RAMCO AVIATION SOLUTION
VERSION 5.9

USER GUIDE
MAINTENANCE PROGRAMS

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 3 chapters and index. Given below is a brief run-through of what each chapter consists of.

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

Chapter 2 focuses on the **Maintenance Task** sub process.

Chapter 3 focuses on the **Component Maintenance Program** sub process.

Chapter 4 focuses on the **Aircraft Maintenance Program** 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.

1 INTRODUCTION

Aircraft and its components undergo regular maintenance inspections and repairs throughout their life cycle. Maintenance activities to be performed on aircraft and components are provided by the OEMs. Maintenance time limits and intervals for these maintenance activities are also provided by the OEMs based on the standard operating conditions. Schedule for the maintenance activities stipulating what, how and when to perform the maintenance according to the operating conditions is formulated by the respective airline operators in the maintenance program. A maintenance program provides details of maintenance tasks and their time limits and intervals adhered to by the airline operator. The customized scheduled maintenance program is then authorized by the regulatory authorities for execution.

The Maintenance Programs business process addresses the above-mentioned business need and facilitates users to define maintenance tasks for aircraft as well as components, and then devise maintenance programs for aircraft and components by grouping these tasks based on the requirement. Finally, the time intervals, the relationship and the sequence between the tasks in the maintenance programs are computed to arrive at the scheduled date of execution of the task on the aircraft/component. The **Maintenance Programs** process involves the **Maintenance Task, Component Maintenance Program** and **Aircraft Maintenance Program** business components

2 MAINTENANCE TASK

Aircraft and its components undergo regular maintenance inspections and repairs throughout their life cycle. Maintenance activities to be performed on aircraft and components are provided by the OEMs. Maintenance time limits and intervals for these maintenance activities are also provided by the OEMs based on the standard operating conditions. Schedule for the maintenance activities stipulating what, how and when to perform the maintenance according to the operating conditions is formulated by the respective airline operators in the maintenance program. A maintenance program provides details of maintenance tasks and their time limits and intervals adhered to by the airline operator. The customized scheduled maintenance program is then authorized by the regulatory authorities for execution.

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The **Maintenance Programs** process involves the **Maintenance Task, Component Maintenance Program** and **Aircraft Maintenance Program** business components.

Authoring of aircraft and component maintenance tasks and managing the changes to a task are handled as part of this sub process.

The **Maintenance Task** business component enables you to identify the basic maintenance tasks, which will be used in maintaining the aircraft and components.

2.1 Authoring a task

2.1.1 Defining work areas and zones

Creating a work area

Work area is the physical location in the aircraft where the maintenance activity must be carried out.

1. Select **Create Work Area** under **Maintenance Task** business component. The **Create Work Area Information** page appears. *See Figure 2.1.*

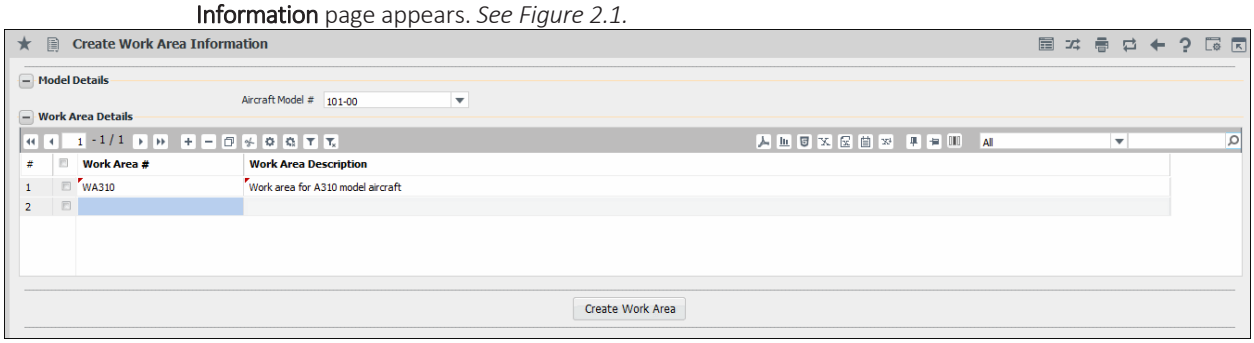


Figure 2.1 Creating work area information

2. Select the **Aircraft Model #** for which the work area is being defined.
3. Enter the **Work Area #** and **Work Area Description** in the multiline, for the selected aircraft model.
4. Click the **Create Work Area** pushbutton.

2.1.2 Creating access panel tasks and access panels

Creating an access panel task

Access panels provide work area access for performing maintenance activities. A maintenance task can have corollary tasks relating to the opening and closing of the required access panels.

1. Select **Create Access Panel Task** under the **Maintenance Task** business component. The **Create Access Panel Task Information** page appears. *See Figure 2.2.*

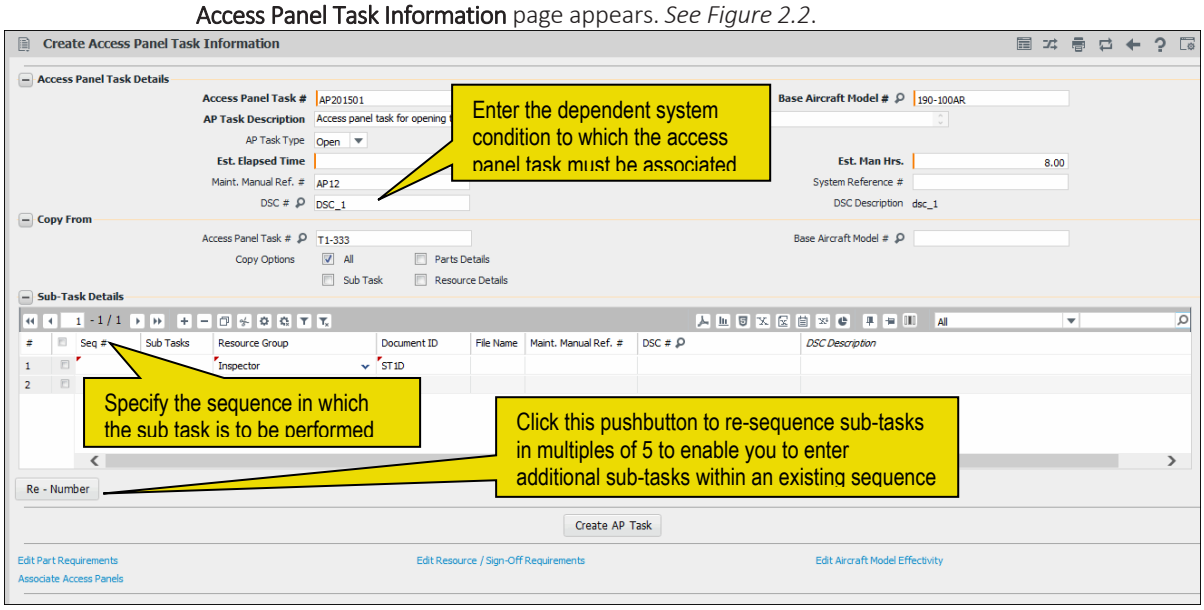


Figure 2.2 Creating access panel task

2. Enter the **Access Panel Task #** to uniquely identify the access panel task.

3. Identify the **Base Aircraft Model #** for the access panel task.
4. Select the access panel task type in the **AP Task Type** drop-down list box. The access panel task could be of type “Open” or “Close”.
5. Enter the details such as **AP Task Description**, **Est. Elapsed Time** and **Est. Man Hrs**.
6. To copy details from an existing access panel task, enter the **Access Panel Task #** in the **Copy From** group box and specify the **Copy Options**.
7. Enter the sub tasks to be performed for carrying out the access panel task, in the **Sub Tasks** field in the multiline.
8. Select the **Resource Group**, which is responsible for executing the sub-task.
9. Click the **Create AP Task** pushbutton.

To proceed,

- Select the Edit Parts Requirement link to specify parts for the access panel task.
- Select the Edit Resource / Sign-Off Requirements link to specify resources for the access panel task.
- Select the Edit Aircraft Model Effectivity link to specify access panel task applicability to aircraft model.
- Select the Associate Access Panels link to associate access panels to access panel task.

2.1.3 Specifying parts for the access panel task

You can add or modify the details of parts required for executing the access panel task.

1. Select the **Edit Parts Requirement** link in the Create Access Panel Task Information page.
2. Enter the **Part #** that is required for carrying out the access panel task.
3. Enter the **UOM** and **Est. Quantity** of the part that is required.
4. Click the **Edit Part Requirements** pushbutton.

2.1.4 Specifying resources for the access panel task

You can add or modify the details of resources required for executing the access panel task.

1. Select the Edit Resources Requirement link in the Create Access Panel Task Information page.
2. Select the type of the resource to be specified for the task, in the Resource Type drop-down list box. The resource can be of type “Skill”, “Tools”, “Equipment” or “Others”.
3. Enter the resource in the Resource # field in the multiline.
4. Select “Yes” for “Skill” type of resources in the Approval Reqd.? field, if you want the system to verify the license or certification availability for the employee who executes the task.
5. Select “Yes” for “Skill” type of resources in the Sign-Off? field, if you want the system to ensure sign-off for the task by an employee who possesses the skill, during work execution.
6. Click the Edit Resources pushbutton.
7. Click the Edit **Sign-Off Details** pushbutton to update the sign-off details

2.1.5 Specifying model effectivity details for the access panel task

You can define the model effectivity, to indicate the applicability of the access panel task for the aircraft models.

1. Select the Edit Aircraft Model Effectivity link in the Create Access Panel Task Information page.
2. Enter the Aircraft Model # in the multiline.
3. Click the Edit Model Effectivity pushbutton.

2.1.6 Associating access panels to access panel task

You can identify the access panels on which the access panel task can be performed.

1. Select the **Associate Access Panels** link in the **Create Access Panel Task Information** page.
2. Enter the default aircraft model number that you wish to specify for the access panels in the **Def. Aircraft Model** field.
3. Enter the Aircraft Model # and Access Panel # in the multiline.
4. Click the Associate Access Panels pushbutton.

2.1.7 Creating an access panel

Access panels provide work area access for performing maintenance activities. Executing a maintenance activity may involve opening of one or more panels to access a component or the area inside the component.

1. Select **Create Access Panel** under the **Maintenance Task** business component. The **Create Access Panel Information** page appears. *See Figure 2.3.*

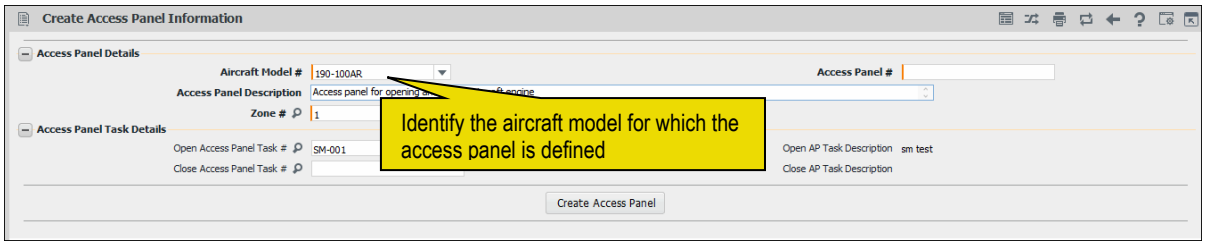


Figure 2.3 Creating access panel

2. Enter the **Access Panel #** as a unique identifier of the access panel.

Enter the **Access Panel** Description.

3. Enter the Zone number identifying the zone to which the access panel must be associated.
4. Specify the Open Access Panel Task # to open the access panel.
5. Specify the Close Access Panel Task # to close the access panel.
6. Click the **Create Access Panel** pushbutton.

2.1.8 Defining quick codes

What are quick codes?

Quick codes can be used to classify the task based on the type of maintenance activity to be carried out. Some examples of quick codes for task are “Lubrication” and “Inspection”.

1. Select the **Create Quick Codes** link under the **Maintenance Task** business component. The **Create Quick Codes** page appears. *See Figure 2.4.*

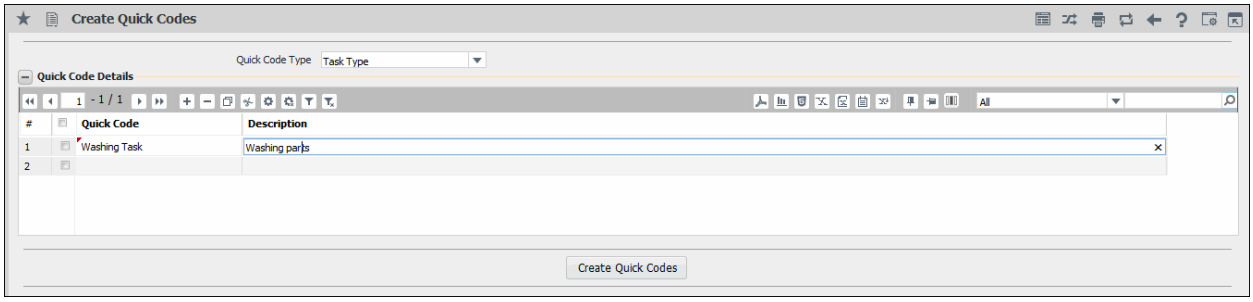


Figure 2.4 Defining quick codes

2. Enter the unique identifier of the quick code in the **Quick Code** field in the multiline.
3. Enter the **Description** of the quick code.
4. Click the **Create Quick Codes** pushbutton.

2.1.9 Setting options

You can set default options for generating a non-standard task. You can specify whether a non-standard task can be generated and the numbering series to be followed while generating them.

1. Select the **Set Options** link under the **Maintenance Task** business component. The **Set Options** page appears. *See Figure 2.5*.

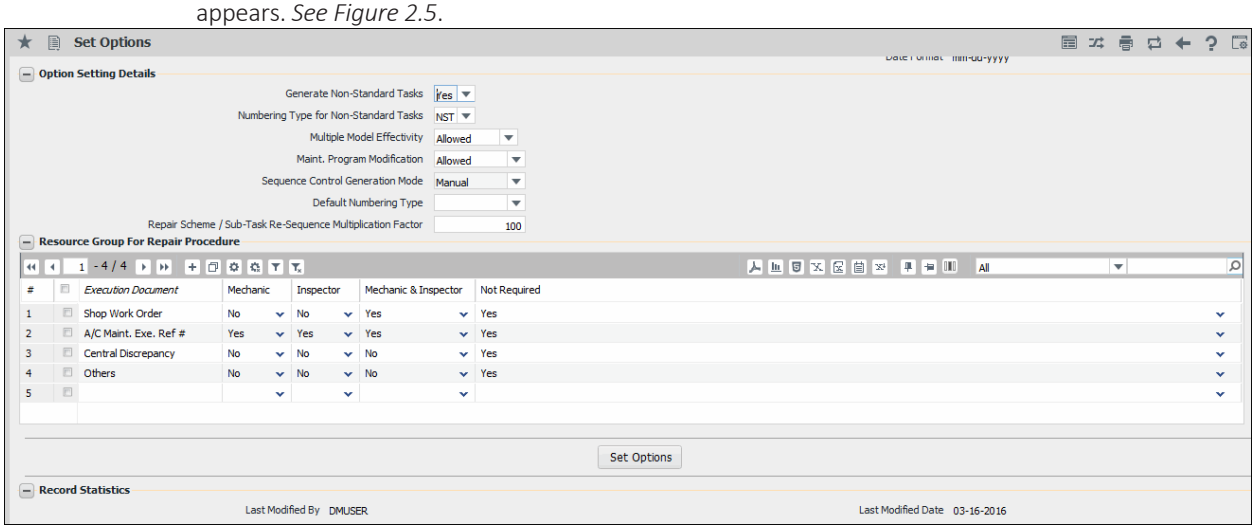


Figure 2.5 Setting options for task

2. Specify whether non-standard tasks can be generated in the **Generate Non-Standard Tasks** drop-down list box.
3. The system retrieves the numbering types that have been defined for the task in the **Numbering Type for Non-Standard Tasks** drop-down list box. Select the numbering type for the non-standard task.
4. Indicate whether **Multiple Model Effectivity** is allowed for task, standard procedure and non-standard task by selecting the appropriate option.
5. Use the **Maint. Program Modification** drop-down list box to indicate whether component/aircraft maintenance programs can be modified. From the drop-down list box, select,
   - "Allowed", to enable modification of maintenance programs.
   - "Not Allowed", to prevent modification of maintenance programs.
   - "With Revision", to allow modification of maintenance programs with a new revision number

6. Use the **Sequence Control Generation Mode** drop-down list box to indicate whether the generation of sequence control number must automatic or manual. Select,
    - Automatic, to enable the system to automatically generate the sequence control number on the basis of the default numbering type.
    - Manual, to enable users to specify the identification number for a sequence control.
7. Use the **Default Numbering Type** drop-own list box to select the numbering type for the automatic generation of sequence control numbers in the **Manage Unified Task Sequence** activity. The drop-down list box displays all numbering types in Active status defined for the transaction **Maintain Task Seq #**. It is mandatory to specify the numbering type, if the sequence control generation mode is "Automatic". Conversely, the drop-own list box displays no values, if the sequence control generation mode is set as "Manual".
8. Enter the **Re-Sequence Multiplication Factor** for re-sequencing of sequence control numbers in the **Manage Unified Task Sequence** activity, Mandatory. The factor you specify here must be a positive integer.
9. Click the **Set Options** pushbutton.

2.1.10 Creating a task

You can define the task, which is the basic unit of the maintenance work performed on the equipment. You can create various revisions of task. Revisions represent the number of changes the task has undergone.

1. Select **Create Task** under the **Maintenance Task** business component. The **Create Task Information** page appears. *See Figure 2.6.*
2. Indicate whether the task is applicable for an "Aircraft", "Engine" or "Component" n the **Task Applicability** drop-down list box.
3. Select the base aircraft model on which the task can be performed in the **Base Aircraft Model #** field.
4. Enter the **Task #** as a unique identifier of the task.
5. Specify **Revision #** and **Revision Date** for the task.
6. Select the type of the task in **Task Type**.
7. Enter **Task Description**.
8. Select the category of the task in **Task Category** field.
9. Select the **Operations Type** of the maintenance task. Specify the work center in which the maintenance task must be executed in the **Work Center #** field.
10. Use the **WBS Code** drop-down list box to specify the Work Breakdown Structure (WBS) Code indicating the attributes that identify whether the task is executed for planning purpose or execution purpose.
11. To copy details from an existing task, enter the **Task #, Revision #** and **Base Aircraft Model #** in the **Copy From** group box and specify the **Copy Options**.
12. Check the following boxes to copy specific details of the task to the new task being created by you. All: To copy all the details pertaining to the task. Details include reference, schedule, sub tasks, access panel, work area or zone, effectivity, reference details, parts and resources.
    - Schedule: To copy the schedule details
    - Sub Task: To copy the sub tasks.

- Task Requirements: To copy the task requirement details such as spare part details and resource details.
- Effectivity: To copy the effectivity details
- Access Panel /Work Area /Zone: To copy the access panel, work area or zone details
- Task References: To copy the reference document details

13. In the **Task Additional Details** group box, specify the **Est. Elapsed Time**, **Insp. Man Hrs.** and **Est. Man Hrs.** required for executing the task.

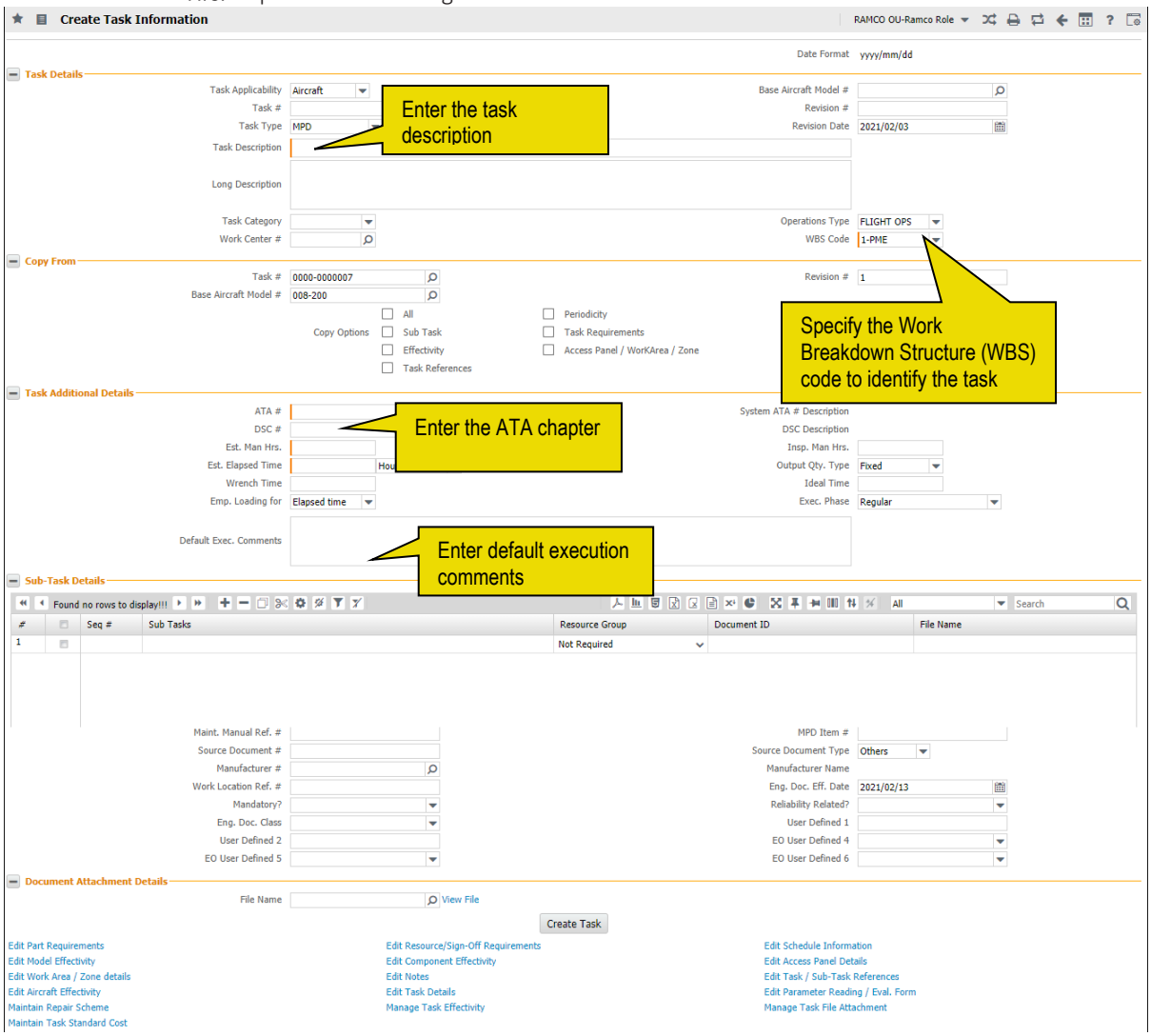


Figure 2.6 Creating a task

14. Use the **Output Qty. Type** drop-down list box to select the type of output quantity from the task. The drop-down list box displays Fixed and Variable.
15. Enter the total time estimated for the actual execution of the task in the **Wrench Time** field.
16. Enter the **Ideal Time** recommended by the OEMs for the completion of the task.
17. Use the **Emp. Loading** drop-down list box to select the time for employee loading for the task. The drop-down list box displays Elapsed time and Wrench time.
18. Enter the execution comments to be defaulted in the shop work order or aircraft package at the time of assigning the task in the **Default Exe. Comments** field.
19. Select the **Execution Phase** of the task. The execution phase can be one of the following:

- Preparatory – Select this option if the task must be performed as a part of preliminary activities before aircraft is grounded for maintenance.
- Regular – Select this option if the task must be performed as a part of normal maintenance activities carried out in hangar.
- Post Flight – Select this option if the task must be performed as a part of post test flight activities.

20. Enter the **Sub Tasks** that must be performed while executing the maintenance task, in the **Sub-Task Details** multiline.
21. Enter the Maintenance Planning Document item number of the task, in the **MPD Item #**.
22. Specify the dependent system condition to which the sub-task must be associated in the **DSC #** field.
23. Enter the projected time for executing/completing the sub-task in the **Est. Elapsed Time f**ield.
24. Use the **Time UOM** drop-down list box to select the unit of measurement for the estimated elapsed time.
25. Use the **Output Qty. Type** drop-down list box to select the type of output quantity from the sub-task.
26. Use the **Emp. Loading** drop-down list box to select the time for employee loading for the sub-task.

In the **Reference Details** group box,

27. Specify the Aircraft Maintenance Manual or the Component Maintenance Manual item number of the task in the **Maint. Manual Ref. #** field.
28. Specify the Maintenance Planning Document item number of the task in the **MPD Item #** field.
29. Identify the **Source Document Type** and enter the **Source Document #** for the task.
30. Enter **Manufacturer #** associated with the task.
31. Enter the **Work Location Ref. #** for the task.
32. Enter the date till which the engineering document is valid in the **Eng. Doc Eff. Date** field.
33. Use the **Mandatory** drop-down list box to indicate whether the task is mandatory for the part #.
34. Use the **Reliability Related** drop-down list box to indicate whether the task executed on the part will be evaluated for the component reliability analysis.
35. Use the **Eng. Doc. Class** drop-down list box to select the engineering document class to be associated with the task.
36. Click the **Create Task** pushbutton.

> *Note: The system creates the task and sets the status as "Fresh".*

Mapping of new task to sequence control

If you have accessed the "Create Task Information" page from the "Manage Repair Scheme Definition" page and if you have specified a sequence control for the new task in the later page, the system on authorization of the task:

- Maps the new task to the sequence control
- Makes all those parts that are mapped to the sequence control effective for the new task.

To enable the system to automatically perform the above-explained jobs, the new task must possess WBS code with process parameters defined in the Common Masters component in the following way:

- WBS level? as “Root/Intermediate”
- Allow Master Sequence Control definition?' as “Yes”.

Creating repair scheme task

If the newly created task has a parent task, the system sets the new task as a repair scheme task in the repair scheme of the parent task.

To proceed,

- Select the **Edit Part Requirements** link to specify the materials required for carrying out the task.
- Select the **Edit Resource/Sign-Off Requirements** link to specify resources and sign-off information for carrying out the task.
- Select the **Edit Schedule Details** link to specify the schedule details for the task.
- Select the **Edit Model Effectivity** link to specify the task applicability to aircraft model.
- Select the **Edit Component Effectivity** link to specify the task applicability to the component.
- Select the **Edit Access Panel Details** link to specify the access panels that are to be used for executing the task.
- Select the **Edit Task / Sub-Task References** link to specify the reference document details for the task.
- Select the **Edit Work Area / Zone Details** link to specify the work area and the aircraft zone where the task has to be executed.
- Select the **Edit Parameter Reading Requirements** link to add or modify the parameter details of the task/sub-task.
- Select the **Edit Aircraft Effectivity** link to specify the task applicability to the aircraft.
- Select the **Maintain Repair Scheme** link to create a repair scheme for the tasks.
- Select the **Manage Task Effectivity** link to manage task effectivity details.
- Select the **Manage Task File Attachment** link to associate multiple files to a task for printing.

2.1.11 Creating standard task from non-standard task

You can create standard task from non-standard task Non-Standard tasks are the unscheduled, unplanned tasks carried out during the non-standard kind of maintenance. The non-standard tasks can be generated by the system while creating the work orders. Using this activity you can convert non-standard tasks to standard tasks.

1. Select Create Non-Standard Based Standard Task under the Maintenance Task business component. The Select Non-Standard Task page appears.
2. Specify search criteria and click the **Search** pushbutton, to search for non-standard tasks.

3. Click the hyperlinked non-standard task in the multiline. The **Create Non-Standard based Task Information** page appears. *Figure 2.7*

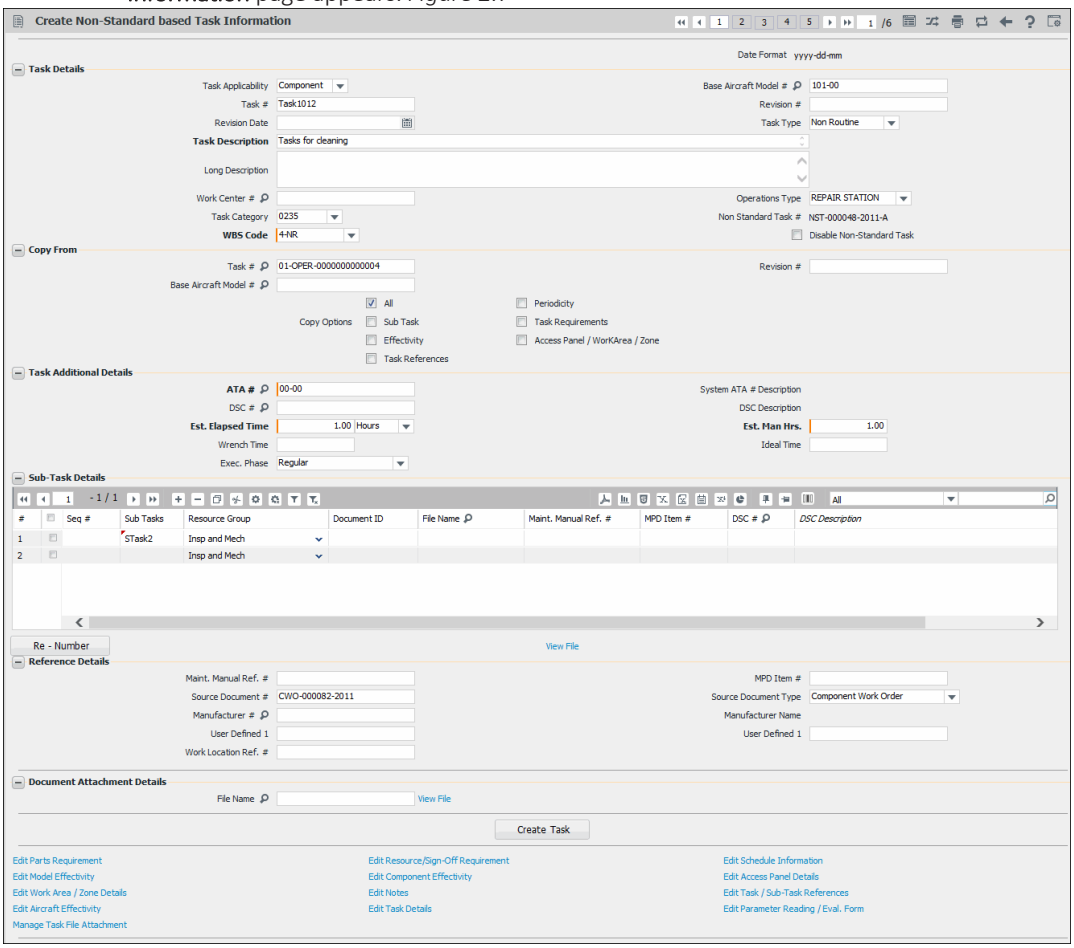


Figure 2.7 Creating non-standard based standard task

Follow the instructions given under the topic "Creating a task" to create standard tasks from non-standard tasks.

2.1.12 Specifying parts for the task

You can add or modify the details of parts required for executing the task.

1. Select the **Edit Part Requirements** link in the **Create Task Information** page. The **Edit Part Requirements** page appears. *See Figure 2.8.*
2. Enter the **Part #** field and other details in the multiline.

Or

3. Enter the **Mfr. Part #** and the **Mfr. #** of the part.

> *Note: The system displays the **Mfr. Part #** and **Mfr. #** fields for you to enter, and hides the "Part #" field above, if the parameter "Enable Manufacturer Part # control in transaction" under the Category 'Manufacturer Part #' is set as "Yes" in the "Set Inventory Process Parameters" activity of the "Logistics Common Master" business component.*

4. Enter the **Customer #** of the part.

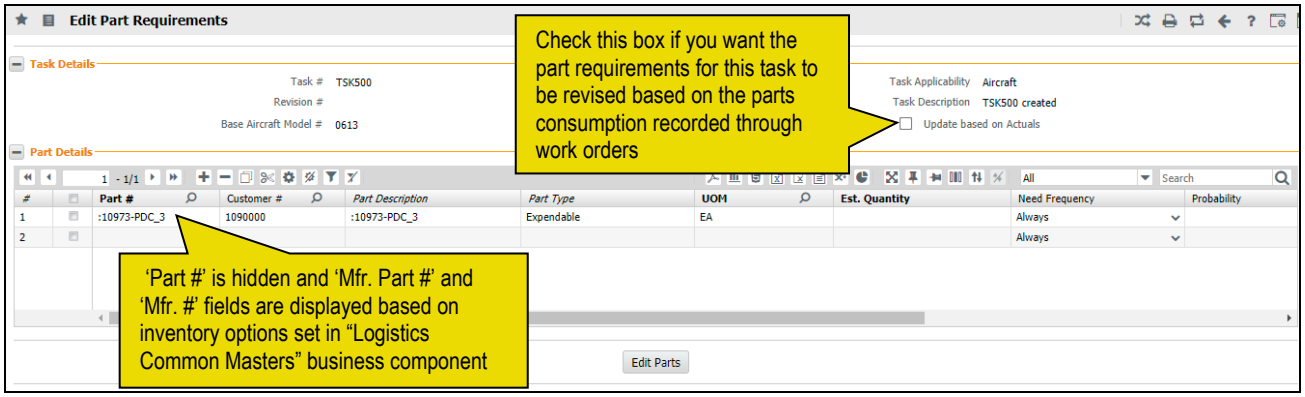


Figure 2.8 Specifying parts for the task

Enter the required quantity of the part to carry out the task in the **Est. Quantity** field.

5. Use the **Need Frequency** drop-down list box to indicate the requirements of the part.
6. Enter the **Probability** of requirement of the part. A positive value ranging between 0 and 1 (e.g. 0.1, 0.5, 0.9) is entered here if the 'Need Frequency' is set as "As Required" or the value '1' is entered if the "Need Frequency" is set "Always".
7. Click the **Edit Parts** pushbutton.

2.1.13 Specifying resources/sign-off information for the task

You can add or modify the details of resources required for executing the task.

1. Select the **Edit Resource/Sign-Off Requirements** link in the **Create Task** Information page. The **Edit Resource/Sign-Off Requirements** page appears. *See Figure 2.9.*
2. Select the **Resource Type** you wish to specify for the task.
3. Enter details such as the **Resource #, Time UOM, Customer #, Est. Time** and Est. Nos in the multiline, to specify the resources required for executing the task.
4. Select "Yes" for the "Skill" type of resources in the **Approval Reqd.?** field, if you want the system to verify the license and certification availability for the employee who executes the task.

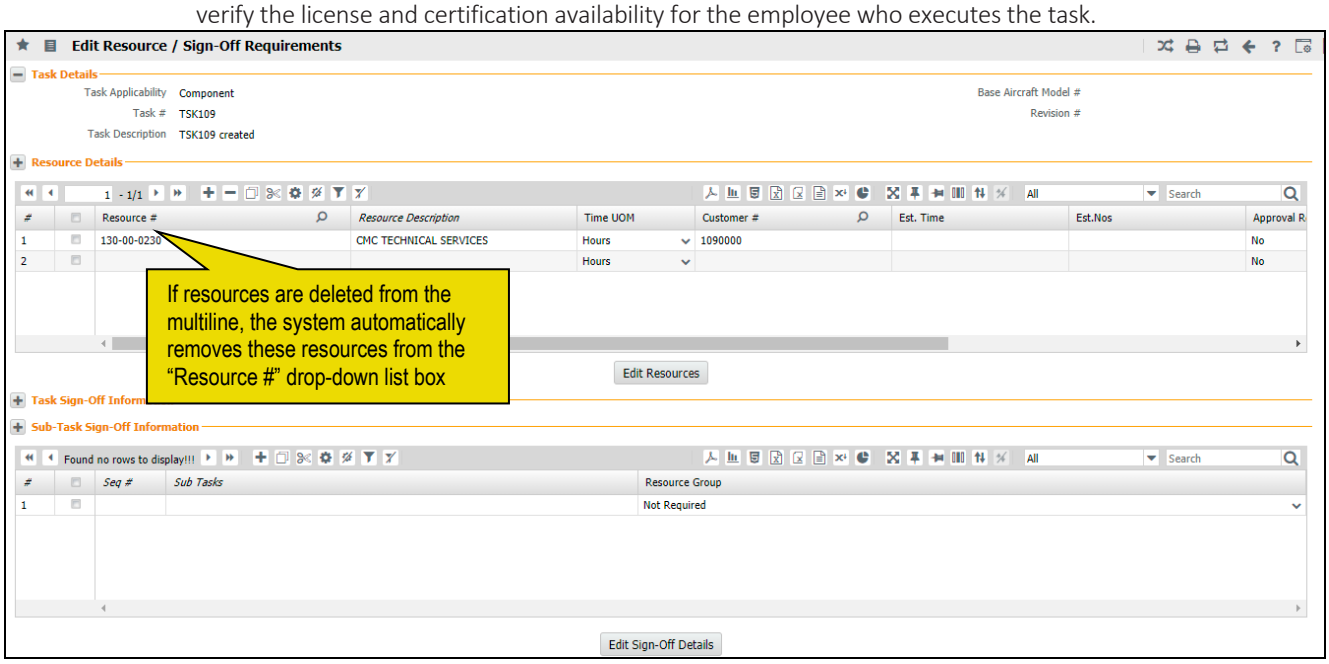


Figure 2.9 Specifying resources to the task

5. Click the **Edit Resources** pushbutton.

In the Resource Sign-Off Information group box,

6. Use the **Resource #** drop-down list box to specify the resource required for completing the task.
7. Click the **Get details** pushbutton to retrieve the sub-task details for the task number, aircraft model number and resource number combination.
8. Use the **Resource Group** drop-down list box to specify the resource group. The system provides the options "Not Required", "Mechanic", "Inspector" and "Insp & Mech".

