



ramco



Ramco Aviation Solution

Version 5.7

User Guide

Technical Documents

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The documentation has been provided for the entire Aviation solution, although only a part of the entire solution may be deployed at the customer site, in accordance with the license agreement between the customer and Ramco Systems Limited. Therefore, the documentation made available to the customer may refer to features that are not present in the solution purchased / deployed at the customer site.

About this manual

This manual briefly describes the basic processes and functions in Ramco Aviation Solution.

Who Should Read This Manual

This manual is intended for users who are managing the Aviation industry processes and are new to Ramco Aviation Solution.

This manual assumes that the user is familiar with the Aviation Industry nomenclatures and systems based software.

How To Use This Manual

Ramco Aviation Solution provides extensive Online Help that contains detailed instructions on how to use the application. Users are suggested to use this manual for specific references, along with the Online Help. This manual contains enough information to help the users perform the basic tasks and points toward the Online Help for more detailed information.

How This Manual is organized

The User Guide is divided into 2 chapters and index. Given below is a brief run-through of what each chapter consists of.

Chapter 1 provides an overview of the entire **Technical Documents** business process. The sub processes are explained in the remaining chapters.

Chapter 2 focuses on the **Fault Manual Setup** sub process.

The **Index** offers a quick reference to selected words used in the manual.

Document Conventions

- ▶ The data entry has been explained taking into account the "Create" business activity. Specific references (if any) to any other business activity such as "Modify" and "View" are given as "Note" at the appropriate places.
- ▶ **Boldface** is used to denote commands and user interface labels.
Example: Enter **Company Code** and click the **Get Details** pushbutton.
- ▶ *Italics* used for references.
Example: *See Figure 1.1.*
- ▶ The  icon is used for Notes, to convey additional information.

Reference Documentation

This User Guide is part of the documentation set that comes with Ramco Aviation Solution.

The documentation is generally provided in two forms:

- ▶ The Documentation CD in Adobe® Systems' Portable Document Format (PDF).
- ▶ Context-sensitive Online Help information accessible from the application screens.

Whom To Contact For Queries

Please locate the nearest office for your geographical area from www.ramco.com for assistance.

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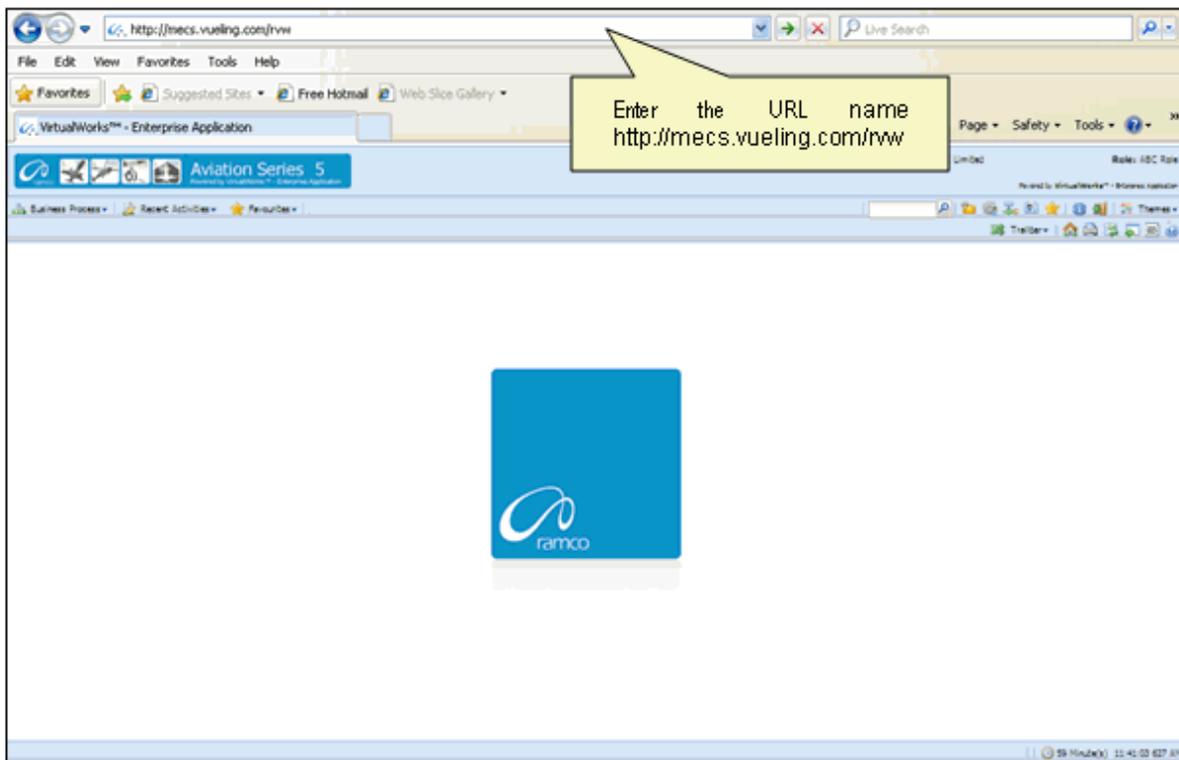
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Using Ramco Aviation Solution

This section explains the basics of using a Ramco Aviation Solution web page. At the end of this section, you will be familiar with the concepts based on which Ramco Aviation Solution works, and also understand how to navigate around Ramco Aviation Solution.

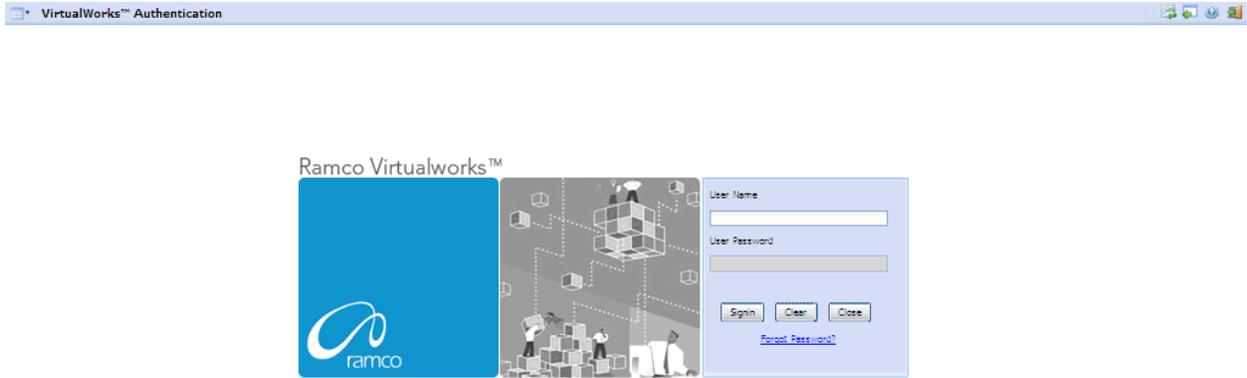
Logging into Ramco Aviation Solution for the first time

Enter the URL of the Ramco Aviation Solution in the Internet Explorer window. For example, URL: <http://meecs.vueling.com/rvw>.

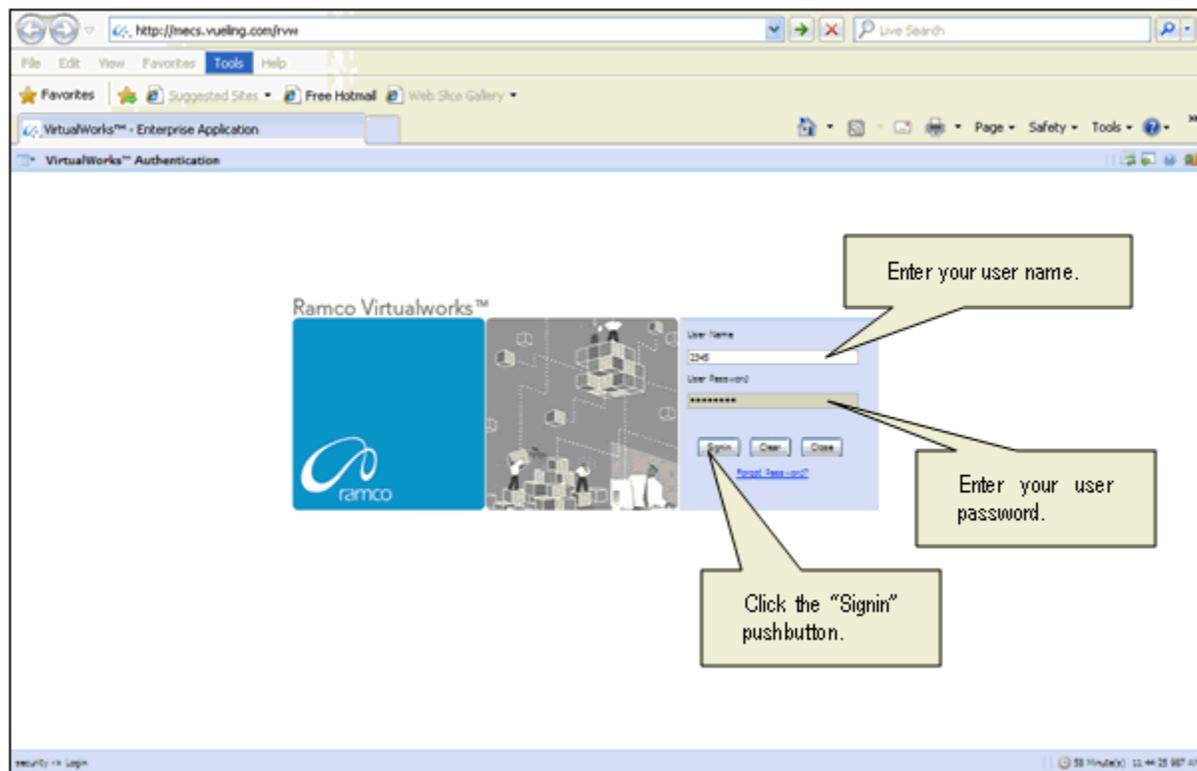


 *Note: The recommended browser platform for Ramco Aviation Solution is IE8.*
The Login page appears.

Using Ramco Aviation Solution



Enter your **User Name** and **User Password** in the Login page, which have been provided by the System Administrator. Refer to the figure below.



