

RAMCOAVIATION SOLUTION VERSION 5.8 USER GUIDE AIRCRAFT / SHOP WORK MANAGEMENT

ramco

©2018 Ramco Systems Limited. All rights reserved. All trademarks acknowledged.

This document is published by **Ramco Systems Ltd**. without any warranty. No part of this document may be reproduced or transmitted in any form or by any means, electronic or mechanical, for any purpose without the written permission of **Ramco Systems Limited**.

Improvements and changes to this text necessitated by typographical errors, inaccuracies of current information or improvements to software programs and/or equipment, may be made by Ramco Systems Limited, at any time and without notice. Such changes will, however, be incorporated into new editions of this document. Any hard copies of this document are to be regarded as temporary reference copies only.

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

ABOUT THIS MANUAL

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

WHO SHOULD READ THIS MANUAL

This manual is intended for users who are managing the Aviation industry processes and are new to Ramco Aviation Solution. This manual assumes that the user is familiar with the Aviation Industry nomenclatures and systems based software.

HOW TO USE THIS MANUAL

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

HOW THIS MANUAL IS ORGANIZED

The User Guide is divided into 4 chapters and index. Given below is a brief run-through of what each chapter consists of.

Chapter 1 provides an overview of Aircraft / Shop Work Management business process. The sub processes are explained in the remaining chapters.

Chapter 2 focuses on the Work Monitoring & Control 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.

contents

1	INTR	ODUCTION	4
2	WORI	K MONITORING AND CONTROL	6
2.1		NAGING WORK ASSIGNMENTS AND REPORTING	7
	2.1.1	REVIEWING THE WORK OF THE EMPLOYEE	7
	2.1.2	RECORDING PARAMETER DETAILS AND CONDITIONAL EVALUATION	
	DETAI	LS FOR THE TASK	14
	2.1.3	MANAGING EMPLOYEE WORK	17
2.2	2 REC	ORDING WORK HOLD DETAILS	20
	2.2.1	REVIEWING WORK HOLD DETAILS	20
	2.2.2	RECORDING WORK HOLD DETAILS	20
	2.2.3	RELEASING WORK HOLD	21
2.3	B REC	ORDING WORK ESTIMATES	22
	2.3.1	RECORDING WORK ESTIMATES	22
2.4	REV	IEWING WORK EXECUTION AND REPORTING ACTUALS	30
IND	EX		32

INTRODUCTION

Aviation industry is maintenance intensive and cannot be compromised due to the airworthiness of the aircraft. Most of the maintenance activities that are to be performed on the aircraft are based on the number of hours for which the aircraft flew and the number of airframe cycles that the aircraft has undergone. Apart from the planned maintenance, any discrepancies observed in aircraft also need to be reported and corrective actions taken accordingly so as to maintain the airworthiness of the aircraft.

The Aircraft / Shop Work Management business process comprises the Work Monitoring and Control sub process which enables the shop supervisors to plan work for the mechanics/employees and review the status of the tasks. The supervisors perform all the system activities including timesheet booking for the mechanics. This allows the mechanics to work only on the aircraft and reduce their system activities.

WORK MONITORING AND CONTROL

The Work Monitoring and Control sub process enables the shop supervisors to plan work for the mechanics/employees and review the status of the tasks. The main objective is to make it possible for the mechanics to work only on the aircraft, and reduce their system activities. The supervisors perform all the system activities, including timesheet booking for the mechanics.

The tasks are grouped into a package in the "Aircraft Maintenance Planning" business component. The grouped tasks are retrieved and the start date and end date for the execution of the tasks are assigned by the supervisor.

The **Work Monitoring and Control** business component enables the supervisor to accomplish the following:

- Plan work for the employee.
- Assign work to the employee.
- Perform timesheet booking for the employees.
- Review the work-in progress.
- Report actual work details of the employee.
- Modify the timesheet.

2.1 MANAGING WORK ASSIGNMENTS AND REPORTING

This activity enables the shop supervisors to plan work for the mechanics/employees and review the status of the tasks.

1. Select the Manage Work Assignments and Reporting link under the Work Monitoring and Control business component. The Manage Work Assignments and Reporting page appears. *See figure 2.1.*

a 📖 Manage Work Assigni		1/1					
		ing				Date & Time Format dd/mm/wa	bhimmiss am/om
- Search Criteria					_	Date & Time Pormat du/him/yyy	y mittimittes anypin
- M	aintenance Object	mponent #	Specify th	ne display option		Primary Work Center #	•
	Ref. Doc. Type CV	vo 🔻	to display	the reference		Ref. Doc. # *CW*	
Review Work Manage Employ	ee Work		to uispiay				
Additional Search Criteria			document				
	Display Option All	▼				Date From / To 07/06/2015 12:00:	JU AM III 11/05/2016 12:00:00 AM III
	Search On Comp	onent Change				Status Task Status	▼ Planned ▼
				Search			
0826933	🐴 🔐 1/e						
Task #	Task Desc	% Complete Part #	Serial #	Work Center #		16-Nov-2011	
÷					00 01 02 03 0	4 05 06 07 08 09 10 11 12 13 14 15 16 17	18 19 20 21 22 23 00 01 02 03 (
185-20		0%		185-20			
UVUL-135-15		0%		YUL-135-15		221	
CWO-000001-2011	GI-000021-2011	0% 3214-54:	01347 MSN-001	YUL-135-15		0%	
NST-003050-2015	nst 1	0% 3214-54:	01347 MSN-001	YUL-120-10		0%	
T VUL-160-15		0%		YUL-160-15			
• VUL-165-15		0%		YUL-165-15			
+ VUL-210-01		0%		YUL-210-01			
🛨 🔲 YUL-210-70		0%		YUL-210-70			
+ YUL-500-04		0%		YUL-500-04			
• ORD-230-05		0%		ORD-230-05			
WC-MECH-1		0%		WC-MECH-1			
WC-MECH-3		0%		WC-MECH-3			
YUL-100-00		0%		YUL-100-00			
• VUL-100-01		0%		YUL-100-01			
• VUL-100-02		0%		YUL-100-02			
YUL-100-05		0%		YUL-100-05			
• VUL-105-05		0%		YUL-105-05			· · · · · · · · · · · · · · · · · · ·
•					•		
	_					—	
- Update Plan		Update Work Actual				- Update Worl	(Hold
Task User Status	•	Start Date / Time		En En	d Date / Time	Hold Code	~
Exec. Priority	•	Change Exec. Status to		•	% Complete	Comments	
		File Name 👂		View File Exe	ec. Comments		
	Update Plan			Report W	ork Actuals	Hold	Release
+ Work Reporting						Click this pushbutton to	
Additional Info	Click here to vie	ew the				report the actual work	
	ink pages					details for multiple tasks	
+ Service Requests							
Others							
T VUICIS							