   Note: You can set the "Resource Group" only to "Inspector" or "Not Required", if the resource group of the sub-task is set as "Inspector" in the previous page. You can set the "Resource Group" only to "Mechanic" or "Not Required", if the resource group of the sub-task is set as "Mechanic" in the previous page.

   If resources are deleted in the "Resource Details" multiline, the system automatically removes the corresponding sub-task details from the multiline.
9. Click the **Edit Sign-Off Details** pushbutton to update the sign-off details.

2.1.14 Specifying schedule information for the task

You can enter the schedule information for the task. The schedule decides the optimum limits within which the task is to be performed. Schedule can be in terms of calendar duration or on the basis of one or more consumption parameters (like flight hours / flight cycles). This becomes very important especially for tasks of type MPD and CMM.

1. Select the **Edit Schedule Details** link in the **Create Task Information** page. The **Edit Schedule Information** page appears. *See Figure 2.10.*
2. Select the **Schedule Type** as "Recurring" or "One-Time".
3. Specify the **Threshold** and **Repeat Interval**, to indicate the duration after which the task must be performed and the interval within which the task must be repeated thereafter.
4. Enter the **Terminating Value** field to specify the terminating value in terms of days, for task execution.
5. Specify the **Time Unit** as 'Days', 'Months', 'Month End' and 'Years'.
6. Use the **Limit Basis** drop-down list box to select the limit basis for picking the Next Schedule Date (NSD) for a task that has multiple NSDs. This situation occurs either when a task has date-based and usage-based schedules or when the usage-based schedule comprises multiple parameters.
7. In the **Usage Based Schedules** multiline, enter the **Parameter** based on which the task must be performed.
8. Specify the Threshold Value, Repeat Interval and Terminating Value for the parameter.

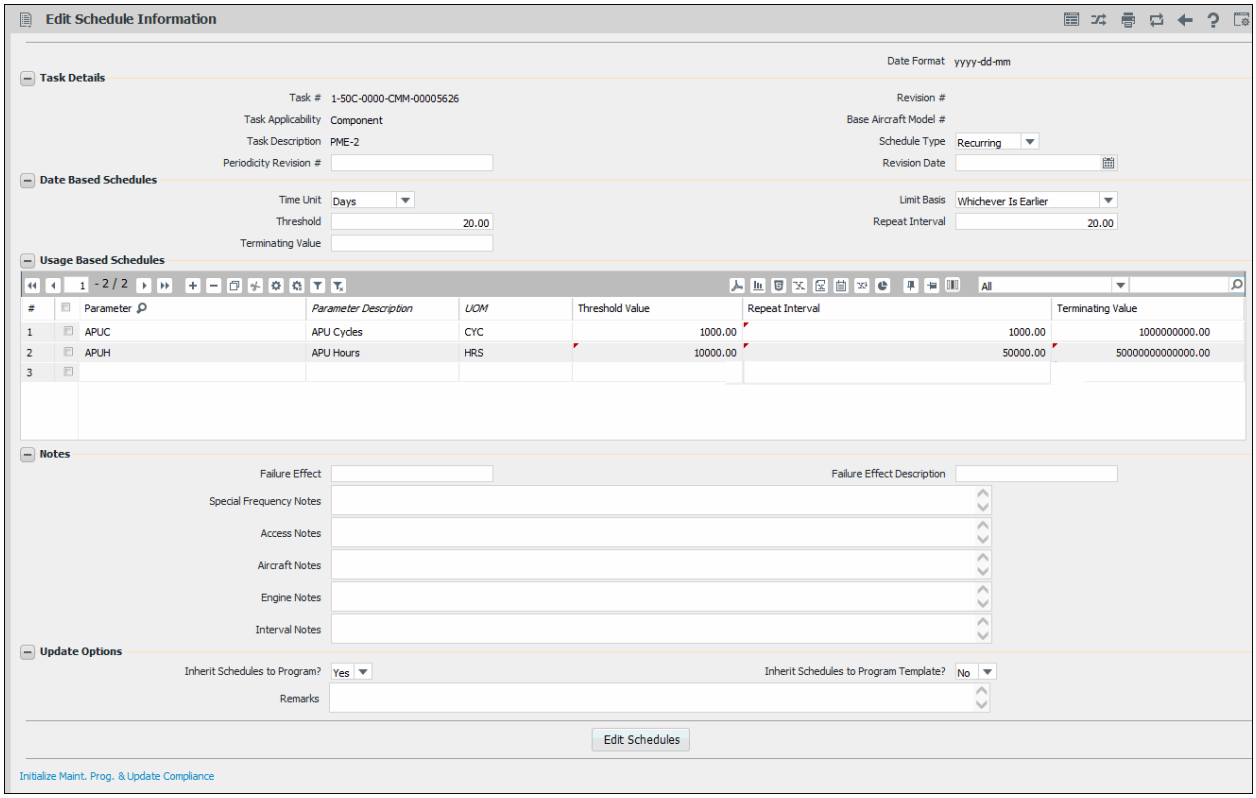


Figure 2.10 Specifying schedule information of task

9. In the **Update Options** group box, use the **Inherit Schedules to Program?** drop-down list box to indicate whether task schedules must be updated in the maintenance programs associated with aircraft/components when schedules for the task are modified.

10. Use the **Inherit Schedules to Program Template?** drop-down list box to indicate whether task schedules must be updated in the maintenance programs of part/aircraft model when schedules for the task are modified.

11. Click the **Edit Schedule** pushbutton.

The system performs the following:

- The schedules of tasks are updated in the maintenance programs only if the Prog. Item Type of tasks is 'Block', 'Base', 'Non-Block' or 'To Be Decided'.

- When a new parameter is added for the task, the system updates the parameter details to the AMP, CMP, Model Program and Part Program, if the added parameter is defined for the effective aircraft, component, model and part, respectively.

- **NSD / NSV computation** - Computes and updates the NSD / NSV for tasks. Refer to the flow diagram for NSD / NSV computation. *See Figure 2.10a-g.*

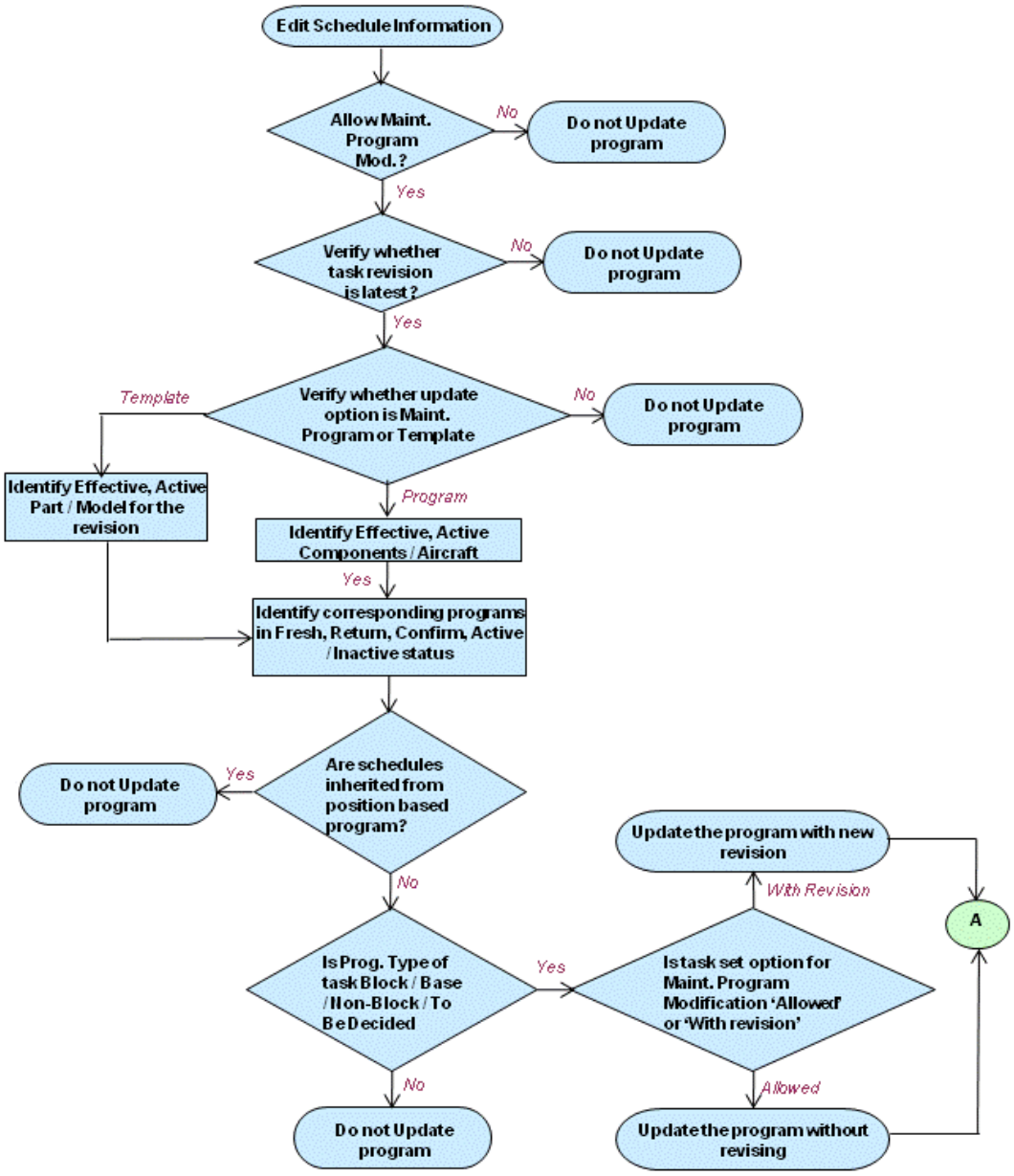


Figure 2.11 a Flow diagram for NSD / NSV computation - Updating maintenance program

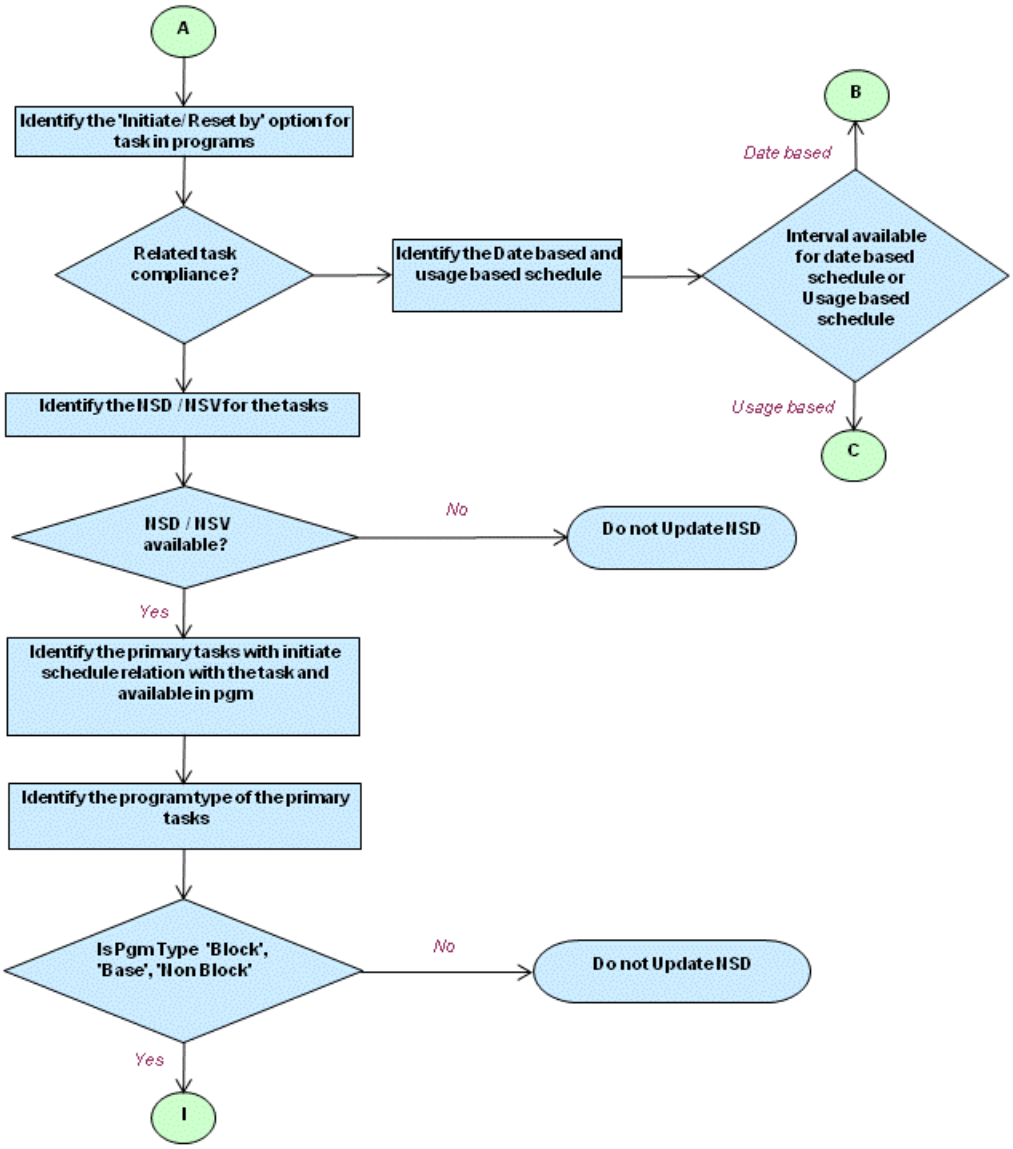


Figure 2.10b NSD / NSV computation - Updating maintenance program

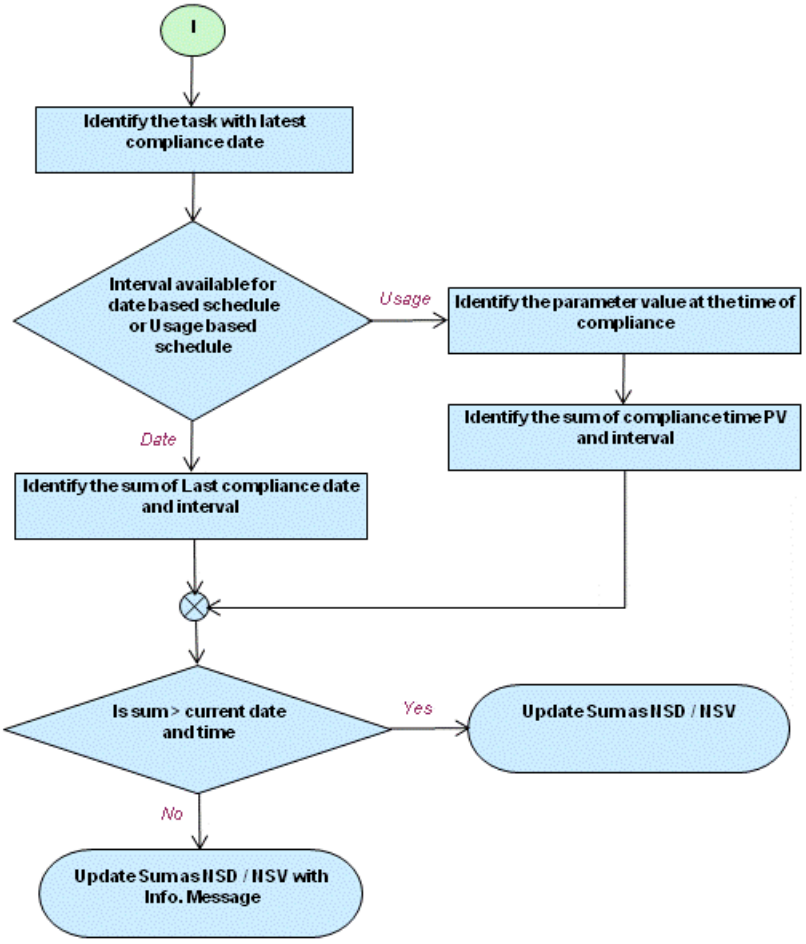


Figure 2.10c NSD / NSV computation - Updating maintenance program

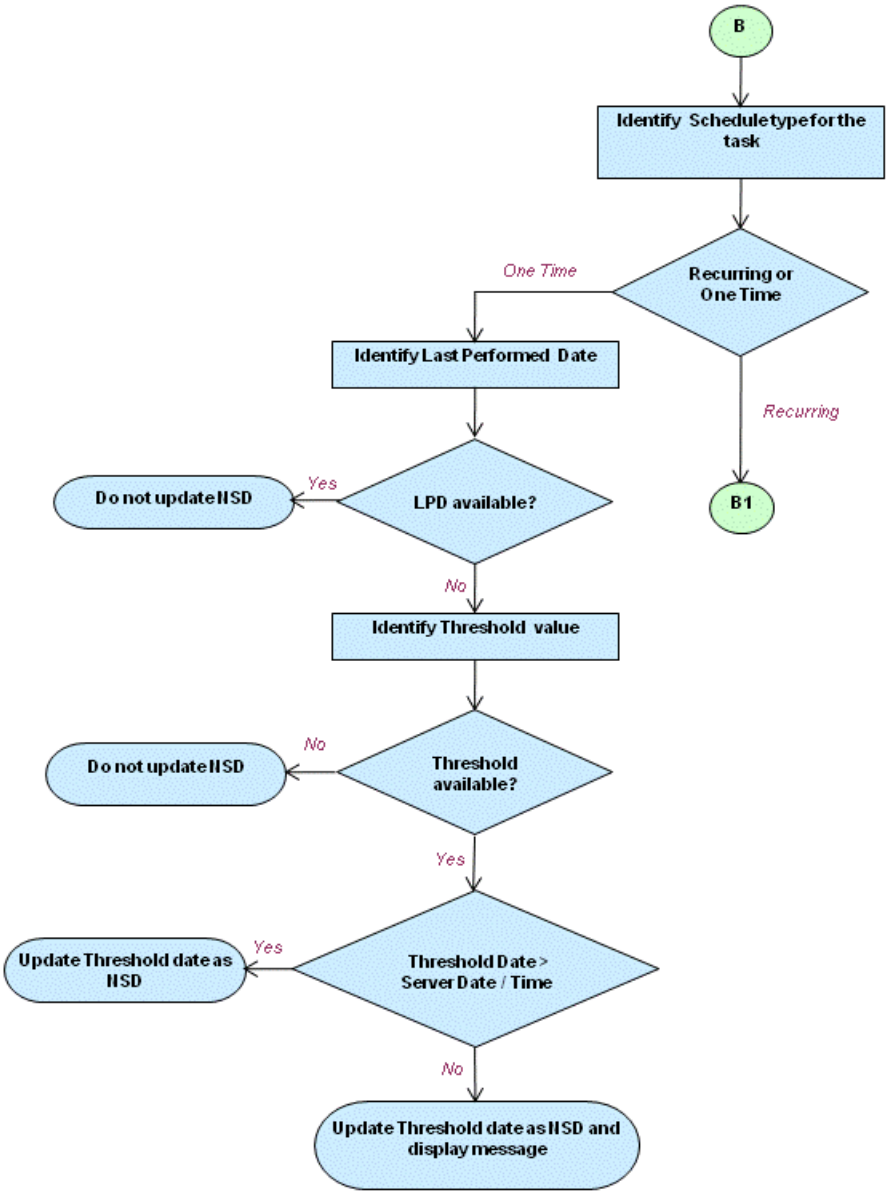


Figure 2.10d NSD / NSV computation - Date Based Schedule Update

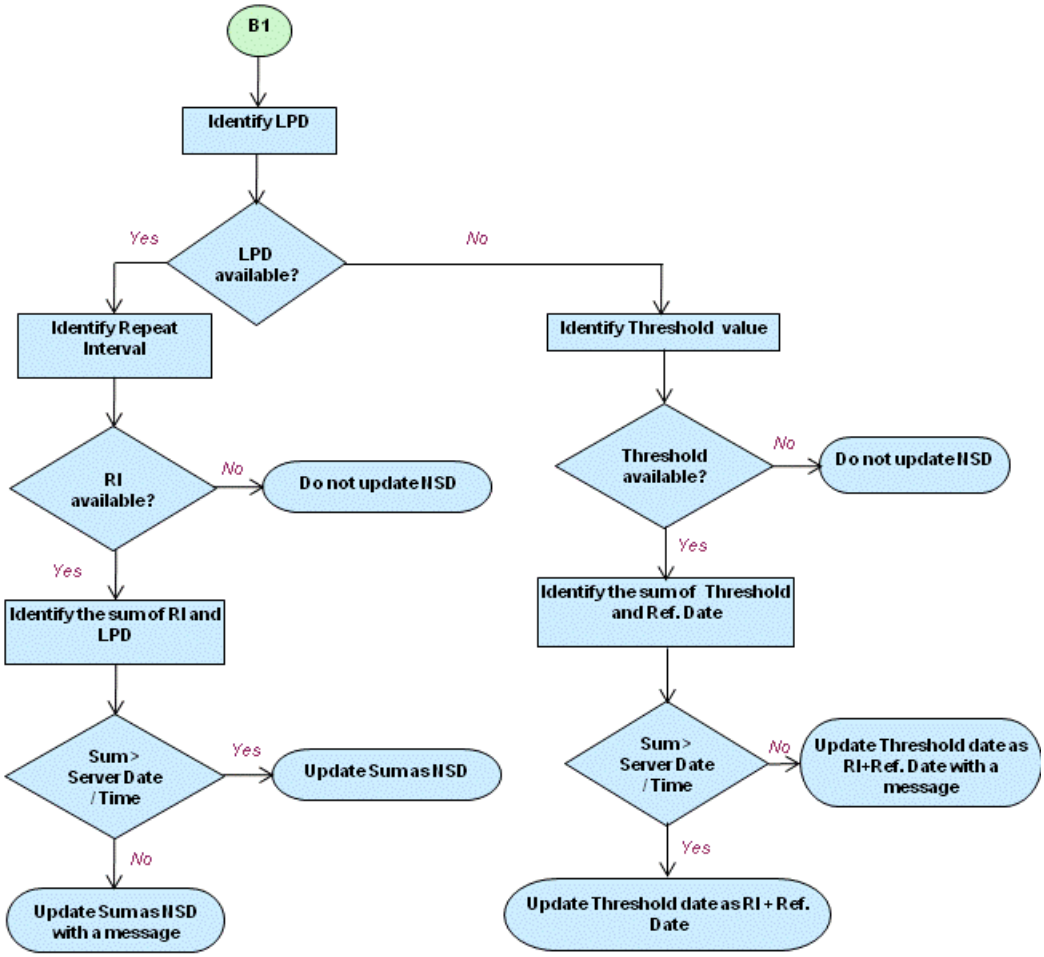


Figure 2.10e NSD / NSV computation - Date Based Schedule Update

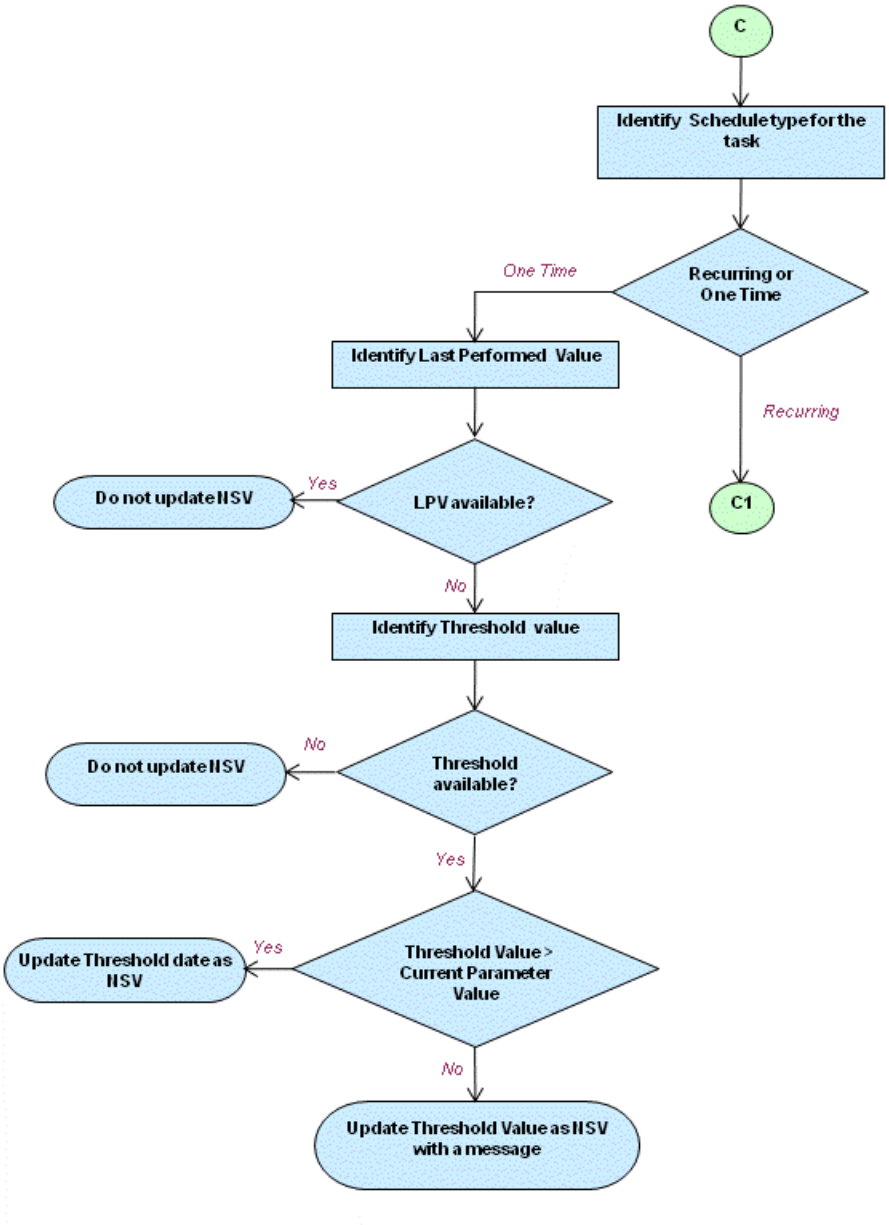


Figure 2.10f NSD / NSV computation - Usage Based Schedule Update

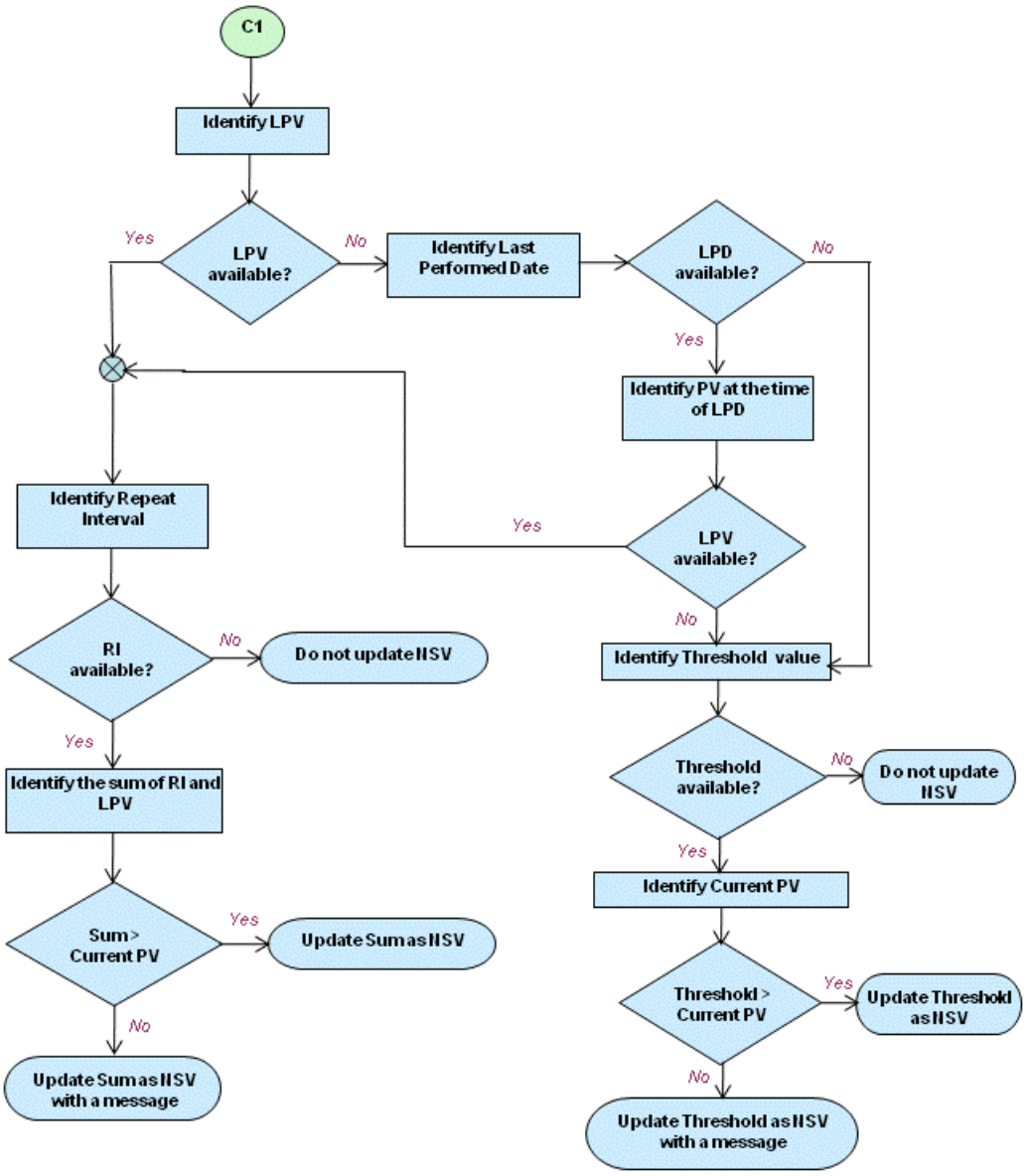


Figure 2.10g NSD / NSV computation - Usage Based Schedule Update

To proceed,

τ Select the **Initialize Maint. Prog. & Update Compliance** link to update schedule details of tasks and record compliance information.

2.1.15 Specifying model effectivity details for the task

You can define the model effectivity, to indicate the applicability of the task for the aircraft models. Note: This page is displayed only when the "Multiple Model Effectivity" option is set as "Allowed" in "Set Options" activity.

1. Select the **Edit Model Effectivity** link in the **Create Task Information** page. The **Edit Model Effectivity** page appears. *See Figure 2.11.*

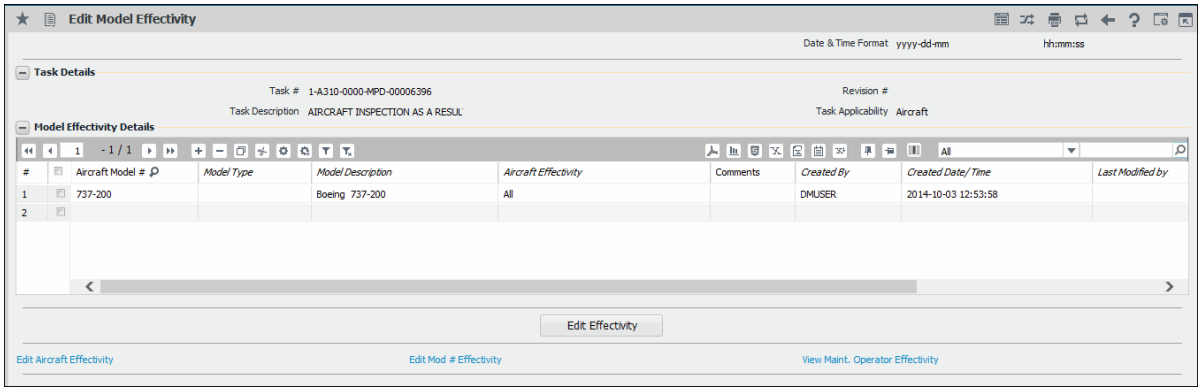


Figure 2.12 Specifying model effectivity of task

2. Enter the **Aircraft Model #** in the multiline.
3. Click the **Edit Effectivity** pushbutton.
4. To specify aircraft effectivity details, select the aircraft model in the multiline and select the **Edit Aircraft Effectivity** link.
5. Select the **Edit Mod # Effectivity** link to modify the aircraft model details.
6. Select the **View Maint. Operator Effectivity** link to view the maintenance operator effectivity details.

2.1.16 Editing aircraft mod # details

Using this page you can edit the Mod # effectivity details for an aircraft that belong to a specific model.

1. Select the **Edit Mod # Effectivity** link provided at the bottom of the **Edit Model Effectivity** page. The **Edit Mod # Effectivity** page appears. *See Figure 2.12.*

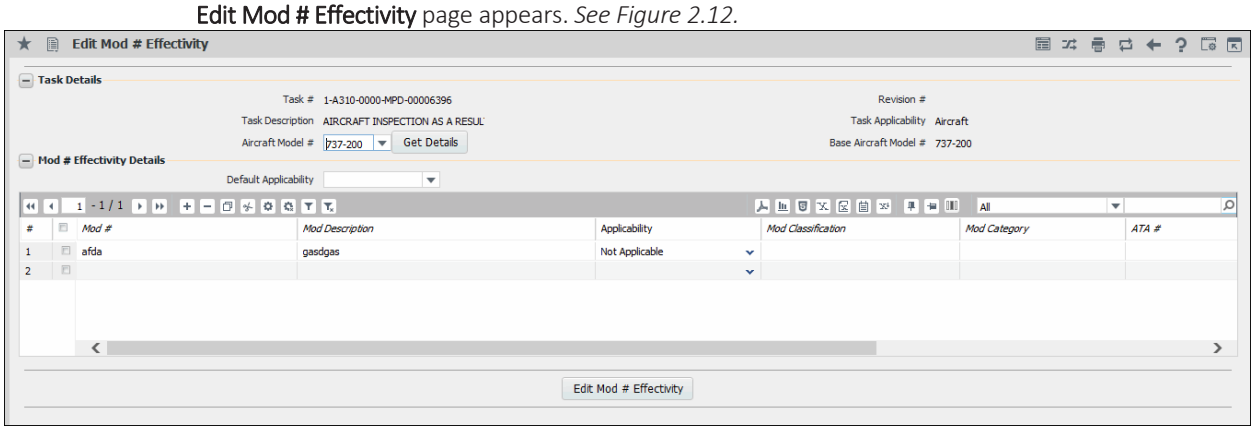


Figure 2.13 Editing Mod # effectivity details of task

2. Use the **Aircraft Model #** drop-down list box and specify the model number to which the aircraft belongs, in the **Task Details** multiline.
3. Click the **Get Details** pushbutton to retrieve Mod # Effectivity details pertaining to the aircraft.
4. In the **Mod # Effectivity Details** multiline, specify the **Default Applicability** and the **Applicability** of the Mod number on the aircraft. The system provides the options: “Pre”, “Post”, “No Impact” and “Not Applicable”.

   Note: The system loads the option “Not Applicable”, when there is no applicability value defined for the Mod # - Aircraft combination in the “Common Masters” business component.

5. Click the **Edit Mod # Effectivity Details** pushbutton, to modify the mod effectivity details of the aircraft.

2.1.17 Specifying component effectivity details for the task

You can define the component effectivity, to indicate the applicability of the task for the components.

