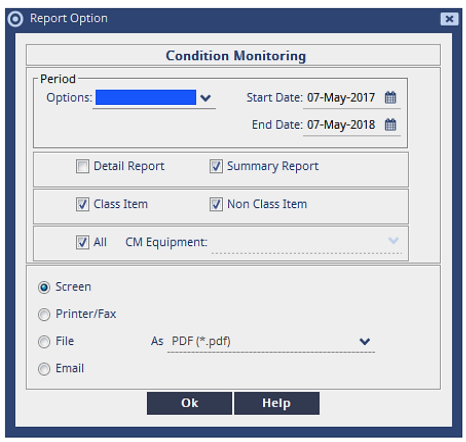
Options – click on the dropdown menu to select a pre-defined time frame for the report. The Last Year option has the current date in the End Date field and the same date from the previous year in the Start Date field. The Last Report option displays the date of the last report in the Start Date and End Date fields. Select the Custom Date option to select the time frame of the report.
Start Date / End Date – click the Calendar buttons at the end of these fields to select a custom date for the report. The Options field changes depending on the dates selected.
Detail Report check box – click the Detail Report check box to include more detailed information from the documents included on this report. This information includes the document number, date completed, description of the maintenance and information from the Findings tab.
Summary Report check box – click the Summary Report check box to only include a summary of the maintenance completed for the specified time frame. This information includes only the number of standard jobs completed, unscheduled work orders and failure work orders.
Class Item
Non-Class Item
All CM Equipment checkbox – click the All CM Equipment checkbox to include all equipment for the vessel within the selected time frame in the report.



</td>
</tr>
</table>

<table>
<tr>
<td>Condition Monitoring</td>
<td>
The Condition Monitoring report is a summary of all condition monitoring reports for a specified time frame. The other fields on this Report Option window are:

Options – refer to the Planned Maintenance description in the previous page.
Start Date / End Date – refer to the Planned Maintenance description in the previous page.
Detail Report check box – refer to the Planned Maintenance description in the previous page.
Summary Report check box – refer to the Planned Maintenance description in the previous page.
Class Item checkbox
Non-Class item checkbox
All checkbox - refer to the Planned Maintenance description in the previous page.
CM Equipment - refer to the Planned Maintenance description in the previous page.

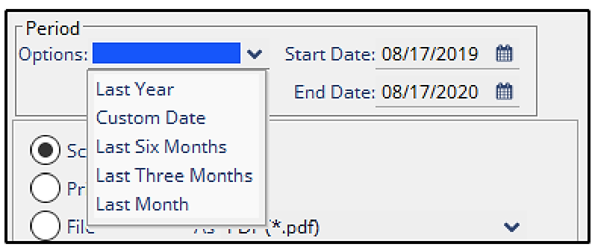


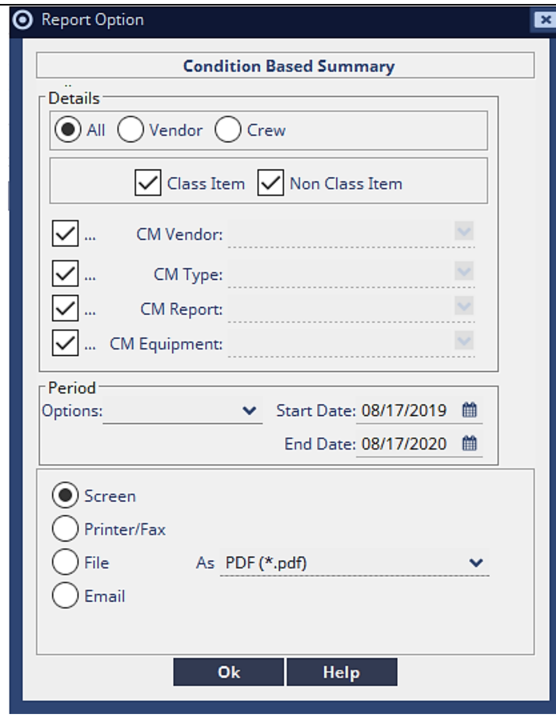
</td>
</tr>
</table>

<table>
<tr>
<td>CBM Summary</td>
<td>The CBM Summary report contains the same information as the Condition Monitoring report except that the CBM Summary report can be customized. The fields on this Report Option window are:

Source options – click the radio button to include the condition reports from vendors, crew members or both.
Class Item checkbox
Non-Class Item checkbox

CM Vendor – The All check box preceding the CM Vendor field is clicked by default to include reports from all condition monitoring analysts in the report. The CM Vendor field becomes available when the All check box is unchecked. Click the dropdown menu at the end of the field to select the vendors to be included on the report. The Companies List window opens. Click the Search tab. The condition monitoring company type is automatically listed in the Company Type field. Click the Search button. Companies with that company type are listed in the query results. Click the check box preceding the vendors to be included on the report. Click the Select button on the company list toolbar to close the list window and add the selections to the CM Vendor field.
CM Type - The All check box preceding the CM Type field is clicked by default to include all condition monitoring types in the report. The CM Type field becomes available when the All check box is unchecked. Click the dropdown menu at the end of the field to select the monitoring types to be included on the report. The Condition Monitoring Type Selection window opens with a list of monitoring types. Double click on a type to move it from the left side of the window to the right. More than one selection can be made. Click the OK button to close the Condition Monitoring Type Selection window and add the selections to the CM Type field. </td>
</tr>
</table>