User Name: A unique identifier name or code for logging into Ramco Aviation Solution.

Password: A sequence of characters which, when combined with the user name, ensures that only the user with this password and user name can access Ramco Aviation Solution, where Ramco Aviation Solution offers the user a predefined set of business processes and components.

Passwords must be difficult to guess, and kept secret by the user.

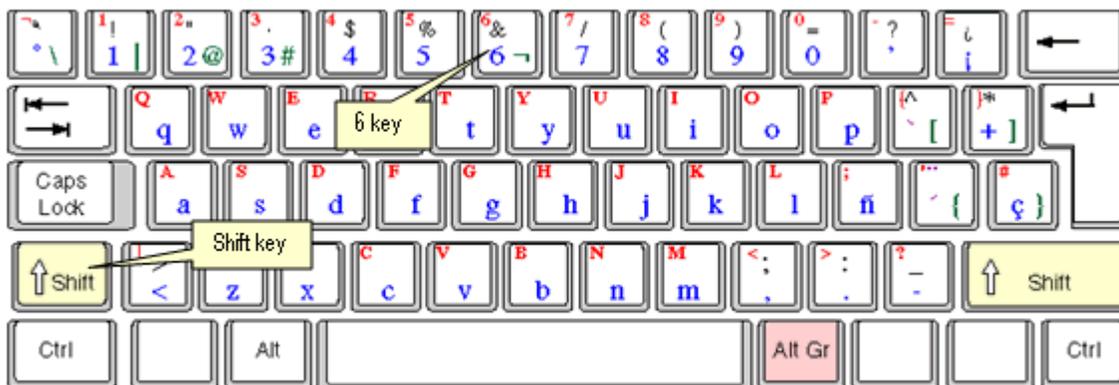
What is a Special Character?

A special character is a non-numeric character (not in the a-z alphabet and 0-9 numbers). Common examples are “!”, “@”, “#”, “\$”, “%”, “^”, “&”, “*”.



You can type the special characters by pressing Shift + the required character key.

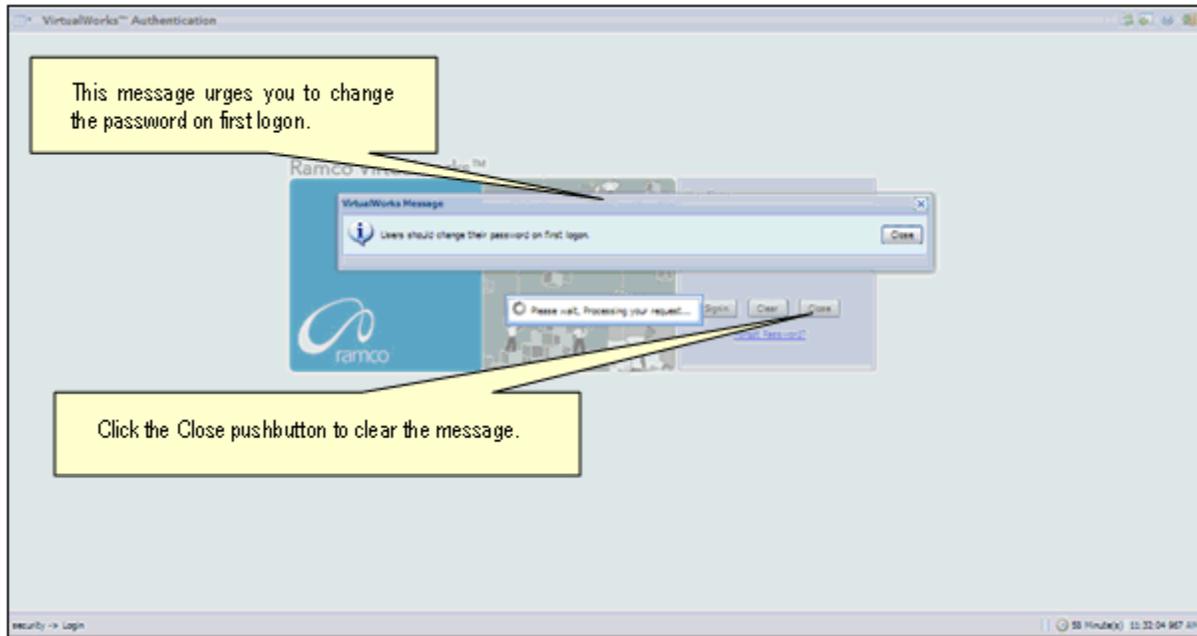
Example: If you want to type “&” as the special character, then press Shift button + 6 Key.



After entering the User Name and Password, click the **Login** pushbutton.

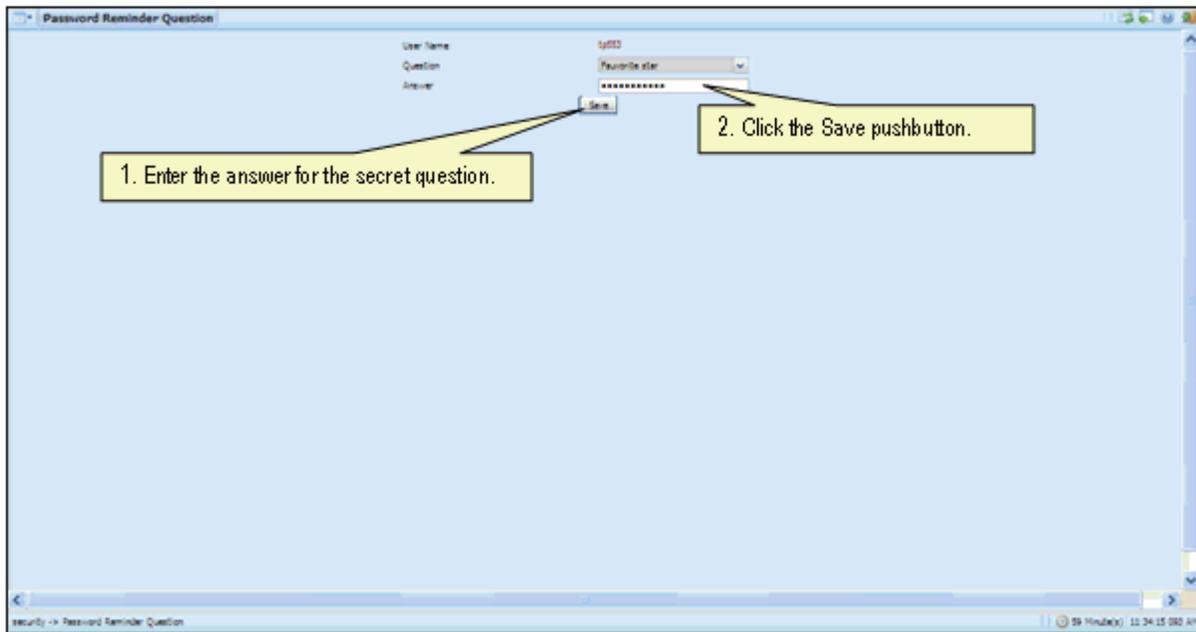
The system will prompt you to change the password, because it is your first login. Refer to the following figure.

Using Ramco Aviation Solution



Close the window by clicking the **Close** pushbutton.

The **Password Reminder Question** screen appears. The system prompts you to provide an answer to the question.

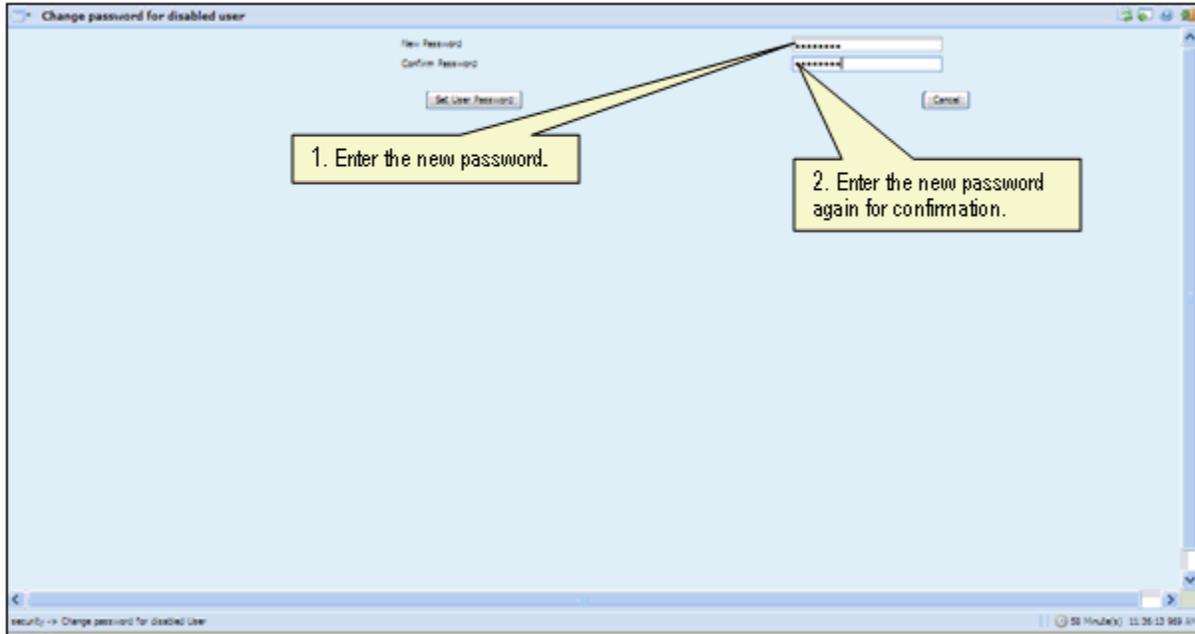


Enter the **answer**.

Click the **Save** pushbutton to save the answer.

 *Note: The answer provided here will be used for changing the password if you forget your password.*

The "Change Password" screen appears.