Figure 2.1 Managing work assignments and reporting

- 2. In the **Search Criteria** group box, select the **Maintenance Object** as 'Aircraft Reg #', 'Part # / Serial #' or 'Component #' and enter values in the editable box, corresponding to the option selected.
- 3. Select the "<u>Review Work</u>" tab to review the status of the task in the corresponding package.
- 4. Select the "<u>Manage Employee Work</u>" tab to assign work and perform timesheet booking for the employee.

2.1.1 REVIEWING THE WORK OF THE EMPLOYEE

The tasks which are grouped into a package in the **Aircraft Maintenance Planning** business component are retrieved in this tab and the start date and end date for the execution of the tasks are assigned by the supervisor. The supervisor can perform the following using this tab:

- Plan the work for the employee using the Gantt chart.
- Go to the Manage Employee Work tab and assign the work to the employee and book the hours the employees spent on the task. You can also modify the booked timesheet details, if required.
- Revisit the Review Work tab and review the progress of each task.
- Update the actual work details of the employee for multiple tasks.
- Change the status of the task to "Completed" if the assigned task is completed.
- Hold or release the task.
- 5. Select the **Review Work** tab in the **Manage Work Assignments and Reporting** page. See figure 2.2.



Figure 2.2 Reviewing work of employees

- 6. In the **Additional Search Criteria** group box, select the **Display Option** to display the reference documents and tasks in the Gantt Chart. The system provides the following options:
- "All" Select this option to display all the tasks whose Plan Start Date fall within the From / To date range.
- "Delayed Start" Select this option to display the reference documents and the associated tasks whose Actual Start Date / Time is greater than the Plan Start Date / Time. The details are displayed only at task level.
- "Delayed End" Select this option to display the reference documents and the associated tasks whose Actual Start Date / Time, Actual End Date / Time and server

Date / Time are greater than the Plan End date / Time. The details are displayed only at task level.

Note: The system displays only those reference documents that are in "Planned", "In-Progress" and "Completed" statuses.

- 7. Use the Date drop-down list box to select the date type of the period for which you want to retrieve records. The drop-down list box displays the following: Task Planned Start, Task Planned End, Doc. Planned Start, Doc. Planned End, TAT End, Customer Required and Promised Delivery. Next, enter the start and end dates of the period for which you want to retrieve shop work orders and packages based on the selected date type.
- 1. Select the **Search On** based on which the task details are retrieved and displayed in the corresponding search details multiline. The system lists different sets of values based on the "Maintenance Object" and 'Display Option' selected An editable box is provided alongside in which the values corresponding to the item selected in the drop-down list box are to be entered.
- 2. Select **Doc. Status**, **Task Status** or the **Hold Status** of the task from the **Status** drop-down list box. In the next drop-down list box, select the status of the tasks/documents that you wish to retrieve in Gantt.
- 8. Use the **Search By** drop-down list box to select **Doc Class**, **Doc. Priority** or **Task Exec. Priority** by which you want to retrieve tasks/discrepancies. Enter the value for the selected attribute in the adjacent input box. The tasks/documents with attribute values that you specify here are retrieved in Gantt.
- 9. Use the **Material Availability** drop-down list box to indicate whether you want to retrieve documents or tasks in specific material status. To retrieve documents/tasks in specific material status, select the material status from the next drop-down list box. The drop-down list box displays the following: Not Requested, Not Available, Partially Available and Available.
- 10. Click the **Search** pushbutton.

The system displays a "Gantt Chart" which is divided into two panes.

Left Pane of the Gantt Chart

The aircraft for which the maintenance activities are planned for a specified date range can be retrieved and displayed in the left pane in the Gantt chart. The maintenance supervisors can now plan the work for the mechanics. The following details are displayed in the left pane at different levels: *See figure 2.3.*

- Work Center #
- Aircraft Reg #
- Execution Document #
- ▶ Task #

For each execution document, the system displays various columns such as Task #, Task Description, Seq #, Tracking #, % Completed, Part #, Serial #, Work Center, Exec. Phase, Exec. Status, Hold Status, ATA #, and Est. Status #. *See Figure 2.3.*

Task #	Pesc	% Complete	Part #	Serial #	Work Center #	Exec. Phase	Exec. Status	Hold Status	ATA #	Est.status	Parent Sv	00 01 02
185-20	Tool bar abo	ve the			185-20							
Gantt cha Gantt cha Gantt cha Gantt cha					YUL-135-15							
		076	3214-54:D1347	MSN-001	YUL-135-15		Planned			Not Required		
NST-003050-2015	nst 1	0%	3214-54:D1347	MSN-001	YUL-120-10	Regular	Planned		00-00	Not Required		
• VUL-160-15		0%			YUL-160-15							
		0%			YUL-165-15							
F. TYUL-210-01	_	0%			YUL-210-01							
т ПYUL-210-70		0%			YUL-210-70							
Trul-500-04	of the task displ	avod for			YUL-500-04							
Details the com	n ine iask uispi	ayeu iui			ORD-230-05							
WC-MECH-1					WC-MECH-1							
WC-MECH-3		0%			WC-MECH-3							
🖭 🖾 YUL-100-00		0%			YUL-100-00							
🖭 🖾 YUL-100-01		0%			YUL-100-01							
4											•	F