CBM Summary continued	**CM Report -** The **All** check box preceding the **CM Report** field is clicked by default to include all condition monitoring reports in the report. The **CM Report** field becomes available when the **All** check box is unchecked. Click the dropdown menu at the end of the field to select the report to be included on the report. The **Condition Monitoring Report** window opens with a list of monitoring reports. Double click on a report to close the list window and add the selection to the **CM Report** field. **CM Equipment -** The **All** check box preceding the **CM Equipment** field is clicked by default to include all condition monitoring equipment in the report. The **CM Equipment** field becomes available when the **All** check box is unchecked. Click the dropdown menu at the end of the field to select the monitoring equipment to be included on the report. The **Equipment Explorer** window opens. **NOTE:** Only equipment that is set up as condition monitored is available from this window. under the **Equipment Window** in the **Add or Edit Equipment** in the **Equipment Explorer** portion of the **Hierarchy** section of this manual for details. Click the plus sign (+) preceding each system to display the equipment under the system. Click the check box for all equipment to be included in the query. Click the **Select** button to close the **Equipment Explorer** window and add the selections to the **CM Equipment** field. **Period Options** – click on the dropdown menu to select a pre-defined time frame for the report.  The current date is entered in the **End Date** field and the date in the **Start Date** field is determined by the selection made in the field. Select the **Custom Date** option to select the time frame of the report. **Start Date / End Date** – click the **Calendar** buttons at the end of these fields to select a custom date for the report. The **Options** field changes depending on the dates selected.

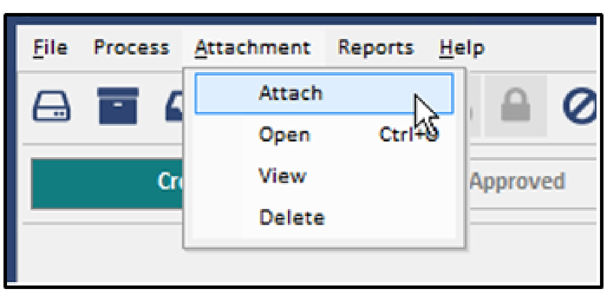
CBM Summary continued	

21.2 *File Attachments Tab*

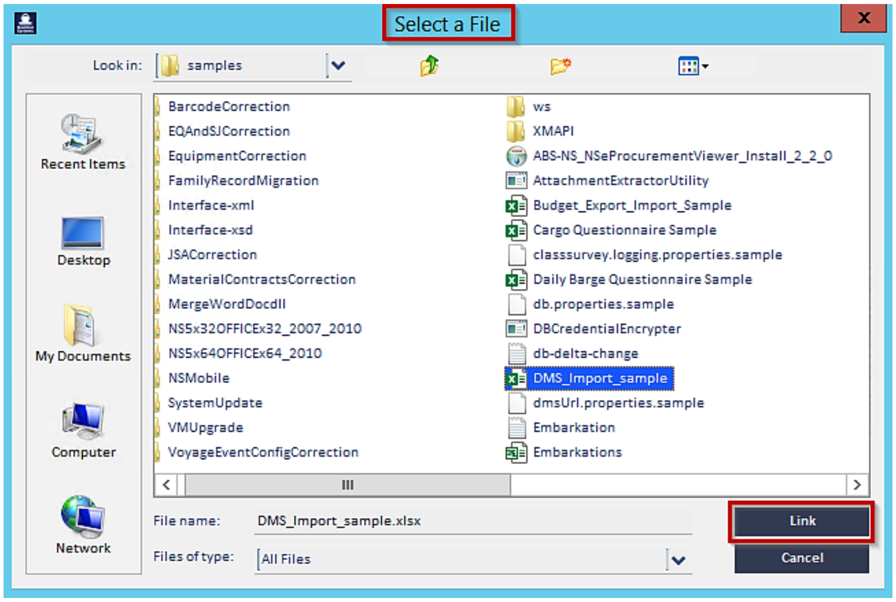
The **File Attachments** tab is used to add attachments to any NS document. Attachments can be any type of file including documentation, drawings, or spreadsheets. The **File Attachments** label on the tab turns blue and an icon is present when entries are made on the tab.

The **File Attachments** tab is universal to most **NS** Documents. Any kind of file can be attached to the documents in NS application through the **File Attachments** tab.

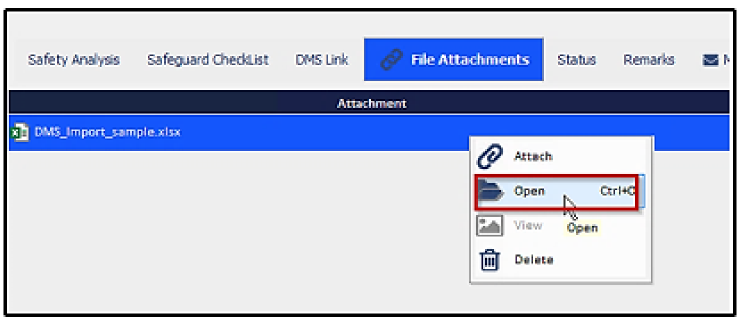
1. Right-click on the **File Attachment** field and select the action OR click **Attachment** from the menu bar and select the action.



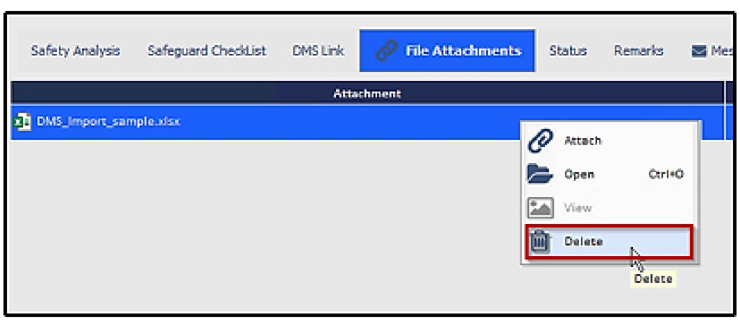
- To Attach, select **Attach** from the actions. A folder where the user can select a file will be shown on screen. Select the file and click **Link** button.