1. Select the **Edit Component Effectivity** link in the **Create Task Information** page. The **Edit Component Effectivity** page appears. *See Figure 2.13.*

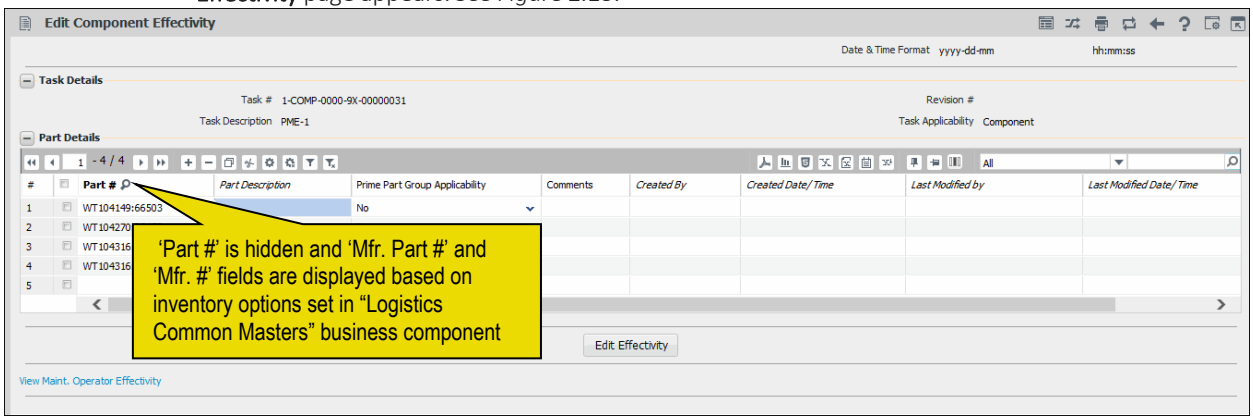


Figure 2.14 Specifying component effectivity of task

2. Enter the **Part #** in the multiline.

Or

3. Enter the **Mfr. Part #** and the **Mfr. #** of the part.

> *Note: The system displays the **Mfr. Part #** and **Mfr. #** fields for you to enter, and hides the "Part #" field above, if the parameter "Enable Manufacturer Part # control in transaction" under the Category 'Manufacturer Part #' is set as "Yes" in the "Set Inventory Process Parameters" activity of the "Logistics Common Master" business component.*

4. Enter any additional **Comments** on the applicability of the task to the component.
5. Click the **Edit Effectivity** pushbutton.
6. Select the **View Maint. Operator Effectivity** link to view the maintenance operator effectivity details.
7. Select the **Record Task Part Mod Details** link at the bottom of the page to update part modification details for the effective tasks.

2.1.18 Editing the access panel information

You can add access panels or modify the access panel details that have already been identified for the task.

1. Select the **Edit Access Panel Details** link in the **Create Task Information** page. The **Edit Access Panel Information** page appears. *See Figure 2.14.*

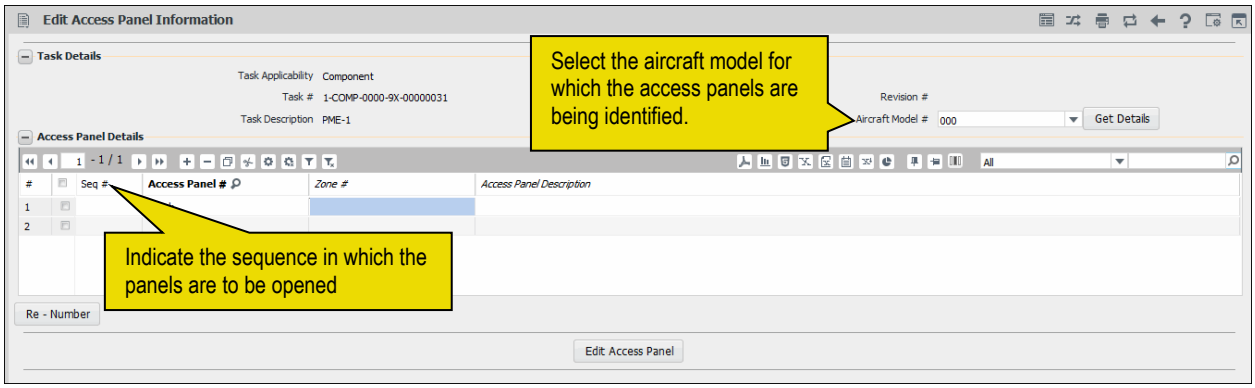


Figure 2.15 Specifying access panel information for the task

2. Enter the access panel number in the **Access Panel #** field.
3. Click the **Edit Access Panel** pushbutton.

2.1.19 Specifying the task references

You can enter the reference information for the task or sub task.

1. Select the Edit Task / Sub-Task References link in the Create Task Information page. The Edit Task References page appears.
2. Select the type of the reference document in the **Reference Doc Type** drop-down list box.
3. Enter the **Document ID** of the document containing details of the task.
4. Click the **Edit References** pushbutton.

2.1.20 Entering work area or zone information for the task

You can add or modify the work area or the zone where the task must be executed.

1. Select the **Edit Work Area/ Zone details** link in the **Create Task Information** page. The **Edit Work Area / Zone Information** page appears. *See Figure 2.15*.

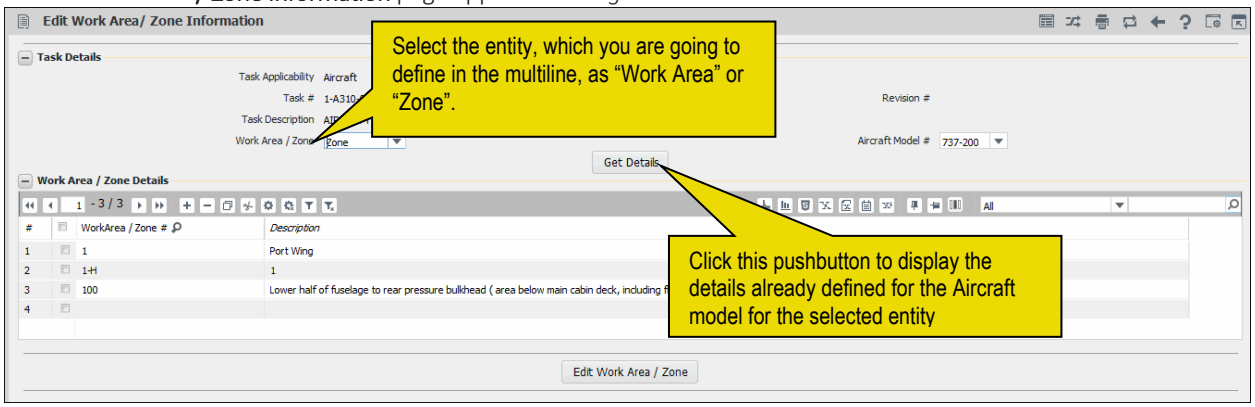


Figure 2.16 Entering work area or zone information for the task

2. Select the entity, which you are going to define in the multiline, as "Work Area" or "Zone".
3. Select the **Aircraft Model #** for which the work area or zone must be defined.
4. Enter the **Work Area / Zone #** field in the multiline, to specify the work area or zone where the task must be executed when performed on the selected Aircraft Model.
5. Click the **Edit Work Area / Zone** pushbutton.

2.1.21 Specifying parameter details for the task / sub-task

You can define or modify the parameter details for the task/sub-task.

1. Select the Edit Parameter Reading / Eval. Form link in the Create Task Information or Edit Task Information page. The Edit Parameter Reading / Conditional Maint. Eval. Requirements page appears. *See Figure 2.16.*

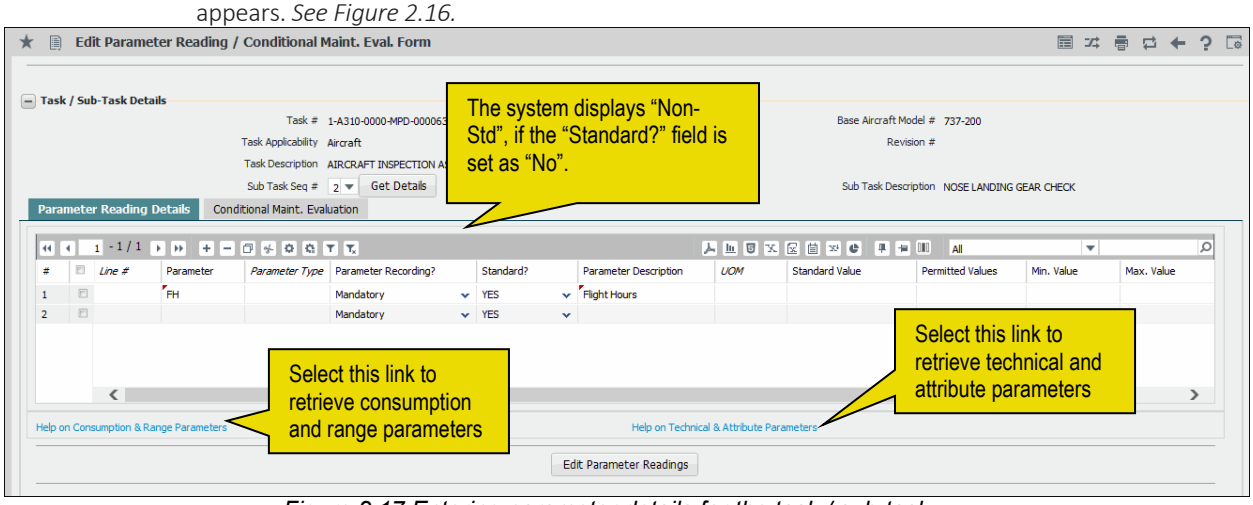


Figure 2.17 Entering parameter details for the task / sub-task

2. Use the **Sub Task Seq #** drop-down list box to specify the sequence for the sub-task.
3. Click the **Get Details** pushbutton to retrieve the parameter details for the task number, base aircraft model number and sub task sequence number combination.
4. Select the Parameter Reading Details tab in the Edit Parameter Reading / Conditional Maint Eval. Form page. See *Figure 2.16.*
5. Enter the **Parameter** of the task/sub-task.
6. Use the **Parameter Reading?** drop-down list box to specify whether recording of parameter reading for the task/sub-task is mandatory or not.
7. Set the **Standard?** field to "Yes" if the parameter is a standard parameter. Select "No" otherwise.
8. Enter the Standard Value, Permitted Values, Min. Value and Max. Value of the parameter.
9. Select the Conditional Maint. Evaluation tab in the Edit Parameter Reading / Conditional Maint Eval. Form page. See *Figure 2.17.*

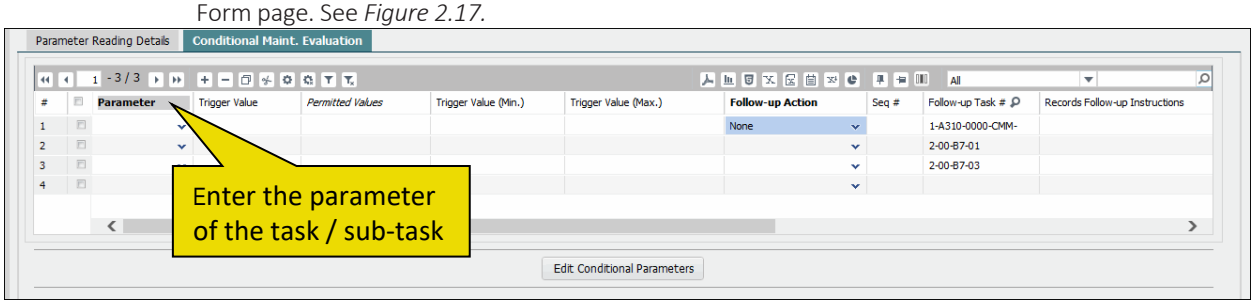


Figure 2.18 Specifying follow-up action for task

10. The name of the parameter in the usage-based schedule in the **Parameter** field.

Specify the following for the parameter in the multiline.

11. **Trigger Value:** The parameter value at which the follow-up action must be executed.
12. **Permitted Values:** The permitted values for the parameter. You can specify multiple values separate by a separator, such as",", ":" or "/".
13. **Trigger Value (Min.):** The minimum parameter value at which the follow-up action must be

executed.

14. **Trigger Value (Max.):** The maximum parameter value at which the follow-up action must be executed.

15. **Follow-up Action:** Use the drop-down list box to select the follow-up action for the task on attainment of one of the following:
    - The trigger value
    - Any of the values in the Trigger Value (Min.) - Trigger Value (Max.) range.

The drop-own list box displays: None, Initiate Schedule, Terminate Schedule, Initiate Immediate Exec. and Initiate Records Follow-up.

16. Specify the task that must be executed as part of the follow-up action in the **Follow-up Task #** field.

17. Specify a set of actions, tasks or procedures that must be carried out as part of "Initiate Records Follow-up" follow-up action on attainment of one of the following in the **Records Follow-up Instructions** field
    - The trigger value
    - Any of the values in the Trigger Value (Min.) - Trigger Value (Max.).

    Note: This field is mandatory, if you have selected "Initiate Records Follow-up" as the Follow-up Action.

18. Specify the base model # of the follow-up task in the **Follow-up Task Base Model #** field.

    Note: This field is mandatory, if you have specified the follow-up task #.

19. Click the **Edit Parameter Readings** pushbutton to add or modify the parameter details for the task/sub-task.

2.1.22 Creating dependent systems condition list

Dependent System Condition (DSC) list describes the condition or the required state of the various related systems for executing a maintenance task.

1. Select Create Dependent Systems Condition List under Maintenance Task business component. The Create Dependent System Condition Information page appears. *See Figure 2.18.*

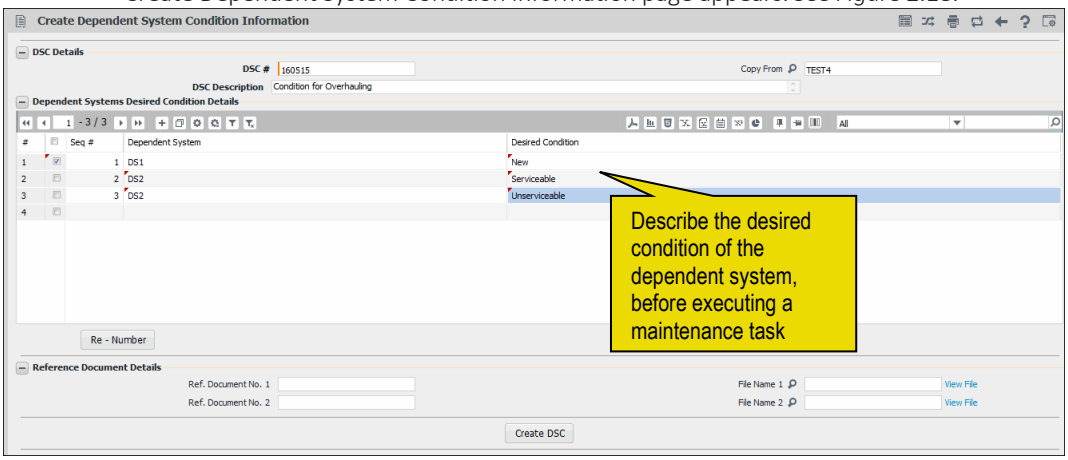


Figure 2.19 Creating dependent system condition

2. Enter the **DSC #** to uniquely identify the DSC.

3. Enter the DSC Description.

4. Enter the dependent systems based on which task is performed, in the **Dependent System** field in

the multiline.

5. Click the **Create DSC** pushbutton.

2.1.23 Authorizing tasks

Tasks can be used in planning and execution documents only after they are activated. You can either activate or cancel the tasks that have been created and are in "Fresh" status.

1. Select **Authorize Task** under **Maintenance Task** business component. The **Authorize Tasks** page appears. *See Figure 2.19.*

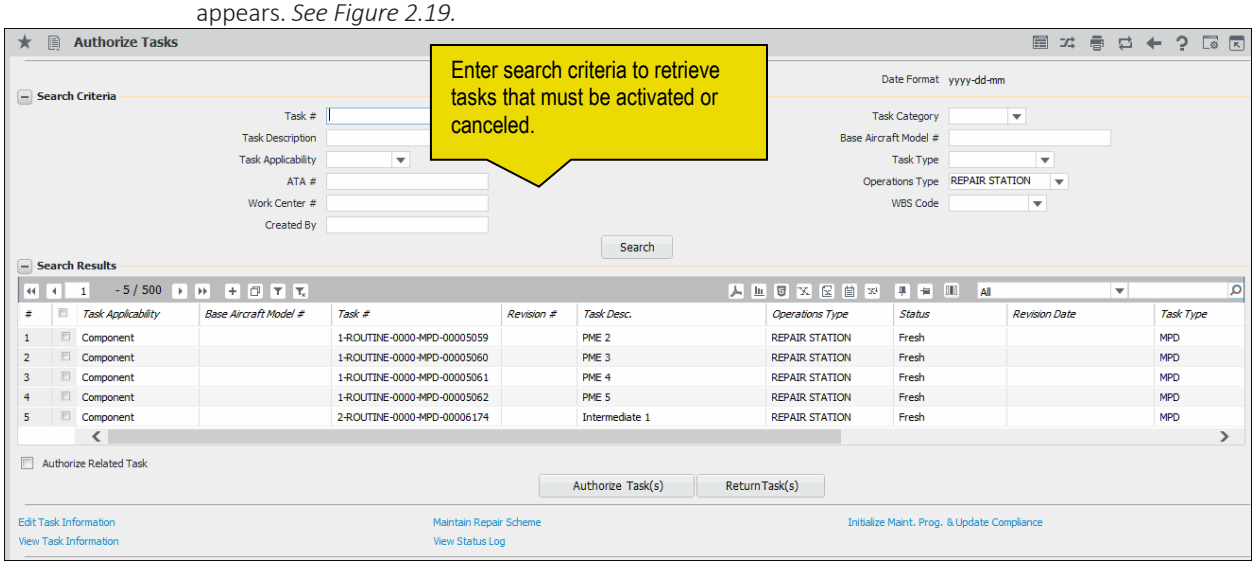


Figure 2.20 Authorizing a task

2. Enter the search criteria to retrieve the tasks that must be activated or canceled.
3. Enter the **Authorization Comments**, if you wish to authorize the task.
4. Select the **Authorize Related Task** check box to enable the system to authorize related tasks in addition to the parent task.
5. Select the tasks that must be activated and click the **Authorize Task(s)** pushbutton.

Note: The system performs the following:

a. *Activates the selected tasks and sets the status of the tasks as "Active".*

b. *Inactivates all the previous revisions of the task, if the "Inactivate Previous Revisions?" check box is selected.*

c. *Consequent to authorization, the parts for which the task is effective are automatically mapped to the sequence control # to which the task has been mapped, if the WBS code for the task has the "Repair Scheme process parameter set to "1".*

d. *If you have selected the "Authorize Related Tasks" check box, the system authorizes related tasks in addition to the primary task.*

e. *When a new parameter is added for the task, the system updates the parameter details to the AMP, CMP, Model Program and Part Program, if the added parameter is defined for the effective aircraft, component, model and part, respectively.*

f. *Computes and updates NSD / NSV for the tasks. Refer to the flow diagram in the "NSD / NSV Computation" section for more details.*

2.1.24 Returning a task

You can return the tasks that you do not wish to authorize, back to the initiator.

1. Repeat steps 1 and 2 under Authorizing a task.
2. Select the tasks that must be returned and click the Return Task(s) pushbutton.

> *Note: The system returns the selected tasks and sets the status of the tasks as "Returned".*

To proceed,

- τ Select the **Edit Task Information** link to modify the task details.
- τ Select the **Maintain Repair Scheme** link to create a repair scheme for the tasks.

2.1.25 Managing unified task sequence

This process enables you to create/update the definition of a sequence control. A sequence control is identified by sequence control # and defines the execution order for a set of component tasks. More precisely, a number of child tasks related to several tasks can be sequenced to be executed in a specific order on a maintenance object. The sequence control # essentially acts as a clue for a shop mechanic in the maintenance. A mechanic can identify the exact order in which a set of tasks must be executed on a part/component by its sequence control #.

To create sequence control #, you must the following,

- Associate parts to the sequence control #
- Associate tasks to a sequence control #. (These tasks are called root tasks for which repair schemes must have been defined using the Maintain Repair Scheme activity.)

Sequence related tasks of all the root tasks in a specific order for execution on parts/components in a shop. You can also modify the above details for an existing sequence control in future. However, a part and task can be associated with only one sequence control # that is in "Active" status at any point of time. Note that this activity does not allow for sequencing of tasks applicable to aircraft.

2.1.26 Managing unified task sequence

1. Select the **Manage Unified Task Sequence** activity in **Maintenance Task** component. The **Manage Unified Task Sequence** page appears. See *Figure 2.20*.

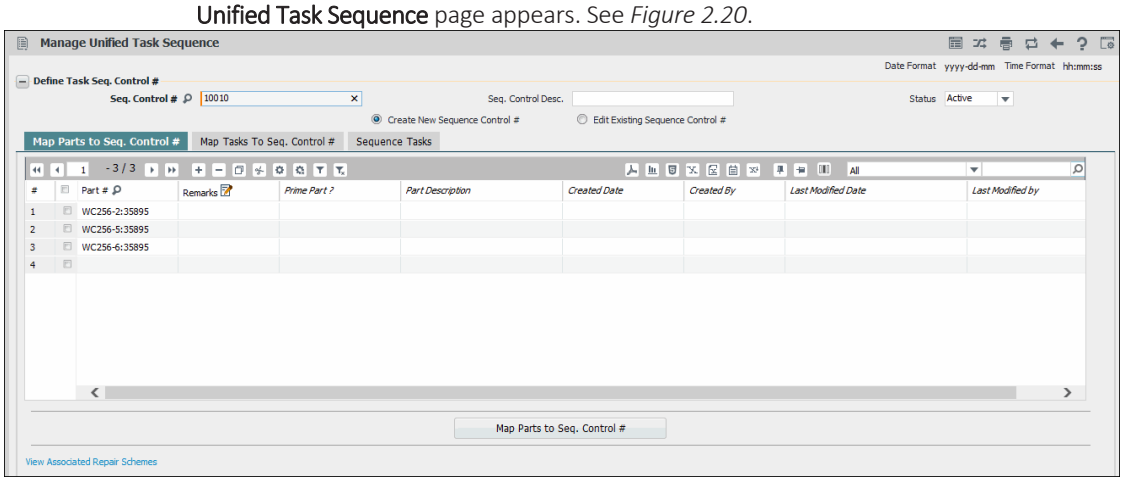


Figure 2.21 Managing sequence control for parts

Creating sequence control

2. In the **Define Task Seq. Control #** group box, enter the sequence control that you want to create and record details, Mandatory. If the "Sequence Control Generation Mode" is set as "Auto" in the Set Options of the Maintenance Task component, the system automatically generates the sequence control # for the new sequence on successful mapping of the parts to the sequence control. However, it is mandatory for the user to specify the sequence control #, if the "Sequence Control Generation Mode" is set as "Manual". Further, enter the following.
3. Enter the **Seq. Control Desc.** of the sequence control for which you want to record details. Mandatory.
4. Use the **Status** drop-down list box to select the status of the sequence control # that you wish to modify. The drop-own list box displays Active and Inactive.
5. Select Create New Sequence Control # radio button.
6. Select the Map Parts To Seq. Control # tab to record.
7. Select the Map Tasks to Seq. Control # tab.
8. Select the **Sequence Tasks** tab.

2.1.27 Mapping parts to sequence control

1. Select the **Map Parts To Seq. Control #** tab in the **Manage Unified Task Sequence** page. See *Figure 2.21*.

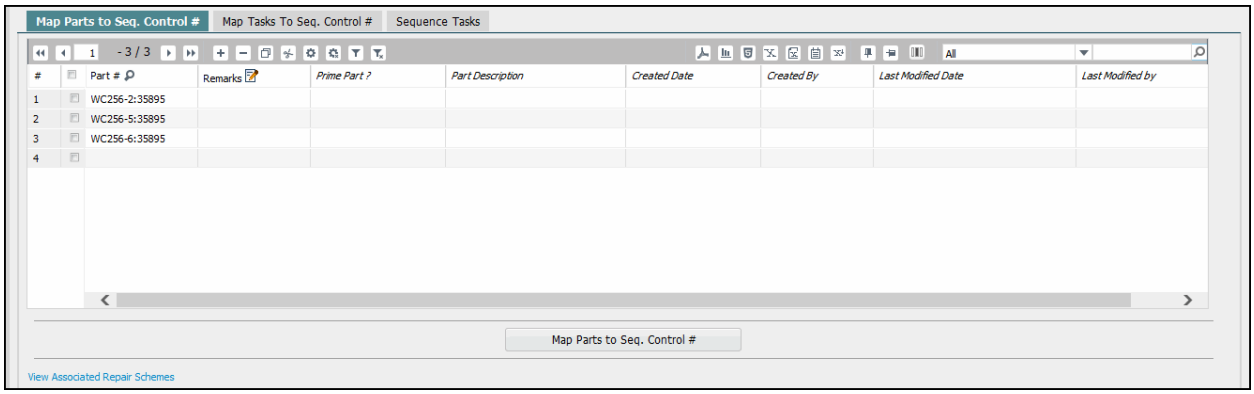


Figure 2.22 Mapping parts to sequence control

2. In the multiline, enter the **Part #** to which you want to associate the sequence control #. The part you specify must be Active and valid as defined in the **Part Administration** component. The part must be effective to at least one of the tasks mapped to the sequence control # in the **Map Tasks To Seq. Control #** tab. Further, enter the following.
3. The **Mfr. Part #** and the **Mfr. #** of the part to which you want to associate the sequence control number.

To proceed,

- τ Select the **View Associated Repair Schemes** link to see details of repair schemes associated with the sequence control #.

2.1.28 Mapping tasks to sequence control

1. Select the **Map Tasks to Seq. Control #** tab in the Manage Unified Task Sequence page. *See Figure 2.22*.

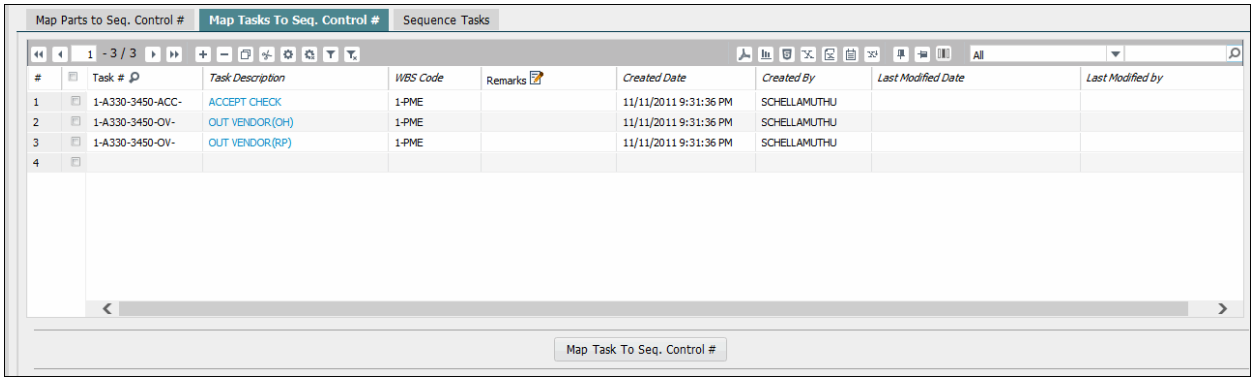


Figure 2.23 Mapping tasks to sequence control

2. In the multiline, the **Task #** of the task that you wish to associate with the sequence control #.
3. Select the Map Tasks To Seq. Control # pushbutton.

Deleting task from the sequence control

4. Select the box from the multiline for the task that you wish to delete.
5. Select the  icon above the multiline

The task as well as its related tasks (listed in the Sequence Tasks tab is disassociated from the sequence control #.

To proceed,

- Select the **Maintain Repair Scheme** link to record/modify details of the repair scheme associated with the task that you have selected in the multiline.
- Select the **Manage Task Effectivity** link to modify effectivity definition for tasks mapped to the sequence control #.
- Select the **View Associated Repair Schemes** link to see details of repair schemes associated with the sequence control #.

2.1.29 Sequencing tasks

1. Select the **Sequence Tasks** tab in the **Manage Unified Task Sequence** page. See *Figure 2.23*.

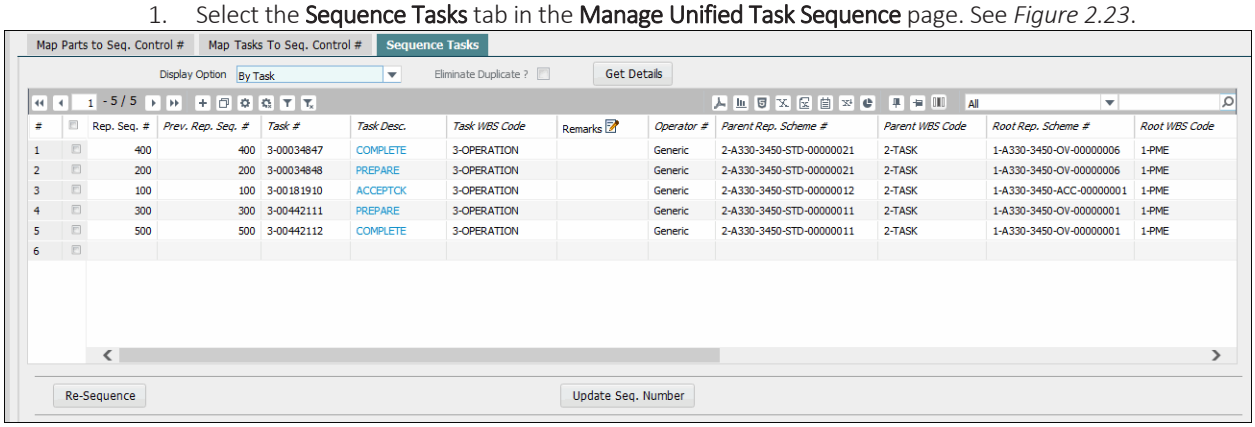


Figure 2.24 Sequencing tasks

2. Use the **Display Option** drop-down list box to select the display option for records in the multiline. The drop-down list box displays the following: By Repair Sequence # and By Task. Select

- "By Task" to display all related tasks of the tasks mapped to the sequence control # in the "Map Tasks To Seq. Control #" tab. in the order of the task #.
- "By Repair Sequence #" to display all repair sequence #s for the sequence control # in the order of the sequence number.

3. Select the **Eliminate Duplicate?** check box to disallow repetition of same Task # - Rep. Seq. # in multiline. This check box is enabled only if you have selected "By Repair Sequence #" as the display option. Select the **Eliminate Duplicate?** check box to display only one instance of the "Rep. Seq # and "Task #" combination against the sequence control #. To retrieve all repair sequence #s for the sequence control #, do not select the check box.
4. Select the **Get Details** pushbutton to displays details of the sequence control # in the multiline.
5. In the multiline, enter the **Rep. Seq. #** to indicate the order of execution of the task on the part, Mandatory. Further, enter the following.
6. Use the **Seq. Control?** drop-down list box to indicate the requirement of sequence control for tasks. The drop-down list box displays the following: Required", "Not Required", "Across Phases" and "Within Phases".

   *Note: If the **WBS code** of the task has the "Sequence Control definition allowed?" process parameter set to "Yes", you can set this field to "Required", "Across Phases" or "Within Phases". On the contrary, if this process parameter set to "No", you must set this field to only "Not Required".*
7. Use the **Seq. Modification** drop-down list box to indicate whether sequence modification for tasks is allowed. The drop-down list box displays the following: "Allowed" and "Not Allowed".
8. Select the **Re-Sequence** pushbutton.

Based on the multiplication factor specified in the Set Options activity, the system generates new repair sequence numbers in the **Rep. Seq. #** column. The system generates repair sequence numbers for some or all of the tasks.

9. Select the **Update Seq. Number** pushbutton.

The system saves the repair sequence numbers against the sequence control #. It also updates the repair sequence #s, if modified. If modified for the first time, the old repair sequence #s are saved in the Orig. Seq. # field. The Orig. Seq. # field retains these first time values and, further changes to the repair sequence # do not impact Orig. Seq. #s. The repair sequence numbers for tasks are also updated in the repair schemes of the root tasks.

Modifying sequence control

1. In the **Define Task Seq. Control #** group box, enter the **Seq. Control #** and the **Seq. Control Desc.** for which you want to modify details, Mandatory. Further the of the sequence control for which you want to record details. Mandatory. Further, enter the following.
2. Use the **Status** drop-down list box to select the status of the sequence control # that you wish to modify. The drop-own list box displays Active and Inactive.
3. Select **Edit Existing Sequence Control #** radio button. The available details of the sequence control # are retrieved by the system.
4. To modify these details, follow the procedure explained for creation of sequence control #.

2.1.30 Recording Task Part modification details

Part modification involves upgrade of parts with superior properties on the basis of Mod # that is provided in Service Bulletins and CMM. The Maintain Task Part Mod Details page can be used to

create, modify and view Mod # details against the effective parts for the given Task. In this activity you can map Mod # for the part with the effective task. In other words, you specify the task that must be executed on the part in order to comply with Mod #.

1. Select the **Maintain Task Part Mod Details** link under the **Maintenance Task** business component. The **Maintain Task Part Mod Details** page appears. *See Figure 2.24.*

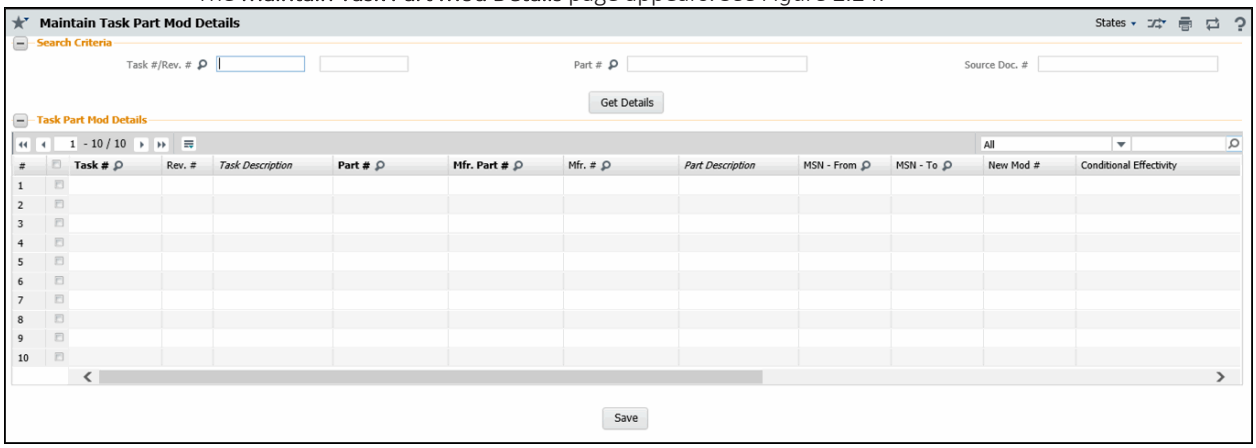


Figure 2.25 Recording Task Part Modification details

2. In the **Task Part Mod Details** multiline, enter **Task #** and **Rev. #** that is effective to the part.
3. Enter Part #, Mfr. Part #, Mfr. # for the part on which modification must be carried out.
4. Enter MSN - From and MSN - To for the range of parts on which the modification process must be executed.
5. Enter **New Mod #** that identifies the modification transaction on the part.
6. Enter **Conditional Effectivity** that explains the user-defined effectivity for the part modification.
7. Click the **Save** pushbutton.
8. Note: The **Save** pushbutton is not available, if the page has been accessed by clicking the **View Task Part Mod Details** link.

2.1.31 Maintaining activated tasks

Modifying a task without creating a new revision

You can modify the contents of an activated task without creating a new revision.

1. Select the **Maintain Activated Tasks** link under the Maintenance Task business component. The **Select Task** page appears.
2. Enter the task directly and select the **Edit Task Information** link.

   Or

3. Select a task by carrying out a search based on filter criteria. Click the hyperlinked task in the multiline. The **Edit Task Information** page appears. See *Figure 2.25*.
4. Enter **Task Description**.
5. Use the **WBS Code** drop-down list box to specify the Work Breakdown Structure (WBS) Code indicating the attributes that identify whether the task is executed for planning purpose or execution purpose.
6. Specify **ATA #**, **Est. Man Hrs.**, and **Est. Elapsed Time**.
7. Use the **Output Qty. Type** drop-down list box to select the type of output quantity from the task. The drop-down list box displays Fixed and Variable.
8. Use the **Emp. Loading** drop-down list box to select the time for employee loading for the task. The drop-down list box displays Elapsed time and Wrench time.
9. Click the **Edit Task** pushbutton.