Figure 2.3 Reviewing work-Task details displayed at left pane of Gantt chart

Right Pane of the Gantt Chart

On clicking each task appearing on the left pane, the Planned Start date and Planned End Date of the corresponding task appear as bar in the right pane. The user can change the Planned Start Date and Planned End Date by shifting the position of the bar across the Gantt Chart. *See figure 2.4.*

0866888	
Task #	16-Nov-2011 17-Nov-2011
	0 01 02 03 04 05 06 07 08 09 10 11 12 13 14 15 16 17 18 19 20 21 22 23 00 10 20 30 4 05 06 07 08 09 10 11 12 13 14 15 16 17 18 19 20 21 22 23 00 40 50 60 7
* 185-20	
TUL-135-15	
	0%
NST-003050-2015	0%
• VUL-160-15	
🖭 🖾 YUL-165-15	
🖭 🔟 YUL-210-01	
🖭 🔲 YUL-210-70	
YUL-500-04	
• ORD-230-05	
WC-MECH-1	
WC-MECH-3	
🖭 🔟 YUL-100-00	
TUL-100-01	
• • • • • • • • • • • • • • • • • • •	۲ ــــــــــــــــــــــــــــــــــــ

Figure 2.4 Reviewing work-Task details displayed at right pane of Gantt chart

After reporting work actuals in the "Manage Employee Work" tab page, the actual work execution details are displayed in the Gantt chart as bars in different colors as shown below:

40	Indicates the percentage of work completed.
	Indicates the total planned duration for completing the task. The percentage of work completed is displayed within this bar as digits.
	Indicates the actual time booked by the employee
	Indicates the document level planned bar.

Note: Ensure that the "Plan Start Date & Time" is not modified for the tasks which are in "In-Progress" status, and both the "Plan Start Date & Time" and "Plan End Date & Time" are not modified for the tasks which are in "Completed" status.

The Bar Chart displays the task details either at the "Primary Work Center Level" or "Execution Work Center level". By default, the details are displayed at the "Primary Work Center Level". You can use the toggle button provided in the tool

ISU



bar above the Gantt chart, to change the display level from "Primary Work Center Level" (PR) "Tool bar displayed above the Gantt Chart

The various icons displayed in the tool bar above the Gantt chart are as shown:

0	Reload Grid, Cancel Changes
8	Print Grid
	'Expand All Rows' - Expands or s the nodes under the work center.
Ð	'Collapse All Rows'
ď	'Zoom In' - Displays the task schedule details day-wise.
×	'Zoom Out' - Displays the task schedule details month-wise and year wise.
à	Zoom to fit page
1	'Print' - Prints the details displayed in the Gantt Chart.
F	'Print Package' - Prints the package document in PDF format.
1	'Selective Print' - Launches the ePublications entry point screen.
PRI	'Primary Work Center Toggle button' - Displays the task details at Primary work center level.
ſv	Legends

- 11. In the **Update Plan** group box, enter the status of the time lag for the task to go to the next stage of execution in the **Task User Status** drop-down list box.
- 12. Use the **Task User Status** drop-down list box to specify the status of the time lag for the task to go to the next stage of execution. The system lists the options as follows:
- o If "Aircraft Reg #" is selected as the "Maintenance Object" in the "Search Criteria" group box, the system lists all the all the active quick codes defined for the quick code type "Task User Status" in the "Flight Log" business component.
- o If "Part # / Serial #" or "Component #" is selected as the "Maintenance Object" in the "Search Criteria" group box, the system lists all the quick codes defined for the user status in shop Work Order
- 13. Use the **Priority** drop-down list box to specify the priority of execution of the task for which you wish to modify status.
- 14. Enter Start Date & Time and End Date & Time as scheduled for the execution of the task.
- 15. Click the Update Plan pushbutton to update the plan details.
- 16. In the **Update Work Actuals** group box, enter the Start Date / Time, and End Date / Time of execution of the task.

Note: The system allows modification of the "Start Date / Time" and "End Date / Time" only for tasks which are in "Planned" status.

17. Use the **Change Exec. Status to** drop-down list box to change the status of the task as "In-Progress", "Completed", "Closed", "Cancelled" or "Pre-Closed".

- 18. Enter the **% Complete** of the task execution, and the **File Name** which contains the task execution.
- 19. Enter any remarks regarding the reason for change in the status of the task in the **Exec. Comments** field.
- 20. Click the Report Work Actuals pushbutton to modify the status of the task.
- 21. In the **Update Work Hold** group box, select the **Hold Code** associated to the 'hold' of the task and specify the **Comments** related to the tasks that are on hold.
- 22. Click the Hold / Release pushbutton to hold or release the task.
- Note: Ensure that your role has been mapped for releasing a hold and "All Roles" is specified as the value for the parameter ""Release Responsibility Roles' in the "Define Process Entities" activity of the "Common Masters" business component.
- "You cannot update the task plan or report the 'Work Actuals', when the task is on hold.

To proceed further,

- ▼ Select the 进 icon to expand the **Work Reporting** group box to view the link pages:
- ▼ Select the **Record Part Consumption** link to record the part consumption details.
- ▼ Select the **Record Work Hold** link to record the details of the tasks that are on hold.
- ▼ Select the **Report Fuel / Oil Log** link to enter the fuel and oil consumption details
- ▼ Select the **Record Parameter Reading / Cond. Eval. Form** link to record the parameter values and conditional evaluation details of the parameters.
- ▼ Select the Report Resource Estimates / Actuals link to update resource actual information.
- ▼ Select the **Record Signoff & Work Completion** link to sign-off the tasks and sub tasks in bulk.
- ▼ Select the **Return Parts** link to return parts to the warehouse after completion of task.
- ▼ Select the Issue Certificate of Maintenance link to issue the certificate of maintenance (CoM) for the Execution Ref #.
- ▼ Select the **Bulk Material Request** link to plan for the material required for executing the task/ package.
- ▼ Select the **Revise Deferral Limits** link to revise the deferral limits set for the discrepancy.
- ▼ Select the **Create Maintenance Return** link to create a maintenance return document
- ▼ Select the Perform Opportunity Maintenance link to perform opportunity maintenance.
- ▼ Select the 进 icon to expand the "Additional Info" group box to view the link pages
- ▼ Select the Edit Discrepancy Additional Information link to modify the discrepancy additional information.
- ▼ Select the Edit Package Additional Information link to modify the additional information of the package.
- ▼ Select the Edit Task Additional Information link at the bottom of the page to modify the additional information of the task.
- ▼ Select the Edit / Authorize Labour Hours link to modify / authorize labour hour details.