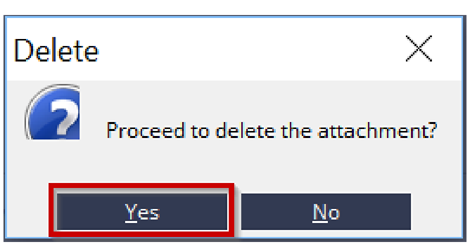
- To **Open**, select the file from the **File Attachment** tab, right-click on the file and select **Open**.



- To **Delete**, select the file from the **File Attachment** tab, right-click on the file and select **Delete**.



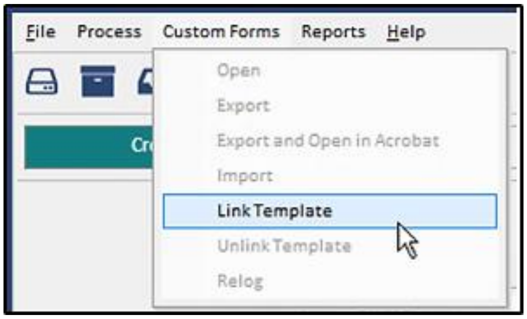
- A Proceed to delete attachment confirmation message will be shown on screen, select **Yes**.



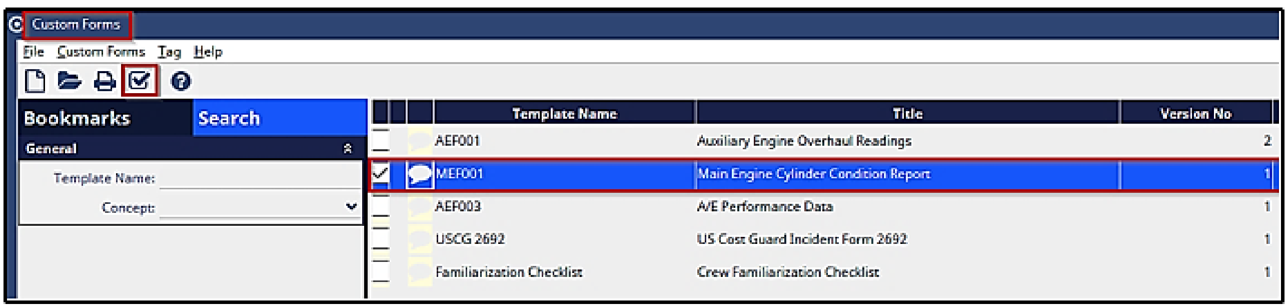
21.3 *Custom Forms Tab*

The **Custom Forms** tab allows users to Open, Import, Export and Open in Adobe, import, link/unlink a Custom Form template to the document.

1. Right-click on the **Custom Forms** field and select the action OR click **Custom Forms** from the menu bar and select **Link Template**.



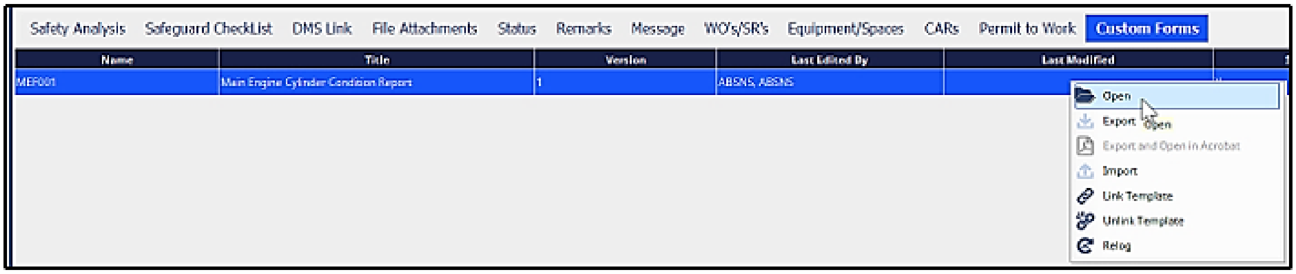
2. The **Custom Forms** window will appear on screen. Tick the box preceding the template and click **Select** icon from the toolbar.



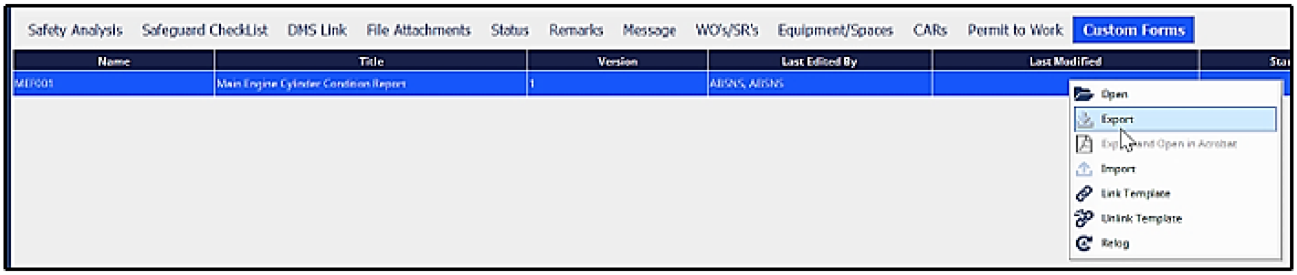
3. A confirmation message will appear, click **Ok**.