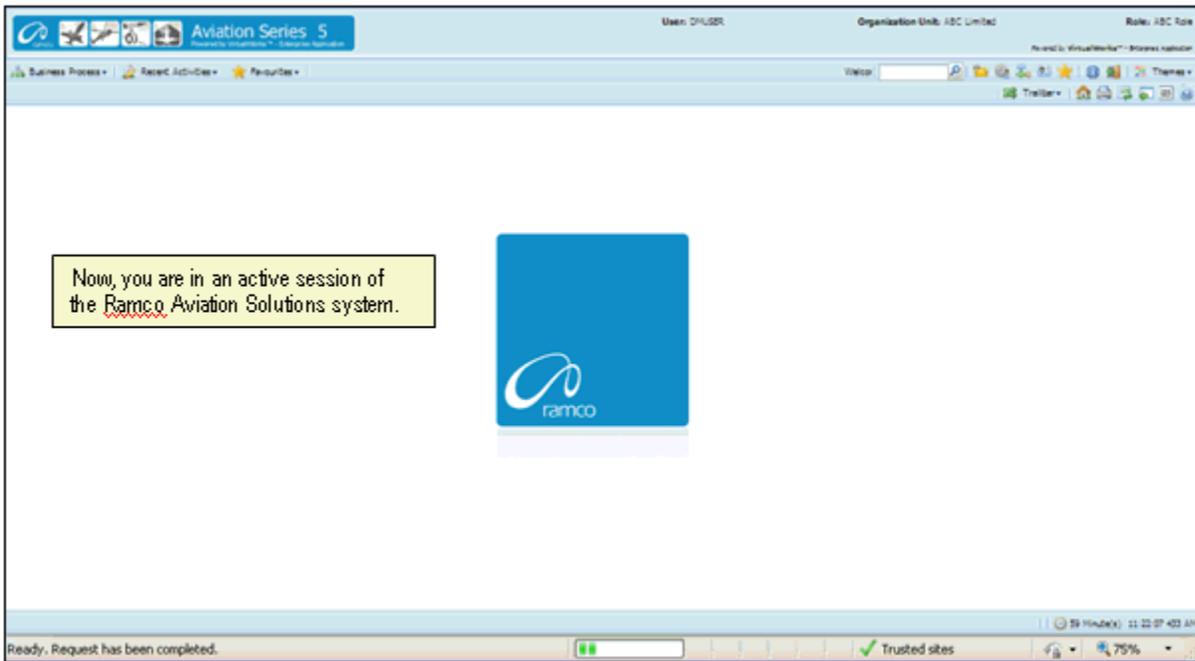


Enter a password of your choice. Ensure that the new password comprises a minimum of six characters and a maximum of 15 characters and includes a special character as well.

Example of passwords: abcd&, abcd*, abc@best

Click the **Set User Password** pushbutton, to save the password.

The home page of Ramco Aviation Solution appears. You can now access the activities for which you have permission, from this page.



Ramco Aviation Solution Home page

Welcome to Ramco Aviation Solutions!

You are now in the Ramco Aviation Solutions Home page. This is the first page you encounter, after successfully logging into the application.



From now on, your user name, organization unit and role are displayed on the top right of every Ramco Web page.

Default login details

This section, which occupies the area immediately below the address bar and to the right, side, shows:

- ▶ Your user name
- ▶ The default role to which your user name is mapped
- ▶ The organization unit mapped to the default role

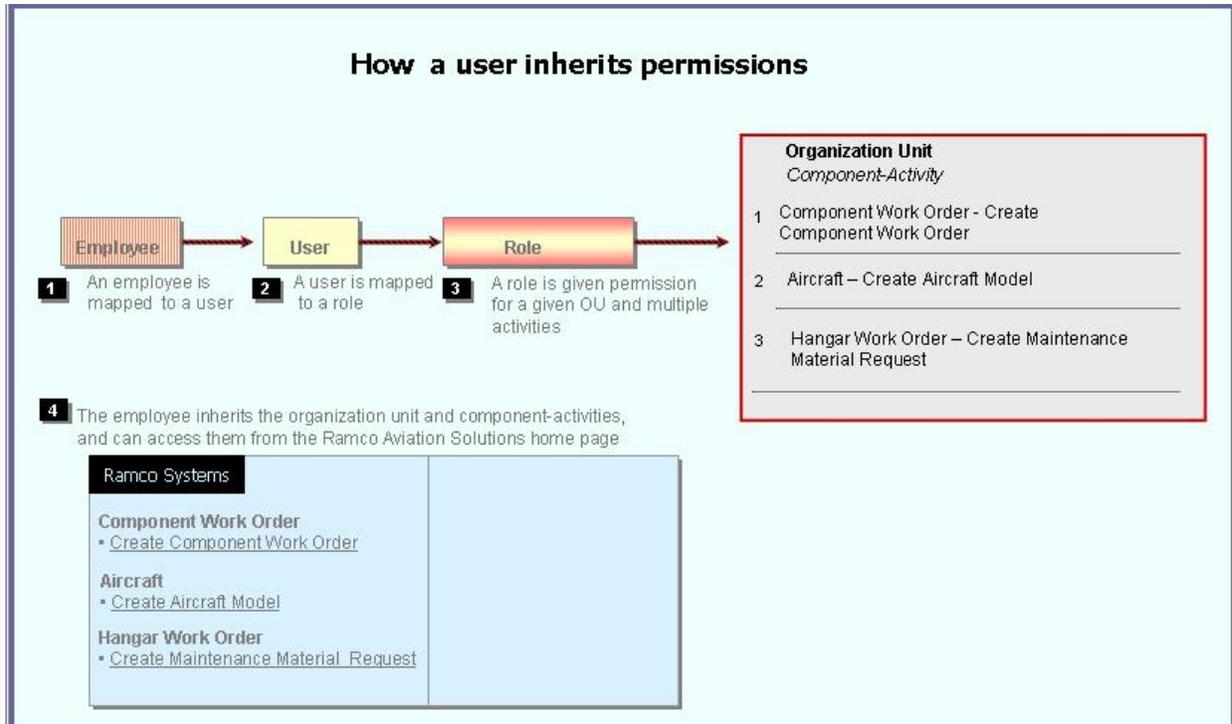
How a user inherits permissions

During deployment, each user name can be mapped or linked to multiple role-organization unit combinations. Shown below are a few examples.

User Name	Role	Organization Unit
John	Configuration Administrator	Tech Records-Indianapolis
John	Engineering Manager	Engineering-New York
John	HR User	Engineering-New York
Andrea	Stores Clerk	Central Warehouse-Los Angeles
Andrea	Shift In charge	Line Station-Chicago
Daniel	Shop Maintenance Manager	Maintenance Shop-Memphis
Daniel	Project Engineer	Head office-New York

For each user name-role-organization unit combination, permission is given to a set of activities. These activities could be across the components deployed in the organization unit. Each user name-role-organization unit combination, therefore, refers to access to (i) a specific organization unit and (ii) one or more activities.

Although a user name can be mapped to multiple role-organization units, the user is assigned a default role-organization unit. This is accomplished through the Setup Defaults icon on the Web toolbar. Therefore, when you login with a given user name, the system retrieves the default role-organization unit and displays it to the right of the page.

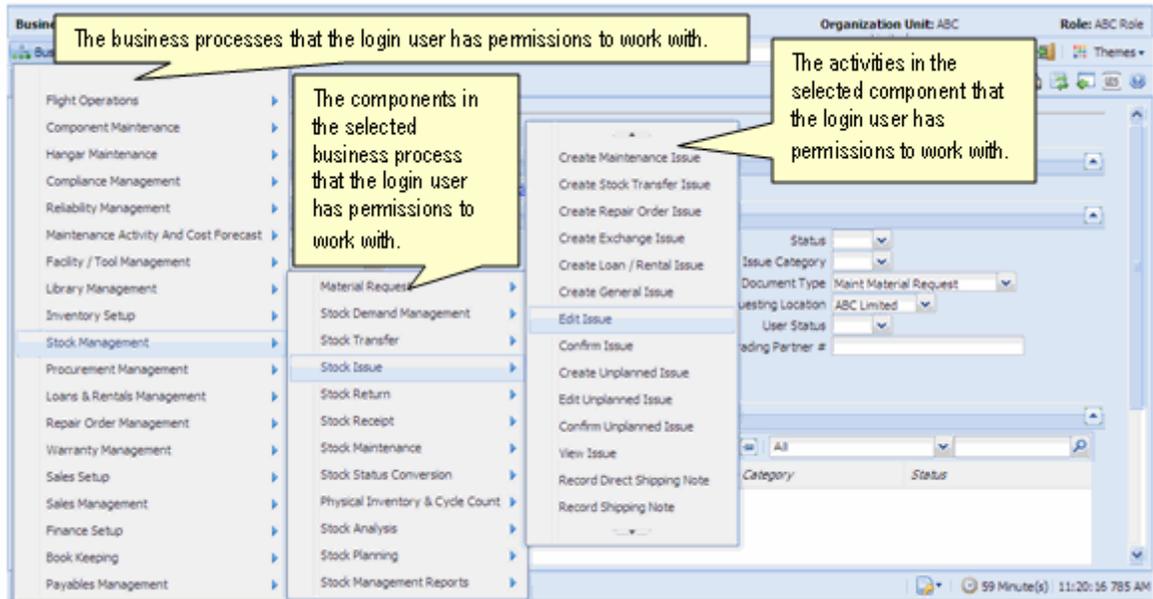


Note that there is no separate permission to be obtained for a business process or a component. When you log into a permitted organization unit, the system displays all the business processes and components whose activities your role is permitted to access.

For example, your role may be given permission to two activities under the **Component Work Order** component, and one activity under the **Aircraft** component. When you log in, the system will show the following business processes: **Component Work Order** and **Aircraft**.

- ▶ Under the **Component Work Order** business process, the **Create Component Work Order** and **Edit Component Work Order** activities for which you have permission are displayed.
- ▶ Under the **Aircraft** business process, the **Create Aircraft Record** activity for which you have permission is displayed.

Using Ramco Aviation Solution



Business Processes and Activities

Immediately below your user name, the system displays two rows of icons in the Web page toolbar.

On the left half of the first row, there will be three adjacent tabs: they are labeled Business Processes, Recent Activities and Favorites.