- Select the
 icon to expand the Service Requests group box to view the link pages:
- Select the Track Response link to record details of any request raised by an employee and track the response to the requests.
- ▼ Select the Create Eng. Service Requests link to create and confirm an engineering request (ESR).
- ▼ Select the View Engg. Advice Note link to select an engineering advice note (EAN) for viewing.
- ▼ Select the 🖻 icon to expand the "Others" group box to view the link pages:
- ▼ Select the **View Task** link to view the details of the task.
- ▼ Select the View Discrepancy link to view discrepancy information.
- Select the View Task Date & References link to view details of reference documents and date of completion of tasks.
- ▼ Select the View A/C Maint. Exe. Ref. # link to view the A/C maintenance execution reference details.
- ▼ Select the Author Repair Procedure to modify the non-standard task details.
- ▼ Selec the View Comments Information link to view comment information.
- ▼ Select the **Check Part Availability** link to view details of part availability in the warehouse.
- ▼ Select the View Associated Doc. Attachments link to view the associated document attachments.
- ▼ Select the Upload Documents link to upload the documents
- ▼ Select the 🗄 icon to expand the "Reports" group box to view the link pages:
- Select the Manage Tear Down Report to generate a report containing the details of the maintenance activities carried out on a part.
- ▼ Select the **Part Tag Report** link to tag the condition of a part.
- ▼ Select the <u>Record Parameter Reading / Cond. Eval. Form</u> link to record the parameter values and conditional evaluation details of the parameters.
- ▼ Select the Edit / Authorize Labor Hours link to modify and authorize the details of the labor hours recorded against aircraft maintenance execution documents.
- ▼ Select the Author Repair Procedure link to author the repair procedure details for Non standard tasks.
- ▼ Select the Check Part Availability link to check the availability of the parts across warehouses.
- ▼ Select the Create Engg. Service Request link to create an engineering service request.
- ▼ Select the View Engg. Advice Note link to view the engineering advice note.
- ▼ Select the View Comments Information link to view the comments such as assignment Comments, employee comments, execution comments or sign-off comments.
- ▼ Select the View Task Dates & References link to view the task / discrepancy date and reference details.
- ▼ Select the View Discrepancy link to view the discrepancy details.
- Select the View A/C Maint. Exe. Ref. # link to view the A/C maintenance execution reference details.

▼ Select the View Task link to view the task details.

2.1.2 RECORDING PARAMETER DETAILS AND CONDITIONAL EVALUATION DETAILS FOR THE TASK

Engineering Change Management is a very critical and essential part of Aircraft Maintenance. Most of the engineering changes are very complex in nature and often needs lot of evaluation and follow-up. Consequentially, it is vital that the information systems employed, guide other related functions viz., Maintenance Planning & Production control, through various steps they need to take for effective completion of engineering change initiated, thus ensuring seamless information flow for effective decision making.

Some of the maintenance inspections trigger multiple tasks based on set of conditions defined as part of the task card definition and authoring process. During execution of the main task, mechanic performs the inspection and fills up the evaluation form. Based on the evaluation, another set of task has to be triggered. The planner has to manually

review the post compliance follow-up instructions and execution details, to arrive at the next set of action.

The set of post conditional triggers can be captured in this screen. Based on the post-compliance value provided during execution, system can automatically perform the needed post compliance triggering action without manual intervention for analyzing the execution comments and deriving the post compliance action needed.

- 1. Select the **Record Parameter Reading / Cond. Eval. Form** link from any of the following business components:
- Work Monitoring and Control: "Review Work" tab of the "Manage Work Assignments and Reporting" activity.
- Aircraft Maintenance Execution: "Record Aircraft Maintenance Execution Details" activity.
- Shop Work Order:
 - "Record Shop Execution Details" activity.



The Record Parameter Reading / Cond. Eval. Form page appears. See figure 2 5.



Figure 2 5 Recording parameter details and conditional evaluation details

The system displays the Exe. Doc. Type / Ref # and the Work Center # in the Execution Details group box.

Tree Structure

The system displays a tree structure in the left pane. The tree will have the 'Execution Doc. #' as the parent node (level). All the nodes of the tree are displayed in an exploded form. The various nodes displayed in the tree are as follows:

First (Parent) node: Execution Doc. **#:** The package, shop work order or the aircraft maintenance execution document against which the tasks are performed on an aircraft / engine.

Second node: Task # which have parameter requirements defined at task and / or at sub-task levels.

Third node:

- Parameter(s) mapped for the task (Parameters are listed in the same order as defined for the task in the "Edit Parameter Reading / Eval. Form' page of the "Maintenance Task'" business component).
- Sub Task Description which has parameter requirements. This is displayed in an order as per the Sub Task Seq #.

Fourth Node: Parameter mapped at each of the sub task level (Parameters are listed in the same order as defined for the task in the "Edit Parameter Reading / Eval. Form" page of the "Maintenance Task" business component).

For the parameter with and without conditional evaluation requirements, the nodes are represented with different symbols as shown below:

Indicates that the parameter has evaluation details defined for the task or sub tasks in the "Maintenance Task" business component.

 \mathcal{R} - Indicates that the parameter does not have evaluation details defined for the task or sub tasks in the "Maintenance Task" business component.

Parameter Node with and without Value / Eval. Response:

When the parameter information is displayed in the tree interface, if the 'Value/ Eval. Response' is already defined for that parameter, the saved 'Value / Eval. Response' value is displayed along with the parameter, concatenated by "::", in



'Bold Blue' font. If the 'Value/ Eval. Response' is not defined for the parameter, the parameter node is displayed in 'Bold Red' font.