4. To **Unlink**, follow the steps in Linking Template, but this time, **Untick** the box preceding the template.

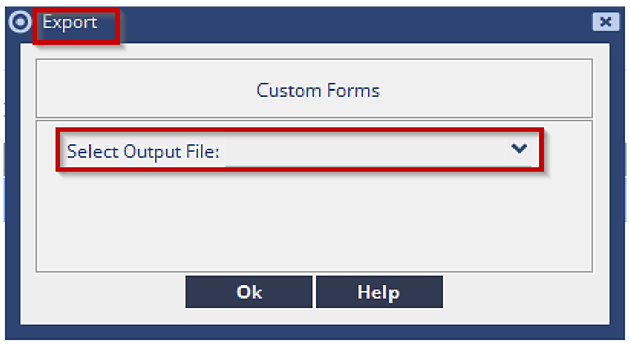
5. To **Open**, select the template from the Custom Forms tab. Right-click and select **Open** to open the file.



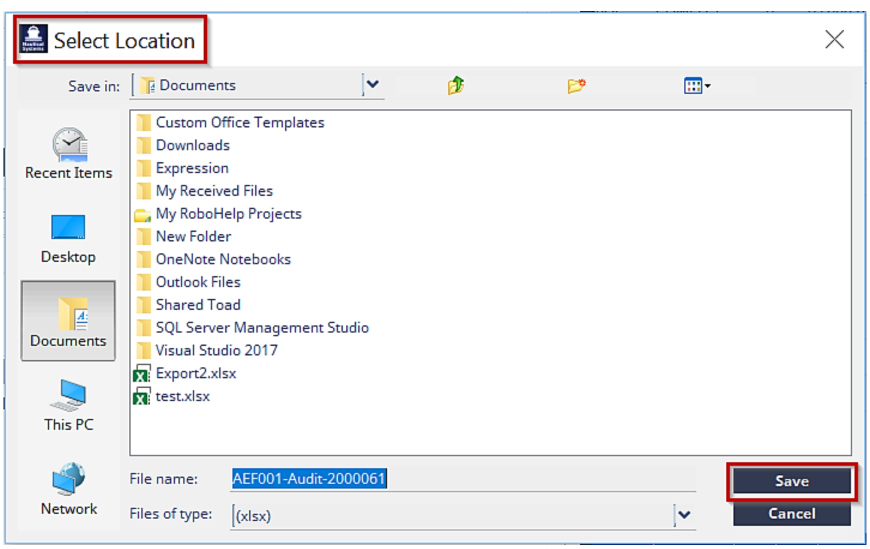
2. To **Export**, select the template from the Custom Forms tab. Right-click and select Export.



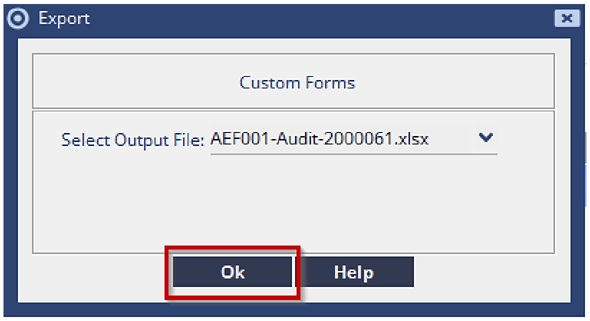
a. The Export window will appear on screen. Select Output File from the dropdown menu.



b. The Select Location window will appear on screen. Select the location where the file to export will be saved. Click **Save** to close the window.

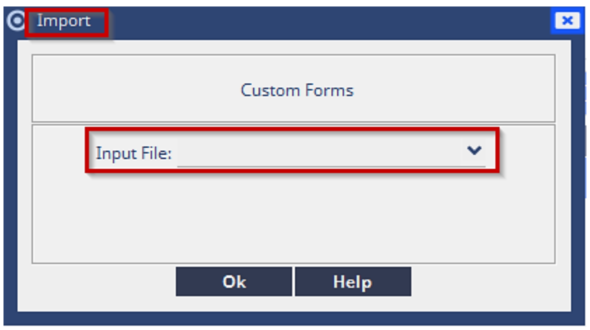


c. Click **Ok**.