 Business Process ▼	<p>Those business processes to which your role-organization unit has been entitled permission.</p> <p>Click this icon at the left top of the Web page to find the business process list.</p>
 Recent Activities ▼	<p>The most recent list of business activities that you have visited. These activities could be across components and even business processes</p> <p>Click any link, to directly launch the recently visited page.</p>
 Favourites ▼	<p>This list, represented by the third icon from the left in the Web toolbar, shows those activities already earmarked as your favorites, using the Favorite icon on the Web toolbar. They will be activities to which your user name-role has been entitled permission.</p> <p>An activity under Favorites provides you a short cut to directly select it after you log into Ramco Aviation Solution, without having to search for the business process and component under which it is logically arranged.</p> <p>Pull down the Favorites menu and select the required activity. The activity is instantly invoked and the first page of the activity appears. This saves users time and effort of traversing to a Web page from the business process, the component and then the activity.</p>

To start an activity under the Recent Activities or Favorites tabs

Select an activity listed under the Recent Activities or Favorites tab.

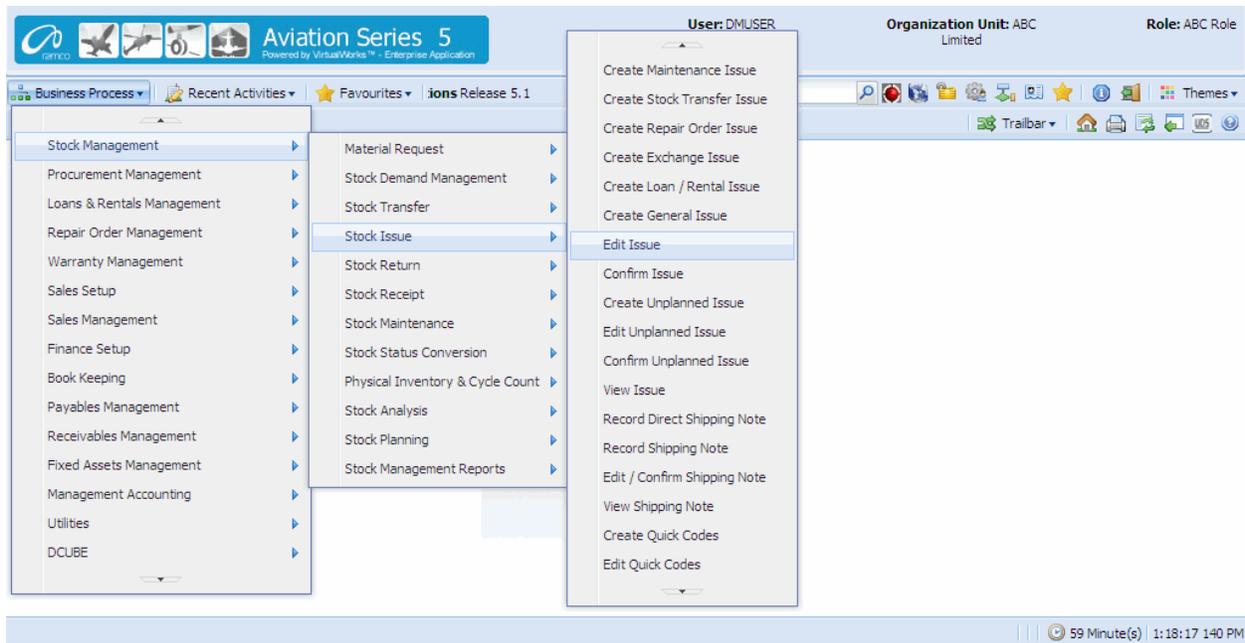
The system displays the first page of the selected activity.

For instance, if the activity Create Component Work Order is listed under the Favorites tab and you select it, the system will display the Select Component page.

To start a business process under the Business Process tab

Select any business process listed under the Business Process tab.

The system displays the components of the selected business process, in the submenu to the right of the selected business process.



Before using a Ramco Aviation Solution Web page

Components, activities and tasks

Before you get started on the Ramco Aviation Solution Web page, you need to know a few concepts based on which Ramco Aviation Solution works. These can be summed up in the few key words that follow.

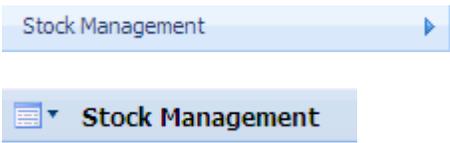
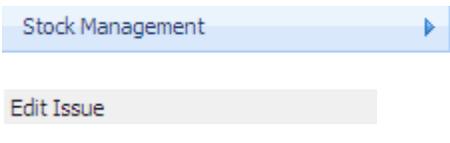
- ▶ Business process
- ▶ Business component
- ▶ Activity
- ▶ Web page or user interface

A business process is a collection of interrelated components that pertain to a specific business domain/department, such as Book Keeping, Hangar Maintenance, Stock management, Human Resources Management, etc.

A business component refers to a set of logical actions or transactions that happen during the course of a business process. For example, components Stock Issue, Stock Return and Stock Receipt components are classified under the Stock Management BPC. Likewise, Journal Voucher, Currency Revaluation and Bank Reconciliation components are grouped under the Book Keeping BPC.

An activity refers to any task/transaction under a business component. For example, Create Maintenance Issue, Confirm Issue and Record Shipping Note activities under the

Stock Issue component enable users to perform specific functions of the Stock Issue process.

<p>Business Component</p>		<p>Click the arrow of any business process to display the list of components.</p> <p>Alternatively, click this icon to display the list of components for the previously selected business process.</p>
<p>Activity</p>		<p>Click the right arrow for any component to view the list of activities.</p> <p>Click the activity to view the first page of the activity. You can click links in this page to view more pages in the activity.</p>

Essentially, clicking an Activity opens the **Web page** with which you work. When you are working with a Web page, you would be performing a task in an activity. However, it may or may not be necessary to perform all the tasks in an activity at one go. You may revisit the activity and perform some other tasks that are not mandatory at a later point of time. Hence, it may be concluded that you may have worked with as many **Web pages** as the number of tasks you have performed.

Note that there are several instances when a single Web page is used to carry out the activity straight away. Many of the activities comprise of a single Web page by which the user can both search for a specific record and perform the relevant task on the record.

Correlating tasks to web pages

Given below is an example of the Web pages under an activity, and the task correlating to each Web page.

Go to page...	...To carry out task
Select Issue to Edit	Selecting the stock issue for modification
Edit Issue	Editing the stock issue details
Confirm Issue	Confirming stock issue
Generate MMD Report	Generating MMD for the stock issue
Generate Part Barcode Label	Generate part barcode label for the stock issue

The second page is a hyperlink from the first page. The remaining pages are hyperlinks from the first page or other pages.

More about Search Criteria and the Select web page

You normally encounter a Select page before recording, editing or viewing a record. The "Select Issue Document" is an example of a select page. From this page, you can search for stock issue document you want to edit/view in the following way:

- ▶ Select search criteria such as Issue #, Warehouse #, Issue Type or Issue Category.
- ▶ You may also specify attributes of a stock issue such as, Ref. Document Type, Ref. Document #, Part # and/or Aircraft Reg. Type.

- ▶ The system displays all the stock issue records that satisfy the search criteria, in a multiline.
- ▶ From the multiline, select the specific issue record whose details are to be viewed or edited.
- ▶ From the Select page, click the link that takes you to the Edit page, Record Page or the View page. Alternatively, one of the fields in the multiline employee records will be hyperlinked, in the Select page. Select the hyperlinked field, to enter the Edit, Record or View page.

A typical Ramco Aviation Solution Web Page

Select a Web page by clicking on the activity on the left pane of the application.

The web page appears.

The screenshot shows the 'Authorize Component Work Order' web page. The interface includes a top navigation bar with 'Business Process', 'Recent Activities', and 'Favourites'. A search criteria section on the left contains fields for 'Comp. Work Order #', 'Part #', 'CWO Category', 'Work Center #', 'Transient Status', 'CWO Priority', 'Planned Date: From', and 'Customer #'. A search results table is displayed below, with columns for '#', 'Comp. Work Order #', 'Task #', 'Total Cost', and 'Serial #'. The table contains four rows of data. At the bottom, there is a 'Work Order Options' section with buttons for 'Hold', 'Release', and 'Return'. The status bar at the very bottom shows 'Component Work Order -> Authorize Component Work Order' and 'Ready: Search Successfully Completed (Total: 7609 / Server: 5484 / Client: 1359 / Msg: 766 ms)'. The browser's address bar shows 'dd/mm/yyyy' and the status bar indicates '57 Minute(s) 11:00:18 447 AM'.

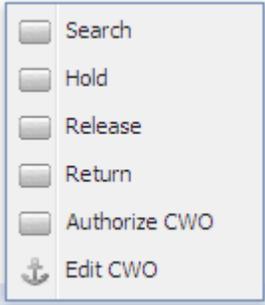
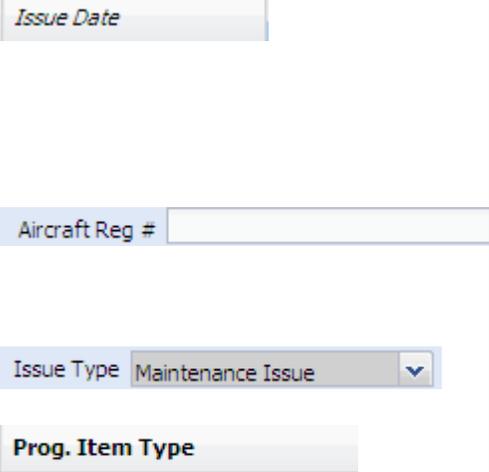
Annotations on the screenshot include:

- The Hot Key menu
- The Application toolbar
- The Web page toolbar
- The Help icon.
- A group box.
- An Up arrow indicates the group is open.
- A Down arrow indicates hidden group box fields.
- A multiline
- The Right-click menu lists pushbutton and link tasks you can perform in the Web page.
- A hyperlink task.
- The Trail bar.
- A pushbutton task.
- Click this icon to find the Access keys.
- Click this icon to reactivate session of the application.
- The Process Status bar

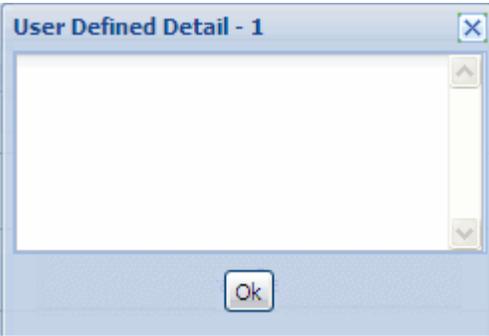
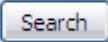
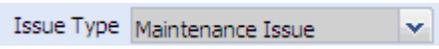
Knowing what a Web page consists of

A web page constitutes the entire document that you view online, which you use to either type in information or view information. All other elements described below, except the Menu button, will be inside the Web page.