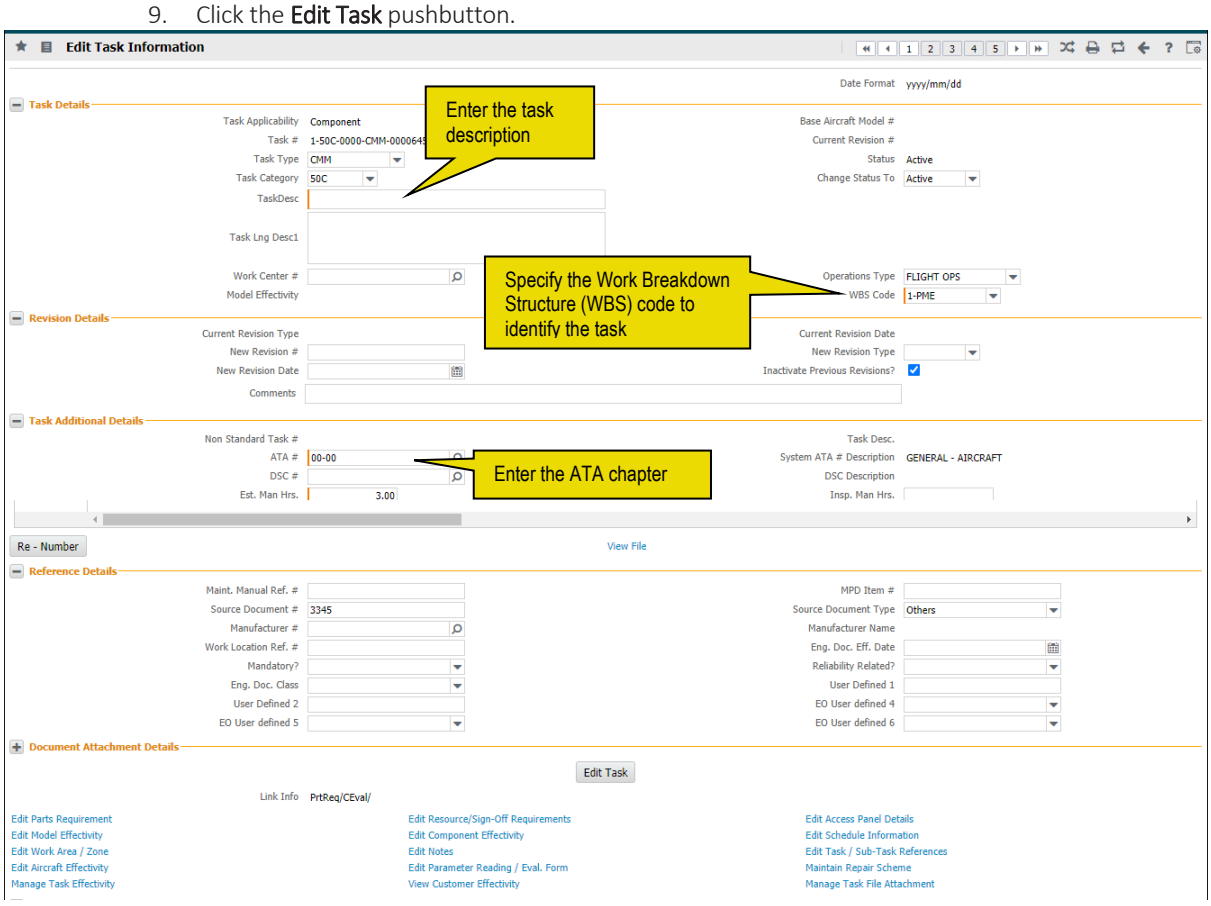


Figure 2.26 Maintaining activated tasks

2.1.32 Revising an activated task with a new revision

You can modify the contents of an active task and create a new revision.

1. Use the **Edit Task Information** page of the **Edit Task** or the **Maintain Activated Tasks** activity to modify the task details.
2. Enter the **Revision Details** for the task.
3. Click the **Edit Task** pushbutton.

   Note: The system creates a new revision for the task and automatically activates the same.

To provide further details,

- Select the **Edit Parts Requirement** link to specify parts for carrying out the task.
- Select the **Edit Resource/Sign-Off Requirements** link to specify resources and sign-off information for carrying out the task.
- Select the **Edit Schedule Details** link to specify the schedule details for the task.
- Select the **Edit Model Effectivity** link to specify the task applicability to the model.
- Select the **Edit Component Effectivity** link to specify the task applicability to the component.
- Select the **Edit Access Panel Details** link to specify the access panel information for the task.
- Select the **Edit Task / Sub-Task References** link to specify the reference document details for the task.
- Select the **Edit Work Area / Zone Details** link to specify the work area and the zone where the task has to be executed.
- Select the **Edit Access Panel Details** to specify access panel details for the task.
- Select the **Edit Parameter Reading / Eval. Form** link the page to add/modify the parameter details that are required for the task/sub-task.

Refer to the topic, Creating tasks, for more details.

- Select the **Manage Task Effectivity** link to record/modify effectivity definition for the task.
- Select the **Maintain Repair Scheme** link to create/modify repair scheme for the task.
- Select the **Manage Task File Attachment** link to associate multiple files to a task for printing.
- Select the **Record Task Part Mod Details** link at the bottom of the page to update part modification details for the task.

2.1.33 Deactivating a task

4. Use the **Edit Task Information** page of the **Maintain Activated Tasks** activity and set the **Change Status To** field to “Inactive”.

   Note: The system inactivates the specific revision of the task.

2.1.34 Reactivating a task

You can re-activate an inactive task.

1. Use the **Edit Task Information** page of the **Maintain Activated Tasks** activity and set the **Change Status To** field to "Active".

   Note: The system activates the specific revision of the task

2.1.35 Maintaining task relationship

Through this activity, you can define relationship between a primary task and the related tasks. The relationship is defined between two tasks depending on the significance of a specific stage of a primary task with respect to the other related tasks. A relationship can be classified as "Regular" or "Schedule" to simplify the retrieval and viewing the relationships.

1. Select the **Maintain Task Relationship** link under the **Maintenance Task** business component. The **Maintain Task Relationship** page appears. See *Figure 2.26*.

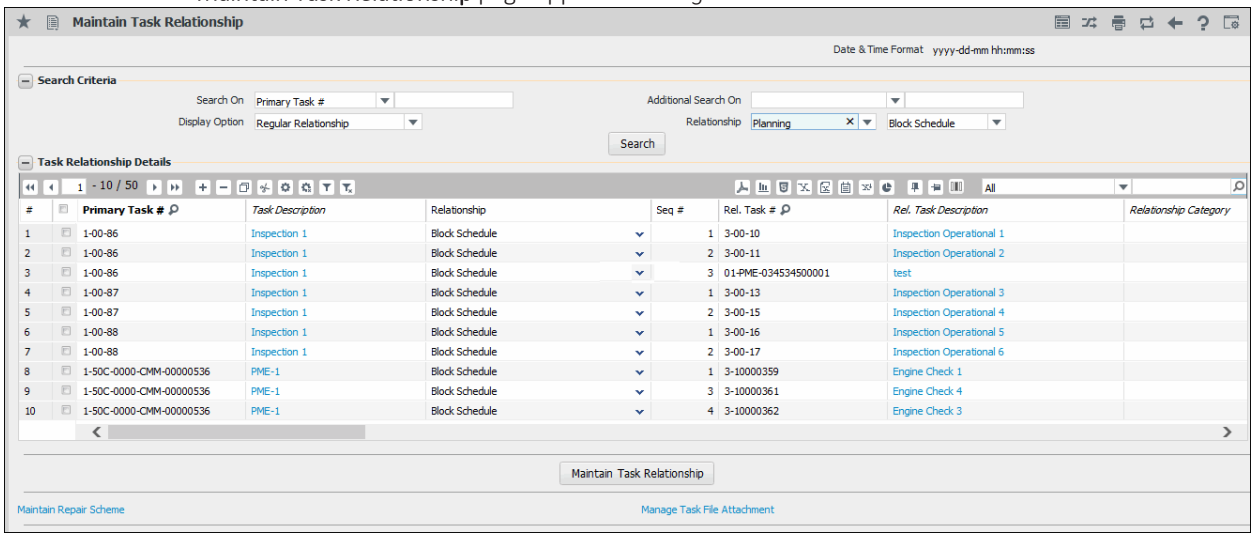


Figure 2.27 Maintaining task relationship

Creating new relationship between tasks

Enter the following in the **Task Relationship Details** multiline:

2. Enter a unique identifier of the primary task in the **Primary Task #** field.
3. Select a value from the **Relationship** drop-down list box or **Schedule Relationship** drop-down list box.
4. Enter a unique identifier of the related task in the **Rel. Task #**. This field is mandatory if any Relationship or Schedule Relationship has been selected.
5. Use the **Sch. Rel. with Predecessor Task** drop-down list box to set the schedule relationship of the task with its predecessor in a work order.
6. Enter any follow-up instructions required in the **Follow-Up Instructions** field. This field is mandatory if you selected the relationship as "Initiate Records Follow - Up".
7. Click on the Maintain Task Relationship pushbutton.

Retrieving / editing existing relationship between tasks

1. Provide **Search Criteria** to retrieve the relationship that has been defined between primary task and the related tasks.
2. Click on the **Search** pushbutton.
3. Based on the search criteria, the system retrieves the relationship details in the **Task** Relationship Details multiline,

4. You can edit the details, if required. Note that you cannot edit the primary task # while modifying the details.

5. Click on the Maintain Task Relationship pushbutton.

2.1.36 Scheduling relationships for execution phases

The sub process allows you to define schedule relationships between two execution (primary and secondary) phases of aircraft maintenance or component maintenance process.

1. Select the **Execution Phase Schedule Relationships** link under the **Maintenance Task** business component. The **Execution Phase Schedule Relationships** page appears. See *Figure 2.27*.

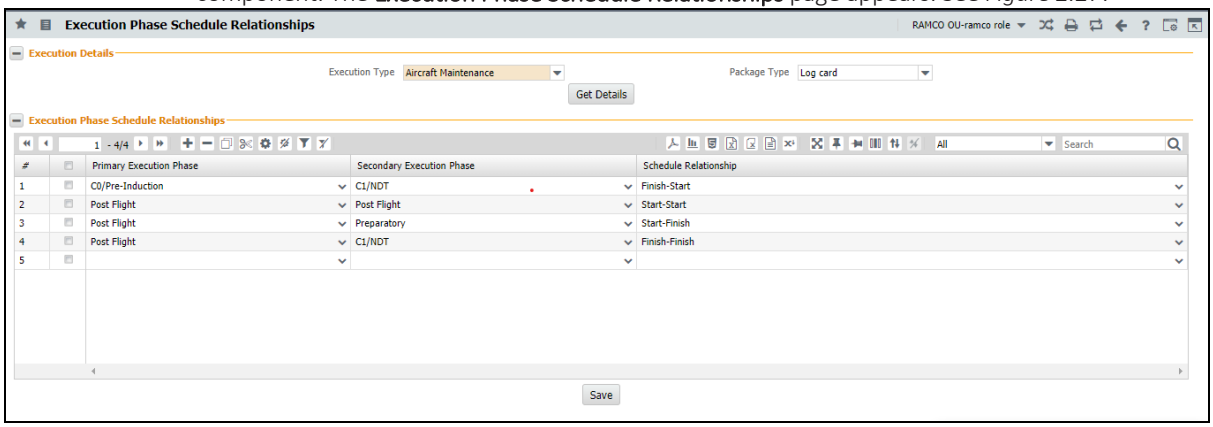


Figure 2.28: Setting relationship between execution phases

2. In the **Execution Phase Relationships** multiline, use the **Primary Execution Phase** drop-down list box to select the primary execution phase for the schedule relationship.

3. Use the **Secondary Execution Phase** drop-down list box to select the secondary execution phase for the schedule relationship.

4. Use the **Schedule Relationship** drop-down list box to select the type of schedule relationship between execution phases.

5. Click the **Save** pushbutton to update the schedule relationship details.

2.1.37 Managing repair scheme definition

1. Select the **Manage Repair Scheme Definition** link under the **Maintenance Task** business component. The **Manage Repair Scheme Definition** page appears. *See 2.28.*

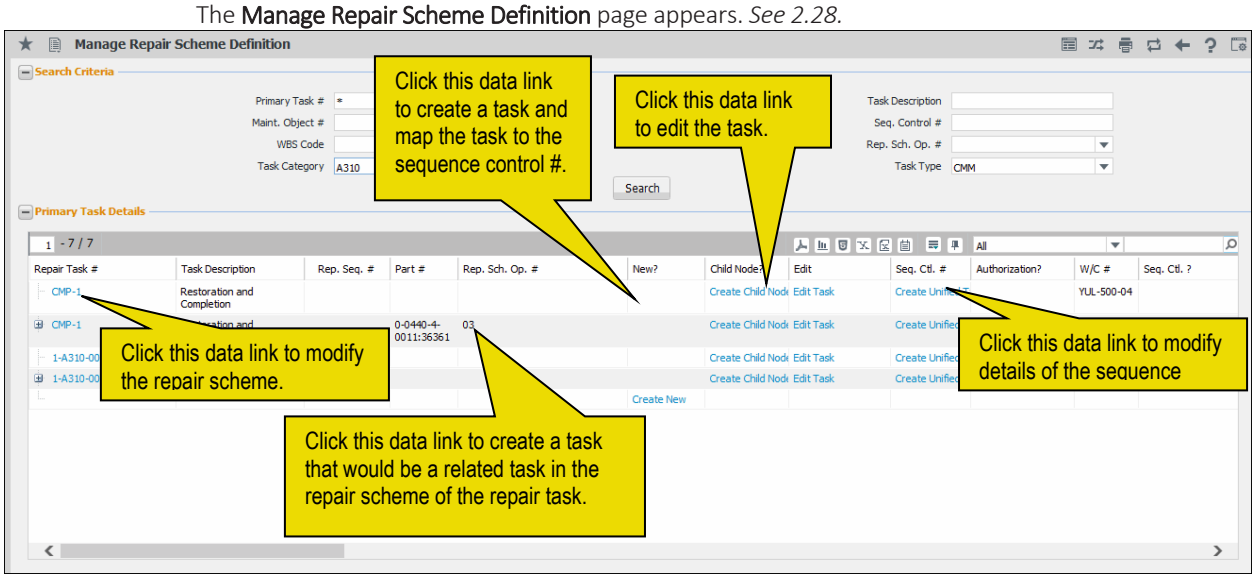


Figure 2.29. Managing repair scheme definition

2. Specify fields in the **Search Criteria** group box to retrieve repair tasks.
3. Click the **Search** pushbutton to retrieve details of tasks as well as their repair schemes in the **Primary Task Details** multiline displays.
4. Click on the data link in the **Repair Task #** column to create/modify details of the repair scheme for the task.

   Note: A repair task is synonymous with its repair scheme.

5. Select the **Create New** link in the **New?** column to create a new task and map the task to the sequence control.

   Note: The data link appears in this column for blank records or if you have retrieved a specific sequence control # through search. Now you can proceed to create a task and automatically map the task to the sequence control.

6. Select the **New Child Node** link in the **Child Node** column to create a task, which would be a related task in the repair scheme of the repair task.

   Note: The data link is available only if a repair scheme exists for the repair task. Typically, you use this link to create related tasks and map these to repair schemes.

7. Select the **Edit Task** link in the **Edit** column to modify information on the task.
8. Click the data link in the **New Seq. Ctl #** to modify sequence control for the repair task. However, if the task is not associated with a sequence control, the **Create Seq. control #** link appears here.
9. Click the data link in the **Authorization?** column, if you wish to authorize the repair task. On authorization, the task is automatically mapped to the sequence control #.

Tree structure in the multiline and its purpose

In the **Primary Task Details** multiline, if a repair scheme is available for the task in the Repair Task # column, data hyperlink appears in the column. You can click the link to access the **Maintain Repair Scheme** page and update its details. Conversely, click the  icon the appearing on the left to display the related tasks in the repair scheme. Each of the following rows displays a related task in the repair scheme. A related task in turn could be associated with a repair scheme, which can be identified by the  icon. The entire hierarchy of the maintain scheme of the repair task is represented in the multiline using a tree structure as shown in the picture below. The topmost node holds the repair task/root task while the child nodes display the related tasks. A child node may be expanded further to display related tasks and so on. However, if no repair scheme is available for the task, the tree is not displayed in the multiline. *See 2.29.*

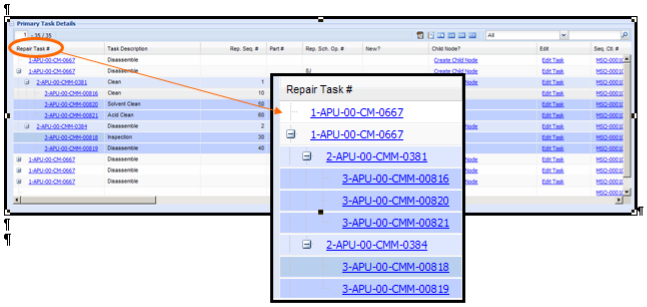


Figure 2.30 Managing repair scheme definition

2.1.38 Maintaining repair scheme

This page allows you to create a repair scheme for the tasks by grouping the tasks based on the need of users, MRO, operator, etc. Grouping of the tasks can be done at model level or part level. You can specify the sequence in which the tasks must be executed. Using this page you can perform the following:

- Create a repair scheme by grouping the tasks based on need of users / MRO need / operator need.
- Group tasks at part level / model level.
- Perform master sequencing of tasks.
- Automation of the tasks.
- Eliminate duplication of sequence number of task.

You can insert tasks in the multiline and assign sequence number for them, by clicking the "Re Number" pushbutton to rearrange the existing rows in the ascending order of the sequence number. The system regenerates the sequence number in multiples of five, thereby enabling you to specify the sequence number for the newly added task.

1. Select the **Maintain Repair Scheme** link in the **Maintain Task Relationship**, **Edit Task** or **Maintain Activated Tasks** page of the **Maintenance Task** business component. The **Maintain Repair Scheme** page appears. See *Figure 2.30*.

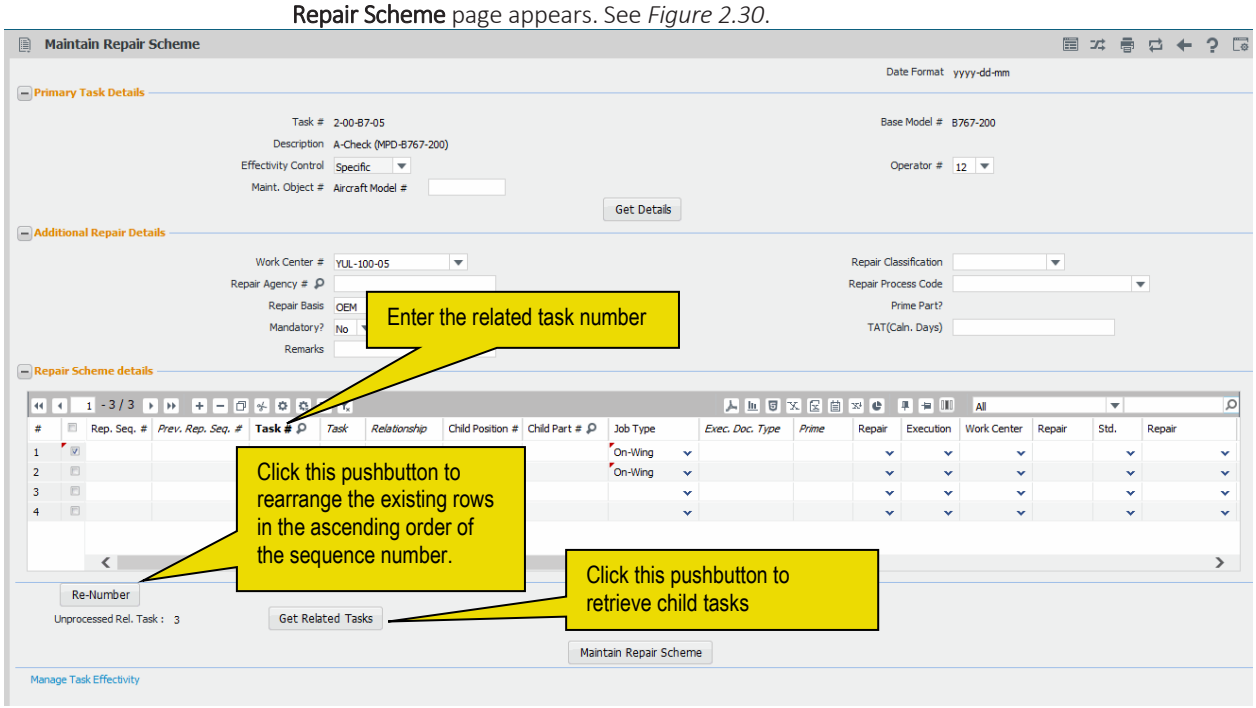


Figure 2.31 Maintaining task relationship

2. Select the **Effectivity Control** as "None" or "Specific" to specify whether the repair scheme is applicable for all the operators, parts or aircraft models or a specific operator, part or aircraft model. If this field is set as "Specific", you can do the following:
3. Specify the **Operator Code** identifying the airline operator,

Or

4. In the **Maint. Object #** field, enter the "Aircraft Model #", if the Applicability of the task in the header is "Aircraft", or "Part #" if the Applicability of the task is other than "Aircraft".
5. Use the **Effective for Alternates** drop-down list box to specify whether the repair scheme is

applicable for parent part alternates. The system lists the values 'yes' and 'No'.

> *Note: This field is enabled only if the 'Effectivity Control' field is chosen as 'Specific'.*

6. Specify the Additional Repair Details and click the Get Details pushbutton.

In the **Repair Scheme Details** multiline,

7. Enter the **Task Control #** indicating the master sequence number for the execution of the tasks and the **Related Task #.**
8. Use the **Effective for Alternates** drop-down list box to specify whether the repair scheme is applicable for parent part alternates. The system lists the values 'yes' and 'No'. The system displays the value 'No', by default.
9. Enter the **Child Position #** and the **Child Part #**.
10. Enter the **Child Mfr. Part #** (number assigned to the child part, by the manufacturer of the part) and the **Mfr. #** indicating the manufacturer of the part.

> *Note: The system displays the **Child Mfr. Part #** and **Mfr. #** fields for you to enter, if the parameter "Enable Manufacturer Part # control in transaction" for the Category 'Manufacturer Part' is set as "Yes" in the "Set Inventory Process Parameters" activity of the "Logistics Common Master" business component.*

11. Use the **Prime Part Group Appl.?** to specify whether the repair scheme is applicable for the parts having the same prime part number or not. The system lists the values "Yes" and No".
12. Select the **Maint. Type** as "Overhaul", "Repair", "Inspection", "Other" or "Retire" to specify the type of maintenance work to be carried out on the part.
13. Select the **Execution Facility** to specify the location where the part can be repaired, as "In-House", "Out-Source" or "In-House & Out-Source".
14. Select the **Work Center** in which the task must be executed and enter the **Repair Agency #** to which the part must be sent for repair.
15. Use the **Std. Disposition** drop-down list to specify the type of work performed on the part. The system list the values "Repair", "Replace", "Exchange" and "Ext. Repair".
16. Select the **Repair Classification** in order to differentiate the tasks which are over and above the contract (COA - Contract Over and Above) between the operator and the MRO.
17. Select the **Routing Req.?** field as "Yes" or "No" to specify whether shop work order must be created for the execution of the tasks.
18. If the above field is set as "Yes", you must select the option "Automatic" or "Manual" in the **Routing Sheet Updates** drop-down list, to specify whether the shop work order is created automatically or manually.
19. Enter the **Rel. Task Lag (Days)** indicating the time lag (in days) in completing the task.
20. Use the **Schedule Relationship** drop-down list box and select the value "Start-Start", "Start-Finish", "Finish-Start" or "Finish-Finish" to specify the sequence in which the related tasks must be executed.

> *Note: For example, if the relationship between the task T1 and T2 is "Finish–Start", this indicates that T2 can commence only if the primary task T1 has been completed.*

21. Enter the **Base Model #** of the aircraft on which the task is performed.
22. Click the **Get Related Tasks** pushbutton to retrieve the following:

- If no task is selected in the multiline, the system retrieves all the child related tasks.
- If a task is selected in the multiline, the system retrieves the child related tasks specific to the selected task, with Execution relationship defined as “Concurrent Group”, “Concurrent Specific” and “Concurrent Conditional”.

*Note: The “Predecessor Constrained” tasks will not be retrieved in the multiline. The count of the child related tasks is displayed as “**Unprocessed Rel. Task**”.*

23. Click the **Maintain Repair Scheme** pushbutton to maintain repair scheme for the tasks.

Note: The system generates Task Control #, on addition of new tasks. The system creates a repair scheme for the tasks, if the task relationship with the primary task is already defined in the “Maintain Task Relationship” page. If the relationship does not exist with the primary task, the system creates “Concurrent – Specific” relationship between the primary task and the related task for creating the repair scheme.

To proceed,

τ Select the **Maintain Task Effectivity** link to record/modify effectivity definition for a task.

2.1.39 Managing task effectivity

The activity allows you to perform bulk update of task effectivity. The effectivity of the task can be updated against the maintenance objects such as aircraft registration number, part number and aircraft model number. You can change the effectivity of the task against the maintenance object and update the modified effectivity details.

You can also update the effectivity changes to the maintenance program and the maintenance program template.

1. Select the **Manage Task Effectivity** link under the Maintenance Task business component. The **Manage Task Effectivity page** appears. See *Figure 2.31*.

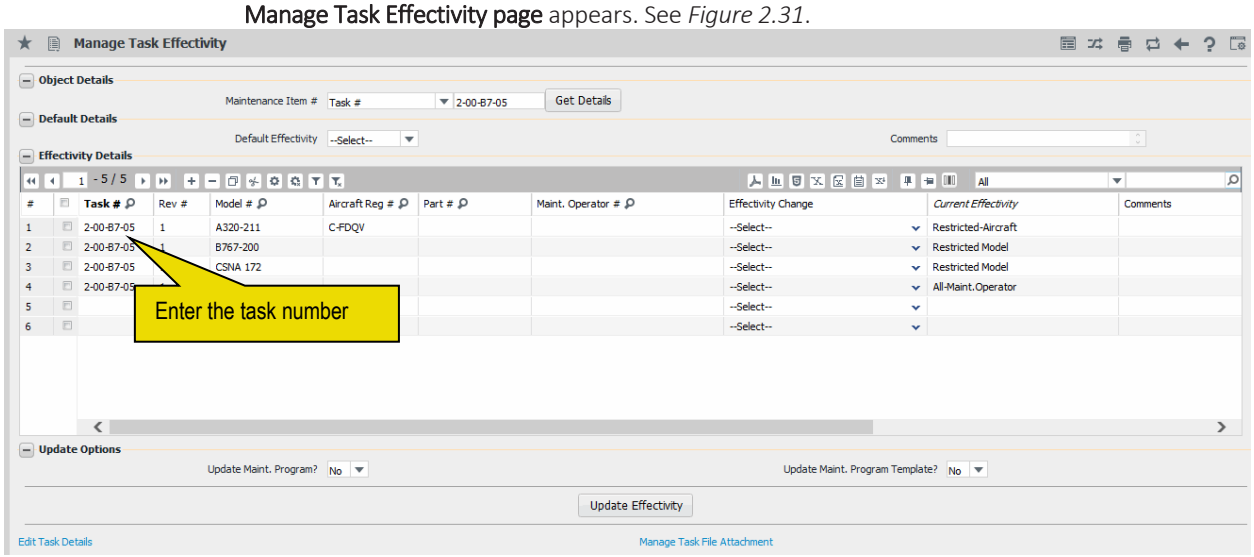


Figure 2.32 Managing task effectivity

2. In the **Object Details** group box, use the **Maintenance Item #** drop-down list box and select the type of the maintenance item as “Aircraft Reg #”, “Part # / Mfr. Part #”, “Model #”, “Task #”, “Maint. Operator #” and Seq. Control. #. Enter the maintenance item # corresponding to the type of the maintenance item selected, in the box provided alongside.

3. Click the **Get Details** pushbutton to retrieve the effectivity details in the multiline.
4. In the **Default Details** group box, select the **Default Effectivity** as "Effective" or Not Effective" and enter any **Comments** related to the task effectivity.
5. In the Effectivity Details multiline, enter the Task #, Rev #, Model #, Aircraft Reg #.
6. Enter the **Part #** for which the task effectivity details need to be updated.

Or

7. Enter the **Mfr. Part #** and the **Mfr. #** of the part.

   *Note: The system displays the **Mfr. Part #** and **Mfr. #** fields for you to enter, and hides the "Part #" field above, if the parameter "Enable Manufacturer Part # control in transaction" under the Category 'Manufacturer Part #' is set as "Yes" in the "Set Inventory Process Parameters" activity of the "Logistics Common Master" business component.*

8. Select "Effective" or "Not Effective" in the **Effectivity Change** drop-down list box, to change the effectivity of the task as effective or nor effective.

The system displays the **Current Effectivity** of the task as "Effective", "Not Effective", "Restricted" or "All".

9. Enter any **Comments** related to the effectivity and the **Base Model #** of the aircraft.
10. In the **Update Options** group box, select "Yes" in the **Update Maint. Program?** drop-down list box if you wish to update the maintenance program. Else select "No".
11. Select "Yes" in the **"Update Maint. Program Template?** drop-down list box if you wish to update the maintenance program template.
12. Click the **Update Effectivity** pushbutton to update the task effectivity details.

To proceed,

- Select the **Edit Task Details** link to modify details of the task.
- Select the **Manage Task File Attachment** link to associate multiple files to a task for printing.
- Select the **Record Task Part Mod Details** link at the bottom of the page to update part modification details for the task.

2.1.40 Managing task file attachment

You can associate multiple files to a task for printing. For an aircraft model # and for a range of manufacturer serial number of aircraft specified, you can enter the file mapping details or retrieve the already existing task-file mapping details against the Task #-Revision # combination. You can specify the sequence in which the files must be printed.

File attachment may be broadly classified into two types as follows:

Specific File Attachment: The file attachment in which From/To Aircraft MSN, Aircraft Ownership, Owning Agency and Maint. Operator # are defined.

Generic File Attachment: The file attachment in which From/To Aircraft MSN, Aircraft Ownership, Owning Agency and Maint. Operator # are not defined.

Whenever Package Print / Selective Print / Task Card Print is initiated, if specific file attachment(s) is printed for a Task, then the generic file attachment(s) are also

printed along with it, if the process parameter 'Print List Selection for Task Card Files with Specific Attributes' under the Entity 'Task' of the Entity Type 'Maintenance Task' is set as "Matched & Generic Files" in the “Common Master” business component. If this process parameter is set as "Matched Files Only", specific file attachment(s) overrides generic file attachment(s). (i.e. only specific file attachment(s) is printed for a Task).

1. Select the **Manage Task File Attachment** link under the **Maintenance Task** business component. The **Manage Task File Attachment** page appears. See *Figure 2.32*.

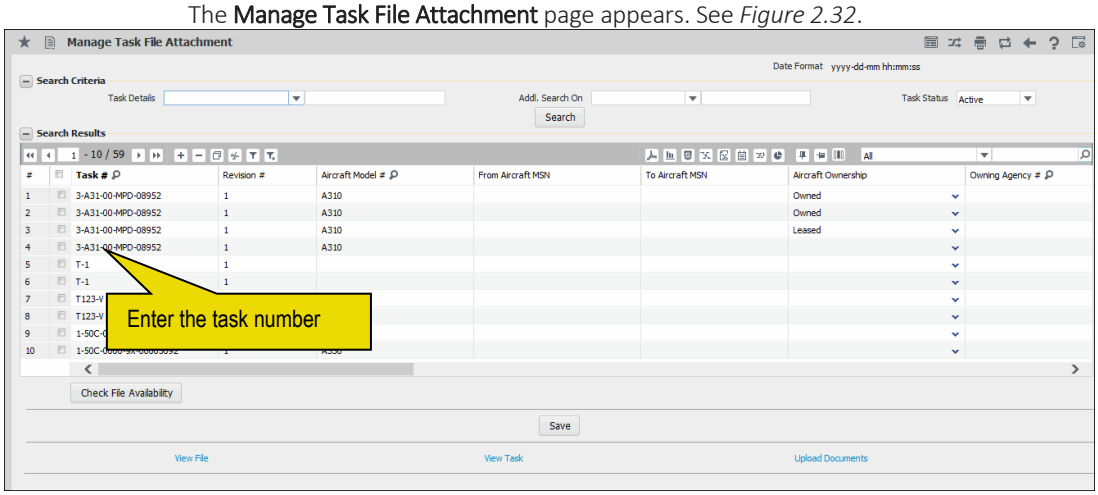


Figure 2.33 Managing task file attachment

2. Specify the **Search Criteria** and click the **Search** pushbutton..
3. Enter a valid **Task #** to which the file is to be mapped.
4. Enter the **Seq #** in which the files must be printed.
5. Enter the File Reference #.
6. Enter either Task Reference # or File Name.
7. Click the **Check File Availability** pushbutton to determine the availability of file in the specified folder in the FTP path.
8. Click the **Save** pushbutton to save the task-file mapping details.

To proceed further,

- Select the **View File** link to view the file associated to the task.
- Select the **View Task** link to view the task details.
- Select the **Upload Documents** link to upload the files.

2.1.41 Authoring repair procedure

1. Select **Author Repair Procedure** link from any of the following pages. The **Author Repair Procedure** page appears. See *Figure 2.33*.
   - Identify Resolution Procedure page of Discrepancy Processing business component.
   - Plan Work Order page or Record Shop Execution Details page of Shop Work Order business component.
   - Record Aircraft Maintenance Execution Details page of Aircraft Maintenance Execution business component.

- Review Fleet Maintenance Plan page of Aircraft Maintenance Planning component.
- Manage Work Assignments and Reporting page of Work Monitoring and Control component.

Note: You cannot launch this page, if the following are true: (a) the status of the Reference Document is "Terminated", (b) the task is a standard task or (c) from the "Identify Resolution Procedure" page, if the Reference Document is "Maintenance Report" and the processing status "Analyzed".

Enter or modify the following fields in the **Task Details** group box:

2. Enter the Task Description and the Task Category.
3. Use the **Exec. Phase** drop-down list box to select the execution phase of the task. The system provides the following options:
   - "Preparatory" - Select this option, if the task must be performed as a part of preliminary activities before the aircraft is grounded for maintenance.
   - "Regular" - Select this option, if the task must be performed as a part of normal maintenance activities carried out in the hangar.
   - "Post Flight" - Select this option, if the task must be performed as a part of post test flight activities.
   - In addition to the above, the drop-own list box displays all quick codes defined under the quick code type "Exe. Phase", which are in Active status.
4. Enter the Estimated Man Hours in the Task Details group box.

   Note: You can modify the details of a sub-task, only if the job status of the task is 'Fresh' and the sign-off' status of the sub-task is "Pending".
5. Enter the **Seq. #** in which the sub task must be performed while executing the maintenance task.

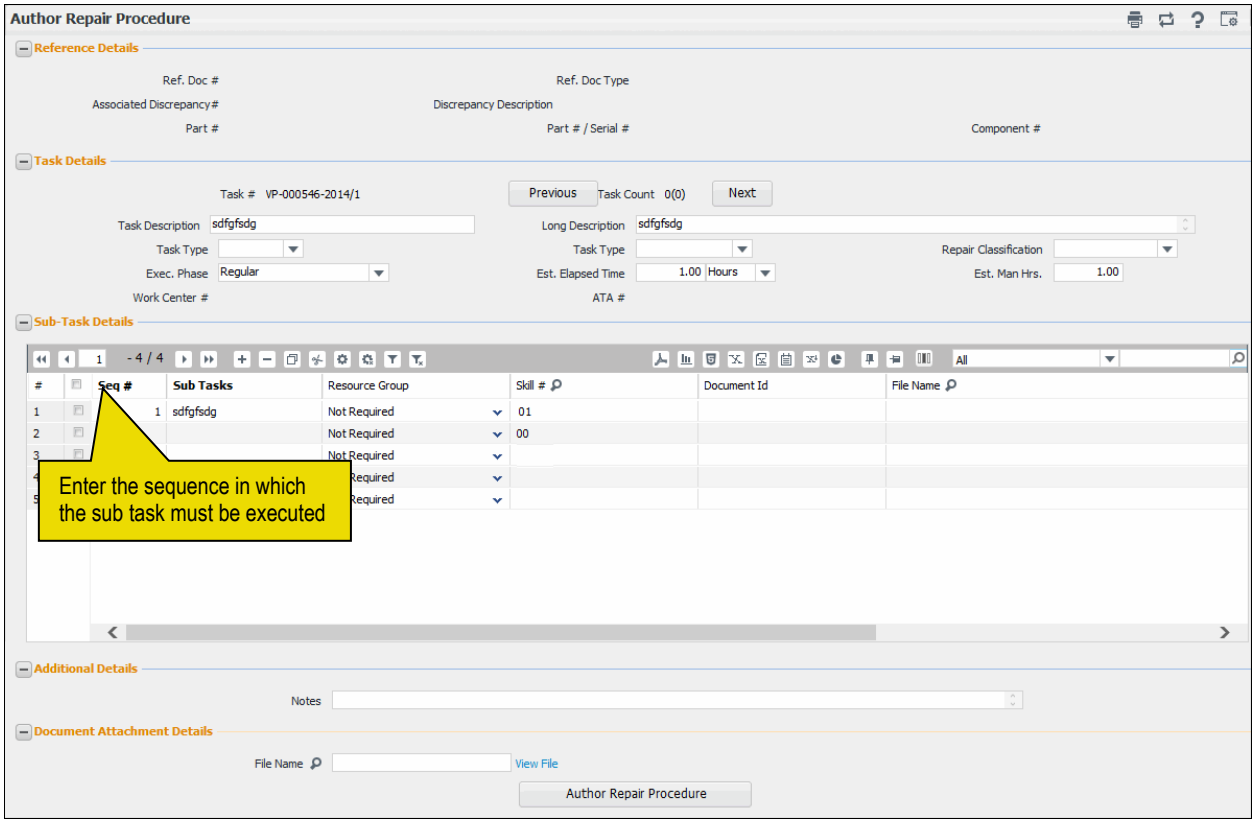


Figure 2.34 Author Repair Procedure

6. Use the **Resource Group** drop-down list box to select the resource group for performing the sign-off of the sub task. The system provides the following options:
   - "Not Required" – Select this option if sign-off is not required.
   - "Mechanic" – Select this option if the sign-off is to be performed by the mechanic.
   - "Inspector" – Select this option if the sign-off is to be performed by the inspector.
   - "Insp. & Mech." – Select this option if the sign-off is to be performed by both the inspector and mechanic.