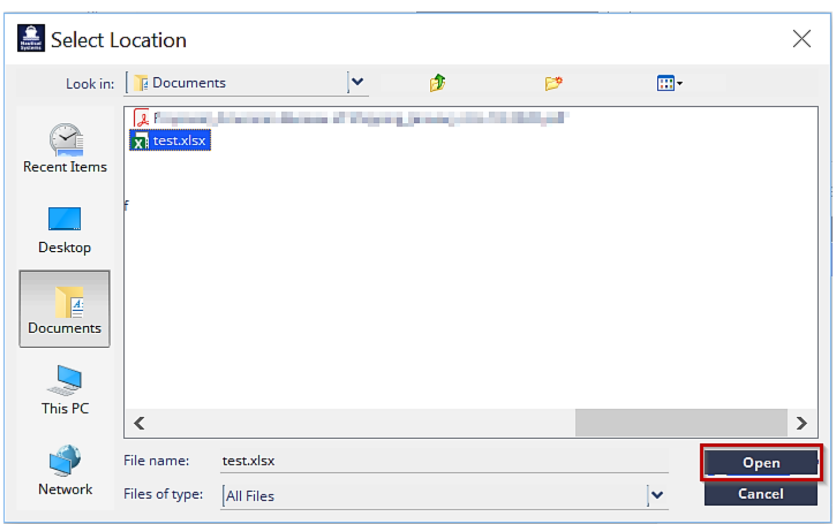


3. To **Import**, select the template from the Custom Forms tab. Right-click and select Import.

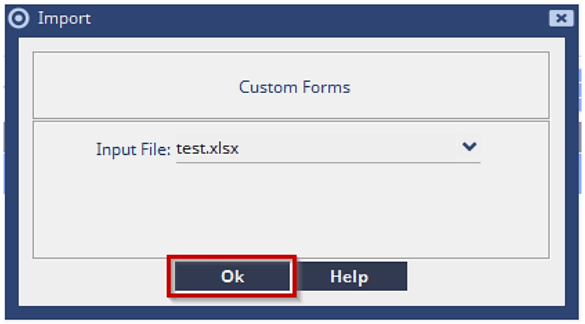
    a. The **Import** window will appear on screen. Select **Input File** from the dropdown menu.



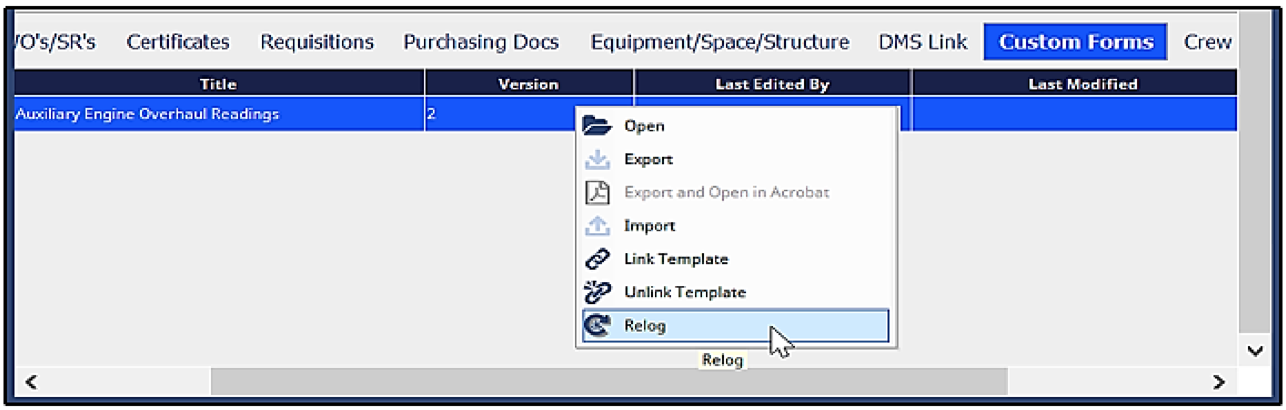
    b. The Select Location window will appear on screen. Select the location where the file to import is located. Click **Open** to close the window.



    c. Click **Ok**.



4. To **Relog**, select the template from the Custom Forms tab. Right-click and select Relog.

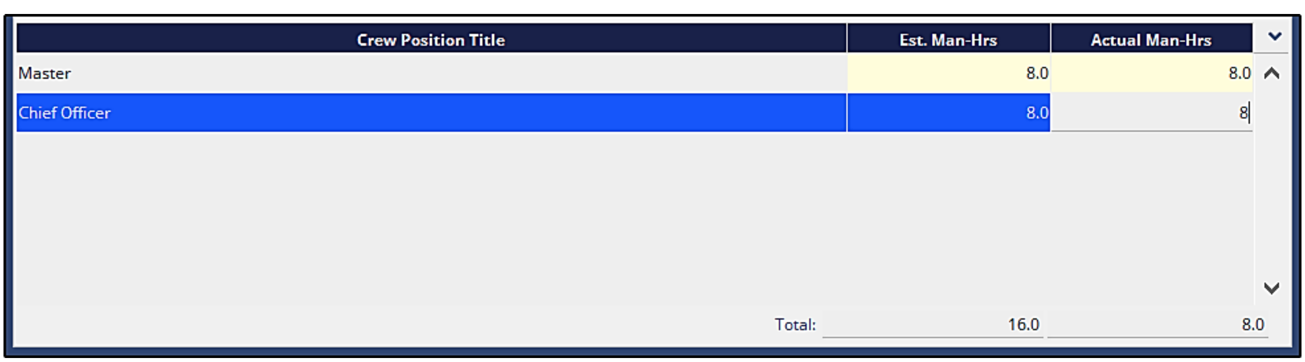


21.4 *Resources Tab*

The **Resources** tab on the **Standard Job** window has the information from the **Resources Required** tab when the standard job was created. This information can be changed by authorized users.

Click the **Resources** tab. Enter the man hours actually used for this work. Users can add additional resources or deselect resources that were originally designated.

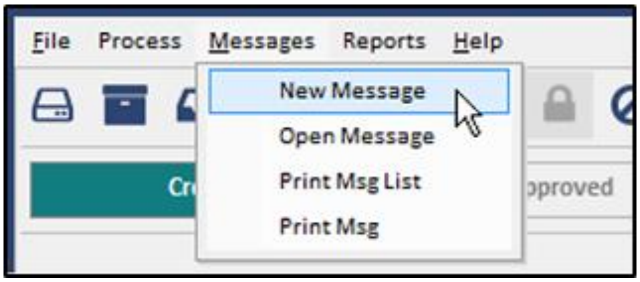
It is important to enter the man hours used, as this helps in planning future work, provides more valuable maintenance history, and allows for better budget forecasting.