While using a Web page, here are the basic elements you will be working with.

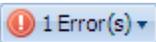
Element	Icon	Description
<p>List of Tasks in Web Page</p>		<p>Right-click anywhere on the Web page to display a drop-down menu that lists the tasks you can perform in the Web page. The tasks include pushbuttons and links.</p>
<p>Record</p>		<p>A record refers to a collection of fields that represent attributes of an entity, such as aircraft, aircraft model, component or part. A record is uniquely identified by a key field, such as an identification number.</p>
<p>Multiline</p>		<p>A table, consisting of multiple rows and columns. Each row contains a single record. Each attribute of the record appears under a column with the field as the header in the multiline.</p>
<p>Field</p>		<p>Each data element in a page, which is either displayed automatically or which you enter/type in, is a field.</p> <p>A display field appears in an Italic Regular font.</p> <p>An input field may be a text box or a drop-down list box. You may provide a valid input value.</p> <p>A drop-down list box displays a list of values from which you may select the required value.</p> <p>An input field appearing in Bold format implies data entry is mandatory for the field.</p>

Using Ramco Aviation Solution

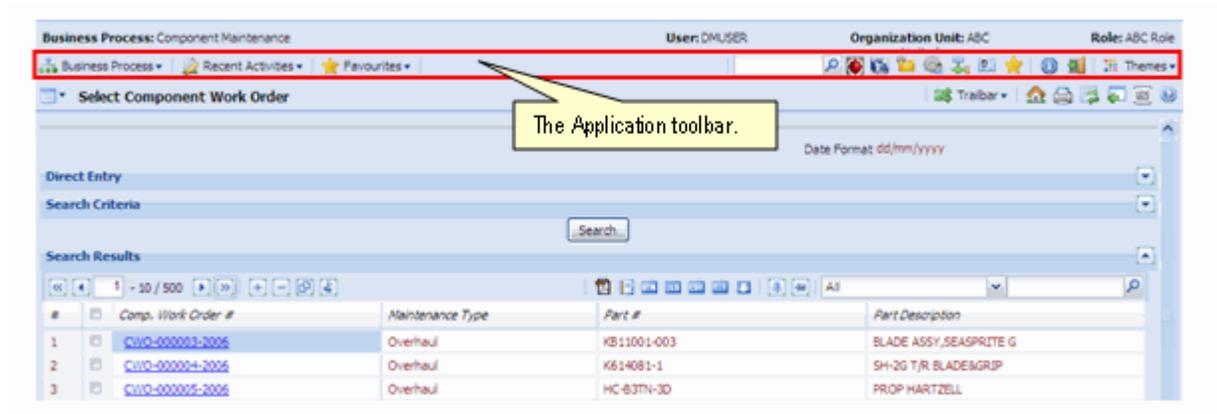
<p>Field Input Window</p>		<p>Place your cursor inside an input field in any Web page and click the F2 key to open the input window. You can now type the required information, and click the  pushbutton to close the window. This proves convenient for data entry as you can type in text continuously without scrolling as well as view the typed text in its entirety.</p>
<p>Link</p>		<p>A hyperlink when selected opens up another Web page.</p>
<p>Data Hyperlink</p>		<p>Any data in a field when selected, takes you to another Web page.</p>
<p>Search Criteria</p>		<p>Refers to a group of fields you can specify, such as "From Date" and "To Date". It enables the system to retrieve those records that have the same attributes as you have specified. Essentially, fields in the Search Criteria group box are filters to enable the system to retrieve specific and precise records. After you specify filters for retrieving records from the database, you must click the  pushbutton to display records in the "Search Results" multiline.</p> <p>The number of records to be retrieved for each user interface is decided by the system administrator. Contact your system administrator for more details.</p> <p>The Search Criteria group box most commonly appears in Select pages; though it is not uncommon to find them in other pages as well.</p>
<p>Drop-down List Box</p>		<p>This refers to the list box that appears when you click inside a field containing a downward arrow. The list box shows a list of items, each of which represent an action you can choose.</p>

<p>Lens</p>		<p>The icon positioned next to fields where code search facility is available. Click this icon to search for a code or number. For example, Help on Employee Code.</p>
<p>Pushbutton</p>		<p>A rectangular button that performs an action when clicked. For example, clicking the "Add Employee" pushbutton saves the employee details entered in the page.</p>
<p>Up Arrow</p>		<p>Click this icon appearing at the top of certain drop-down menus to view the hidden list above.</p>
<p>Down Arrow</p>		<p>Click this icon appearing at the bottom of certain drop-down menus to view the hidden list below.</p>
<p>Show Group Box</p>		<p>Select this button to show/ expand a group box.</p>
<p>Hide Group Box</p>		<p>Select this button to hide a group box.</p>
<p>Reactivate Session</p>		<p>Click this icon to reactivate the current instance of the application. The timer next to the icon at the right bottom of the screen displays the time remaining for the end of the session.</p>
<p>Access Keys</p>		<p>Click this icon located at the bottom right of a Web page to view the short cut keys currently available for pushbuttons in the Web page.</p>

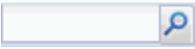
Using Ramco Aviation Solution

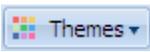
System Error Message		<p>Click this icon located at the bottom right of any Web page to view error messages generated by the application whenever erroneous data is input. Note that this icon appears only when an error occurs.</p>
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Application Toolbar



You will find the following elements in the Application Toolbar.

Element	Icon	Description
Hot Menu Key		<p>Use this text box to type in the menu code and then click the  icon for directly launching an activity page. Through the menu code you can open any activity page straightway by avoiding traversal across business components or business processes. Contact your System Administrator for more information.</p>
Change Password		<p>Use this icon on the Web page toolbar to change the password settings for the currently logged in user.</p>
Setup Preferences		<p>Use this icon to set the style and format for numeric, date and time displays.</p>

Change User Context		Use this icon to switch across organization units or roles.
Setup Defaults		Use this icon to select the organization unit to which you will be logged in, by default.
Define Favorites		Use this icon to list down all the activities defined in the favorites. i) Click this icon to open the Organize Favorites window. ii) Specify the activities that must be set as favorites. iii) Click the Save user favorites pushbutton.
About VirtualWorks		Click this icon to know more about Ramco Aviation Solution.
Signout		Click this icon to log out of the current session of the Ramco Aviation Solution.
Themes		Use this drop-down list box to set the theme for the user interface (UI). Theme defines the color scheme, style and appearance of the user interface.

 *Note: Some more icons may appear in the Application toolbar, which may not be useful to end-users.*

After the page appears, you may view it and then exit by clicking the Exit button on the Web page toolbar, after viewing the contents of the page.

When you complete selecting / viewing / entering data in all the required fields in the page, you can either:

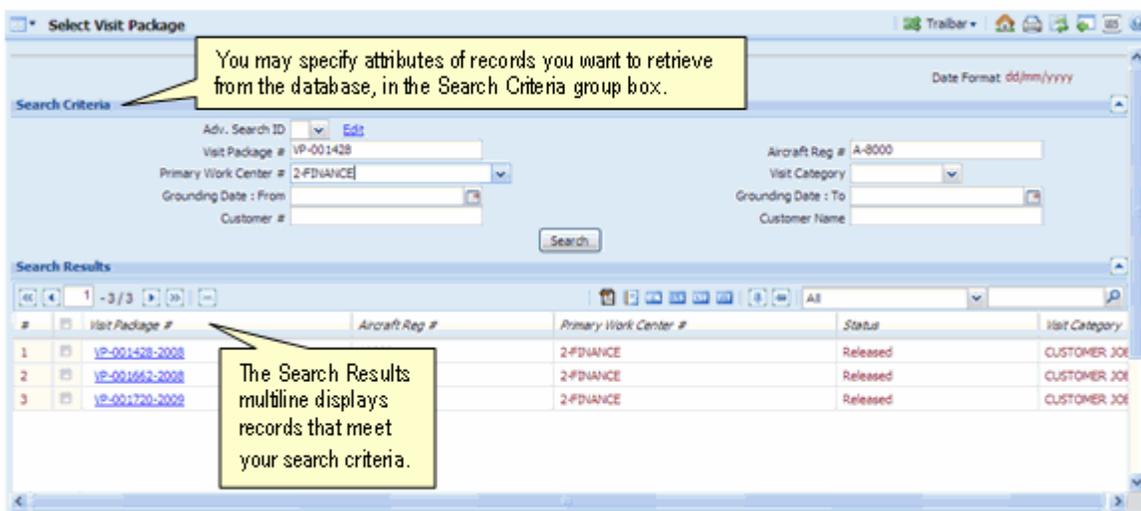
- ▶ Save the details you entered in the current Web page, by clicking the relevant pushbutton.
- ▶ Select or choose a row in the multiline, by checking the box that appears as the first field of the row. Traverse to the next page, by selecting a link in the current page. In the next page, you can enter additional details that pertain to the multiline row. (A row in a multiline represents a record.)
- ▶ Exit the Web page without effecting any action that you might have carried out in the Web page.

Adding a record

You can add a new record in a web page. You are to enter a unique code to identify the record, along with other details of the record such as description, type, etc. This unique code of the record

- ▶ Can identify it from other records
- ▶ Cannot be edited
- ▶ Can be used to retrieve the record for edit and delete tasks
- ▶ Selecting a record

For certain other actions such as edit, delete, authorize or report generation, at the onset you need to find and choose a record in a **Select** page.