Example:

If the 'Exec. Doc #' is HVY-003482-2010, 'Task #' is 53A0051-HFEC, 'Sub Task Desc.' is "Inspection of Crack Length" and 'Parameter' is "Length". The tree structure is displayed as follows:

Without Value / Eval. Response:

```
HVY-003482-2010
```

```
53A0051-HFEC
```

Inspection of Crack Length

Length

With Value / Eval. Response:

HVY-003482-2010

```
53A0051-HFEC
```

```
Inspection of Crack Length
```

Length :: 5mm

Parameter reading / conditional evaluation details:

- 2. On clicking the "Task #" and "Sub Task #" nodes in the tree interface, the system displays the details in the Parameter Reading / Evaluation Form" group box and in the "Conditional Maintenance Evaluation" multiline, in the right pane.
- 3. The system displays the following fields in the Parameter Reading / Evaluation Form group box:
- ▶ Task #
- Task Desc.
- Sub Task Desc.
- Sub Task Seq #
- ► Aircraft Reg #
- Part # / Serial #
- Parameter

- Parameter Desc.
- > Permitted Values defined for the 'Task # Sub Task Seq # Parameter' combination
- Current Value of the parameter
- ➤ "Mandatory?" which Indicates whether the Value / Eval. Response recording is mandatory or not for the parameter.
- Update Mode of the parameter
- 4. Enter the Value / Eval. Response value indicating the actual value / response observed against the parameter as part of the compliance of the task.
- 5. Enter the execution remarks in the Exe. Remarks field.
- 6. Enter the date and time at which the parameter details are updated in the **"Update Date & Time"** field.
- 7. Enter the employee code of the login user who updated the parameter details in the **Updated by** field.
- 8. In the Conditional Maintenance Evaluation multiline, the system displays the Processed?, Trigger Value, Trigger Value (Min), Trigger Value (Max), Follow-up Action, Follow-up Task #, Records Follow-up Instructions and Evaluation Remarks.
- 9. Click the **Update Parameter Reading / Eval. Form** pushbutton to update the parameter reading details and conditional evaluation details for the task.

2.1.3 MANAGING EMPLOYEE WORK

The supervisors can assign work to the employee, book the timesheet and report the actual work details. As a supervisor, you can carry out the following:

- ▼ Search for the reference document specific to the aircraft registration number. The system displays the tasks that are mapped to the document.
- ▼ Map the employee for each combination of reference document and the task number.
- ▼ Enter the assignment details such as start date / time, end date / time, assignment comments, employee comments, etc.
- ▼ Select the **Update Mode** as "Assignment" and click the **Update Details** pushbutton.
- Book the timesheet for the employee and modify the timesheet details.
- ▼ Select the **Display Option** and **Update Mode** as "Work Actuals" and click the **Update Details** pushbutton to update the actual work details of the employee at task level.
 - 3. Select the Manage Employee Work tab in the Manage Work Assignments and Reporting page. See figure 2.6.

ramco

*	🗎 Manag	je Work Assignme	nts	and Reporting									?	
	Search Criteri	ia ————							Date & Time Forma	at mm-dd-yyyy		hh:mm:ss am/pm		
R	eview Work	Main Manage Employee	tenar Re Worl	nce Object Aircra f. Doc. Type	ft Reg #	gn			Primary Work Center Ref. Doc.	#	•			
-	-Additional S	earch Criteria	D	Display Option	work to the employee		T		Employee #					
			Ad	Search On dl. Search On	v		•		Task Status Date From / To	05-13-2016 12:00:	▼ ■ MA 00		Ë	
	-Default Deta	ails					Search							
		Default Assi	As From	n Date & Time 07-1	2-2016 🗰 04:23:03 PM				Worked Hours To Date & Time			i		
-	-Search Resu	10 / 142 +	-	0 % ¢ ¢ T	Ts				≝ x, c	All		•	Q	
#	🗉 Work	Exec. Type		Employee Name	Task Description	Timesheet	Timesheet U	pdate Mode	Exec. Doc. # 🔎	Seq #	Task # 🖇	þ	5	k
1	🗉 Aircra	aft	*	Zegenballeeer,	Bird Hit - Task 2	Not Required	CLOCK		LP-000001-2016		8 ME/BIRD	HIT-2		1
2	🗏 Aircra	aft	•	Zegenballeeer,	Bird Hit - Task 2		CLOCK		LP-000001-2016		8 ME/BIRD	HIT-2		
3	🗉 Aircra	aft	*	S, DOMINIC	Net-1	Authorized	MANUAL		LP-000020-2016		1 NST-003	702-2016		
4	🗉 Aircra	aft	*	S, DOMINIC	Descrepancy to check default		CLOCK		LP-000036-2016		5 1152016	-1/1		
5	🖹 Aircra	aft	*	S, DOMINIC	Dp		CLOCK		LP-000036-2016		9 LP-00003	36-2016/4		
	– Update Det	ails Update Mode		•	Select this pushbu work assignment d employee time she details	tton to up letails and eet bookin	date I [g	Update Assignments	/ Time Booking		Authoriz	ze Booking		

Figure 2.6 Managing employee work

- 4. In the Additional Search Criteria group box, select the Display Option as "New Updates", "Assigned Records", "Work Actuals" or "New Assignments", for displaying the work assignment details in the multiline. If "New Assignments" is selected here, a secondary drop-down box is displayed alongside, which lists one of the values "Task #", Skill", "Zone #", "Work Area #" and "ATA #", based on the value of the process parameter 'Default Assignment by' set for 'All Packages' in the "Define Process Entities" activity of the "Common Master" business component.
- 5. Enter **Employee #**.
- 6. Select the **Search On** based on which the task details are retrieved and displayed in the corresponding search details multiline. The system lists different sets of values based on the "Maintenance Object" and 'Display Option' selected An editable box is provided alongside in which the values corresponding to the item selected in the drop-down list box are to be entered.
- 7. Select the **Task Status** as "Planned", "In-Progress", "Incomplete", "Deferred" "Completed", "Pre-Closed", "Closed" or "Planned & In-Progress".
- 8. Specify the **Task Category** and the **Exec. Phase** of the task. The Execution Phase may be "Post Flight", "Preparatory" or "Regular".
- 9. In the Default Details group box, enter the Assigned Hours, Worked Hours, From Date & Time, and To Date & Time and Default Assignment Comments and click the Search pushbutton.
- 10. In the Search Results multiline, select the Work Exec. Type as Aircraft or Shop and enter the Exec. Doc. #, Seq #, Task # and Employee #.
- 11. Enter the From Date, From Time, To Date and To Time indicating the work assignment date and time or actual start / end date and time, based on the Update Mode selected.
- 12. Enter the Assigned Hours, Worked Hours, Repair Classification, Attendance Type, I-Direct Category, Assignment Comments and Employee Comments.