21.5 *Messages Tab*

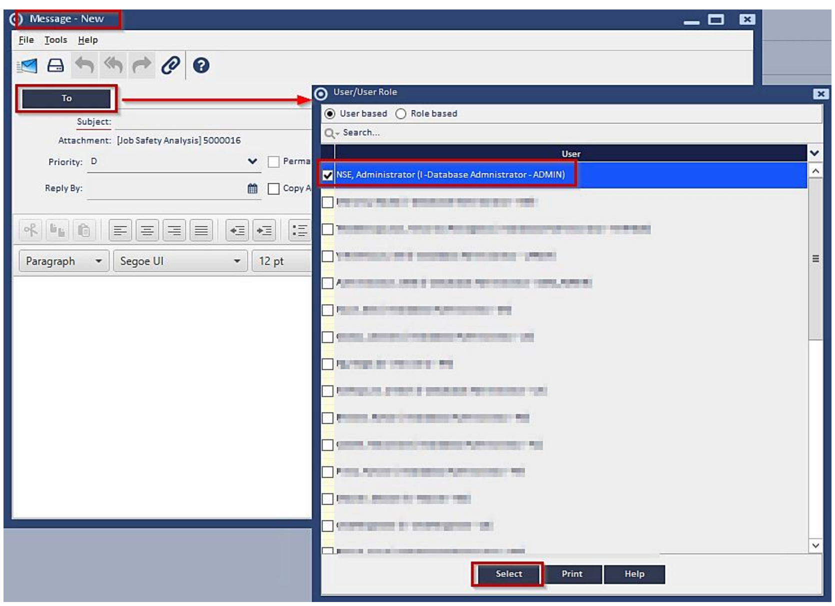
The **Messages** tab is a type of email system. It provides a way to send messages between users in reference to the piece of equipment. It is different from a regular email system because it is specific to **NS Enterprise** and the section from which the message is created. A message from this equipment **Message** tab can only be retrieved from the same equipment **Message** tab by the recipient.

1. Right-click on the **Message** field and select the action OR click **Messages** from the menu bar and select the action.

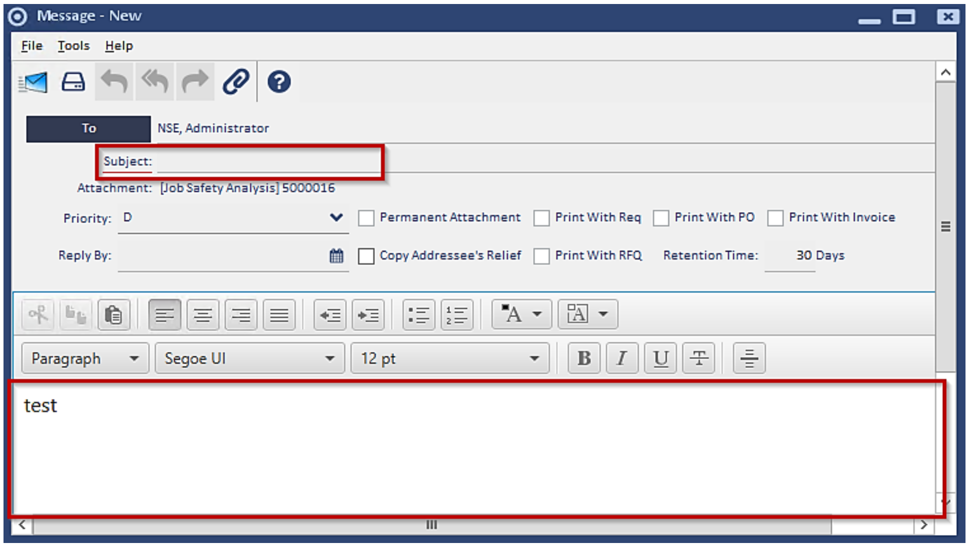


2. For **New Message,** select New Message from the options. **Message-New** window will be shown on screen.

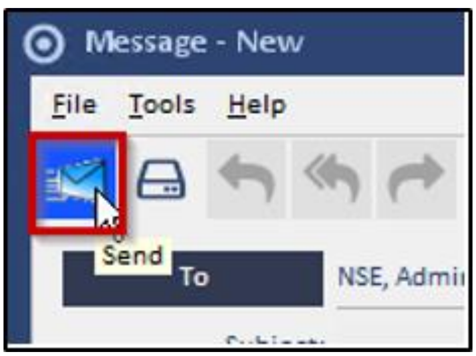
    a. Click **To** button. **User/User Role** window will appear on screen. Tick the box preceding the name of the recipient and click **Select** button.



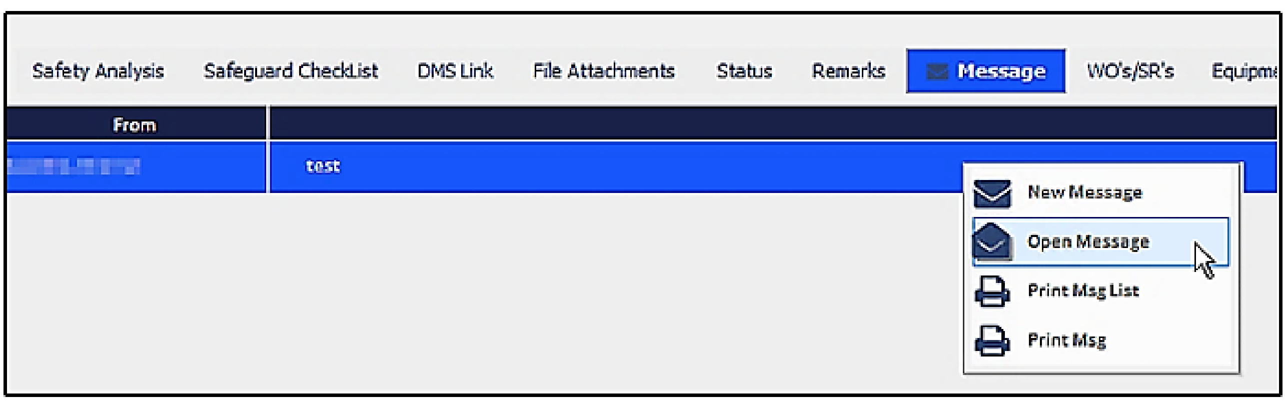
    b. Enter the **Subject.** Enter the body of the message in the space provided.