   Note: Addition of new subtasks for a non-standard task is allowed till the last sub-task associated to the non-standard task is signed-off.

7. Click the **Author Repair Procedure** pushbutton.

   Note: Ensure that (a) the Reference Document is in "Active" status for the aircraft registration number, (b) the status of the Reference Document Number is not "Hold" and (c) the status of the task is "Fresh" or "Scheduled".

2.1.42 Maintaining Standard Cost of task

1. Select the **Maintain Task Standard Cost** link under the **Maintenance Task** business component. The **Maintain Standard Cost** page appears.
2. In the **Task Details** multiline, enter **Task #** for which you want to record standard cost details.
3. Click the **Get Task Details** pushbutton to retrieve details of the specified task.
4. In the **Task Details** multiline, enter **Material Cost, Resources Cost** and **Other Cost** incurred on execution of the task.

5. Enter Total Cost required for completing the task (Total Cost = Material Cost + Resources Cost + Other Cost).
6. Enter **Effective From** and **Effective To** dates to specify the period during which the cost remains valid for the task.
7. Click the **Save Std. Cost** pushbutton to save the recorded cost details.

3 COMPONENT MAINTENANCE PROGRAM

The component maintenance program contains all the scheduled maintenance related details pertaining to the component. It has the work units that need to be performed on the component, along with the schedules for execution of the work unit. It can either be created directly at the component level, or copied from the part program in bulk at the part level. In either case, the program details like work units and their schedules can be modified.

The component maintenance planning cell for component assesses all the up-coming maintenance activities that need to be executed for the component sets, which are due for maintenance.

The scheduled maintenance of components is driven through pre-defined maintenance programs. With the arising of these scheduled maintenance events, the component maintenance planner forecasts for a planning horizon and propagates execution planning. The planner finalizes the work scope; allocates the component removals and on-wing inspections to the visit package and creates work scope along with the work order.

The Component Maintenance Program business component enables you to group all the scheduled maintenance activities to be performed on the component and provides a single lookup for all the maintenance-related information for a component.

3.1 Configuring component maintenance program

3.1.1 Defining the quick codes

What are quick codes?

Quick Codes are user-defined values, used to categorize a set of details of identified behavior. These quick codes are later used in the process of retrieving or addressing the details by referring to the attached quick code.

Quick codes act as additional qualifiers for a business entity or document. Quick codes can assume user provided values which can be used to categorize/group an entity/document record to satisfy specific needs in a user organization's internal processes, especially with respect to unique reporting requirements.

The "User-Status" quick code type is predefined by the system. You can define values for this quick code type. For example, the "User-Status" quick code type can contain the "Material Not Available" quick code.

1. Select Add Quick Codes in the Component Maintenance Program business component. The Create Quick Codes page appears. *See Figure 3.1*

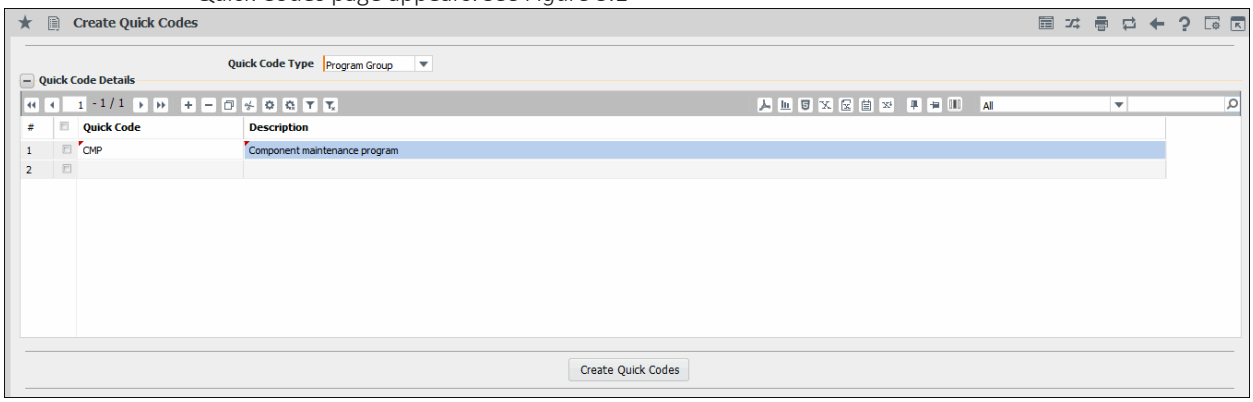


Figure 3.1 Creating quick codes

2. Use the **Quick Code Type** drop-down list box to select the type of quick code to be created. You can define quick codes of the type "User Status" and "Program Group".
3. Enter the **Description** for the quick code.
4. Click the **Create Quick Codes** pushbutton.

> *Note: The system assigns the "Active" status to the quick codes entered in the multiline.*

3.1.2 Setting options

You can define system parameters in order to update the schedules of all the tasks in a work order. Based on the option settings, the system updates the last performed dates for the tasks in the work order.

1. Select the **Set Options** link under the **Component Maintenance Program** business component. The **Set Options** page appears.
2. In the **Option Setting Details** group box, use the **Compliance Updation Basis** drop-down list box to select either "Actuals" or "Time Window", for executing the work unit.
   - Actuals – Select this option if the next due date for carrying out the work units must be calculated based on its previous completion.

- Time Window – Select this option if the following conditions are applicable:
  - Within the Tolerance limits: If the option is selected as "Time Window", the NSD (Next Schedule Date /NSV (Next Schedule will be calculated based on a scheduled fixed interval)
  - Beyond the Tolerance limits: If the option is selected as "Time Window", the NSD / NSV will be calculated by adding the Repeat Interval value to the date or value at which the work unit is actually executed.

3. Use the **Planner Group Security d**rop-down list box to specify whether planner group security is required or not.
4. Use the **Impact on Sch. Adj.** drop- down list box to stipulate whether schedule adjustments must influence existing schedules for the scheduled adjusted task in component maintenance program. Select:
   - "Retain Existing Schedules", to retain the existing schedules for the scheduled adjusted tasks in component maintenance program.
   - "Reset to Template Schedules", to reset the existing schedules for the schedule adjusted tasks in the component program based on the part program.
5. Use **Rules based Inheritance of As Required tasks to Execution documents** the drop-down list to indicate whether the "As Required" tasks must be inducted into the execution document based on rules.
6. Use the **Alert Value based inheritance of Scheduled tasks into Execution Documents** drop-down list box to indicate whether the scheduled tasks must be inducted into the execution document based on the alert value.
7. Click the **Set Options** pushbutton to set the values.

3.1.3 Creating part maintenance program

Creating part program

You can create a maintenance program based on parts.

1. Select **Maintain Part Program** under the Component Maintenance Program business component. The Select Part # page appears.
2. Enter the **Part #** and click the **Maintain Program** link alongside. Or, search for a part, click the **Search** pushbutton and select the hyperlinked **Part #** in the **Part Details** multiline. The **Edit Part Program Information** page appears. *See Figure 3.2*

   Note: The system retrieves only the 'Active' parts in the search results.

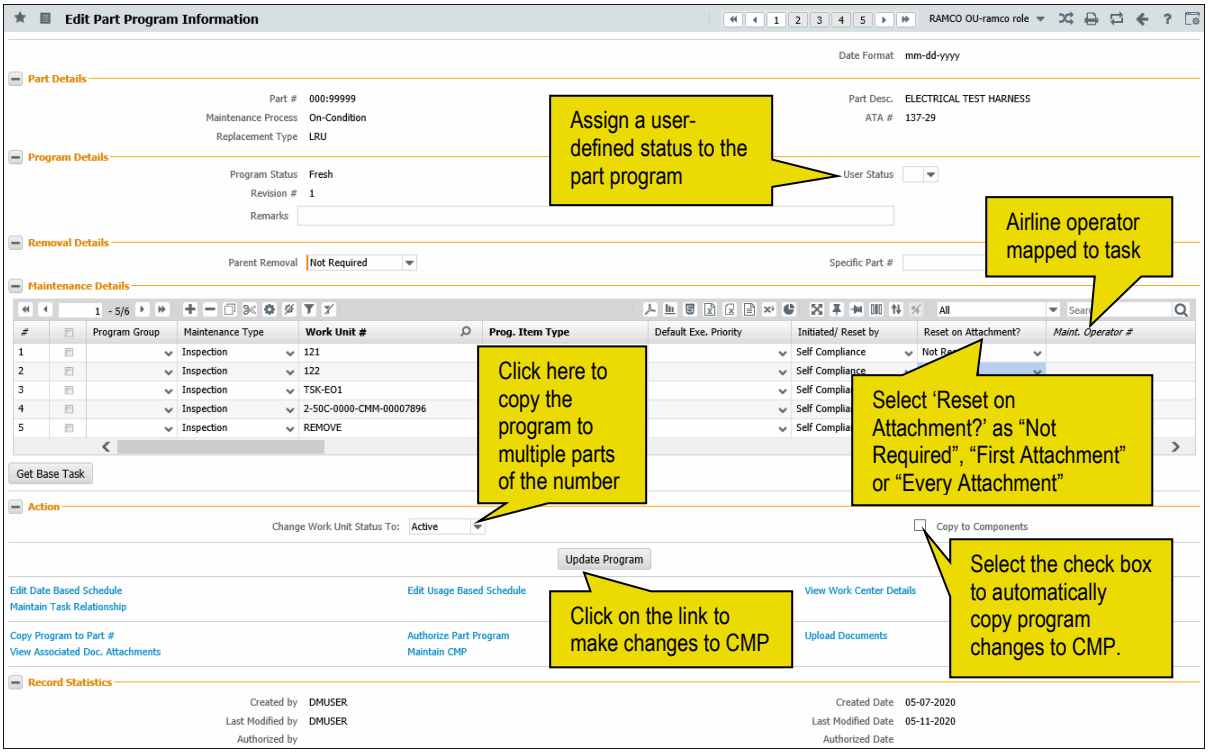


Figure 3.2 Creating a part maintenance program

3. Enter Parent Removal and Specific Part # in the Removal details group box.
4. Specify the **Program Group** of the maintenance program planned for the part.
5. Use the **Maintenance Type** drop down list box in the **Maintenance Details** multiline and select the maintenance type, which could be "Overhaul", "Inspection", "Repair", "Retire" or "Others".

   Note: The "Retire" option will be available only if the "Lifed?" field is set as "Yes" for the part number, in the "Maintain Maintenance Info. for Part" page of the "Aircraft" business component. Only one work unit can exist with maintenance type "Retire" for the part program.

6. Enter the **Work Unit #**.
7. Specify the **Program Item Type** maintenance task. The drop-down list box displays the following values: Block, Base, Perpetual, As Required, Non-Block and To be Decided.
8. Use the **Default Exe. Priority** drop-down list box to specify the priority for execution of the task with reference to other tasks in the maintenance program planned for the part.
9. Use the **Initiated/Reset By** drop-down list box to specify the manner in which the Next Scheduled Value (NSV) for the task in the maintenance program must be computed. When you select,
   - Self-Compliance, the system sets the Next Schedule Value/Next Schedule Date on compliance of the task.
   - Related Task Compliance, the system sets the Next Schedule Value/Next Schedule Date on compliance of all related tasks in additional to the compliance of main task.
10. Use the **Reset on Attachment?** drop-down list box and select,
    - 'Not Required' to compute NSD / NSV based on Last Performed Date / Value.
    - 'First Attachment' to compute NSD / NSV on first attachment of the component after the off-wing compliance of the task.

- 'Every Attachment' to re-compute NSD / NSV on every attachment of the component to the Aircraft.

11. Specify the parent task associated with the work units/tasks planned to be executed on the part, in the **Parent Item #** field.

    Note: This field is applicable only if the Program Item Type of the task is "Base".

12. Indicate the **Schedule Status** of the work unit task, which could be "Active" or "Inactive" or Terminated.

13. Set the **Execution Facility** to "In-house" or "Out-source" to specify the location where the work unit has to be performed.

    Note: The "In-house" option alone will be listed in this field, if the execution facility is set as "In-house" for the part number in the "Maintain Maintenance Info. for Part" page of the "Aircraft" business component. The "Out-source" option alone will be listed in this field, if the execution facility is set as "Out-source" for the part number in the "Maintain Maintenance Info. for Part" page of the "Aircraft" business component.

14. Select the **Work Center #** and enter the **Est. Duration**.

15. Use the **On Wing?** drop down list box to select whether the work unit has to be performed on-wing or off-wing.

16. Use the **Package Type** drop-down list box to select the package type of the work unit.

17. Enter the Ref. Document Type, Ref Document #, Reference EO # and other details.

18. Use the **Shelf Life Expiry** drop-down list box to select whether the given maintenance requirement is applicable to the shelf life expiry of the component.

19. Use the **Expense Type** drop-down list box to select the expense type of the work unit. The system provides the options "Revenue" and "Capital".

    Note: Ensure that this field is set to "Revenue", if the expense type for the part is identified as "Revenue" in the "Part Administration" business component.

20. Select the **Get Base Tasks** pushbutton to display base tasks of a task in the multiline.

    Note: The program item type of the task for which you want to view the base tasks must be "Block".

21. Use the **Change Work Unit Status To** drop-down list box to change the status for the work unit to "Active" or "Inactive".

22. Select the **Copy to Components** check box to automatically copy changes made in part program to component programs upon authorization of part program.

23. Click the **Update Program** pushbutton to create the part maintenance program.

    Note: The system ensures that there is at least one work unit with maintenance type "Retire", if the "Lifed?" field is set as "Yes" for the part number in the "Maintain Maintenance Info. for Part" page of the "Aircraft" business component.

To proceed,

- Define date based schedule
- Define usage based schedule
- Associate estimated skill requirement
- Associate estimated facilities requirement

- Associate estimated material requirement.
- Copy part maintenance program to multiple parts
- Authorize part program
- Upload documents associated with the part maintenance program
- Maintain component maintenance programs

3.1.4 Defining date based schedule

1. Select the Edit Date Based Schedule link in the Edit Part Program Information page. The Edit Date Based Schedule Information page appears. *See Figure 3.3*

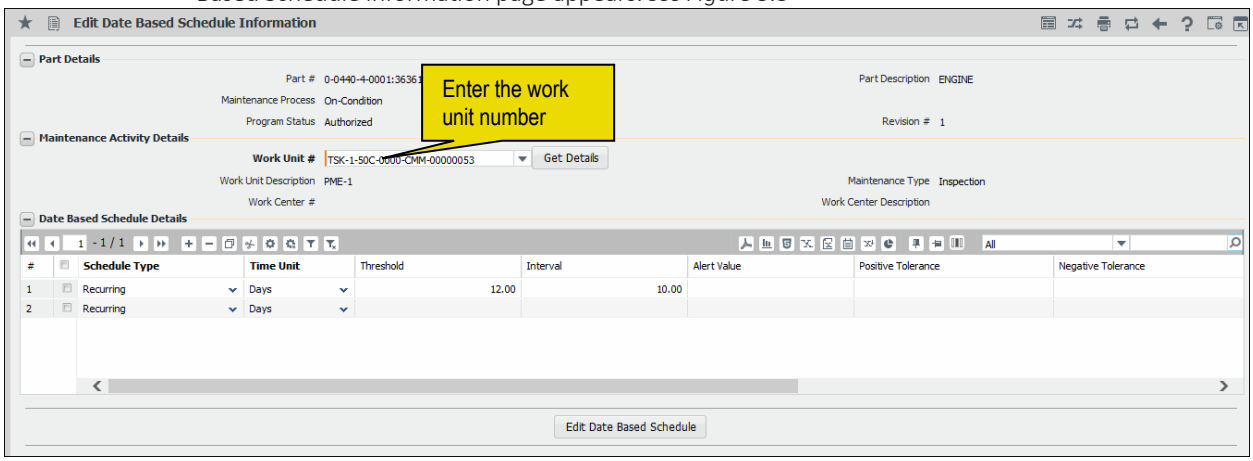


Figure 3.3 Defining date based schedule for part program

2. Use the **Work Unit #** drop down list box to select the work unit to be performed. The system displays all the work units created for the part except those for which **Shelf Life Expiry** has been set to "Yes". Click the **Get Details** pushbutton to get the work unit information.
3. Select the **Schedule Type,** which could be "Recurring" or "One-Time".

   *Note: This field should be set as "One-Time", if the **Maintenance Type** of the work unit is "Retire".*

4. Select the **Time Unit,** which could be "Days", "Weeks", "Months", "Month End" or "Years".
5. Enter the starting value of performing the work unit in the **Threshold** field.
6. Enter the value after which an alert need to be given in the **Alert Value field**.
7. Enter the Positive Tolerance and Negative Tolerance.
8. Enter the Terminating Date and Terminating Value.
9. Select "Last Performed Date" or "Installation Date" in the **Update Basis** field, to specify the basis for updating the work units of the part program.
10. Enter any comments or supplementary information on the maintenance program planned for the part in the **Remarks** field.
11. Click the **Edit Date Based Schedule** pushbutton to record the schedule details.

3.1.5 Defining usage based schedule

1. Select the Edit Usage Based Schedule link in the Edit Part Program Information page. The Edit Usage Based Schedule Information page appears. *See Figure 3.4*

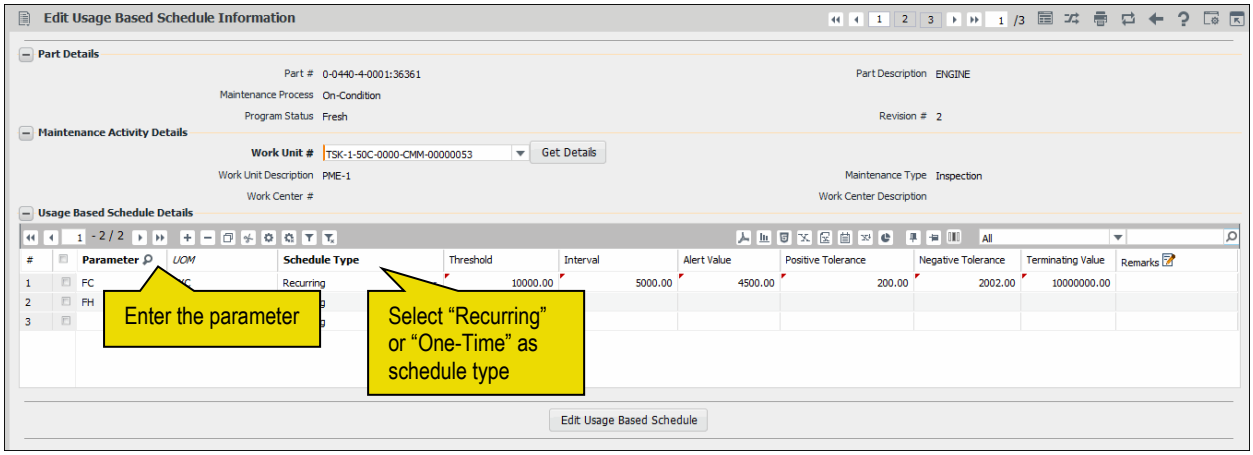


Figure 3.4 Defining usage based schedule for part program

2. Use the **Work Unit #** drop down list box to select the work unit to be performed. The system displays all the work units created for the part except those for which "Shelf Life Expiry" has been set to "Yes".
3. Click the **Get Details** pushbutton to get the work unit information.
4. Enter **Parameter**, the number identifying the consumption parameter in the aircraft.
5. Select the **Schedule Type**, which could be "One Time" or "Recurring".

   *Note: This field should be set as "One-Time", if the **Maintenance Type** of the work unit is "Retire".*

6. Enter the value after which an alert need to be given in the **Alert Value** field.
7. Enter the Positive Tolerance and Negative Tolerance.
8. Enter the Terminating value.

   Note: The system displays the parameter values in the multiline based on the option "Decimal Format" or "HHMM Format" selected for the parameter in "Time Display Option" drop-down list box in the "Aircraft" business component while parameter creation. For e.g. If the Time Display Option is selected as "HHMM Format" and the value stored is 2.50 in the data base, the system displays 2.30 in the multiline.

9. Click the **Edit Usage Based Schedule** pushbutton to record the schedule details.

3.1.6 Copying part maintenance program to multiple parts

You can copy the maintenance program created for a part to other parts.

1. Select the **Copy Program To Part #** link in the **Edit Part Program Information** page appears. *See Figure 3.5*

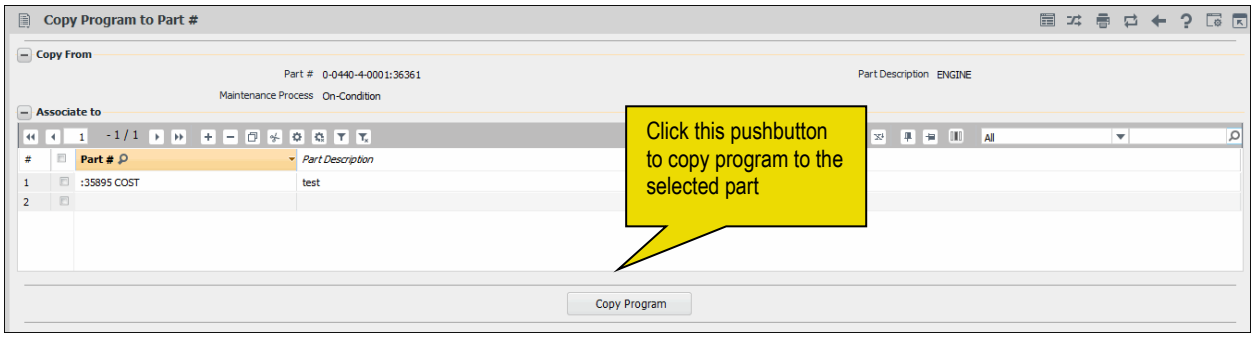


Figure 3.5 Copying maintenance program to other parts

2. Enter the number identifying the part to which the maintenance program must be copied, in the **Part #** field.
3. Click the **Copy Program** pushbutton to copy the maintenance program details.

3.1.7 Authorizing a part maintenance process

1. Select **Authorize Part Program** under **Component Maintenance Program** business component. The **Authorize Part Program** page appears. *See Figure 3.6.*
2. Enter the desired search criteria in the **Search Criteria** group box and click the **Search** pushbutton. The system retrieves all the details of all the parts associated with the maintenance, matching the search criteria.
3. Select the part program to be authorized, in the multiline.
4. You can also use the **Select All** box if you wish to authorize all the part programs at the same time.

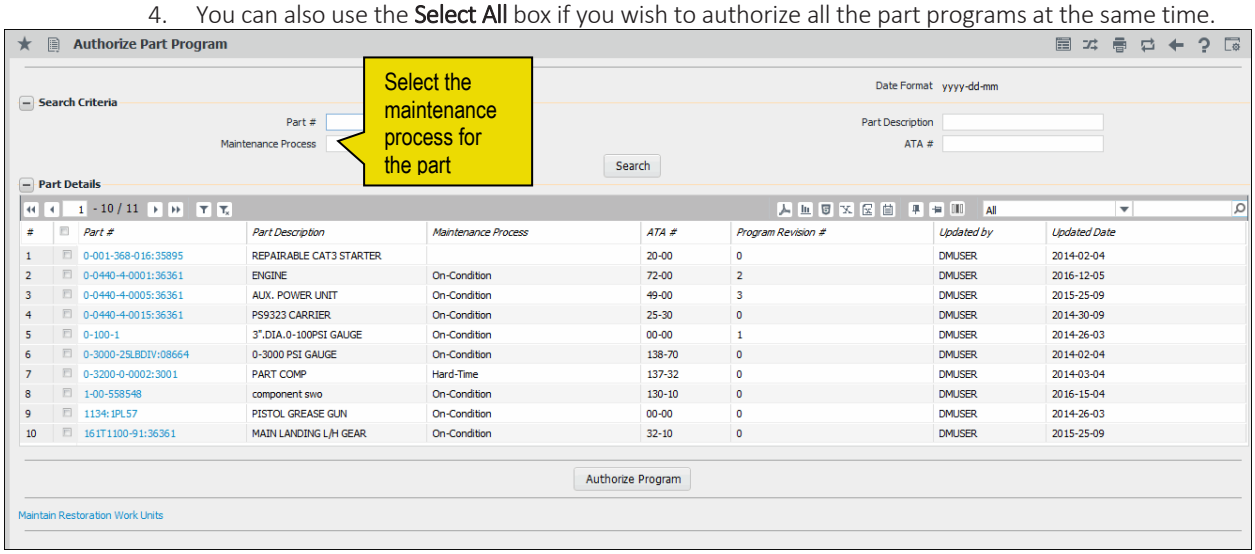


Figure 3.6 Authorizing a part maintenance program

5. Click the **Authorize Program** pushbutton to authorize the maintenance program of the selected parts.

> *Note: The status of the part maintenance program is set to "Authorized" and is available for forecasting. The system also updates this maintenance program for all parts of the same type with different serial number.*

3.1.8 Creating component maintenance program

You can create a maintenance program based on component. A component is a combination of a part number and its serial number.

You can create a maintenance program based on parts.

1. Select the **Maintain Component Maintenance Program** under the Component Maintenance Program business component. The Select Component # page appears.

2. Enter the **Component #** and click the **Maintain CMP** link provided alongside. Or, search for a part, click the **Search** pushbutton and select the hyperlinked component number in the multiline. The **Edit Component Maintenance Program Information** page appears. *See Figure 3.7.*

3. Select the type of parent removal in the **Parent Removal** drop-down list box and enter the **Specific Part #** fields in the **Part Removal details** group box.

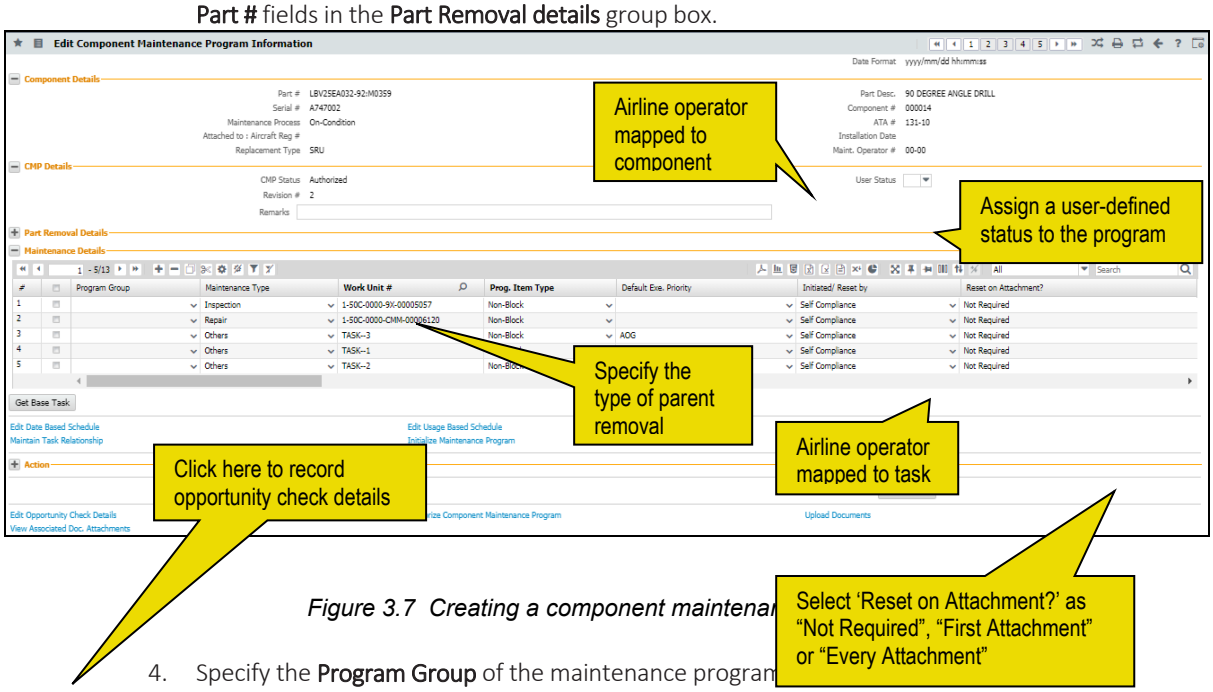


Figure 3.7 Creating a component maintenar

4. Specify the **Program Group** of the maintenance program

5. Use the **Maintenance Type** drop down list box in the **Maintenance Details** multiline to select the type of maintenance type which could be "Overhaul", "Inspection", "Repair", "Retire" or "Others".

> *Note: The "Retire" option will be available only if the "Lifed?" field is set as "Yes" for the part number, in the "Maintain Maintenance Info. for Part" page of the "Aircraft" business component. Note: Only one work unit can exist with maintenance type "Retire" for the part program.*

6. Enter the **Work Unit #**.

7. Specify the **Program Item Type** maintenance task. The drop-down list box displays the following values: Block, Base, Perpetual, As Required, Non-Block and To be Decided.

8. Use the **Default Exe. Priority** drop-down list box to specify the priority for execution of the task with reference to other tasks in the maintenance program planned for the part.

9. Use the **Initiated/Reset By** drop-down list box to specify the manner in which the Next Scheduled Value (NSV) for the task in the maintenance program must be computed. When you select,

   - Self-Compliance, the system sets the Next Schedule Value/Next Schedule Date on compliance of the task.

   - Related Task Compliance, the system sets the Next Schedule Value/Next Schedule Date on compliance of all related tasks in additional to the compliance of main task.

10. Use the **Reset on Attachment?** drop-down list box and select,

    - 'Not Required' to compute NSD / NSV based on Last Performed Date / Value.

- 'First Attachment' to compute NSD / NSV on first attachment of the component after the off-wing compliance of the task.
- 'Every Attachment' to re-compute NSD / NSV on every attachment of the component to the Aircraft.

11. Specify the parent task associated with the work units/tasks planned to be executed on the part, in the **Parent Item** # field.

    Note: This field is applicable only if the Program Item Type of the task is "Base".

12. Indicate the **Schedule Status** of the work unit task, which could be "Active" or "Inactive" or Terminated.

13. Set the **Execution Facility** to "In-house" or "Out-source" to specify the location where the work unit has to be performed.

    Note: The "In-house" option alone will be listed in this field, if the execution facility is set as "In-house" for the part number in the "Maintain Maintenance Info. for Part" page of the "Aircraft" business component. The "Out-source" option alone will be listed in this field, if the execution facility is set as "Out-source" for the part number in the "Maintain Maintenance Info. for Part" page of the "Aircraft" business component.

14. Select the **Work Center #** and enter the **Est. Duration**.

15. Select "Yes" in the **On Wing?** drop down list box to specify that the work unit must be performed on-wing. Select "No" if the work unit must be performed off-wing.

16. Select the Package Type and enter the Ref Document Type, Ref Document #, Reference EO # and other details.

17. Use the **Shelf Life Expiry** drop-down list box to specify whether the given maintenance requirement is for shelf life expiry of the component.

    Note: If Shelf Life expiry is specified as "Yes", you cannot define schedules (date based as well as usage based) for the relevant work unit.

18. Use the **Expense Type** drop-down list box to specify the expense type of the work unit. The system provides the options "Revenue" and "Capital".

    Note: Ensure that the above field is set to "Revenue":

    a. *If the expense type for the part is identified as "Revenue" in the "Part Administration" business component.*

    b. *If the component ownership is other than "Owned" in the "Aircraft" business component.*

19. Select the **Get Base Tasks** pushbutton to display base tasks of a task in the multiline.

    Note: The program item type of the task for which you want to view the base tasks must be "Block".

20. Use the **Change Work Unit Status To** drop-down list box to change the status for the work unit to "Active" or "Inactive".

21. Click the **Update CMP** pushbutton to create the component maintenance program.

    Note: The system ensures that there is at least one work unit with maintenance type "Retire", if the "Lifed?" field is set as "Yes" for the part number, in the "Maintain Maintenance Info. for Part" page of the "Aircraft" business component.

    Note: On creation of component maintenance program, the system copies "Revenue" as the expense type for the work units in the component maintenance program, irrespective of the expense type identified for the work units in the part

program, if the ownership is identified as "Customer" for the component number. Else, the system copies the expense type identified for the work units in the part program.

22. Click the **Cancel CMP** pushbutton to cancel the specific revision of the component maintenance program.

To proceed,

- τ Define usage based schedule
- τ Define date based schedule
- τ Associate estimated skill requirement
- τ Associate estimated facilities requirement
- τ Associate estimated material requirement
- τ Associate work units on opportunity check
- τ Authorize part maintenance program
- τ Set Execution Inheritance rules for tasks in the maintenance program
- τ Upload documents associated with the component maintenance program

3.1.9 Associate work units on opportunity check

You can carry out some additional work units along with the next maintenance arising of the component.

1. Select the **Edit Opportunity Check Details** link in the **Edit Component Maintenance Program Information** page. The Edit Opportunity Check Information page appears. *See Figure 3.8.*
2. Use the **Execute With** drop down list box to indicate when the work unit is to be performed on the component. The system lists the options "Next Overhaul", "Next Repair", "Next Inspection" and "Next Shop-Visit".
3. Enter the **Work Unit Type, which** could be "Task" or "Standard Procedure".
4. Enter the **Work unit #** which is to be performed.

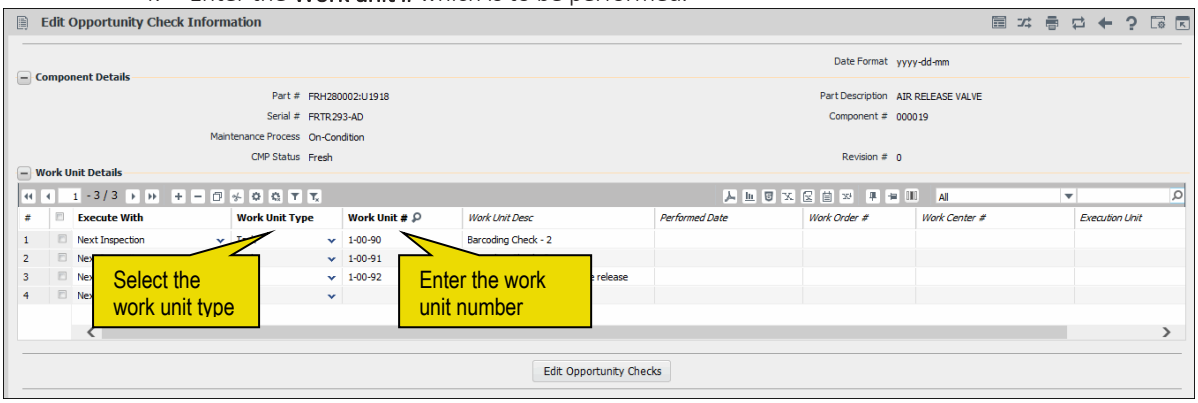


Figure 3.8 Recording of opportunity check details

5. Click the **Edit Opportunity Checks** pushbutton to record the details.

3.1.10 Authorizing a component maintenance program

1. Select Authorize Component Maintenance Program under Component Maintenance Program business component. The **Authorize Component Maintenance Program** page appears.

2. Enter **Search Criteria** and click the **Search** pushbutton.

   Note: The system retrieves all the components, which have maintenance programs in the "Fresh" status. The system will not retrieve the components that are attached to the aircraft with record status "Frozen".

3. Select the component for which the maintenance program must be authorized, in the multiline.
4. To authorize all the programs, check the **Select All** box below the multiline.
5. Click the **Authorize CMP** pushbutton, to authorize the component maintenance program.

   Note: The system changes the status of the program to "Authorized" and the program is made available for forecasting.

6. Click the **Cancel CMP** pushbutton to cancel the specific revision of the component maintenance program.

3.1.11 Creating position based schedule

The maintenance schedule information can be defined for a position code and part number. Schedule values (in the CMP and in the position schedule) will be taken for the forecast when the particular part number is attached to the specific position code.

1. Select Maintain Position Based Schedule under Component Maintenance Program business component. The Select Position - Part # page appears.
2. Enter the **Search Criteria** to search for a position code and part number combination.
3. Select the position code - part number combination, for which schedule must be defined, in the multiline.
4. Enter the **Aircraft Model #**, **Part #**, **Level Code** and **Position Code** in the **Position Details** group box to maintain position-based schedule for alternate parts of type "Component".