Note: You must enter the Assignment Comments either in the multiline or in the Default Details group box.

- 13. Enter the current date and time in the **Updated Date Time** field.
- 14. Enter the name of the supervisor who authorized the time sheet bookings in the **Updated By** field and the remarks in the **Update Remarks** field.
- 15. Select the Update Mode as "Assignment" or "Work Actuals", in the Update Details group box.
- 16. Select the Update Assignments pushbutton to update work assignment details for the employee.
- Note: You cannot update assignment details for the 'Work Exec. Type' set as "Shop".
 - 17. Click the **Update Assignments / Time Booking** pushbutton to update work assignment details and employee time sheet booking details.
- Note: This button is not visible, if the Display Option is selected as "New Assignments" in the Additional Search Criteria.
- If the "Update Mode" is "Assignment" and if the Execution Status of any one of the tasks selected in the multiline is "Draft", "Duplicated", "Routed for Repair", "Closed" or "Pre Closed" status, the system does not allow you to update assignments.
 - 18. Click the Authorize Booking pushbutton to authorize the timesheet booking details for an employee.

2.2 RECORDING WORK HOLD DETAILS

This activity allows you to put documents and tasks on hold for a particular duration. Tasks can be put on hold due to various business reasons, such as non-availability of a part or non-availability of a resource. Only those tasks that are in "Fresh", "Planned" "In-Progress" and "Completed" statuses can be put on hold. You can capture the hold details at task level or at document level. You can also release the documents and tasks which are 'held'.

You cannot perform any action on the tasks that are on hold. For e.g. you cannot change the status, update task plan, record timesheet or create a material request for these tasks.

1. Select the **Record Work Hold** link in the **Review Work** tab of the **Manage Work Assignments and Reporting** activity. The **Record Work Hold** page appears. *See figure 2.7.*

							그다 틈 다	←? 🗔
					Da	te & Time Format mm-dd-yyyy	hh:mm:ss a	im/pm
 Search Criteria 								
Exec. Doc. # A/C Maint. Exe. P	Ref.# 🔻	Customer Order #			Maint. Object	•		
Task # /		Customer # /			Exec. Status	•	•	
Description		Name Responsible	-	-	Pending	-		
Hold Code		Function	·	•	Release by	- tat	1000	
Search On	Ŧ	Addl. Search On	•	v	From / To			
			Sear	ch				
Review Work Hold Record	Work Hold Release Work Hold							
44 4 <u>1</u> - 10 / 105 > >>	T Tx			<u>▶</u> <u></u> U	XKEC	III III AII	•	Q
44 1 -10 / 105 >>> # Customer Order #	T Tx Exe. Order Type	Exec. Order #	Seq #	Task #	Task De	scription	Hold Code	Hold C
•• • 1 - 10 / 105 ▶ ▶ # Customer Order # 1	Exe. Order Type A/C Maint. Exe. Ref.#	<i>Exec. Order #</i> VP-001705-2016	<i>Seq #</i>	Task # 3-OPER-000000004	X. 🗹 🗐 🔮 <i>Task De</i> Aircraft	scription task for print task card	Hold Code AWC investigation	Hold C AWC i
++ 1 -10 / 105 > >>> # Customer Order # 1<	Exe. Order Type A/C Maint. Exe. Ref.# A/C Maint. Exe. Ref.#	Exec. Order # VP-001705-2016 VP-000893-2015	<i>Seq #</i> 5	Task # 3-OPER-000000004 NST-003374-2016	X 🗹 🗐 🔮 <i>Task De</i> Aircraft ok	scription task for print task card	Hold Code AWC investigation Other Reason	Hold C AWC i hold fo
••• 1 - 10 / 105 >>> # Customer Order # 1 1 2 3 3	T T_c Exe. Order Type A/C Maint. Exe. Ref.# A/C Maint. Exe. Ref.# A/C Maint. Exe. Ref.#	Exec. Order # VP-001705-2016 VP-000893-2015 VP-000893-2015	<i>Seq #</i> 5 1	Task # 3-OPER-000000004 NST-003374-2016	X 😰 🗎 C Task De Aircraft ok	F	Hold Code AWC investigation Other Reason Other Reason	Hold C AWC i hold fc
••• 1 -10 / 105 ▶ # Customer Order # 1 2	Y F.e. Order Type A/C Maint. Eve. Ref.# A/C Maint. Eve. Ref.# A/C Maint. Eve. Ref.# A/C Maint. Eve. Ref.# A/C Maint. Eve. Ref.# A/C Maint. Eve. Ref.#	Exec. Order # VP-001705-2016 VP-000893-2015 VP-000893-2015 VP-000754-2015	Seg # 5 1	Task # Image: Control of the second sec	X Z De Carlor Contractor Contract		Hold Code AWC investigation Other Reason Other Reason Tech Issue - Engg	Hold C AWC i hold fo a
••• • 1 -10 / 105 • •• # Customer Order # 1<	Y Exe. Order Type A/C Maint. Exe. Ref.#	Exec. Order ≠ VP-001705-2016 VP-000893-2015 VP-000893-2015 VP-000754-2015 VP-000754-2015	Seg # 5 1	Task # 3-OPER-000000004 NST-003374-2016 3-OPER-000000008	X Z De Caracter Construction Co	scription task for print task card	Hold Code AWC investigation Other Reason Other Reason Tech Issue - Engg Tech Issue - Engg	Hold C AWC i hold fo a a
••• • 1 -10 / 105 • ••• # Custamer Order # 1 1 2	Y Y. Exe. Order Type A/C Maint. Exe. Ref.# A/C Maint. Exe. Ref.# A/C Maint. Exe. Ref.# A/C Maint. Exe. Ref.# A/C Maint. Exe. Ref.# A/C Maint. Exe. Ref.# A/C Maint. Exe. Ref.#	Exec. Order # VP-001705-2016 VP-000893-2015 VP-000893-2015 VP-000754-2015 VP-000754-2015	Seg # 5 1	Jask # 3-0PER-000000004 NST-003374-2016 3-0PER-000000008 NST-003106-2015	X Z De Caracter Contracter Contra	scription task for print task card	Hold Code AWC investigation Other Reason Other Reason Tech Issue - Engg Tech Issue - Engg Tech Issue - Engg	Hold C AWC i hold fc a a Tech I
••••••••••••••••••••••••••••••••••••	Y Y Exe. Order Type A/C Maint. Exe. Ref.# A/C Maint. Exe. Ref.# A/C Maint. Exe. Ref.#	Exec. Order # VP-001705-2016 VP-000893-2015 VP-000893-2015 VP-000754-2015 VP-000754-2015 VP-000754-2015	<i>Seq #</i> 5 1 1	Task = 3-OPER-000000004 NST-003374-2016 3-OPER-0000000008 NST-003106-2015	X 😒 🖬 🤤 <i>Task De</i> Aircraft ok Aircraft Repair	scription task for print task card	Hold Code AVIC investigation Other Reason Other Reason Tech Issue - Engg Tech Issue - Engg Tech Issue - Engg Tech Issue - Engg	Hold C AWC i hold fc hold fc a a Tech I Tech I
••••••••••••••••••••••••••••••••••••	Y Y Exe. Order Type A/C Maint. Exe. Ref.# A/C Maint. Exe. Ref.# A/C Maint. Exe. Ref.#	Exec. Order # VP-001705-2016 VP-000893-2015 VP-000754-2015 VP-000754-2015 VP-000754-2015 VP-000754-2015 VP-000754-2015	Seg # 5 1 1 1 4	Task # 3-OPER-000000004 NST-003374-2016 3-OPER-000000008 NST-003106-2015 3-OPER-000000008	X 🗹 🗎 🖉	ask for print task card	Hold Code AWC investigation Other Reason Other Reason Tech Issue - Engg Tech Issue - Engg Tech Issue - Engg AWC investigation	Hold C AWC i hold fc a a Tech I Tech I AWC i
••• • 1 -10 / 105 • •• # Customer Order # 1 2 - - 3 - - 4 - - 5 - - 6 - - 7 - - 8 - - 9 - -	Y F. Exe. Order Type A/C Maint. Exe. Ref.# A/C Maint. Exe. Ref.# A/C Maint. Exe. Ref.#	Exec. Order # VP-001705-2016 VP-000893-2015 VP-000754-2015 VP-000754-2015 VP-000754-2015 VP-000754-2015 VP-000754-2015 VP-000754-2015 VP-000754-2015 VP-000754-2015	Seq # 5 1 1 4 4	Task # 3-OPER-000000004 NST-003374-2016 3-OPER-0000000008 NST-003106-2015 3-OPER-0000000008	X 🗹 🖻 🥵 Task De Aircraft ok Aircraft Repair Aircraft	ascription scription task for print task card task for print task card	Auld Code AWC investigation Other Reason Other Reason Tech Issue - Engg Tech Issue - Engg Tech Issue - Engg AWC investigation Tech Issue - Engg	Hold C AWC i hold fc a a Tech I Tech I AWC i Tech I