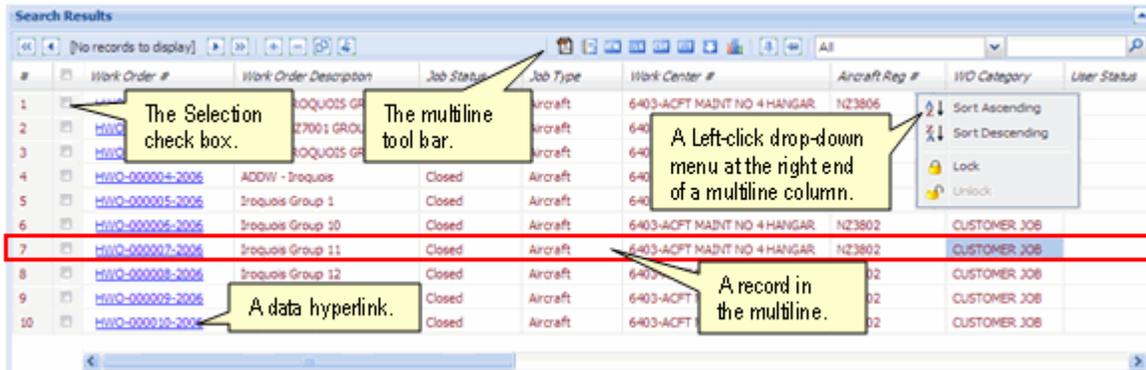
The Select page provides a **Search** facility to find a record based on the search criteria that you can specify. The application retrieves and displays records that match the search criteria in a multiline. You may then proceed to do the following,

- ▶ Select or choose a record in the multiline, by checking the box that appears in the second column of the multiline. (The first column displays the sequence number of the record, which depicts the order in the multiline.)
- ▶ Click the link for the required action/event at the bottom of the page.

The page for the chosen action/event appears, displaying all the details of the record you selected in the multiline of the previous page. You may now edit, delete, authorize or carry out any other valid action on the record.

However, some Select pages facilitate deletion, authorization or release of records in addition to the search and find feature.

Using the multiline



Adding a multiline row

A multiline row can be added, using the toolbar icons above the multiline. It can be either inserted between two existing multiline rows, or added to the end of the last row. You are to

- ▶ Position the cursor in the multiline row above which the row must appear.
- ▶ Click the  icon on the toolbar above the multiline.

Deleting a multiline row

A multiline row can be deleted, using the toolbar icons above the multiline. The item to be deleted must not have been used in any transaction, so far. You are to

- ▶ Check the Selection check box for the record that appears in the second column of the multiline.
- ▶ Click the  icon on the toolbar above the multiline.

Multiline toolbar

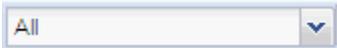
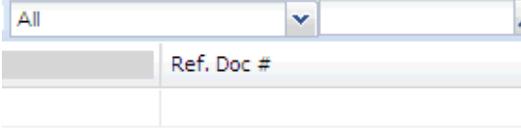
The icons in the multiline toolbar are explained below.

Element	Icon	Description
Selection check box		<p>A check box normally occurring as the second column of every multiline row. It precedes the record in the row. Check the Selection box to mark the record for copy and append, cut and append or deletion. You must also check this box to perform any pushbutton task or hyperlink task available in a Web page.</p> <p>Use the check box in the same row as the multiline header, to simultaneously select all the displayed records in the multiline.</p>

Using Ramco Aviation Solution

First Record		Click this button, to view the first set of multiline records.
Previous Row Set		Click this button, to view the set of multiline records immediately preceding the currently displayed set of multiline records.
Next Row Set		Click this button, to view the next set of multiline records. However, this is applicable only if the number of retrieved records cannot be accommodated in the current set of multiline rows, and the rest need to be displayed in the next set of multiline rows.
Last Record		Click this button, to view the last set of multiline records.
Insert Record		Click this button on the toolbar above the multiline, to insert a record in the multiline.
Delete Record		Click this button on the toolbar above the multiline, to delete the selected record in the multiline.
Copy and Append Record		Click this button on the toolbar above the multiline, to copy a selected record and insert it at the end of the multiline.
Cut and Append Record		Click this button on the toolbar above the multiline, to remove a selected record and insert it at the end of the multiline.
Export to Excel		Click this button on the toolbar above the multiline, to export the multiline contents to Microsoft Excel.

<p>Show PDF</p>		<p>Click this button to view all the multiline records in PDF format. All those records the system cannot accommodate in the current set of multiline rows can also be viewed in PDF.</p>
<p>Show report</p>		<p>Click this button to view the entire report including the header and the records in a pop-up window. All those records that the system cannot accommodate in the current set of multiline rows can also be viewed by maximizing the window.</p> <p>You can also (i) hide a column in the report and/or' (ii) group and view a report by any of the columns in the report.</p>
<p>Show Html</p>		<p>Click this button to view the multiline records in a browser. All those records that the system cannot accommodate in the current set of multiline rows are also displayed in the browser.</p>
<p>Export to Excel</p>		<p>Click this button to view the multiline records in an Excel worksheet in the XML format. All those records that the system cannot accommodate in the current set of multiline rows are also displayed in the worksheet.</p>
<p>Export to csv</p>		<p>Click this button to view the multiline records in an Excel worksheet in the CSV format. All those records that the system cannot accommodate in the current set of multiline rows are also displayed in the worksheet.</p>
<p>Export to text</p>		<p>Click this button to view the multiline records in the Text format. All those records that the system cannot accommodate in the current set of multiline rows can be viewed in Notepad.</p>
<p>Show chart</p>		<p>Click this button for generating charts based on numeric columns.</p>

<p>Import data</p>		<p>Select this button to import data from a CSV or an XML file.</p>
<p>Save Personalize</p>		<p>Use this button to save any change in the size or order of the columns in the multiline that you have made. Once saved, the changed settings will appear when the page is launched again.</p>
<p>Remove Personalize</p>		<p>Select this button to remove the personalization that you previously made.</p>
<p>List of columns in the multiline</p>		<p>Use the first drop-down list box at the top right of a multiline for a complete list of columns in the multiline.</p>
<p>Find specific record from among the retrieved records</p>		<p>Select the required column from the first drop-down list box on the top right of a multiline. Specify a search value for that column in the input box alongside. Thereafter, click the icon to pass the control to the first instance of the value in the selected column in the multiline.</p>
<p>Sort/lock multiline columns</p>		<p>You can use this menu to</p> <ul style="list-style-type: none"> (i) sort rows in the multiline in ascending/descending order. (ii) lock columns in the multiline.

Editing a record

You can edit most records through an Edit page. Although the rules governing the fields to be edited will differ between record types, most records do not allow an edit of the unique code identifying the record. Example, an employee record can allow most of the fields to be edited except the Employee Code field.

You can edit a record, provided the record has not been authorized or mapped to any other record. In short, the record must not have been used by any other transaction. You are to

- ▶ Select the Edit activity option on the left pane. The Select page appears.
- ▶ Select the record to be edited, from the Select page.
- ▶ Select the "Edit" link from the Select page. The Edit page appears, showing the details of the selected record.
- ▶ Edit the fields that the system permits you to edit. After completion, save the page. The edited details are updated in the database.

Authorizing a record

A record is authorized by any employee who has been given supervisory rights. The rules governing the authorization of records will differ between record types.

Keeping two web pages open simultaneously

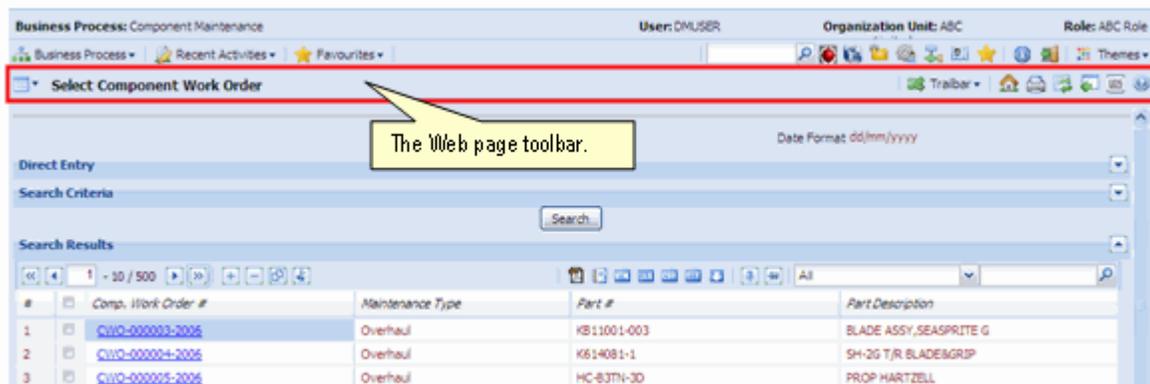
To keep two pages open at the same time, you are to open the browser twice. This implies that you login separately each time, and select the required activity and page.

IE8 is the recommended browser platform for Ramco Aviation Solution.

What is the bare minimum to enter?

In a typical Ramco Aviation Solutions Web page, certain fields crucial for identification of a record appear in **Bold** font. This implies they are mandatory and you must specify a value for the field. Conversely, any field that appears in the Regular font is not mandatory and hence the user need not provide any value for the field. However, certain mandatory fields are set to default values for easy usage, which you may modify, if required.

Web Page / User Interface Toolbar



Using Ramco Aviation Solution

Here are the elements you will be working with, in the Webpage Toolbar.

Element	Icon	Description
Trailbar		The Trailbar drop-down list box displays all the Web pages traversed to reach the current Web page.
Go to Home page		An icon you select to go to the Home page.
Print screen		Use this icon to obtain a hard copy of the Web page.
Refresh Screen		A button that you select on the Web Page toolbar to enable the system to fetch the most recently updated data from the database. When you select this button in a Create page, the fields are made empty.
Go Back		Click this icon to traverse to the previous page.
Launch UDS		Click this icon to launch the user-defined screens.
Show Help		Click this icon to open the online context-sensitive help for a Web page. Alternatively, click the F1 key to open the Help page. However, to access online Help for a tab page, position the cursor on the tab page and then click the F1 key.

Chapter 1/ Introduction

Continuous analysis of operational performance of aircraft is crucial for safe airline operations. Onboard systems like ACARS are capable of identifying abnormal flight conditions and automatically sending real-time messages to an airline. This makes it possible for airline maintenance personnel to receive real-time data associated with maintenance faults on the aircraft.

Onboard computers transmit standard predefined fault codes. Maintenance personnel use the fault isolation manual for trouble shooting the same. The **Technical Documents** business process facilitates users in capturing all predefined fault codes along with detailed troubleshooting instructions.

The business process comprises the **Fault Manual Setup** sub process which deals with codifying faults encountered during an airline operation. You need to rectify the fault in the shortest time possible to avoid long aircraft downtime. To rectify faults effectively and within the turn around time, you need to identify the faults, its possible causes and the correct remedial actions to eliminate the fault.