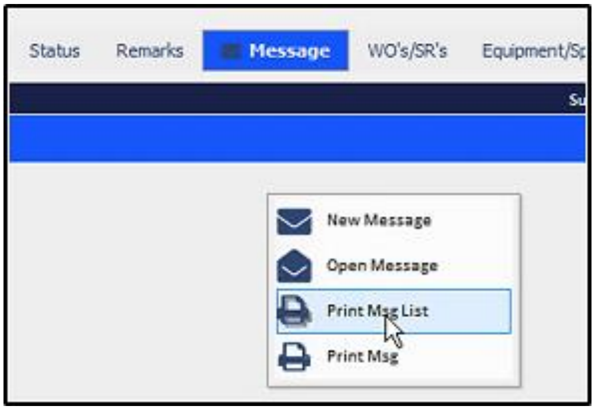
c. Click **Send** icon.



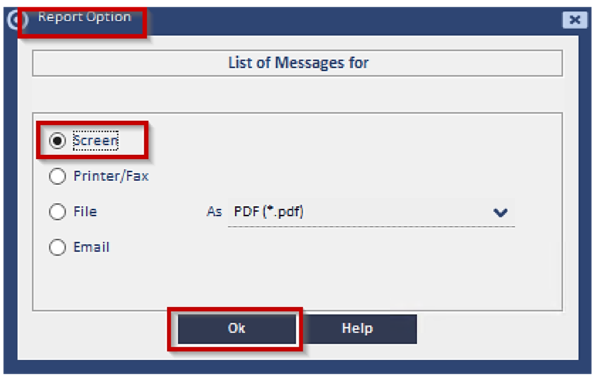
3. To **Open Message**, select the message from the Message tab. Right-click and select **Open Message.**



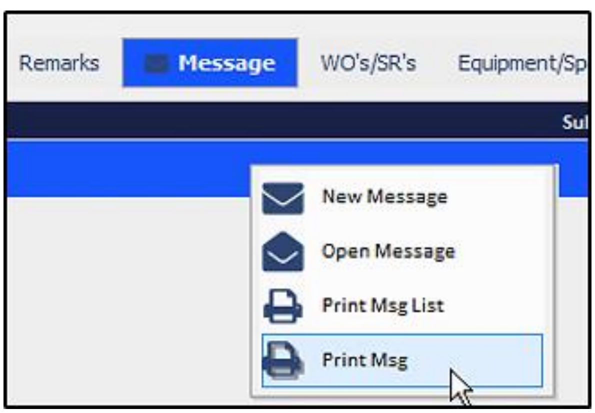
4. To **Print Msg List**, select Print Msg List.



a. The **Report Option** window will appear. Tick the radio button of the preferred option, then click **Ok**.



5. To **Print Msg**, select Print Msg.



a. The **Report Option** window will appear. Tick the radio button of the preferred option, then click **Ok**.

21.6 *Miscellaneous Work Tab*

The **Miscellaneous Work** tab lists all miscellaneous standard jobs. The miscellaneous standard job is a type of standard job. It is work of a general nature such as painting, sandblasting or anode replacement that is not associated with a specifically identifiable item on the ship like a piece of equipment or space. However, miscellaneous work can be cross-referenced with multiple items such as equipment or space so that when the standard job is completed, these areas are automatically updated with maintenance history. The job schedule can only be based on calendar interval.

The fields on the **Miscellaneous Work** tab are:

- **Ship Name** – The name of the ship
- **Job Name** – The job title on the miscellaneous standard job
- **Dormant** – The job status. A “No” indicates that the job is active.
- **Last Done** – The date of the last time the job was performed
- **Interval** – The time frame between when the job was last performed until the next time it needs to be performed.

Double click the standard job in the **Miscellaneous Work** tab and it opens. Only authorized users can enter or change information on the **Standard Job** window.