Figure 2.7 Reviewing work hold details

- 2. In the Search Criteria,
- 3. Enter the **Exec. Doc.** # and the other search criteria details and click the **Search** pushbutton to retrieve the search details in the multiline.
- 4. Select the <u>Review Work Hold</u> tab page to view all the tasks and associated customer orders and shop work orders put on work hold and released.
- 5. Select the <u>Record Work Hold</u> tab page to record work hold details.
- 6. Select the <u>Release Work Hold</u> tab page to release work hold put previously.

2.2.1 REVIEWING WORK HOLD DETAILS

In this section you can view details of work order, customer order and the associated tasks put on hold as well as those that are released.

2.2.2 RECORDING WORK HOLD DETAILS

In this tab page, you can record the hold details for a document or a task /shop work order and can also retrieve hold details that are previously defined. You can record hold details such as hold code associated to the hold, duration of hold, permitted delay duration. Only those tasks that are in Fresh, Planned and In-Progress, Completed statuses can be put on hold. *See figure 2.8.*

21 | Aircraft / Shop Work Management



Revie	ew W	ork Hold Record Work Hold	Release Work Hold						
44		1 - 10 / 494 🕨 🕨 🕂 🗖 🗇	* 0 0 T T.					All	۹ 🗸 🔻
#		Exe. Order Type	Exec. Order #	Seq #	Task # 🔎	Task Description	Customer Order #	Hold Code	Hold Comments
1		Shop Work Order#	CWO-008963-2016	1	N5T-003544-2016	test	CO-007983-2016	Missing documents 🔹 🗸	On Hold as Estimation
2		Shop Work Order#	CWO-008979-2016	1	NST-003540-2016	test	CO-007982-2016	Missing documents 🔹 🗸	On Hold as Estimation
3		Shop Work Order#	r CWO-008962-2016	1	NST-003539-2016	test	CO-007982-2016	Missing documents 🔹 🗸	On Hold as Estimation
4		Shop Work Order#	CWO-008793-2015	2	3-00-32	for WMC change and package relea	CO-007796-2015	PE-INTERNAL 🗸	holding
5		Shop Work Order#	r CWO-008793-2015	2	3-00-32	for WMC change and package relea	CO-007796-2015	Tech Issue - Engg 🔹 🗸	sfsaf
6		Shop Work Order#	CWO-008793-2015	1	3-00-31	for WMC change and package release	CO-007796-2015	Tech Issue - Engg 🔹 🗸	holding
7		Shop Work Order#	r CWO-008793-2015	1	3-00-31	for WMC change and package release	CO-007796-2015	Tech Issue - Engg 🔹 🗸	holding
8		Shop Work Order#	CWO-008793-2015	1	3-00-31	for WMC change and package release	CO-007796-2015	PE-INTERNAL 🗸	olding
9		Shop Work Order#	 CWO-008772-2015 	4	NST-003290-2015	test2	CO-007756-2015	Missing documents 🔹 🗸	
10		Shop Work Order#	CWO-008772-2015	2	1-B767-2520-SC-	SHOP CHECK	CO-007756-2015	Missing documents 🔹 🗸	
		4							