Chapter 2/ Fault Manual Setup

The **Fault Isolation Manual** business component deals with codifying faults encountered during an airline operation. Any problem, which causes an aircraft to perform below its rated efficiency, is termed as "Fault". You need to rectify the fault in the shortest time possible to avoid long aircraft downtime. To rectify faults effectively and within the turn around time, you need to identify the faults, its possible causes and the correct remedial actions to eliminate the fault. Codification of faults helps in faster trouble shooting, organized fault analysis and reporting.

The module provides a thorough guidance as to how a symptom can be traced to faulty equipment. The suggestive action to be carried out is identified in the system in the form of Work Unit(s). The system provides an option to create new fault codes.

Codifying faults

In this activity, you can create new fault codes. You can also create cause codes and identify the work units that have to be associated with the fault code.



Creating a fault code

You can create a new fault code, associate causes codes and also specify the models for which the fault code is applicable.

1. Select **Create Fault Code** under the **Fault Isolation Manual** business component.
2. The **Select ATA Chapter** page appears. Enter an ATA chapter number for which the fault code must be created. Select the **Create Fault Code** link provided alongside. The **Create Fault Code** page appears. See *Figure 2.1*.
3. Enter the **Fault #**, **Fault Description** and **Key Word** by which the fault code is uniquely identified.
4. Select the category to which the fault code belongs, in the **Fault Category** drop-down list box. Fault could be of the category “Cabin” or “Observed”.
5. Click the **Create Fault Codes** pushbutton to create the fault code(s). The system creates the fault code in the “Fresh” status.



Note: The fault code created is used in identifying faults in reporting discrepancies in the journey log and technical log and in creating a maintenance report.



*If a fault identified is specific to an aircraft model, the model can be associated with the fault code. To do this, select the **Edit Model Effectivity** link.*



*A cause code can be associated for a fault code. A cause code can be newly created or an existing cause code can be associated. To do so, select the **Edit Cause Code** link.*

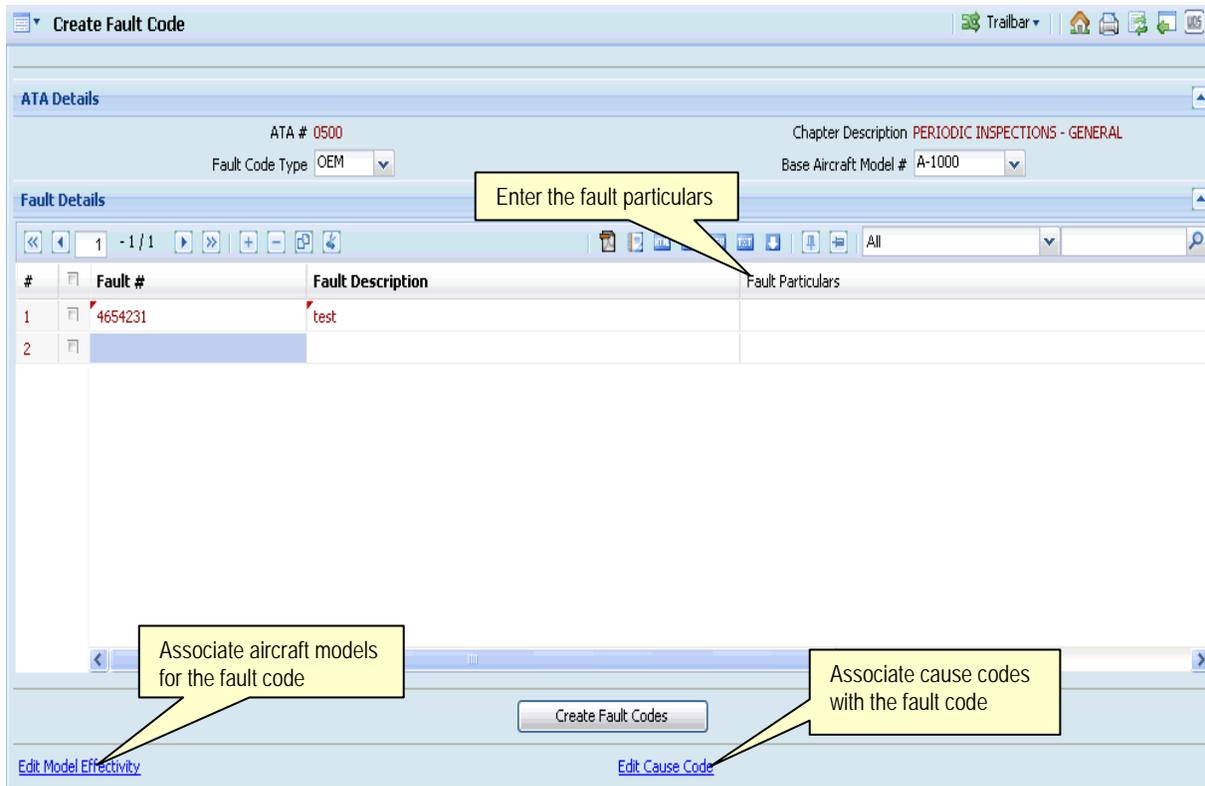


Figure 2.1 Creating a fault code

You can proceed to do the following

- ▼ Select the “Edit Model Effectivity” link, to associate aircraft models to fault code.
- ▼ Select the “Edit Cause Code” link, to associate cause codes to fault code.

Associating aircraft models to fault code

You can identify the aircraft models for which the fault code is applicable.

1. Select the **Edit Model Effectivity** link in the **Create Fault Code** page. The **Edit Model Effectivity** page appears. See *Figure 2.2*.

Fault Manual Setup

Fault Details

ATA # 00
Fault # 4654231
Base Aircraft Model # A-1000

Chapter Description NON AERONAUTICAL EQUIPMENT MRO
Fault Description Test
Model Description FOR MEDICAL SERVICES

Model Details

#	Aircraft Model #	From Tab #	To Tab #	Model Description
1	A-1000			FOR MEDICAL SERVICES
2				

Enter the aircraft model number

Edit Model Effectivity

Figure 2.2 Associating models to the fault code

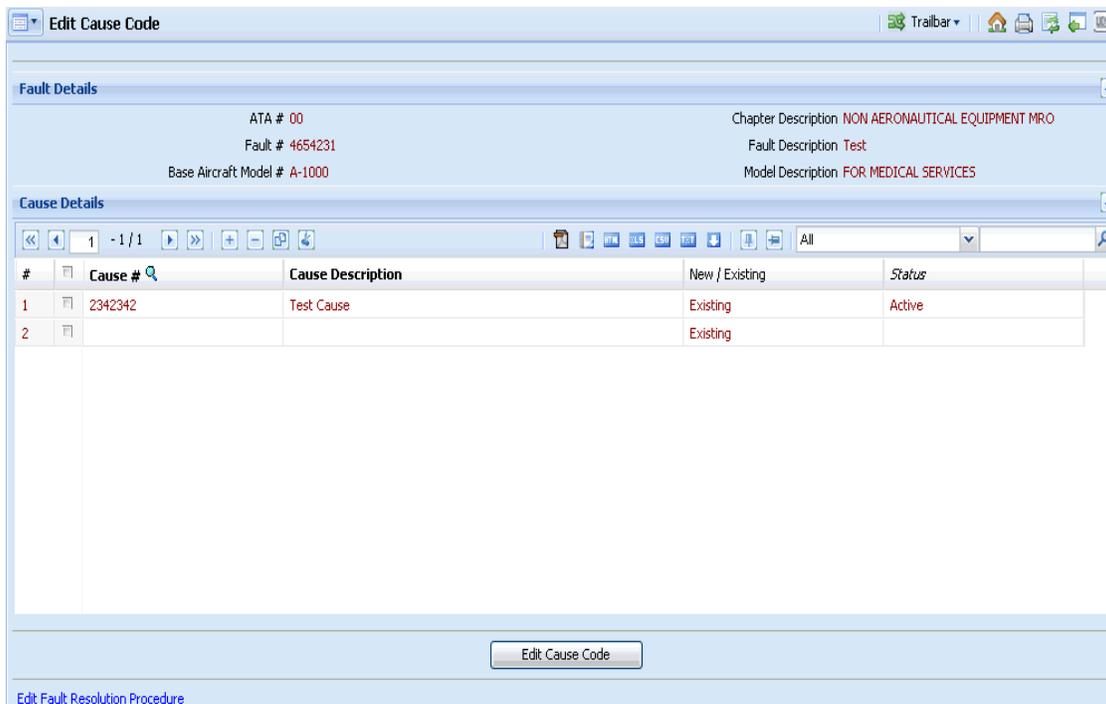
2. The details of the fault code selected in the **Create Fault Code** page appear in the **Fault Details** group box.
3. Enter the **Aircraft Model #**. Enter the starting tab number in the range of tab numbers for which the selected fault code is applicable, in the **From Tab #** field. Enter the ending tab number in **To Tab #** field.
4. Click the **Edit Model Effectivity** pushbutton to associate the models to the selected fault code.

Identifying cause factors

Associating cause codes to fault code

You can associate cause codes against a fault code.

1. Select the **Edit Cause Code** link in the **Create Fault Code** page. The **Edit Cause Code** page appears. See *Figure 2.3*.



#	Cause #	Cause Description	New / Existing	Status
1	2342342	Test Cause	Existing	Active
2			Existing	

Figure 2.3 Associating cause codes to a fault code

2. The details of the fault code selected in the **Create Fault Code** page appear in the **Fault Details** group box.
3. Enter the **Cause #**, a unique number identifying the cause. Enter the description of the cause in the **Cause Description** field.
4. Use the **New/Existing** drop-down list box to indicate whether the specified cause code is new or an existing cause code.
5. Click the **Edit Cause Code** pushbutton to associate the cause codes to the selected fault code.

You can proceed to do the following:

- ▼ Select the “Edit Fault Resolution Procedure” link, to edit the fault resolution procedure for the cause code.

Associating models to cause code

You can identify the aircraft models for which the cause code is applicable.

1. Select **Edit Cause Code** under the **Fault Isolation Manual** business component. The **Edit Cause Code** page appears.

 *Note: This page is used to modify the details of the cause code created using the **Create Fault Code** activity.*

2. Enter the **Search Criteria** to retrieve the cause code for which model effectivity must be specified.
3. Select the cause code in the multiline.
4. Select the **Edit Model Effectivity** link at the bottom of the page. The **Edit Model Effectivity** page appears. See *Figure 2.4*.