To proceed,

- τ Create date based schedule
- τ Create usage based schedule
- τ Define aircraft effectivity

3.1.12 Creating date based schedule

1. Select the Edit Date Based Schedules link in the Select Position - Part # page. The Edit Date Based Schedule Information page appears. *See Figure 3.9.*
2. Use the **Work Unit #** drop down list box to select the work unit to be performed. The system displays all the work units defined in the component maintenance program for the part except those with Program Item Type-Perpetual and As Required; prefixes it with "TSK", "SP" or "WP" based on the type of the work unit.
3. Click the **Get Details** pushbutton to get the work unit information.
4. Select the **Schedule Type, which** could be "Recurring" or "One Time".
5. Select the **Time Unit**, which could be "Days", "Weeks", "Months", "Month End" or "Years".
6. Enter the starting value of performing the work unit in the **Threshold** field.
7. Enter the value after which an alert need to be given in the **Alert Value** field.

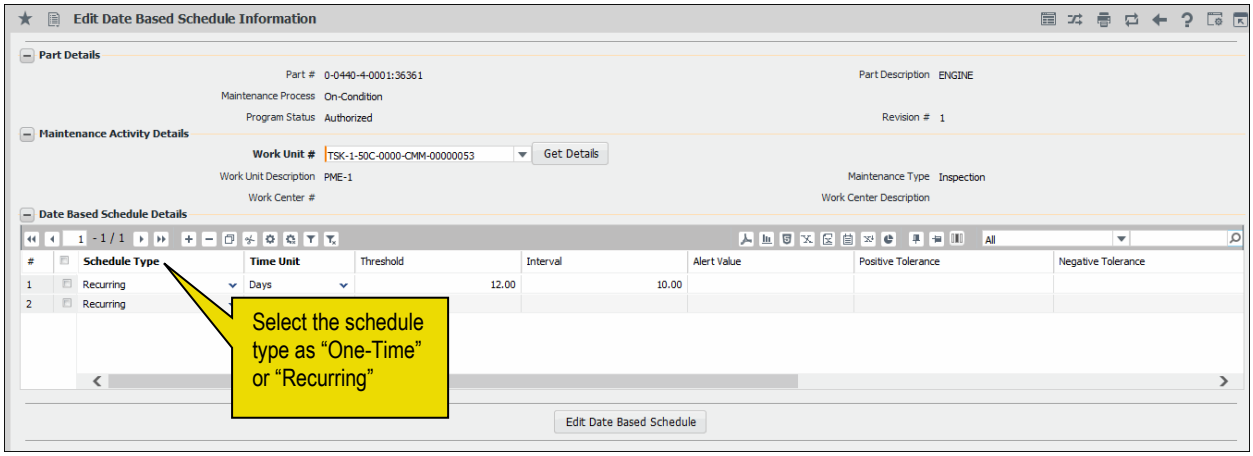


Figure 3.9 Creating date based schedule

8. Enter the Positive Tolerance and Negative Tolerance.
9. Click the **Edit Date Based Schedule** pushbutton to record the schedule details.

3.1.13 Create usage based schedule

You can create schedules depending on the usage of the component, based on the consumption parameters of the component

1. Select the Edit Usage Based Schedules link in the Select Position - Part # page. The Edit Usage Based Schedule Information page appears. *See Figure 3.10*

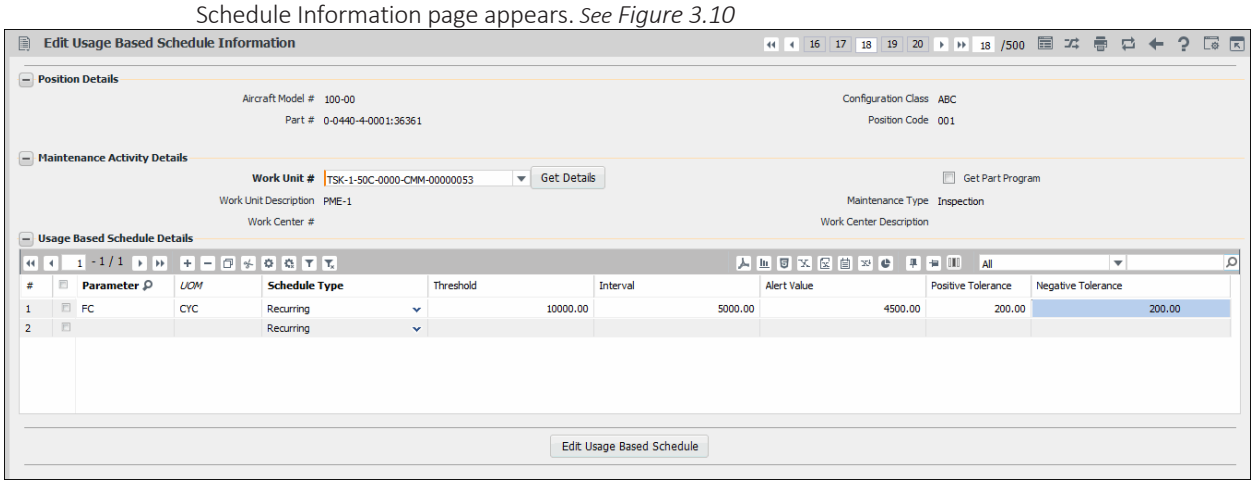


Figure 3.10 Creating usage based schedule

2. Use the **Work Unit #** drop down list box to select the work unit to be performed. The system displays all the work units defined in the component maintenance program for the part except those with Program Item Type-Perpetual and As Required; prefixes it with "TSK", "SP" or "WP" based on the type of the work unit.
3. . Click the **Get Details** pushbutton to get the work unit information.
4. Enter **Parameter**, the number identifying the consumption parameter in the aircraft.
5. Select the **Schedule Type, which** could be "One Time" or "Recurring".
6. Enter the starting value of performing the work unit in the **Threshold** field.
7. Enter the value after which an alert need to be given, in the **Alert Value field**.
8. Enter the Positive Tolerance and Negative Tolerance.

Note: The system displays the parameter values in the multiline based on the

option "Decimal Format" or "HHMM Format" selected for the parameter in "Time Display Option" drop-down list box in the "Aircraft" business component while parameter creation. For e.g. If the Time Display Option is selected as "HHMM Format" and the value stored is 2.50 in the data base, the system displays 2.30 in the multiline.

9. Click the **Edit Usage Based Schedule** pushbutton to record the schedule details.

3.1.14 Define aircraft effectiveness

You can specify the aircraft for which the position-based schedule is applicable. If no aircraft is specified, the system considers all aircraft under the model and configuration class.

1. Select Define Aircraft Effectivity link in the Select Position - Part # page. The Define Aircraft Effectivity Information page appears. *See Figure 3.11.*

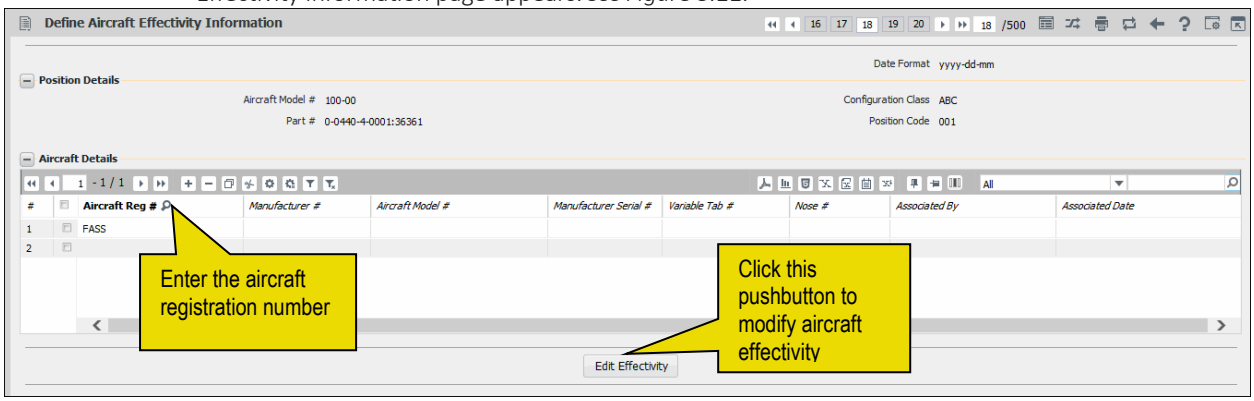


Figure 3.11 Defining aircraft effectivity

2. Enter the **Aircraft Reg #,** the number identifying the aircraft to which the schedule is applicable.
3. Click **Edit Effectivity** pushbutton to record the aircraft effectivity details.

3.1.15 Activating a position based schedule

You can authorize a position based maintenance program in the "Fresh" status.

1. Select **Activate Position Based Schedule** under **Component Maintenance Program** business component. *See Figure 3.12*

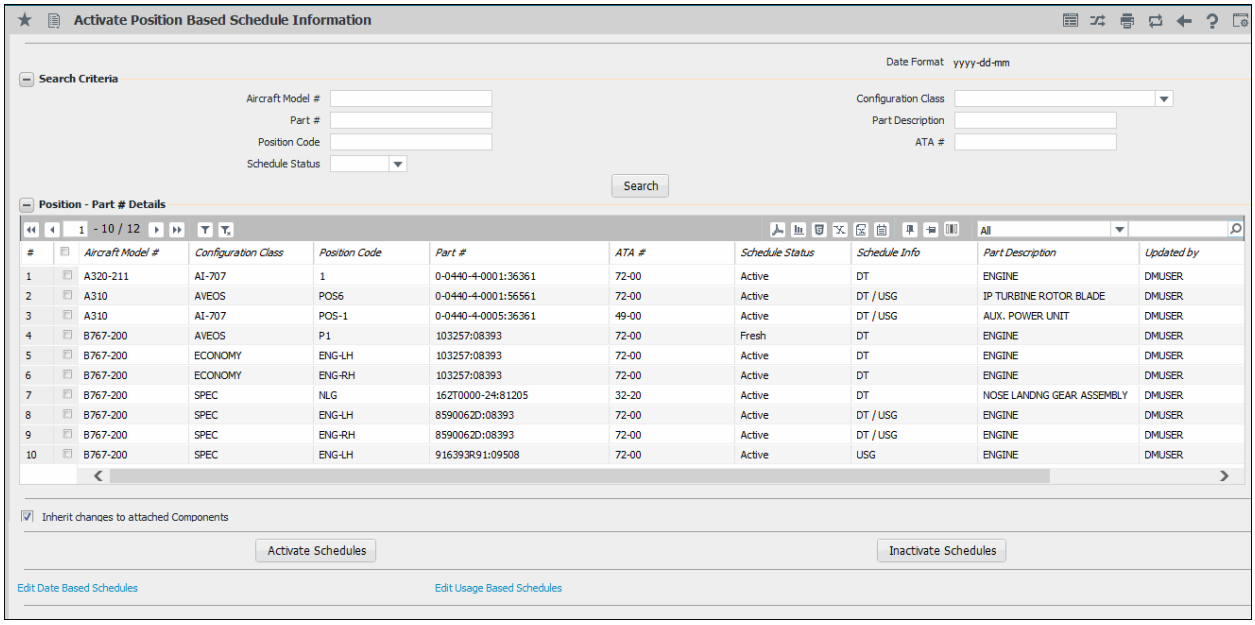


Figure 3.12 Activating position based schedule

2. Enter **Search Criteria** to search for position based schedule information and click the **Search** pushbutton.
3. Check the **Inherit changes to attached Components** box to update maintenance programs of all attached components based on the changes made in the position based schedule. Conversely, leave the box unchecked, if you do not want any change in the maintenance programs of attached components.
4. Select the schedule that you want to make active/inactive, in the multiline.
5. To activate position based schedules, click the **Activate Schedules** pushbutton.
6. To inactivate position based schedules, click the **Inactivate Schedules** pushbutton.

The system changes the status of the program to "Authorized" and the program is made available for forecasting.

3.1.16 Updating work units in existing maintenance program

You can add, modify or delete the work unit in the part program or component maintenance program.

1. Select the Update Work Units in Programs link under Component Maintenance Program. The Select Work Unit # page appears.
2. Provide search criteria to retrieve the work unit that you want to update in Active maintenance programs.
3. Click the hyperlinked **Work Unit #** in the **Search Results** multiline. The **Edit Work Unit Information in Programs** page appears. *See Figure 3.13.*
4. The system displays the details of the work unit in the **Work Unit Details** group box, the execution details of the program in the **Execution Details** group box and the transaction details in the **Transaction Details** group box. You can modify the existing details.
5. In the "Program Details" group box, specify the **Program Group** of the maintenance program planned for the part.
6. Specify the **Program Item Type** of the work unit.
7. Specify the manner in which the Next Scheduled Date /Next Schedule Date for the work unit in the

maintenance program must be computed in the **Initiated/Reset By** field.

8. Modify the Part #, Serial # and the Component #, if required, in the Part Applicability Details multiline.

9. In the Execution Details group box, select the **Expense Type** of the work unit/task.

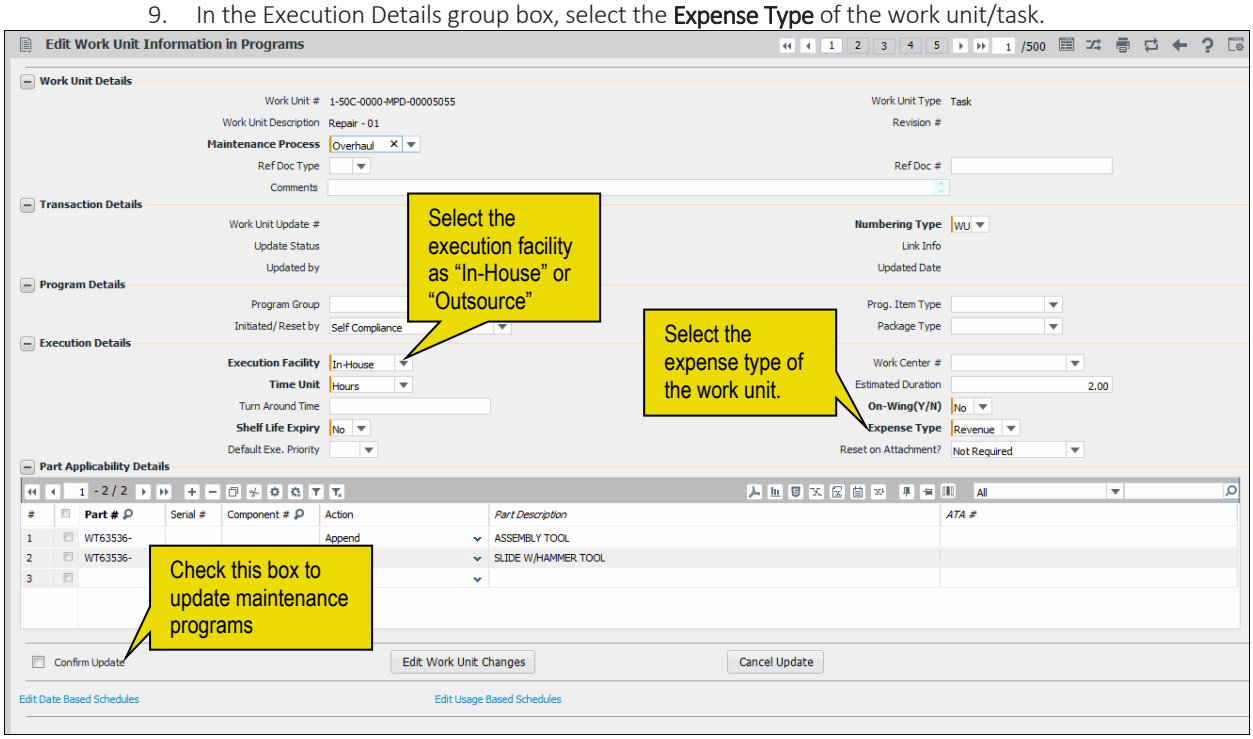


Figure 3.13 Updating work unit in existing maintenance programs

10. Use the **Default Exe. Priority** drop-down list box to specify the priority for execution of the work unit with reference to other work units in the maintenance program planned for the part.

11. You can add, delete or modify the existing work unit details for a selected part. Select "Append" in the **Action** drop-down list box, to add the work unit details. Select "Delete" to remove the work unit details from the component. Select "Overwrite" to modify the existing work unit details.

> *Note: If the "Action" is set as "Delete", the system deletes only those work units having the same maintenance type as the selected work unit, from the part program or the component maintenance program.*

12. Click the **Edit Work unit Changes** pushbutton to record the modified details.

13. Click the **Cancel Update** pushbutton to cancel the modification

3.1.17 Maintaining restoration work units

In this activity, you can identify the work unit that has to be performed for removal and installation of the part. You can identify the restoration task for each part.

1. Select Maintain Restoration work units under Component Maintenance Program business component. The Maintain Restoration Work Unit Information page appears. *See Figure 3.14*

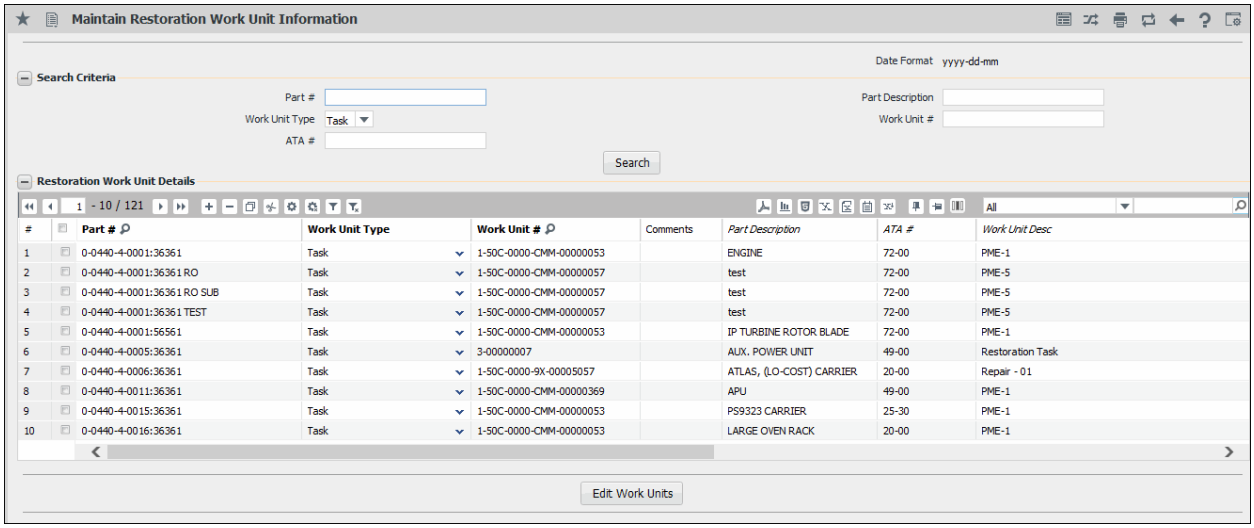


Figure 3.14 Maintain restoration work units

2. Enter the search criteria in the **Search Criteria** group box to retrieve parts. Click the **Search** pushbutton. The system retrieves all active parts and displays the details in the **Search Results** multiline.

3. Use the **Work Unit Type** drop-down list box to select the type of work unit. Work unit type can be “standard procedure” or “task”.

4. Enter the number identifying the task or standard procedure that has to be performed to remove or attach the part in the **Work Unit #** field.

5. Enter any comments regarding the association of the work unit to the part in the **Comments** field.

6. Click the **Edit Work Units** pushbutton to update the work unit details for the part.

3.1.18 Managing Schedule Adjustment for Components

You can set maintenance schedules adjustments for parts at various levels, such as Model, Position Code, Operator, Model & Operator and Operator & Position Based. This helps you to create variants of maintenance programs for specific model, position code or operator.

By means of this activity, you can make adjustments to the following for a part:

- Schedule Information
- Date based schedules
- Usage based schedules
- Aircraft Effectivity

The schedule adjustments incorporated in the part program can be inherited by the associated components, if currently attached to an aircraft. If the components are not attached to aircraft at the time of activation, the schedule adjustments will be incorporated in the component maintenance program upon attachment.

However, you cannot define more than a single schedule adjustment for a specific model, position code, operator, Model & Operator and Operator & Position Based.

1. Select the Manage Schedule Adjustments for Components under the Component Maintenance Program business component. The Manage Schedule Adjustments for Components page appears. *See Figure 3.15*.

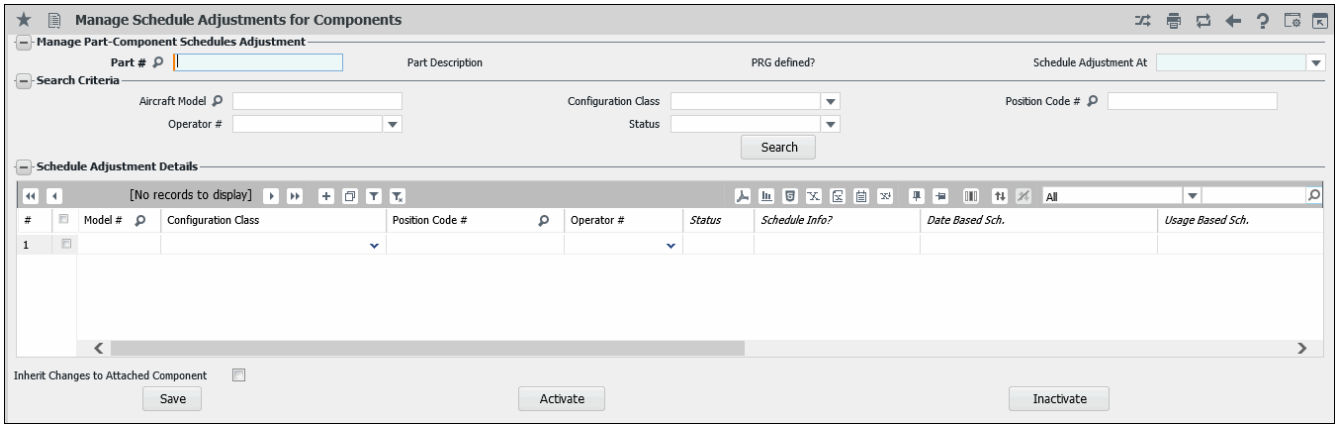


Figure 3.15 Managing schedule adjustments for parts / components

2. Select **Part #** in the **Part Details** group box for which you want to create / update schedule adjustment.
3. In the **Manage Part-Component Schedules Adjustment** group box, use the **Schedule Adjustment At** drop-down list box to select the level at which you wish to adjust schedules for the part. The drop-down list box displays the following: Model, Position Based, Operator, Model :: Operator and Operator :: Position Based.
4. In the Schedule Adjustment Details multiline, enter Model #, Configuration Class, Position Code # and Operator # for the part.
5. To ensure that the part schedule adjustments are copied to the maintenance program of the components attached to aircraft, select the **Inherit Changes to Attached Component** check box. By default, the check box remains selected.

   Note: Only Active schedule Adjustment will be inherited by the components attached to aircraft. However, for components not currently attached to aircraft, schedule adjustments will be carried upon component attachments in future.

6. To update schedule details for the part, click the data hyperlink in the **Schedule Info?** column to open the **Edit Schedule Information** page.
7. To update the date based schedules for the part, click the data hyperlink in the **Date Based Sch.** column to open the **Edit Date Based Schedule Information** page.
8. To update details of the usage based schedules for the part, click the data hyperlink in the **Usage Based Sch.** column to open the **Edit Usage Based Schedule Information** page.
9. To update aircraft effectivity details based on schedule adjustments, click the data hyperlink to open the **Define Aircraft Effectivity** page.
10. Click the **Save** pushbutton to save the entered details.

    Note: The status of the record becomes Fresh upon saving the details.

11. Click the **Activate** pushbutton to activate the schedule adjusted maintenance program.

    Note: You can activate an Adjustment record only after saving the record details. The status of the record becomes Active after it is made Active.

12. Click the **Inactivate** pushbutton to inactivate the schedule adjusted maintenance program.

Conditional availability of fields based on Schedule Adjustment

The fields in **Search Criteria** and the **Schedule Adjustment Details** multiline will be available / unavailable based on the selection you have made in the **Schedule Adjustment At** drop-down list box. The next table shows the field availability for each option in the **Schedule Adjustment At** drop-down list box.

Schedule Adjustment At option	**Fields Displayed**	**Fields Hidden**
Model	Model	Configuration Class Position Code #, Operator,
Position Based	Model #, Configuration Class, Position Code #	Operator
Operator	Operator	Model #, Configuration Class, Position Code #
Model :: Operator	Model #, Operator	Configuration Class, Position Code #
Operator :: Position Based	Model #, Configuration Class, Position Code #, Operator #	

4 AIRCRAFT MAINTENANCE PROGRAM

The **Aircraft Maintenance Program** business component addresses the function of configuring and maintaining the standard maintenance routines of aircraft. The maintenance program identifies the scope (work packages, standard procedures and tasks) of the planned maintenance as well as the periodicity with which the maintenance needs to be performed.

A maintenance program is created for an aircraft model. Individual aircraft can later be associated to the maintenance program. The work units and the schedules that are defined for a specific aircraft maintenance program are later used for forecasting the maintenance activities that are due to be carried out on the aircraft, in the "Aircraft Maintenance Forecast" business component. Later, work orders are generated for carrying out the work units in the "Hangar Work Order" business component.

The following are the various stages and the statuses of an aircraft maintenance program:

- Creation of an aircraft maintenance program – A maintenance program is created for an aircraft model and work units that must be carried out as part of the program are identified. The status of the maintenance program is set to "Fresh". The maintenance program can be modified or canceled only when it is in the "**Fresh**" status.

- Cancellation of the aircraft maintenance program – A maintenance program can be cancelled when it is in the "Fresh" status. The status of the program is set to "**Cancel**".
- Confirmation of the aircraft maintenance program – Once the program is confirmed, further modifications are not possible. Only a confirmed program can be activated. The status of the program is set to "**Confirm**".
- Activating, Returning or Inactivating the maintenance program:
    - Activation of the program – The program is activated and the status of the program is set to "**Active**".

Or

    - Returning the program – If the program is not activated it can be returned for further modification. The status of the program is set to "**Return**".

Or

    - Inactivating the program – An activated program can be inactivated. The status of the program is set to "**Inactive**".
- Revising the program – A program that is in the "Active" or "Inactive" status can be revised. In such cases, a new revision of the program is created in the "Fresh" status. When this new revision of the program is activated, the previous active revision of the program is set to "**Revised**".

See Figure 4. 1 to view the diagrammatical representation of the various stages and the statuses of an aircraft maintenance program:

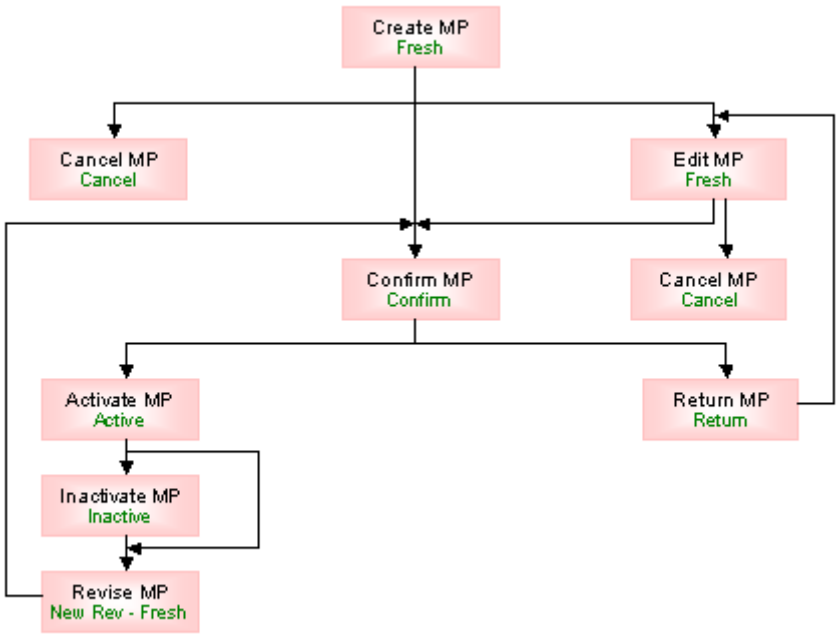


Figure 4.1 Aircraft Maintenance Program status flow

4.1 Configuring the maintenance program for aircraft models

4.1.1 Creating quick codes

Quick Codes are user-defined values, used to categorize a set of details of identified behavior. These quick codes are later used in the process of retrieving or addressing the details by referring to the attached quick code.

Quick codes act as additional qualifiers for a business entity or document. Quick codes can assume user-provided values, which can be used to categorize/group an entity/document record to satisfy specific needs in a user organization's internal processes, especially with respect to unique reporting requirements.

The quick code type "Package Category" and "Program Category" are predefined in the system. Values can be defined for this quick code type.

1. Select the **Create Quick Codes** link under the **Aircraft Maintenance Program** business component.

The **Quick Code Information** page appears. *See Figure 4. 2*

Figure 4.2 Creating quick codes

2. Select the quick code type for which quick codes must be defined, in the **Quick Code Type** field.
3. Set the field to **Package Category** to define quick codes for work package.
4. Set the field to **Program Category** to define quick codes for aircraft maintenance program.
5. Set the field to **MPD Group** to define quick codes for Maintenance Planning Document (MPD) group.
6. Enter a unique identifier for the quick code in the **Quick Code** field in the **Quick Code Details** multiline.
7. Enter the textual description for the quick code in the **Description** field.
8. Click the **Create Quick Codes** pushbutton to create the quick codes.

> *Note: The system creates the quick codes and sets the status of the created quick codes as "Active".*

4.1.2 Setting options for aircraft maintenance program

You can set default options for the various fields in the activities of the **Aircraft Maintenance Program** business component.

1. Select the **Set Options** link under the **Aircraft Maintenance Program** business component. The **Set Options** page appears. *See Figure 4. 3*

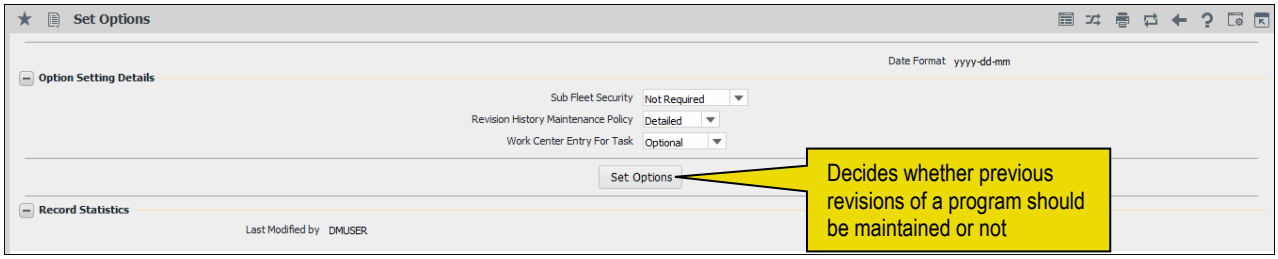


Figure 4.3 Setting options for aircraft maintenance program

2. Enable or disable security check on modification of maintenance program associated to a sub fleet, by selecting one of the following options in the **Sub Fleet Security** field:
   - Set the field to **Required** to enable security check on modification of a maintenance program associated to an aircraft which is part of the sub fleet. When this option is selected, the user, who does not hold rights for a particular sub fleet, will not be allowed to modify the maintenance program of an aircraft belonging to the sub fleet.
   - Set the field to **Not Required** to disable security check on modification of a maintenance program associated to a sub fleet. When this option is selected, users will be allowed to modify the maintenance program of an aircraft belonging to a sub fleet, irrespective of whether they hold rights for the sub fleet or not.

3. Set the policy for maintaining previous revisions of a program, in the **Revision History Maintenance Policy** field.
   - Set the field to **Summary** if you wish to maintain a summary of the previous revisions of the program. When this option is selected, the system displays **No** in the **Maintain Prev Rev.?** field in the **Approve Maintenance Program** activity.
   - Set the field to **Detailed** if you wish to maintain all the details of the previous revisions of the program. When this option is selected, the system displays **Yes** in the **Maintain Prev Rev.?** field in the **Approve Maintenance Program** activity.

4. Select any one of the following options in the **Work Center Entry for Task** field:
   - Optional - Indicates the work center entry for the task is optional.
   - Mandatory - Indicates the work center entry for the task is mandatory.

5. Click the **Set Options** pushbutton to set the options for the maintenance program.

4.1.3 Maintaining maintenance events

You can define customized maintenance event codes and their description. You can also specify the status of the maintenance event.

1. Select **Maintain Maintenance Events** under the **Common Master** business component. The **Maintain Maintenance Events** page appears. *See Figure 4. 4*

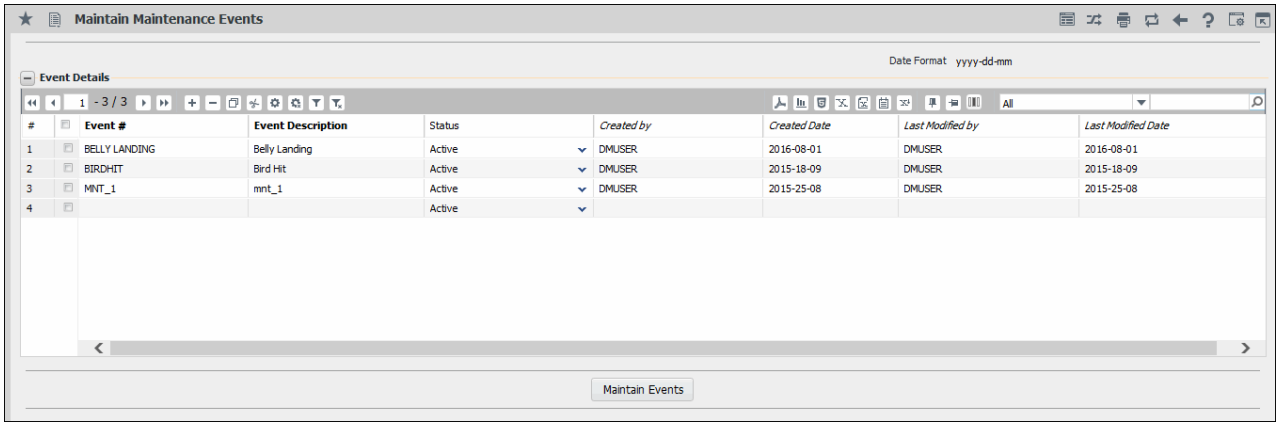


Figure 4.4 Maintaining maintenance events

In the **Event Details** multiline,

2. Enter the Event # and Event Description.
3. Set the **Status** of the maintenance event to “Active” or “Inactive”, to specify whether the maintenance event is to be enabled or disabled for future reference.
4. Click the **Maintain Events** pushbutton at the bottom of the page to save the maintenance event details.

4.2 Creating an aircraft maintenance program

An aircraft maintenance program identifies the work package, standard procedure and tasks of the planned maintenance, as well as the periodicity with which the maintenance must be performed. Typically, aircraft of the same model will have similar maintenance needs. Therefore, the same maintenance program can be applied to all such similar aircraft. Besides routine maintenance, specialized maintenance activities such as corrosion prevention programs can also be configured in the maintenance program.

1. Select the **Create Aircraft Maint. Program** link under the **Aircraft Maintenance Program** business component. The **Create Maintenance Program** page appears. *See Figure 4. 5*
2. Enter a unique number that identifies the maintenance program in the **Maintenance Program #** field in the **Maintenance Program Information** group box.
3. Enter the textual description of the maintenance program, in the **Program Desc.** field.
4. Specify the aircraft model to which the maintenance program is applicable, in the **Primary Model #** field.
5. Select the configuration class for the maintenance program, in the **Configuration Class** field.

You can create a maintenance program by copying the details from an existing maintenance program.

6. Enter the maintenance program number, the details of which must be copied into the maintenance program that is currently being defined, in the **Maintenance Program #** field of the **Copy Details** group box.

   Note: Ensure that the number entered here is different from the maintenance program number entered in the "Maintenance Program Information" group box.

7. Check the **Copy From** box to copy the details from the required maintenance program.
8. Check the **Copy All** box to copy all details of the maintenance program.
9. Check the **Schedule Information** box to copy only the schedule information to the maintenance program that is being created.
10. Check the **Model Effectivity** box to copy only the model effectivity details.
11. Check the **Associated Aircrafts** box to copy only the details of associated aircraft.