21.7 *Materials Tab*

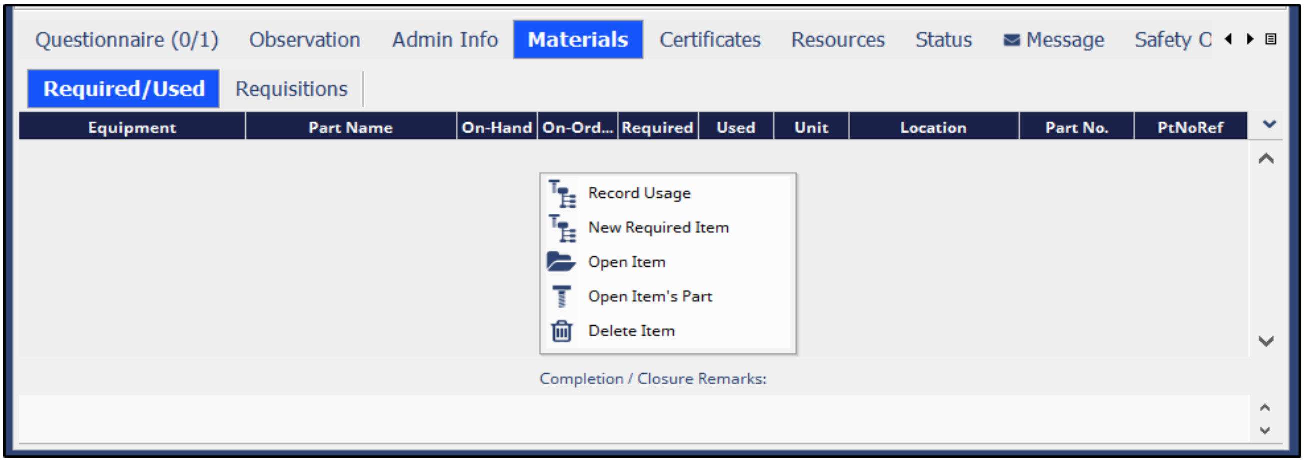
b. On the **Materials** tab, right-click on the field and choose **New Required Item**.

  - This opens an **Equipment Explorer** window in the Purchasing view. The Purchasing View displays the spares for that equipment if there is equipment connected. The list starts at the top of the hierarchy if no equipment is connected.

c. Update the quantity of the spares required to complete the job.

  - The item the user linked is listed in the **Required/Used** section of the **Materials** tab, as well as the current inventory level.

If necessary, create a requisition linked to the WO from the **Materials** tab for any missing items. See **Creating a Requisition from a Work Order** in the **Purchasing User Manual.**

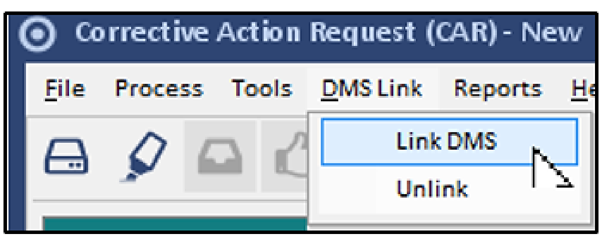


21.8 *DMS Link Tab*

The **DMS Link** tab is used to attach documents from the **Document Management System (DMS)** module to any document in NS that requires it. The **Document Management System** module is one of the web-based modules in **NS Enterprise**. It is used to store, organize, and track electronic documents and images. These documents can then be linked to equipment and documents within **NS Enterprise**.

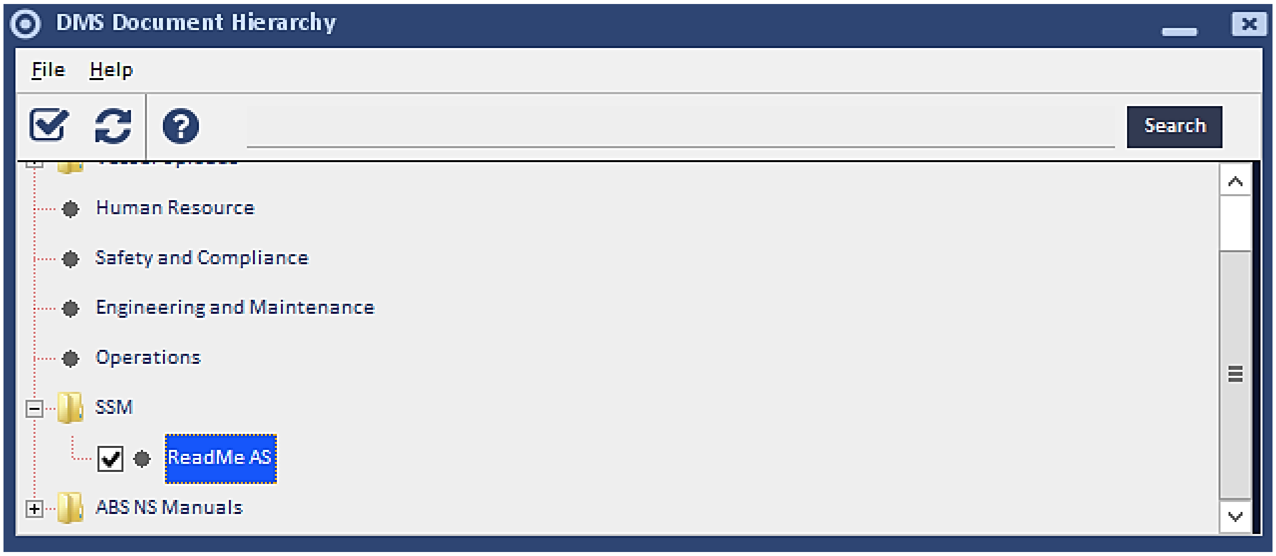
It is important to ensure that the DMS web app configuration has the correct server and IP address.

1. To attach a document from the DMS Module, click DMS Link from the Menu bar and select Link DMS or right-click on the DMS Link tab and select Link DMS.



NOTE: The **DMS Link** tab is only available if the **Document Management System** module is part of your company's **NS** suite of modules.

2. The DMS Document Hierarchy window will be shown on screen.



3. Navigate through the folders until the document to be linked is located.
4. Click the check box preceding the documents to be linked.
5. Click the **Select** button to close the **Document Management System** window and add the selections to the **DMS Link** tab.

Unlink a Document

1. Highlight a document on the **DMS Link** tab.
2. Click **Unlink** button from the Menu bar and select **Unlink**. User may also right-click on the DMS Link and select **Unlink**. Process is the same as in linking a document, but this time, user will uncheck the box to unlink the document.