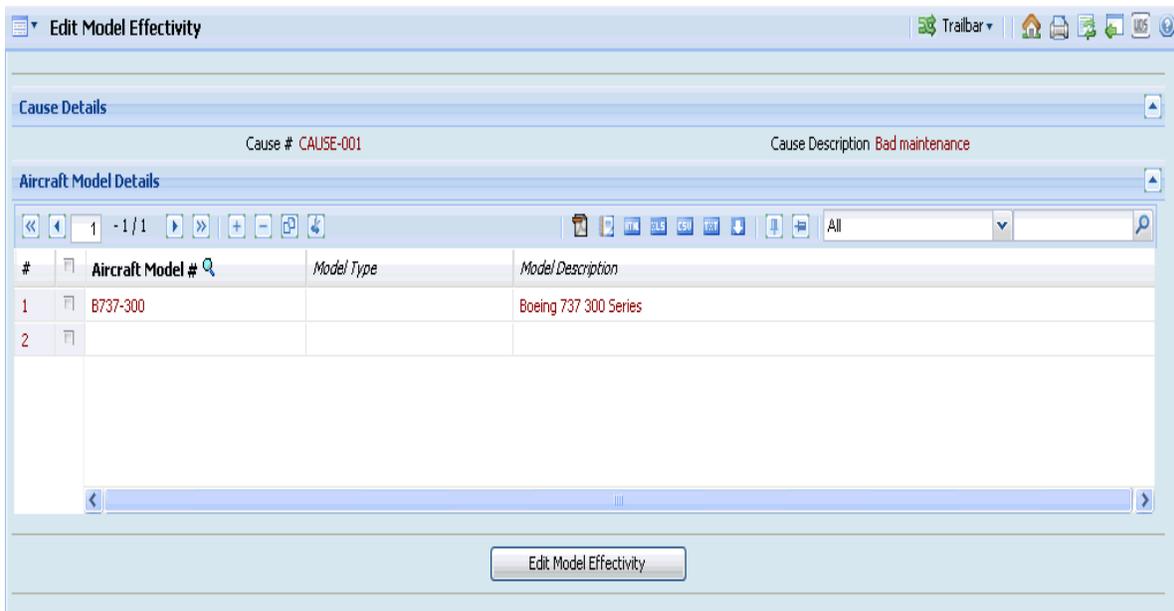


Figure 2.4 Associating models to cause code

5. The details of the cause code selected in the **Edit Cause Code** page are displayed in **Cause Details** group box.
6. In the **Aircraft Model Details** multiline, select the **Aircraft Model #** for which the cause code is applicable.
7. Click the **Edit Model Effectivity** pushbutton to associate the models to the cause code.

 *Note: The **Model Type** and **Model Description** of the selected aircraft are displayed in the multiline.*

Prescribing standard rectification procedures

You can associate a resolution procedure to a fault code and cause code.



Associating resolution procedure to a fault code

Work units that rectify a discrepancy can be associated with the fault code and cause code.

1. Select **Edit Fault Code** under **Fault Isolation Manual** business component. The **Select Fault Code** page appears.
2. Enter the **Search Criteria** to retrieve the fault code for which resolution procedure must be identified. Based on the search criteria, details are displayed in the **Search Results** multiline.
3. In the multiline, click the hyperlinked fault number for which resolution procedure must be associated. The **Edit Fault Code** page appears.
4. Select the **Edit Fault Resolution Procedure** link in the **Edit Fault Code** page. The **Edit Fault Resolution Procedure** page appears. See *Figure 2.5*.

Edit Fault Resolution Procedure

Trailbar

Fault Details

ATA # 00 Chapter Description NON AERONAUTICAL EQUIPMENT MRO
 Fault # 4654231 Fault Description Test
 Base Aircraft Model # A-1000 Model Description FOR MEDICAL SERVICES
 Cause # 2342342 Cause Description Test Cause

Work Unit Details

#	Seq #	Work Unit #	Work Unit Type	Work Unit Desc
1	1	324000-15-1	Task	Wheel & Brakes Inspection
2			Task	

ReNumber

Edit Fault Resolution

Figure 2.5 Associating resolution procedure to a fault code

Fault Manual Setup

5. The details of the fault code selected in the **Create Fault Code page** appear in the **Fault Details** group box.
6. Use the **Cause #** drop-down list box to select a cause code and click the **Get Details** pushbutton.
7. The system retrieves the details of the work units for the Fault # and Cause # (if any already defined) in the **Work Unit Details** multiline.
8. In the **Work Unit #** field, select the work unit that must be associated to the fault code and cause code.
9. Use the **Work Unit Type** drop-down list box to specify the work unit type, which can be "Task" or "Standard Procedure".
10. Click the **Edit Fault Resolution** pushbutton to update the resolution procedure details against the selected Fault # and Cause #.

Regularizing discrepancy records

Certain faults that are not covered in the Fault Isolation Manual can be codified so that it serves as a knowledge base. Such faults are known as “airline fault codes”. You can induct such faults from the Maintenance Report into the fault isolation manual.

Regularizing maintenance report for fault codification

You can create airline fault codes and associate them to the standard fault codes and also specify the model effectivity details.

1. Select **Regularize Maintenance Reports for Fault Codification** under the **Fault Isolation Manual** business component. The **Select MR** page appears.
2. Enter the **Maint Report #** in the **Direct Entry** group box and select the **Regularize Maint. Report** link to go to the **Regularize Maint. Report** page. . Or, specify the search criteria and click the **Search** pushbutton. The system displays the details of the maintenance report in the **Search Results** multiline. Click the hyperlinked **Maint Report #** in the multiline. The **Regularize Maint. Report** page appears. *See Figure 2.6.*
3. The maintenance report details are displayed in the **Maint Report Details** group box.
4. In the **Fault Details** group box, enter the **Fault #**, **Fault Description** and the unique keyword to identify the fault code in the **Key Word** field.
5. Specify the **Base Aircraft Model #** for which the fault code must be created.
6. Use the **Fault Category** drop-down list box to classify the fault. The fault category can be “Cabin” or “Observed”.
7. Enter the code identifying the cause in the **Cause #** field.
8. Use the **New/Existing** drop-down list box to indicate whether the specified cause code is new or an existing cause code.
9. In the **Aircraft Details** multiline, specify the model effectivity for the fault code and cause code. Select the **Aircraft Model #** for which the fault and cause code is applicable.

Fault Manual Setup

The screenshot shows the 'Regularize Maint. Report' application window. The window title is 'Regularize Maint. Report'. The main content is divided into several sections:

- Maint Report Details:** Maint Report # 110000242007, Maint Report Description Regular Inspection
- Fault Details:** ATA # 00, Fault # (empty), Fault Description (empty), Base Aircraft Model # B737-200, Fault Particulars (empty), Fault Category Observed, Copy Work Unit (checkbox), Fault Code Type (empty), Key Word (empty), Model Description Boeing 737 200 Series
- Cause Details:** Cause # 2342342, Cause Description Test Cause, New / Existing Existing
- Aircraft Details:** A table with columns: #, Aircraft Model #, From Tab #, To Tab #, Model Description. Row 1: 1, B737-200, (empty), (empty), Boeing 737 200 Series. Row 2: 2, (empty), (empty), (empty), (empty).

At the bottom left, there is a link labeled 'Edit Fault Resolution'. A yellow callout box points to this link with the text: 'Select this link to associate a resolution procedure to the fault code created'. At the bottom center, there is a button labeled 'Create Fault Code'.

Figure 2.6 Regularize maintenance report for fault codification

10. Enter the starting tab number in the range of tab numbers for which the fault code is applicable, in the **From Tab #** field. Enter the ending tab number in the range of tab numbers in the **To Tab #** field.

11. Click the **Create Fault Code** pushbutton to create the fault code.

 *Note: The system creates the fault code, specific to the aircraft model and attaches the maintenance report. The status of the fault code is set to "Fresh".*

12. Select the **Edit Fault Resolution** link to update the fault resolution procedure associated with the fault code. For more information refer to the topic "Associating resolution procedure to a fault code".

You can proceed to do the following:

- ▼ Select the "Edit Fault Resolution" link, to associate resolution procedure to a fault code.

Approving fault codes

You can approve, cancel or inactivate fault codes created.

1. Select **Approve Fault Code** under the **Fault Isolation Manual** business component. The **Approve Fault Code** page appears. See *Figure 2.7*.

Approve Fault Code

Search Criteria

Fault #

ATA #

Key Word

Base Aircraft Model #

Fault Category

Status

Fault Code Type

Model Description

Search Results

#	Base Aircraft Model #	Fault #	Fault Description	Fault Particulars
1	A-1000	4654231	Test	
2	A-1000	ER	sdfas	
3	B737-300	FIM-001	FIM-001	
4	B737-300	FIM-002	FIM-001	
5	B737-300	FIM-003	fim-003	

Select All

[View Model Effectivity](#) [View Cause Code](#)

Select this link to view the model effectivity of the fault code

Select this link to view the cause codes associated to the fault code

Figure 2.7 Approving fault codes

2. Enter the **Search Criteria** to search for the fault code that has to be approved, cancelled or de-activated.
3. Based on the search criteria entered, the system displays the fault code details in the **Search Results** multiline.
4. In the multiline, select the fault code that must be approved, cancelled or de-activated.
5. Click the **Inactivate FC** pushbutton to de-activate the selected fault code(s).



Note: You can inactivate fault codes, which are in the “Fresh” or “Active” status. The system changes the status of the selected fault codes to “Inactive”.

Fault Manual Setup

6. Click the **Activate FC** pushbutton to approve the fault code(s).



Note: You can approve fault codes, which are in the “Fresh” or “Inactive” status. The system changes the status of the selected fault codes to “Approved”.

7. Click the **Cancel FC** pushbutton to cancel the selected fault code(s).



Note: You can cancel fault codes, which are in the “Fresh” status. The system changes the status of the selected fault codes to “Canceled”.

You can proceed to do the following:

- ▼ Select the “View Model Effectivity” link, to view the model effectivity information of the selected fault code.
- ▼ Select the “View Cause Code” link, to view the cause code information of the selected fault code.

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