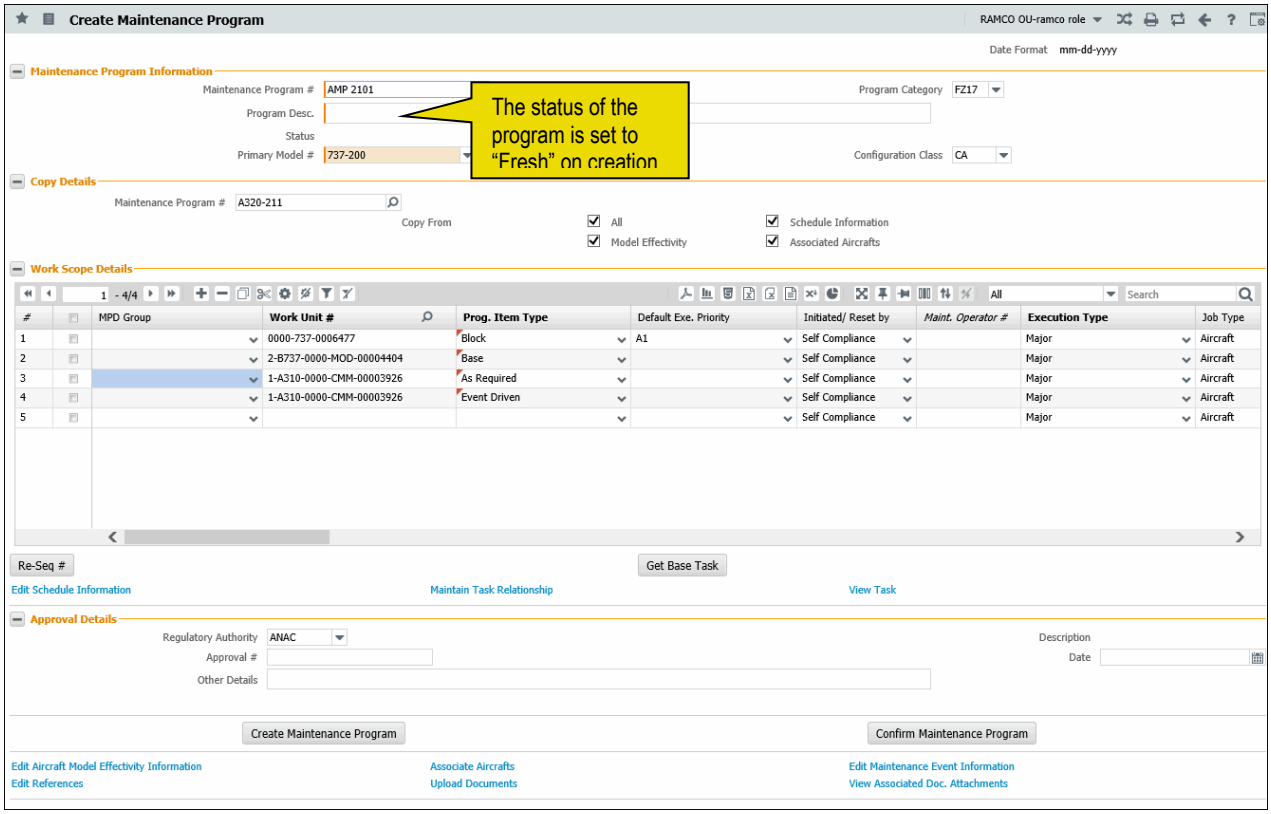


Figure 4.5 Creating aircraft maintenance program

12. Select the Maintenance Planning Document (MPD) Group from the **MPD Group** drop-down list box
13. Enter the task, standard procedure; aircraft work package or component work package to be performed as part of the maintenance program, in the **Work Unit #** field.
14. Select any one of the following valid Program item types from the **Prog. Item Type** drop-down list box:
    - Block - Indicates the task contains a group of tasks to be executed based on a schedule
    - Base - Indicates the task to be executed is associated to a block.
    - Perpetual - Indicates the task is to be executed while executing any other tasks on the aircraft.
    - As required - Indicates the task will be executed whenever required.
    - Event driven - Indicates the task will be executed based on the occurrence/ triggering of an event
    - Non-block - Indicates the task to be executed is not associated to a block.
    - To be decided - Indicates the classification of the program item type for the task will be decided later.
15. Select the default execution priority from the **Default Exe. Priority** drop-down list box.
16. Select any one of the following options from the **Initiated/Reset by** drop-down list box:

- Self-Compliance - Indicates the task would be initiated/ reset on compliance of the same task. This implies that the compliance of this task is not dependent on any other task.

i) Related Task Compliance - Indicates the task, on compliance, would initiate/ reset another task available as part of the same program. The task, which has to be initiated on compliance of a task is based on the "Initiate Schedule" relationship defined for that task in the 'Maintain Task Relationship' activity under the "Maintenance Task" business component.

17. Set the **Execution Type** field to **Major**, to indicate that the work unit is a major check and must be sent to the hangar for maintenance. Set the **Execution Type** field to **Minor**, to indicate that the work unit must be executed as a part of line maintenance.
18. Set the **Job Type** field to **Aircraft** to indicate that the work unit must be performed on the aircraft. Set the **Job Type** field to **On-wing** to indicate that the work unit must be performed on components attached to the aircraft.

    Note: If the job type is "Aircraft" or "On-wing" and if the work unit type is "Aircraft Work Package", then ensure that the work unit number is valid for the aircraft model selected in the "Primary Model #" field.

19. Specify the type of maintenance job that must be carried out as a part of the work unit in the **Maintenance Type** field. The type of the maintenance can be **Repair**, **Overhaul**, **Inspection** or **Others**.
20. Enter the position code in the aircraft where the work unit must be performed, in the **Position Code** field.
21. The number identifying the level at which the position code occurs in the configuration class attached to the primary model in the **Level Code** field.
22. Enter the engineering document as a part of which the work unit was defined along with its revision number, in the **Eng Doc#** and the **Revision #** fields.
23. Specify the status of the schedule, in the **Schedule Status** field.
    - Set the status of the schedule to **Fresh** when the work unit is first specified for the program.
    - Set the status of the schedule to **Active** if you wish to activate the work unit.
    - Set the status of the schedule to **Inactive** if you do not wish to carry out the work unit as a part of the maintenance program.
    - Set the status of the schedule to **Terminated**, to terminate the work unit. This status gets updated from an Engineering Document as a part of which the work unit was defined and is updated for the work unit and for a specific aircraft registration number.
24. Set the **Long Term?** field to **Yes** to indicate that the execution of the work unit is for long term. Otherwise, select the **No** option.
25. Specify the schedule execution of the work unit in the **Sch. Exec Rule** field.
    - Set the field to **Earliest** to indicate that when both date based and usage based schedules is defined for the work unit, the system must consider the earliest of the due dates calculated by these schedules.

- Set the field to **Latest** to indicate that when both date based and usage based schedules is defined for the work unit, the system must consider the latest of the due dates calculated by these schedules.

26. Specify the type of deferment policy for deferring or postponing the work unit when work orders are generated based on the maintenance program, in the **Deferment Policy** field.
    - Set the field to **Not Allowed** if you do not wish to allow deferment of the work unit.
    - Set the field to **Complete Work Unit**, option if you wish to allow the deferment of the work unit along with the tasks and procedures defined for it. For example, If WU1 is a work package and its contents are T1, a task and SP1, a procedure, and if T1 is marked for deferring the whole package WU1 gets deferred.
    - Set the field to **Constituent Unit**, if you wish to allow the deferment of the work unit separately. For example, If WU1 is a work package and its contents are T1, a task and SP1, a procedure, T1 and SP1 can be deferred separately without affecting the parent work package.
27. Select the **Package Type** of the aircraft.
28. Select the expense type of the work unit in the **Expense Type** field.
    - Set the field to **Revenue**, if the cost incurred on the work unit is for routine maintenance activity and must be recorded as revenue cost.
    - Set the field to **Capital**, if the cost incurred on the work unit must be recorded as a capital cost.
29. The work center where the work unit must be performed in the **Work Center #** field.
30. The sequence in which the work unit should be performed as part of the maintenance program in the **Seq #** field.
31. Click the **Get Base Task** pushbutton to retrieve the base tasks for the selected block task.
    - The system retrieves the tasks in the **Work Scope Details** multiline. These tasks would have been mapped to the selected parent Task # with the “Block Schedule'” relationship defined in the “Maintain Task Relationship” activity of the “Maintenance Task” business component.
32. Select the regulatory authority as a reference to the maintenance program in the **Regulatory Authority** field in the **Approval Details** group box.
33. Enter the approval number with reference to which the maintenance program is created, in the **Approval #** field.
34. Select the **Create Maintenance Program** pushbutton to create the maintenance program.

    Note: The system creates the maintenance program and sets the status of the created maintenance program as "Fresh".

35. Select the **Confirm Maintenance Program** pushbutton to confirm the maintenance program.

> *Note: The system confirms the maintenance program and sets the status of the program to "Confirm". Further modifications to the program are not allowed. On confirmation, the system changes the 'Schedule Status' from "Fresh" to "Active".*

To provide further details,

- Select the **Edit Schedule Information** link to specify the schedule information for the maintenance program.
- Select the **Edit Aircraft Model Effectivity Information** link to specify aircraft models on which the maintenance program is applicable.
- Select the **Associate Aircrafts** link to associate aircraft to the maintenance program.
- Select the **Edit Maintenance Event Information** link to specify the maintenance events that must be performed as a part of the maintenance program.
- Select the **Edit References** link to specify reference document details based on which the maintenance program was created.
- Select the **Upload Documents** link to upload documents associated with the maintenance program of the aircraft model.

4.2.1 Specifying schedules for carrying out the maintenance program

The periodicity of a maintenance activity is defined in the form of schedules. Schedules are defined for executing the various work units as a part of the maintenance program for the aircraft model. These schedules are defaulted to aircrafts that are associated to the maintenance program. You can then forecast the maintenance activities that are due for an aircraft in the "Aircraft Maintenance Forecast" business component. Work orders are generated based on these schedules in the "Hangar Work Order" business component.

Refer the "Aircraft Maintenance Program" Online Help for more details on schedules.

1. Select the Edit Schedule Information link in the Create Aircraft Maintenance Program or the Edit Aircraft Maintenance Program page.
2. The **Edit Schedule Information** page appears. See Figure 4. 6.
3. Select the work unit for which schedule information must be specified in the **Work Unit #** field in the **Work Unit Details** group box.
4. Click the **Get Details** pushbutton.
5. Specify whether the work unit must be executed only once or repeated at certain intervals, in the **Schedule Type** group box in the **Schedule Details** group box.
   - Set the field to **One Time** if the work unit must be executed only once.
   - Set the field to **Recurring** if the work unit must be repeated at certain defined intervals.
6. Select the mode by which the due dates for executing the work units must be calculated, in the **Update Basis** field.
   - Set the field to **Schedule** if the next due dates for carrying out the work units must be calculated based on a fixed interval.

- Set the field to **Actual Completion** if the next due dates for carrying out the work units must be calculated based on its previous completion.

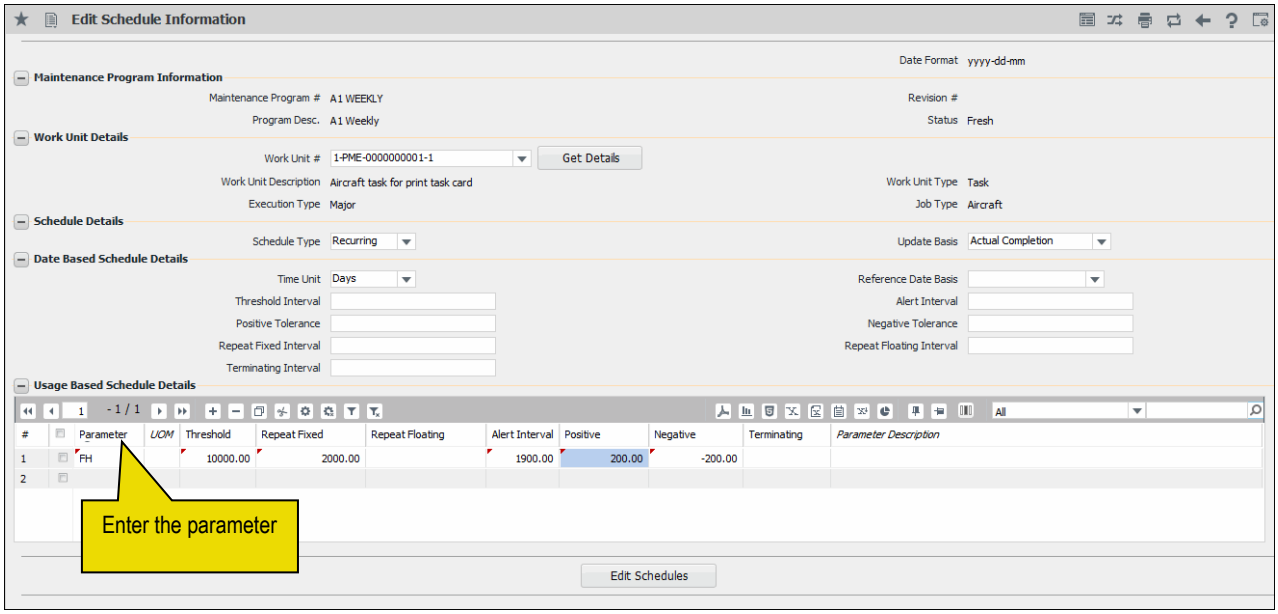


Figure 4.6 Editing schedule information for a maintenance program

To define date-based schedules,

7. Specify the time unit for the date-based schedule in the **Time Unit** field in the **Date Based Schedule Details** group box. The time unit can be **Days, Months, Month End"** or **"Years"**.
8. Specify the reference date based on which the schedules for the work unit must be ascertained, in the **Reference Date Basis** field.
   - Set the field to **Operational Date** if the schedules for executing the work units must be calculated based on the operational date of the aircraft.
   - Set the field to **Induction Dat**e if the schedules for executing the work units must be calculated based on the induction date of the aircraft.
9. Enter the period from the induction date or the operational date, for which the due dates for the work units must be calculated in the **Threshold Interval** field.
10. Enter the period at which an alert message must be displayed about an impending due date for performing the work unit in the **Alert Interval** field.
11. Enter the maximum time period subsequent to the next schedule date, within which the work unit must be performed, in the **Positive Tolerance** field.
12. Enter the maximum time period ahead of the next schedule date, within which the work unit could be performed, in the **Negative Tolerance** field.
13. Enter the interval after which the work unit must be repeated irrespective of whether its previous execution is completed or not, in the **Repeat Fixed Interval** field.
14. Enter the interval after which the work unit must be repeated, from the period of its last execution and completion in the **Repeat Floating Interval** field.

> *Note: You must specify either Fixed Interval or Repeat Floating Interval for a date-based recurring task. However, for a recurring task with both date-based and usage-based*

schedules, you can specify.

15. Enter the period reaching which the work on the work unit must be terminated in the **Terminating Interval** field.

To define usage-based schedules,

16. Enter the parameter based on which the work unit must be performed in the **Parameter** field in the **Usage Based Schedule Details** multiline.
17. Enter the parameter value at which the first execution of the work unit is due in the **Threshold Value** field.
18. Specify the interval after which the work unit must be repeated irrespective of the completion of its last execution, in the **Repeat Fixed Interval** field.
19. Specify the interval after which the execution of the work unit must be repeated, from the period when it was last executed, in the **Repeat Floating Interval** field.

    Note: If the usage-based schedule for a task comprises of many parameters, you must specify repeat fixed interval or the repeat floating interval for a minimum of one of the parameters. However, if the usage-based schedule comprises of single parameter, repeat fixed interval or repeat floating interval is mandatory for the lone parameter. For a task with both date-based and usage-based schedules, you must specify one of the below-listed,

    1. *Repeat fixed interval or repeat floating interval for date based schedule*
    2. *Repeat fixed Interval or the repeat floating interval for at least one parameter comprising the usage-based schedule.*

20. Enter the parameter value at which an alert message would be displayed about an impending work due on the work unit, in the **Alert Interval** field.
21. Enter the upper limit of the parameter value greater than the next schedule value, within which the work unit must be performed, in the **Positive Tolerance** field.
22. Enter the lower limit of the parameter value lesser than the next schedule value, within which the work unit could be performed, in the **Negative Tolerance** field.
23. Specify the parameter value, reaching which the work on the work unit must be terminated, in the **Terminating Value** field.
24. Click the **Edit Schedules** pushbutton.

    Note: The system saves the schedule details against the maintenance program.

4.2.2 Identifying the maintenance events to be carried out for the program

You can specify the various maintenance events that must be performed as a part of the maintenance program. You can select the maintenance event that must be performed and specify the various work units that must be executed as a part of the maintenance event for the maintenance program. A maintenance event can be a “Pre Flight Check”, “Night Haul Check” etc.

1. Select the Edit Maintenance Event Information link in the Create Maintenance Program or the Edit Maintenance Program page. The Edit Maintenance Event Information page appears. *See Figure 4. 7*

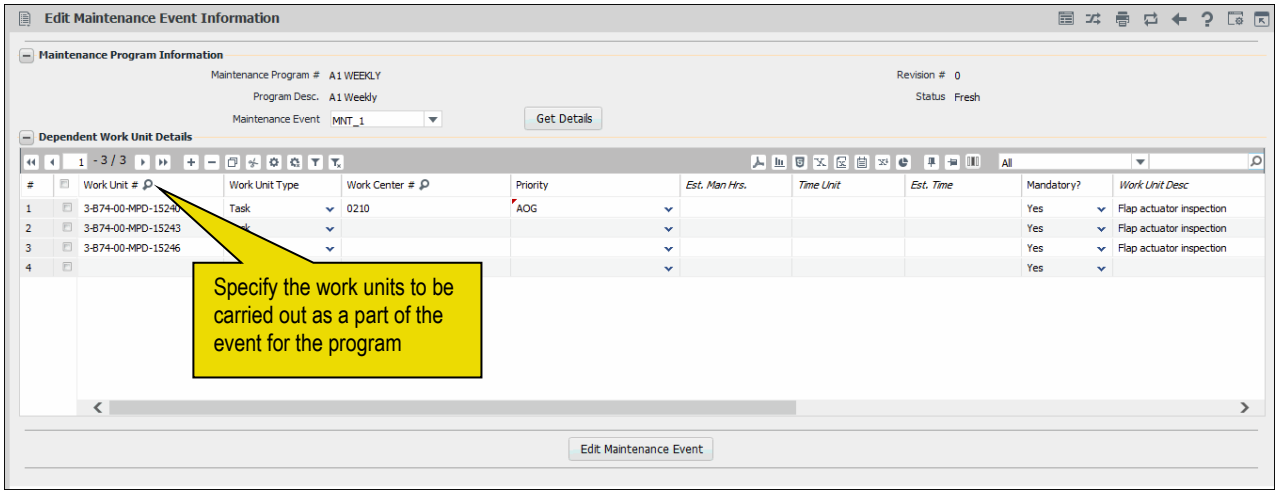


Figure 4.7 Identifying the maintenance events to be carried out for the program

2. Select the maintenance event for which dependent work units must be specified in the **Maintenance Event** field.
3. Click the **Get Details** pushbutton.
4. Specify the type of the work unit, in the Work Unit Type field. The work unit type can be Task, Standard Procedure, Aircraft Work Package or Component Work Package.
5. Specify the work center where the work unit must be performed in the **Work Center #** field.
6. Set the **Mandatory?** field to **Yes** to indicate that the execution of the work unit is mandatory in the work package. Otherwise, set the field to **No**.
7. Click the **Edit Maintenance Event** pushbutton to save the details of the work units for the maintenance program – maintenance event combination.

4.2.3 Capturing document references for the maintenance program

1. Select the **Edit References** link in the **Create Maintenance Program** or the **Edit Maintenance Program** page. The **Edit References** page appears. *See Figure 4. 8*

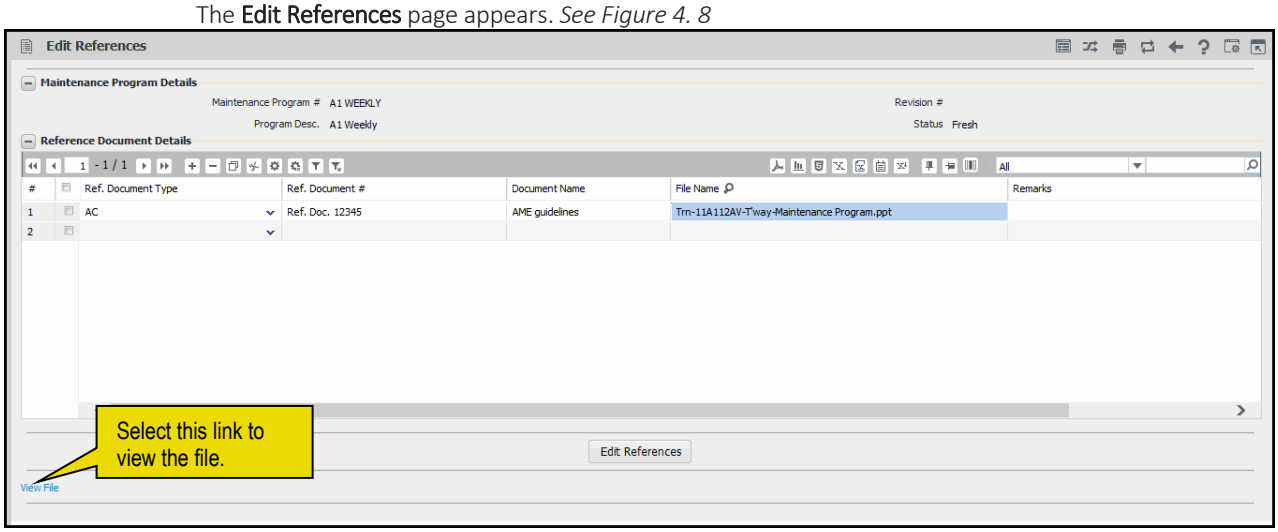


Figure 4.8 Capturing document references for the maintenance program

2. Specify the type of the reference document for which the maintenance program is created in the **Ref. Document Type** field in the **Reference Document Details** multiline.
3. Enter the reference document number in the **Ref. Document #** field.
4. Click the **Edit References** pushbutton.

Note: The system saves the details of the reference documents against the maintenance program

4.2.4 Defining model effectivity for the maintenance program

1. Select the Edit Aircraft Model Effectivity Information link in the Create Aircraft Maint. Program or the Edit Maintenance Program page. The Edit Aircraft Model Effectivity Information page appears. *See Figure 4. 9*

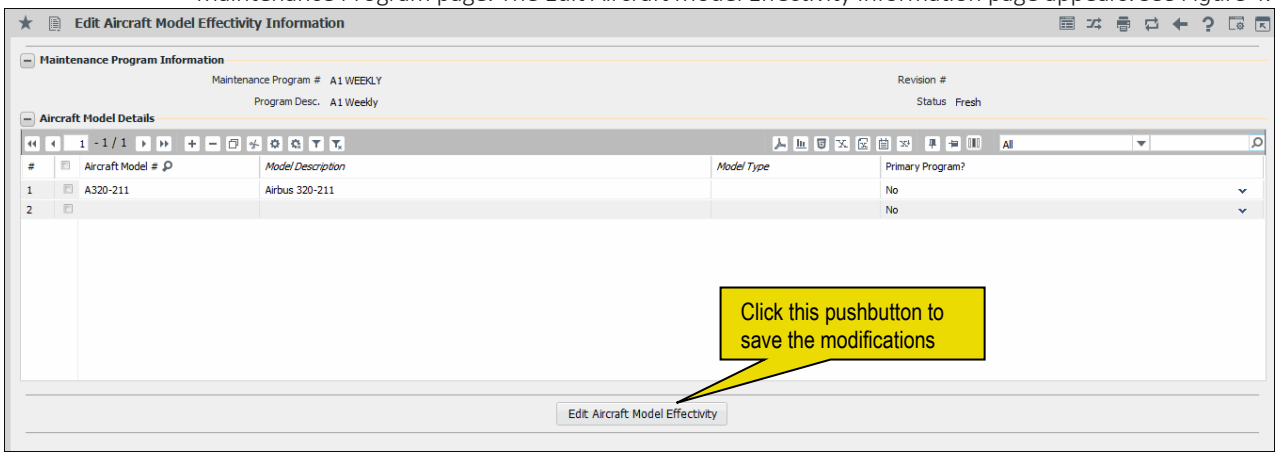


Figure 4.9 Defining model effectivity for the maintenance program

2. Enter the aircraft model for which the maintenance program is applicable in the **Aircraft Model #** field in the **Aircraft Model Details** multiline.
3. Set the **Primary Program?** field to **Yes** to assign the maintenance program as the primary program for the aircraft model.
4. Click the **Edit Aircraft Model Effectivity** pushbutton to save the model effectivity details for the program.

4.3 Associating aircraft to maintenance program

4.3.1 Associating multiple aircraft to the maintenance program

1. Select the Associate Aircrafts to Program link under the Aircraft Maintenance Program business component.
2. The Select Maintenance Program page appears.
3. Enter the program to which the aircraft must be associated and select the **Associate Aircrafts to Maintenance Program** link provided alongside.

Or

4. Search for the program and click the hyperlinked program number in the multiline. The **Associate Aircrafts to Maintenance Program** page appears. *See Figure 4. 10*

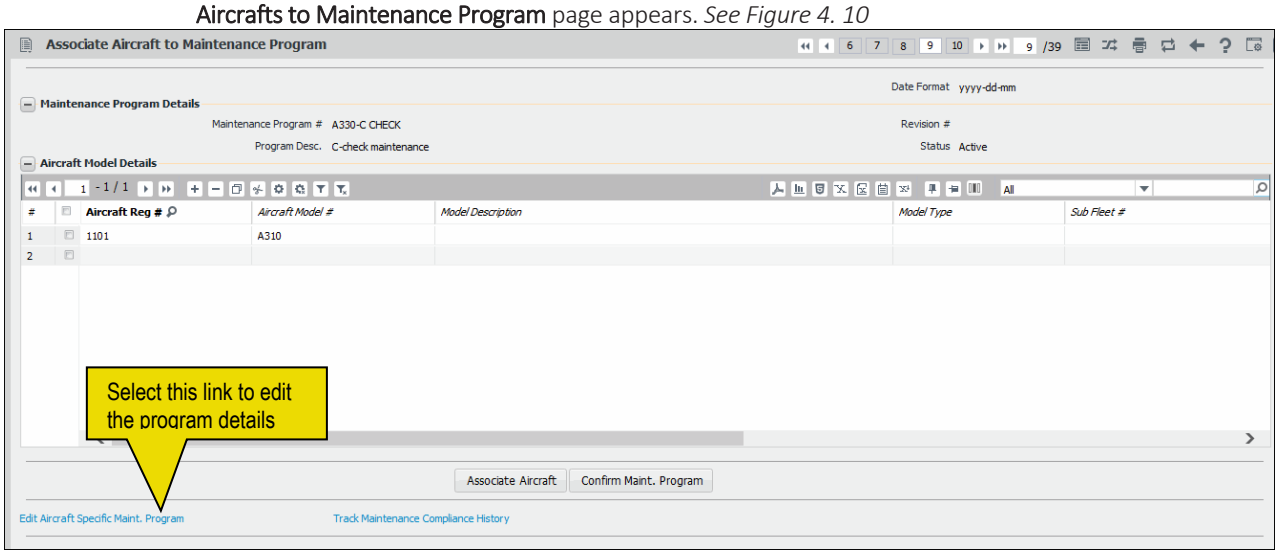


Figure 4.10 Associating multiple aircrafts to the maintenance program

5. Enter the registration number of the aircraft, which must be attached to the maintenance program in the **Aircraft Reg #** field in the **Aircraft Model Details** multiline.

> *Note: Ensure that the aircraft registration number is not repeated in the multiline.*

6. Specify the status of the aircraft association in the Association Status field.
   - Set the field to **Fresh** if you are associating the aircraft to the program for the first time.
   - Set the field to **Active** to activate the association of the aircraft to the program.
   - Set the field to **Inactive** to inactivate the association of the aircraft to the program.

> *Note that the system allows you to associate multiple aircraft maintenance programs to an aircraft. However, only one among these maintenance programs can be in "Active" status.*

7. Set the **Primary Program?** field to **Yes** to set the program as the primary program for the aircraft. Otherwise, set the field to **No**.
8. Click the **Associate Aircraft** pushbutton to associate aircraft to the maintenance program.

> *Note: The system associates the aircraft to the maintenance program and copies the work units defined for the program along with its schedules and all the resources*

defined for carrying out the program.

9. Click the **Confirm Maint. Program** pushbutton to confirm the maintenance program.

> *Note: You can confirm a maintenance program only when it is in the "Fresh" status. The system confirms the maintenance program and sets the status of the program to "Confirmed". Further modification of the program is not possible.*

> *Note: On confirmation, the system changes the "Association status" from "Fresh" to "Active".*

To provide further details,

- Select the **Edit Aircraft Specific Maint. Program** link to edit the program details
- Select the **View Compliance Details** link to view the compliance details of an aircraft maintenance program

4.3.2 Associating multiple programs to an aircraft

1. Select the **Associate Programs to Aircraft l**ink under the Aircraft Maintenance Program business component. The **Select Aircraft** page appears.
2. Enter the aircraft to which programs must be associated and select the **Associate Maintenance Programs** link provided alongside.

Or

3. Search for the aircraft and click the hyperlinked aircraft registration number in the multiline. The **Associate Maintenance Programs to Aircraft** page appears. *See Figure 4. 11*
4. Enter the maintenance program to be associated to the aircraft in the **Maintenance Program #** field in the **Maintenance Program Details** multiline.

> *Note that the system allows you to associate multiple aircraft maintenance programs to an aircraft. However, only one among these maintenance programs can be in "Active" status.*

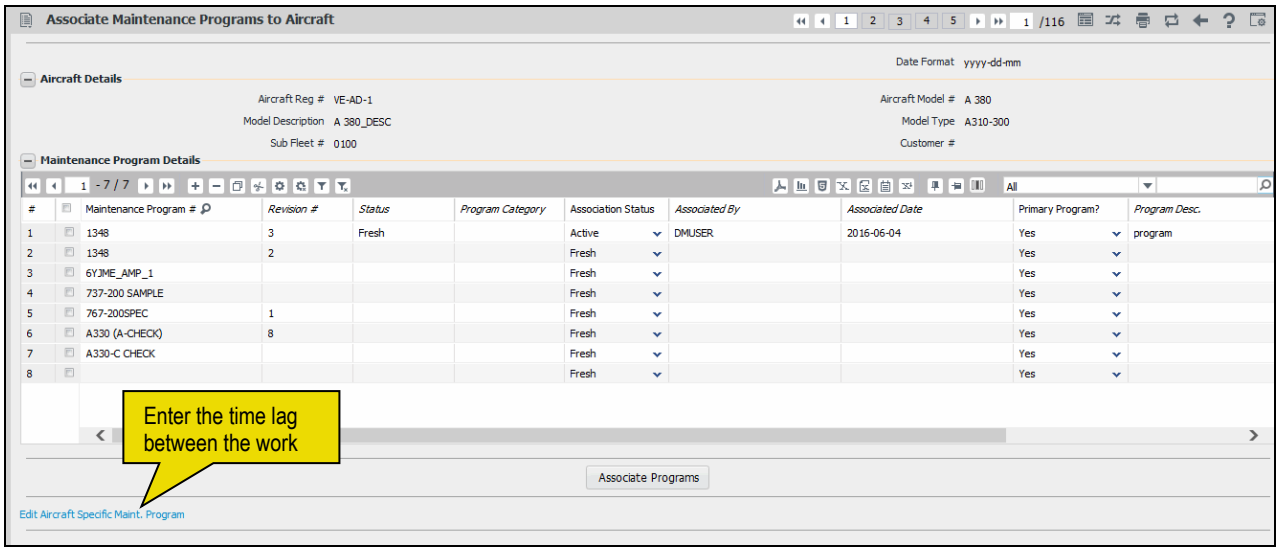


Figure 4.11 Associating multiple programs to an aircraft

5. Specify the association status of the program to the aircraft in the **Association Status field.**
   - Set the field to **Fresh** if you are associating the program to the aircraft for the first time.

- Set the field to **Active** to activate the association of the program to the aircraft.
- Set the field to **Inactive** to inactivate the association of the program to the aircraft.

6. Set the **Primary Program?** field to **Yes** to set the program as the primary program for the aircraft. Otherwise, set the field to **No**.
7. Click the **Associate Programs** pushbutton to associate the maintenance programs to the aircraft.

> *Note: The system associates the aircraft to the maintenance program and copies the work units defined for the program along with its schedules and all the resources defined for carrying out the program.*

To provide further details,

τ Select the **Edit Aircraft Specific Maint. Program** link to edit the program details.

4.3.3 Modifying the maintenance program of an aircraft

1. Select the Edit Aircraft Specific Maint. Program link in the Associate Aircrafts to Maintenance Program page. The **Edit Aircraft Specific Maintenance Program** page appears. *See Figure 4. 12*

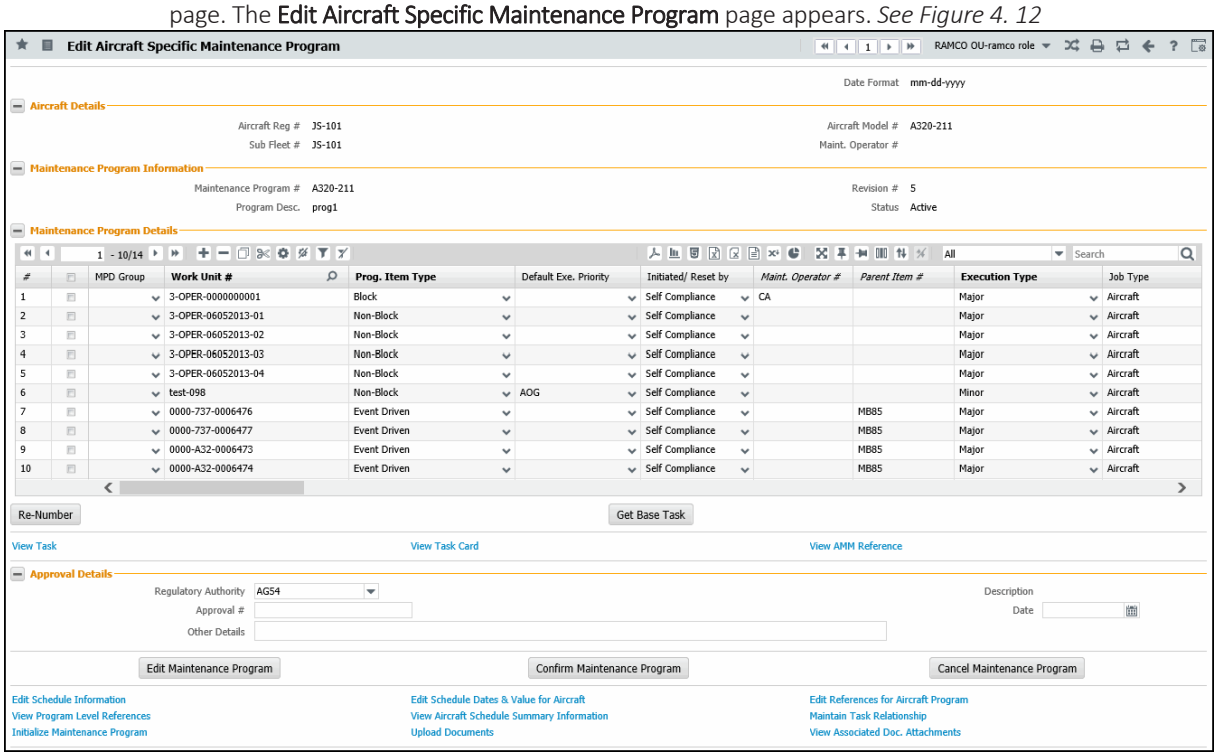


Figure 4.12 Editing aircraft specific maintenance program

2. Select the Maintenance Planning Document (MPD) Group from the **MPD Group** drop-down list box.
3. Enter the task, standard procedure; aircraft work package or component work package to be performed as part of the maintenance program in the **Work Unit #** field.

> *Note: You can include only one instance of a task in an aircraft maintenance program*

4. Select any one of the following valid Program item types from the **Prog. Item Type** drop-down list box:
   - Block - Indicates the task contains a group of tasks to be executed based on a schedule
   - Base - Indicates the task to be executed is associated to a block.

- Perpetual - Indicates the task is to be executed while executing any other tasks on the aircraft.
- As required - Indicates the task will be executed whenever required.
- Event driven - Indicates the task will be executed based on the occurrence/ triggering of an event
- Non-block - Indicates the task to be executed is not associated to a block.
- To be decided - Indicates the classification of the program item type for the task will be decided later.

5. Select the default execution priority from the **Default Exe. Priority** drop-down list box.
6. Select any one of the following options in the **Initiated/Reset by** drop-down list box:
   - Self-Compliance - Indicates the task would be initiated/ reset on compliance of the same task. This implies that the compliance of this task is not dependent on any other task.
   - Related Task Compliance - Indicates the task, on compliance, would initiate/ reset another task available as part of the same program. The task, which has to be initiated on compliance of a task is based on the "Initiate Schedule" relationship defined for that task in the 'Maintain Task Relationship' activity under the "Maintenance Task" business component.
7. Set the **Execution Type** field to **Major** to indicate that the work unit is a major check and must be sent to the hangar for maintenance. Set the **Execution Type** field to **Minor** to indicate that the work unit must be executed as a part of line maintenance.
8. Set the **Job Type** field to **Aircraft** to indicate that the work unit must be performed on the aircraft. Set the **Job Type** field to **On-wing** to indicate that the work unit must be performed on components attached to the aircraft.

   Note: If the job type is "Aircraft" or "On-wing" and if the work unit type is "Aircraft Work Package", then ensure that the work unit number is valid for the specified aircraft model.
9. Specify the type of maintenance job that must be carried out as a part of the work unit in the **Maintenance Type** field. The type of the maintenance can be **Repair**, **Overhaul**, **Inspection** or **Others**.
10. Enter the position code in the aircraft where the work unit must be performed in the **Position Code** field.
11. The number identifying the level at which the position code occurs in the configuration class attached to the primary model in the **Level Code** field.
12. Enter the engineering document as a part of which the work unit was defined along with its revision number in the **Eng Doc #** and the **Revision #** fields.
13. Specify the status of the schedule in the **Schedule Status** field.
    - Set the status of the schedule to **Fresh** when the work unit is first specified for the program.
    - Set the status of the schedule to **Active** if you wish to activate the work unit.

- Set the status of the schedule to **Inactive** if you do not wish to carry out the work unit as a part of the maintenance program.
- Set the status of the schedule to **Terminated**, to terminate the work unit.

14. Set the **Long Term?** field to **Yes** to indicate that the execution of the work unit is for long term. Otherwise, select the **No** option.
15. Specify the schedule execution of the work unit in the **Sch. Exec Rule** field.
    - Set the field to **Earliest** to indicate that when both date based and usage based schedules is defined for the work unit, the system must consider the earliest of the due dates calculated by these schedules.
    - Set the field to **Latest** to indicate that when both date based and usage based schedules is defined for the work unit, the system must consider the latest of the due dates calculated by these schedules.
16. Specify the type of deferment policy for deferring or postponing the work unit when work orders are been generated based on the maintenance program in the **Deferment Policy** field.
    - Set the field to **Not Allowed** if you do not wish to allow deferment of the work unit.
    - Set the field to **Complete Work Unit**, option if you wish to allow the deferment of the work unit along with the tasks and procedures defined for it. For example, If WU1 is a work package and its contents are T1, a task and SP1, a procedure, and if T1 is marked for deferring the whole package WU1 gets deferred.
    - Set the field to **Constituent Unit**, if you wish to allow the deferment of the work unit separately. For example, If WU1 is a work package and its contents are T1, a task and SP1, a procedure, T1 and SP1 can be deferred separately without affecting the parent work package.
17. Select the **Package Type** of the aircraft
18. Select the expense type of the work unit in the **Expense Type** field:
    - Set the field to **Revenue**, if the cost incurred on the work unit is for routine maintenance activity and must be recorded as revenue cost.
    - Set the field to **Capital**, if the cost incurred on the work unit must be recorded as a capital cost.
19. Enter the work center where the work unit must be performed in the **Work Center #** field.
20. The sequence in which the work unit should be performed as part of the maintenance program in the **Seq #** field.
21. Click the **Get Base Task** pushbutton to retrieve the base tasks for the selected block task.

- The system retrieves the tasks in the **Maintenance Program Details** multiline. These tasks would have been mapped to the selected parent Task # with the "Block Schedule'" relationship defined in the "Maintain Task Relationship" activity of the "Maintenance Task" business component.

22. Select the regulatory authority as a reference to the maintenance program in the **Regulatory Authority** field in the **Approval Details** group box.
23. Enter the approval number with reference to which the maintenance program is created in the **Approval #** field.
24. Select the **Edit Maintenance Program** pushbutton to edit the maintenance program pertaining to the aircraft.
25. Click the **Re-Number** pushbutton to rearrange the existing rows in the ascending order of the sequence number.

To confirm the maintenance program,

26. Click the **Confirm Maintenance Program** pushbutton to confirm the maintenance program.

> *Note: The system confirms the maintenance program and sets the status of the program to "Confirm". Further modifications to the program are not allowed. On confirmation, the system changes both the 'Association Status' and the 'Schedule Status', from "Fresh" to "Active".*

To cancel the maintenance program,

27. Click the **Cancel Maintenance Program** pushbutton to cancel the maintenance program.

> *Note: The system cancels the maintenance program and sets the status of the maintenance program to "Cancel".*

To provide further details,

- Select the **Maintain Task Relationship** link at the bottom of the page to maintain relationship between a task and the related tasks.
- Select the **View Aircraft Schedule Summary Information** at the bottom of the page to view aircraft schedule summary information.
- Select the **Edit Schedule Information** link to specify the schedule information for the maintenance program.
- Select the **Edit Schedule Dates & Value for Aircraft** link to edit the scheduled dates and values for the maintenance program.
- Select the **Edit References for Aircraft Program** link to specify reference document details based on which the maintenance program was created.
- Select the **View Program Level References** link to view the reference documents specified for the maintenance program.
- Select the **Upload Documents** link to upload documents associated with the maintenance program of the specific aircraft.

4.3.4 Modifying the schedules for an aircraft specific maintenance program

1. Select the Edit Schedule Information link in the Edit Aircraft Specific Maintenance Program page. The Edit Aircraft Maint. Schedule Information page appears. *See Figure 4. 13*

2. Select the work unit for which schedule information must be specified in the **Work Unit #** field in the **Work Unit Details** group box.
3. Click the **Get Details** pushbutton.
4. Specify whether the work unit must be executed only once or repeated at certain intervals in the **Schedule Type** group box in the **Schedule Details** group box.
    - Set the field to **One Time** if the work unit must be executed only once.
    - Set the field to **Recurring** if the work unit must be repeated at certain defined intervals.
5. Select the mode by which the due dates for executing the work units must be calculated in the **Update Basis** field.
    - Schedule – If the option is selected as "Scheduled", then NSD/NSV (Next Schedule Date/ Next Schedule Value) for executing the work units will be calculated based on a scheduled fixed interval.
    - Actual Completion – If the option is selected as "Actual Completion", then NSD/ NSV will be calculated by adding the Repeat Fixed / Floating Interval value to the date or value at which the work unit is actually executed.
    - Time Window – This option is applicable for the following conditions:
        1. Within the Tolerance limits: If the option is selected as "Time Window", then NSD/NSV will be calculated based on a scheduled fixed interval
        2. Beyond the Tolerance limits: If the option is selected as "Time Window", then NSD/NSV will be calculated by adding the Repeat Fixed / Floating Interval value to the date or value at which the work unit is actually executed.

To define date-based schedules,

6. Specify the time unit for the date-based schedule in the **Time Unit** field in the **Date Based Schedule Details** group box. The time unit can be **Days, Months, Month End** or **Years**.
7. Enter the period from the induction date or the operational date of the aircraft, for which the due dates for the work units must be calculated, in the **Threshold Interval** field.
8. Enter the period at which an alert message must be displayed about an impending due date for performing the work unit in the **Alert Interval** field.
9. Enter the interval after which the work unit must be repeated irrespective of whether its previous execution is completed or not in the **Repeat Fixed Interval** field.
10. Enter the interval after which the work unit must be repeated, from the period of its last execution and completion in the **Repeat Floating Interval** field.

    Note: Ensure that only one of the fields, "Repeat Fixed Interval" or "Repeat Floating Interval", is entered. Data entry in the "Repeat Fixed Interval" or the "Repeat Floating Interval" fields is mandatory, if you are defining date-based schedules and if you have set the "Schedule Type" field to "Recurring".

11. Enter the maximum time period subsequent to the next schedule date, within which the work unit must be performed, in the **Positive Tolerance** field. Enter the maximum time period ahead of the next schedule

date, within which the work unit could be performed, in the **Negative Tolerance** field.

12. Enter the period reaching which the work on the work unit must be terminated in the **Terminating Interval** field.

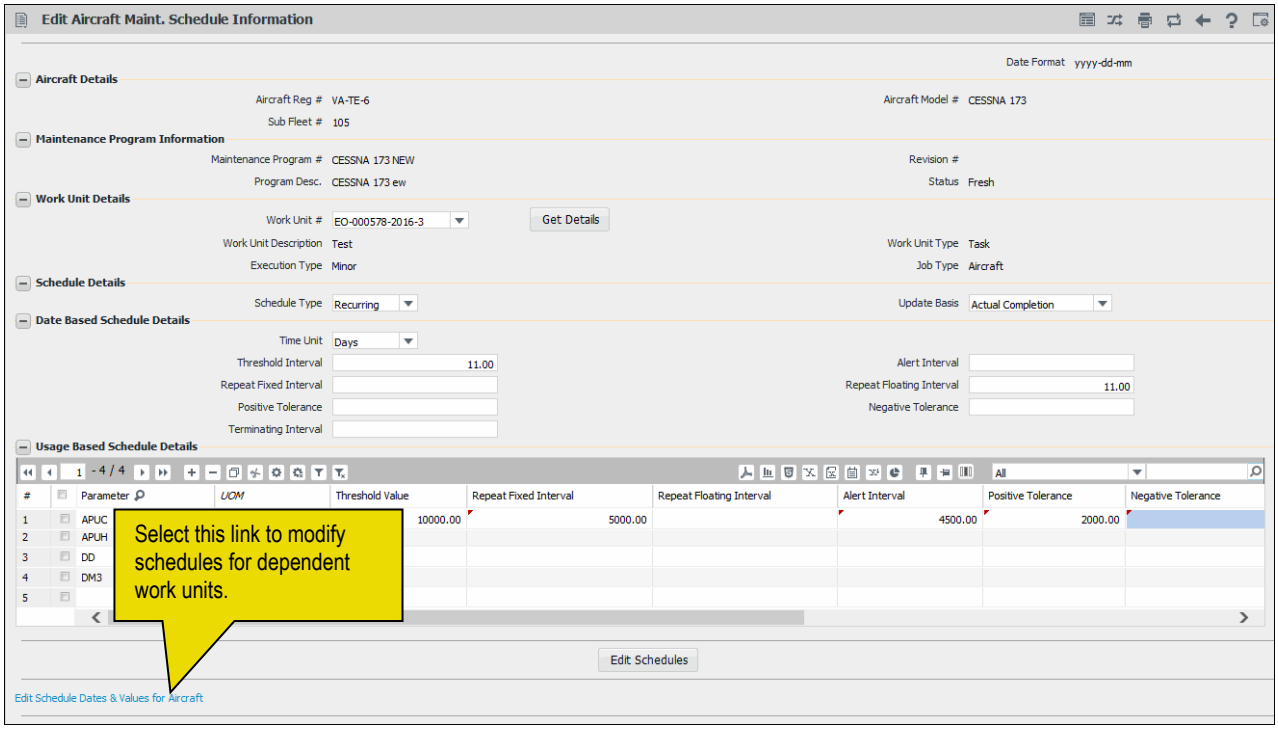


Figure 4.13 Editing aircraft maintenance schedule information

To define usage-based schedules,

13. Enter the parameter based on which the work unit must be performed in the **Parameter** field in the **Usage Based Schedule Details** multiline.
14. Enter the unit of measurement of the parameter in the **UOM** field.
15. Enter the parameter value at which the first execution of the work unit is due in the **Threshold Value** field.
16. Specify the interval after which the work unit must be repeated irrespective of the completion of its last execution in the **Repeat Fixed Interval** field.
17. Specify the interval after which the execution of the work unit must be repeated, from the period when it was last executed in the **Repeat Floating Interval** field.

    Note: Ensure that only one of the fields, "Repeat Fixed Interval" or "Repeat Floating Interval", is entered. Note: Data entry in the "Repeat Fixed Interval" or the "Repeat Floating Interval" field is mandatory if you are defining usage-based schedules and if you have set the "Schedule Type" field to "Recurring".

18. Enter the parameter value at which an alert message would be displayed about an impending work due on the work unit in the **Alert Interval** field.
19. Enter the upper limit of the parameter value greater than the next schedule value, within which the work unit must be performed, in the **Positive Tolerance** field.
20. Enter the lower limit of the parameter value lesser than the next schedule value, within which the work unit could be performed, in the **Negative Tolerance** field.
21. Specify the parameter value, reaching which the work on the work unit must be terminated in the **Terminating Value** field.
22. Click the **Edit Schedules** pushbutton.

Note: The system saves the schedule details against the maintenance program.

To provide further details,

- Select the **Edit Schedule Dates & Values for Aircraft** link to edit the details of the scheduled date or values for the work unit in the program.

4.3.5 Modifying the scheduled dates and the values for the work units in the maintenance program

1. Select the Edit Schedule Dates & Value for Aircraft link in the Edit Aircraft Specific Maintenance Program or the View Aircraft Schedule Summary Information page. The Edit Schedule Date/Value page appears. *See Figure 4. 14*
2. Select the work unit for which the schedule dates and values must be specified in the **Work Unit #** field in the **Work Unit Details** group box.
3. Click the **Get Details** pushbutton.

To modify the date-based schedule details,

4. Enter the period from the induction date or the operational date, for which the due dates for the work units must be calculated, in the **Threshold Date** field in the **Date Based Schedule Details** group box.
5. Enter the date on which the work unit was last performed in the **Last Performed Date** field.
6. Enter the next scheduled date of the work unit in the **Next Scheduled Date** field.
7. Enter the date on which the work unit must be terminated in the **Terminating Date** field.
8. Use the **Change Type** drop-down list box and select the value 'Correction' or 'Re-baseline' to indicate whether NSD can be modified on modification of Threshold or interval.

*Note: The system displays the computation basis controls such as **Next Due Calc. On** indicating computation basis of NSD, **Calc. Ref. Date** (reference date based on which NSD is computed) and **Last Schedule Date.***

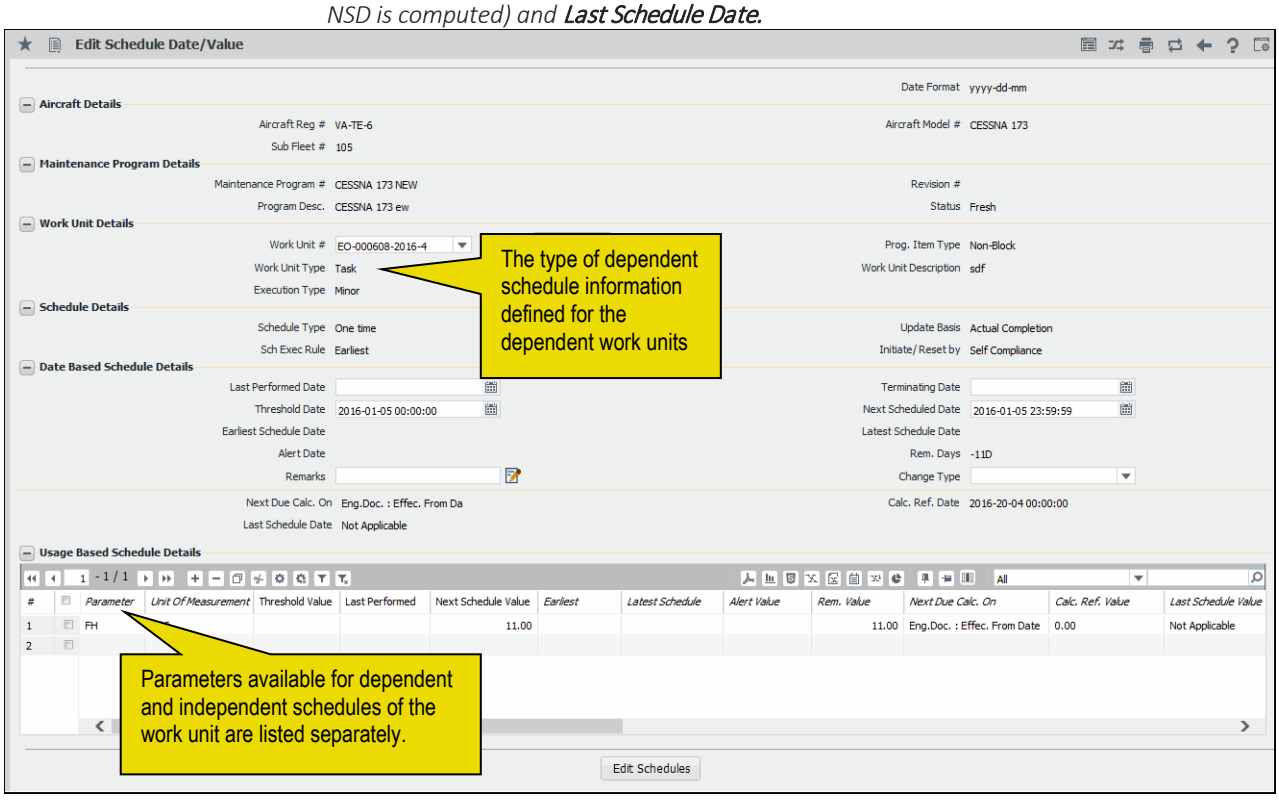


Figure 4.14 Modifying scheduled dates and values for work units in the maintenance program

To modify the usage-based schedule details,

9. Enter the parameter value at which the first execution of the work unit is due in the **Threshold Value** field in the **Usage Based Schedule Details** multiline.
10. Enter the last parameter value at which the work unit must be performed in the **Last Performed Value** field.
11. Enter the parameter value at which the work unit is next due to be executed in the **Next Schedule Value** field.
12. Enter the parameter value, reaching which the work on the work unit must be terminated in the **Terminating Value** field.
13. Use the **Change Type** drop-down list box and select the value 'Correction' or 'Re-baseline' to indicate whether NSV can be modified on modification of Threshold or interval.

    *Note: The system displays **Next Due Calc. On** indicating computation basis of NSV, **Calc. Ref. Value** (reference date based on which NSV is computed) and **Last Schedule Value.***

14. Click the **Edit Schedules** pushbutton.

    Note: The NSD / NSV computation basis controls are updated based on selection of 'Change Type' and values specified by user, on modifying the schedule details.

4.3.6 Inactivating the association of an aircraft to a maintenance program

Inactivate the association through the "Associate Aircrafts to Program" activity

1. Select the Associate Aircrafts to Program link under the Aircraft Maintenance Program business component.
2. The Select Maintenance Program page appears.
3. Enter the program to which aircrafts must be dissociated, and select the **Associate Aircrafts to Maintenance Program** link provided alongside.

Or

4. Search for the program and click the hyperlinked program number in the multiline. The **Associate Aircrafts to Maintenance Program** page appears.
5. The system retrieves the details of the aircraft already associated to the program in the **Aircraft Model Details** multiline.
6. Set the **Association Status** field to "Inactive", to inactivate the association of the aircraft to the program.
7. Click the **Associate Aircraft** pushbutton to inactivate the association of the aircraft.

Inactivate the association through the "Associate Programs to Aircraft" activity

1. Select the Associate Programs to Aircraft link under the Aircraft Maintenance Program business component. The **Select Aircraft** page appears.
2. Enter the aircraft registration number of the aircraft to which programs must be dissociated and select the **Associate Maintenance Programs** link provided alongside.

Or

3. Search for the aircraft and click the hyperlinked aircraft registration number in the multiline. The **Associate Maintenance Programs to Aircraft** page appears. *See Figure 2.24.* The system retrieves the details of the programs already associated to the aircraft in the **Maintenance Program Details** multiline.
4. Set the **Association Status** field to "Inactive", to inactivate the association of the program to the aircraft.
5. Click the **Associate Programs** pushbutton, to inactivate the association of the program to the aircraft.

Providing document references for an aircraft maintenance program

1. Select the **Edit References** for Aircraft Program link in the Edit Aircraft Specific Maintenance Program page. The Edit References for Aircraft Program page appears. *See Figure 4. 15*

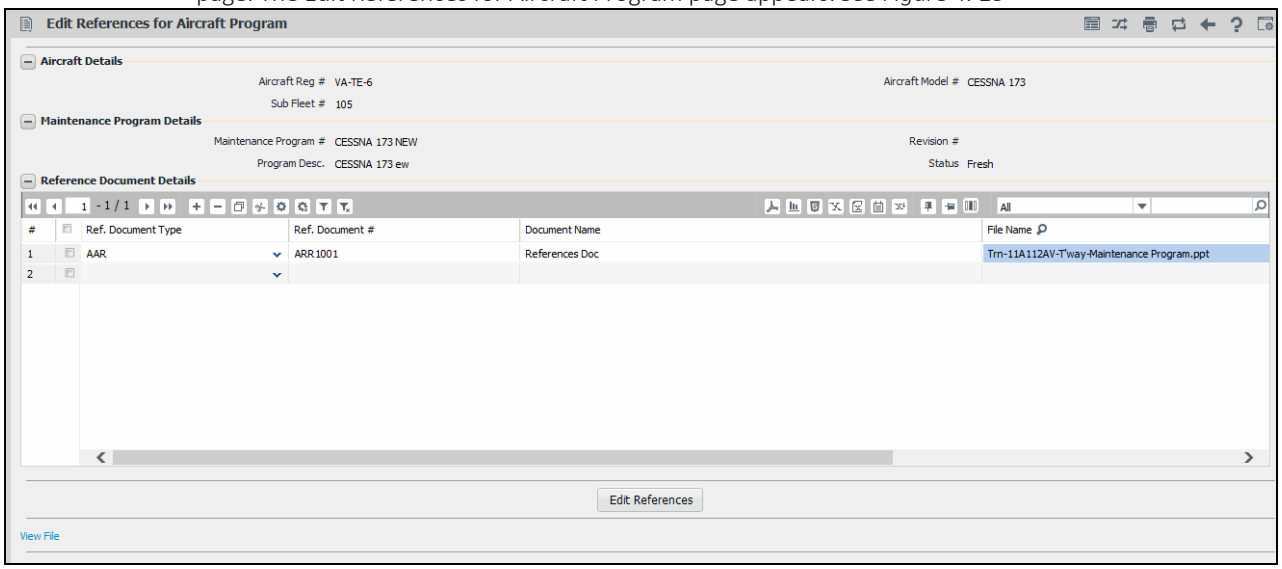


Figure 4.15 Editing the reference details for the aircraft maintenance program

2. Specify the type of the reference document for which the maintenance program is created in the **Ref. Document Type** field in the **Reference Document Details** multiline.
3. Enter the reference document number in the **Ref. Document #** field.
4. Click the **Edit References** pushbutton.

> *Note: The system saves the details of the reference documents against the maintenance program.*

4.4 Activating a maintenance program

1. Select the Activate Aircraft Maint. Program link under the Aircraft Maintenance Program business component. The Activate Maintenance Program page appears. *See Figure 4. 16.*

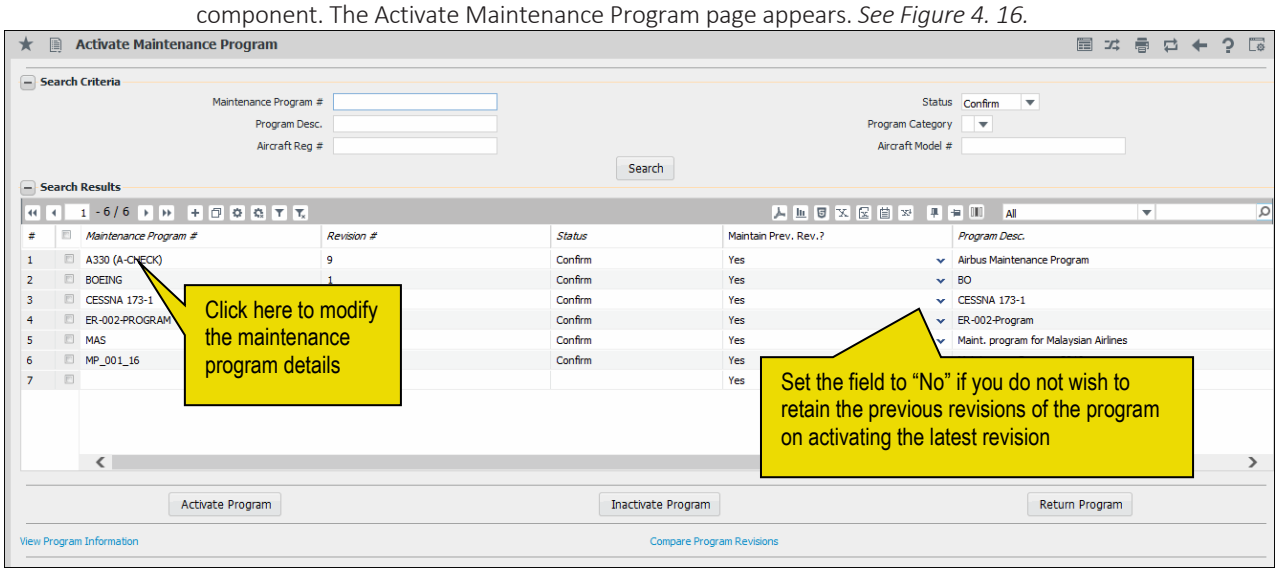


Figure 4.16 Approving the maintenance program

2. Search to retrieve the maintenance programs to be approved, in the multiline.

> *Note: The system retrieves the maintenance programs only for those aircraft for which the record status is not "Frozen".*

3. Set the **Maintain Prev Rev.?** field in the multiline to **Yes** if you wish to maintain all the previous versions of the maintenance program when this version of the program is activated. Otherwise, set the field to **No**.

To activate maintenance programs,

4. Select the programs to be activated and click the **Activate Program** pushbutton to activate the programs.

> *Note: Ensure that the selected programs are not already in the "Active" or "Inactive" status. The system activates the selected programs and sets the status of the programs to "Active". If a previous revision of the program exists in the "Active" status, the system sets the status of the previous revision to "Revised". In addition, if the "Maintain Prev Rev.?" field is set to "Yes" for the selected program, the system maintains all previous revisions of the programs on activating the selected revision.*

To inactivate maintenance programs,

5. Select the programs to be inactivated and click the **Inactivate Program** pushbutton.

> *Note: You cannot inactivate the maintenance program, which is already in "Inactive" or "Confirmed" status.*

The system sets the status of the maintenance program to "Inactive".

To return maintenance programs,

6. Select the programs to be returned and click the **Return** pushbutton.

> *Note: Ensure that the maintenance program is in the "Confirm" status. The system sets the status of the maintenance program to "Return". The returned program can be modified further in the "Edit Aircraft Maint. Program" activity and confirmed for activating it at a later date.*

To compare various revisions of a program,

- τ Select a specific revision of a program and select the **Compare Program Revisions** link to compare the selected revision of the maintenance program with other revisions.

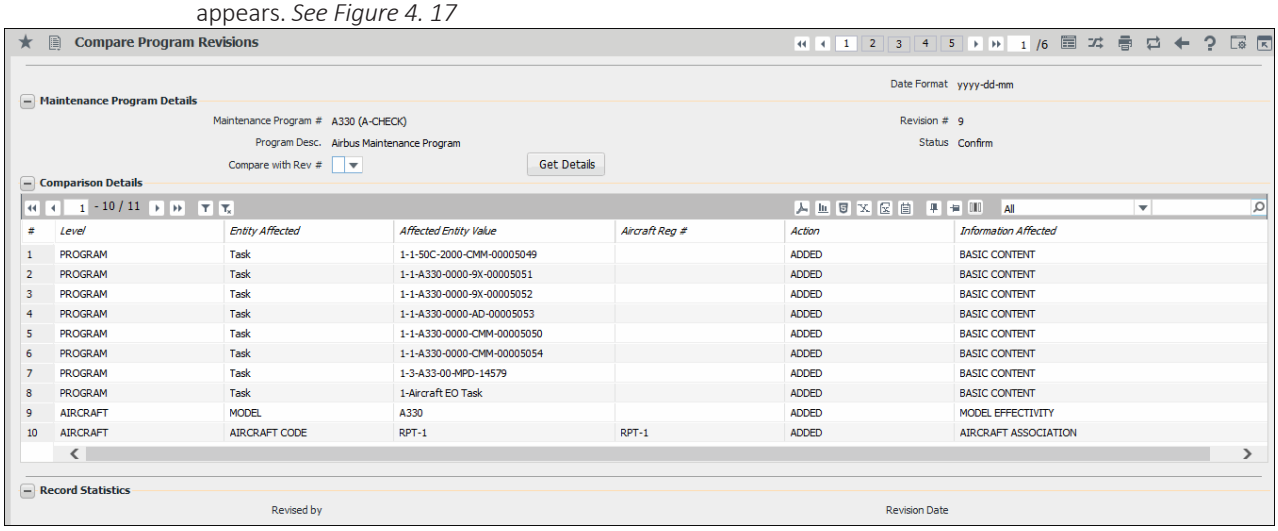
4.4.1 Comparing the revisions of a maintenance program

You can compare the various revisions of a maintenance program. You can select a specific revision of the maintenance program and compare it with the other revisions of the program.

The following comparison details are retrieved:

- The level at which the revision change has taken place, whether it is at the program level or at the aircraft specific program level.
- The entity due to which the revision has taken place. It could be either the changes in the work units or to the aircraft associated to the program.
- The value of the entity that was affected.
- The action due to which the program was revised.
- The type of information that was affected due to the revision.

1. Select the Activate Aircraft Maint. Program link under the Aircraft Maintenance Program business component. The Activate Maintenance Program page appears. *See Figure 4.21.*
2. Use **Search Criteria** to retrieve the maintenance program, that you wish to compare with other versions.
3. Select a specific revision of a program and then click **Compare Program Revisions** link to compare the selected revision of the maintenance program with other revisions. The **Compare Program Versions** page appears. *See Figure 4. 17*



#	Level	Entity Affected	Affected Entity Value	Aircraft Reg #	Action	Information Affected
1	PROGRAM	Task	1-1-50C-2000-CMM-00005049		ADDED	BASIC CONTENT
2	PROGRAM	Task	1-1-A330-0000-9X-00005051		ADDED	BASIC CONTENT
3	PROGRAM	Task	1-1-A330-0000-9X-00005052		ADDED	BASIC CONTENT
4	PROGRAM	Task	1-1-A330-0000-AD-00005053		ADDED	BASIC CONTENT
5	PROGRAM	Task	1-1-A330-0000-CMM-00005050		ADDED	BASIC CONTENT
6	PROGRAM	Task	1-1-A330-0000-CMM-00005054		ADDED	BASIC CONTENT
7	PROGRAM	Task	1-3-A33-00-MPD-14579		ADDED	BASIC CONTENT
8	PROGRAM	Task	1-Aircraft EO Task		ADDED	BASIC CONTENT
9	AIRCRAFT	MODEL	A330		ADDED	MODEL EFFECTIVITY
10	AIRCRAFT	AIRCRAFT CODE	RPT-1	RPT-1	ADDED	AIRCRAFT ASSOCIATION

Figure 4.17 Comparing the revisions of a program

The system displays the specific revision of the maintenance program that must be compared in the **Maintenance Program #** and the **Revision #** fields in the **Maintenance Program Details** group box.

4. Select the specific revision number of the program to which the selected maintenance program revision must be compared, in the **Compare with Rev #** field in the **Maintenance Program Details** group box.
5. Click the **Get Details** pushbutton.

The system retrieves the following details of the revision in the Comparison Details multiline.

Column 1 - Level - The level at which the revisions are compared.

Value displayed	Indicates
Program	Revision details are displayed for the maintenance program
Aircraft	Revisions details are displayed for the maintenance program associated to a specific aircraft

Column 2 - Entity Affected - The type of entity that is affected by the revision.

Value displayed	Indicates
Task / Procedure / Aircraft Work Package / Component Work Package	The type of the work unit in the maintenance program, which has undergone revision
Aircraft	Aircraft effectivity details of the program have been modified

Column 3 - Affected Entity Value - The entity that is affected by the revision.

Value displayed	Indicates
Work unit number	Changes have been made to the work units of the maintenance program
Work unit number along with its schedule ID	Schedules are defined for the work units in the program
Work package number along with the work unit number and its schedule ID	The work unit has been added or deleted from the work package
Aircraft registration number	Associated or dissociated from the program
Aircraft model number	Added or deleted from the model effectivity details of the program

Column 4 - Aircraft Reg # - The registration number of the aircraft, if the revision change is due to the change in the aircraft effectivity.

Column 5 – Action - The action performed, which has resulted in the revision.

Value displayed	Indicates
Added / Activated / Inactivated / Terminated	Actions performed on the work units defined as a part of the program
Added / Deleted / Updated	Actions performed on the dependent work units in the program
Updated	Changes made to the scheduled details of the work units as well as to the dependent scheduled details for the work unit in the program
Added/Deleted	Changes made to the work units that are part of the work packages specified for the program
Added / Activated / Modified	Changes made to the aircraft associated to the program
Added / Deleted	Changes made to the aircraft models associated to the program

Column 6 - Information Affected - The type of information that is affected due to the revision.

Value displayed	Indicates
Basic Content	Changes made to the work units specified for the maintenance program
Dependency Definition	Dependent work units are added, deleted or updated
Schedule Definition	Changes made to the schedules that are defined for the work units
Dep Schedule Definition	Changes made to the dependent schedules
Work Content / Seasonal Variations	Work units in the work packages have undergone change, or when seasonal work units have been defined
Aircraft Association	Aircrafts have been associated or dissociated from the program
Model Effectivity	Changes made to the model effectivity details of the program

4.5 Revising a maintenance program

You can revise an aircraft maintenance program that is in the “Active” or “Inactive” status. You can modify the program and create a new revision in the “Edit Maintenance Program” page. The status of the newly created revision of the program is set to “Fresh”. On confirmation and activation of the newly created revision, the status of the previous revision, which is in the “Active” status, is set to “Revised”.

4.5.1 Revising the program

1. Select the Revise Aircraft Maint. Program link under the Aircraft Maintenance Program business component.

The Select Maintenance Program page appears.

2. Search for the program and click the hyperlinked program number in the multiline. The **Edit Maintenance Program** page appears. *See Figure 4. 18.*

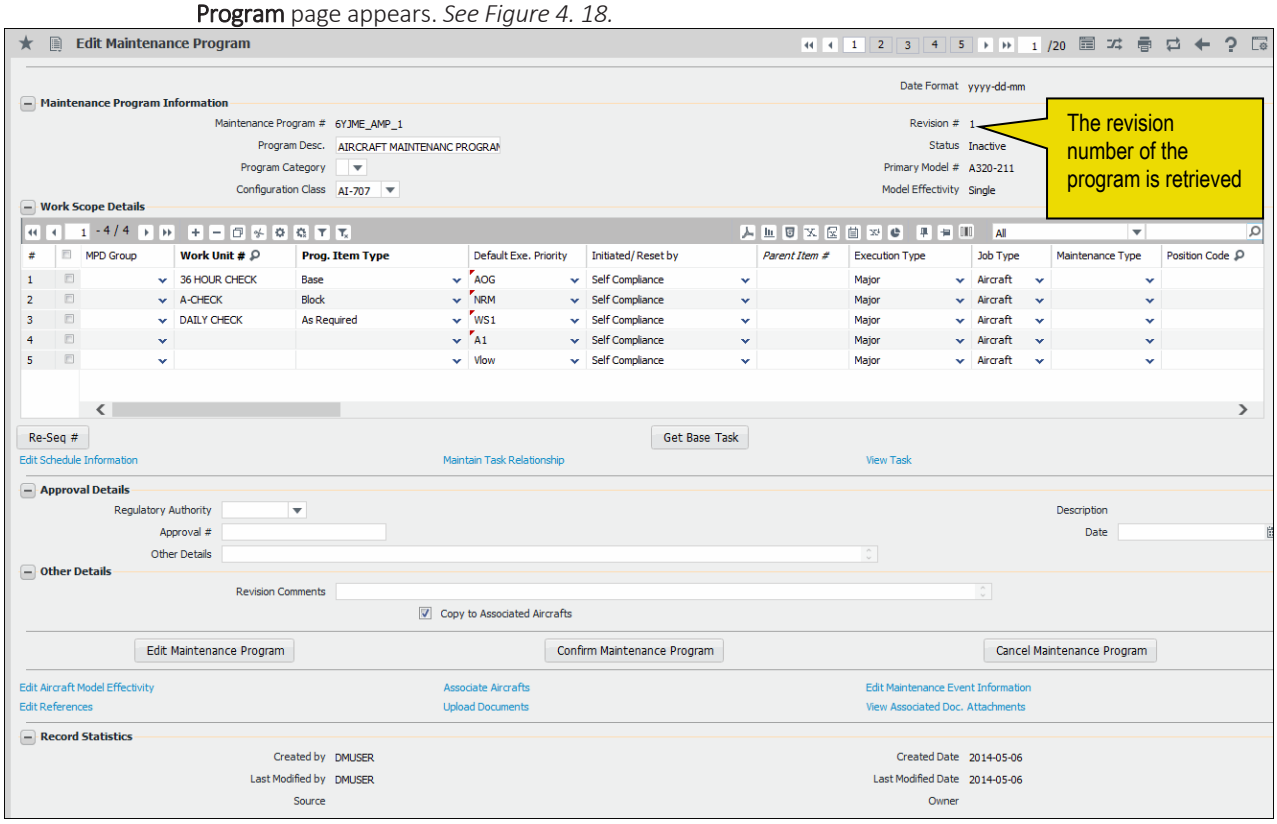


Figure 4.18 Revising maintenance program

You can modify the details of the maintenance program in this page. Refer to the topic “Creating aircraft maintenance program” for more details.

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