Figure 2.8 Recording work hold details

- 7. Use the **Exe. Order Type** drop-down list box to select the execution document for which you wish to record work hold details.
- 8. Use the drop-down list box to select the **Hold Code** and enter any additional comments relating to the hold in the **Hold Comments** field.
- 9. Enter the Initiated By for the person responsible for initialing work hold.
- 10. Enter Released By for the person responsible for releasing the work hold
- 11. Click the **Record Work Hold** pushbutton to record the hold details for the task. You can also release the held task.

2.2.3 RELEASING WORK HOLD

This page enables you to view the tasks on hold, which can be released. The system displays **Exe. Order Type**, **Exec. Order #**, **Task #**, **Hold Code**, **Hold Level**, **Hold Category**, **Released By** and other details in this tab. *See figure 2 9*.

Revi	ew W	/ork Hold Record Work Hold Rele	ase Work Hold						
-	•	1 - 10 / 360 🕨 🗰 🕂 🗖	* 0 0 T T.				🗎 🍽 🗰 💷 🛋 🖬	v	Q
+		Exe. Order Type	Exec. Order #	Seq #	Task #	Task Description	Customer Order #	Hold Code	Hold Comments
1		Shop Work Order#	CWO-008979-2016	1	NST-003540-2016	test	CO-007982-2016	Missing documents	On Hold as Estimation
2		Shop Work Order#	CWO-008962-2016	1	NST-003539-2016	test	CO-007982-2016	Missing documents	On Hold as Estimation
з		Shop Work Order#	CWO-008793-2015	1	3-00-31	for WMC change and package release	CO-007796-2015	Tech Issue - Engg	holding
4		Shop Work Order#	CWO-008772-2015	5	NST-003291-2015	test3	CO-007756-2015	Other Reason	On Hold as Estimation
5		Shop Work Order#	CWO-000592-2012	1	1-Trent5-0000-CMM-	PME-1	CO-001011-2012	PE-INTERNAL	On Hold as Estimation
6		Shop Work Order#	CWO-000592-2012	1	3-TRE-00-CMM-00085	OPS-3	CO-001011-2012	PE-INTERNAL	On Hold as Estimation
7		Shop Work Order#	CWO-000592-2012	2	3-TRE-00-CMM-00086	OPS-4	CO-001011-2012	PE-INTERNAL	On Hold as Estimation
8		Shop Work Order#	CWO-000592-2012	2	3-TRE-00-CMM-00084	OPS-2	CO-001011-2012	PE-INTERNAL	On Hold as Estimation
9		Shop Work Order#	CWO-000592-2012	2	2-TRENT5-0000-CMM-	INT-2	CO-001011-2012	PE-INTERNAL	On Hold as Estimation
10		Shop Work Order#	CWO-000466-2012	1	1-Trent5-0000-CMM-	PME-1	CO-000837-2012	PE-INTERNAL	On Hold as Estimation
		•							
					Release Work	Hold			

Figure 2.9 Releasing work hold details

12. Click the Release Work Hold pushbutton to release hold on tasks.

2.3 RECORDING WORK ESTIMATES

This activity provides an overview of the estimation status of all the execution documents e.g. shop work orders and AME documents. You can retrieve the packages and parent / and child work orders for which estimates are available. Both external work orders and internal work orders can be retrieved in this page. Internal work orders are those that are basically created for MRO use, whereas external work orders are customer based. For the execution documents retrieved, you can view the estimation status at task level and confirm the estimates.

You can also retrieve the actual parts and resources utilized for the execution of the task. You can estimate the number of parts and/or resources required by the mechanic for completing each task. After the estimation is complete, you can confirm the part and resource estimates. On confirming the estimation, if the work order has a customer order reference, a quotation service will be triggered.

You can also estimate the charges for the tasks in the work order.

This activity allows you to accomplish the following:

- Retrieve AME documents and SWO documents for which estimates are available and for which estimates are to be done.
- View the estimation status of the execution documents.
- View estimation status at task level.
- Retrieve actual parts / resources utilized for task execution.
- Estimate parts / resources required for executing tasks.
- Confirm part / resource estimates.
- Estimate charges for the tasks within the work order.

2.3.1 RECORDING WORK ESTIMATES

- 1. Select the **Record Work Estimates** activity under the **Work Monitoring and Control** business component. The **Record Work Estimates** page appears.
- 2. Enter the Search Criteria to retrieve the work orders in the multiline.

Note: You can specify the customer number and the customer name if you wish to retrieve external work orders.

- 3. In the **Display Option** field, select one of the following radio buttons:
 - **Top Assly. Work Orders** Select this radio button, if you wish to display only the parent work orders.
 - All Work Orders Select this radio button, if you wish to display both the parent work orders and the child work orders.
- 4. Click the **Search** pushbutton to retrieve the **Search Results** in the multiline.
- 5. Click the hyperlinked execution document number in the multiline. The **Edit Work Estimates** page appears. *See figure 2.10.*



★ 🗎 Edit Work Estimates			44 4 1	2 3 4 5 + ++ 3 /9	92 74 🖽 🖶 🛱 🗲	? 🖪 🖪
- Work Order List	Reference Document Details					
CWO-000007-2011::YUL-130-05::GI-000037-2011::Pending Estimates			CWO-000007-2011	Job Type	Component	
	Order Description	GI-000037-2011		Primary Work Center #	YUL-130-05	
	 Main Core Details 					
Ν	Mfr. Part #	766219		Mfr. #	99167	
	Serial #	test-end-cmc-03-01		Part Description	INTEGRATED DRIVE GENERATOR	
	Component #	C69		Event #	CO-000010-2011	
	Customer Order Details					
	Customer Order #	CO-000010-2011		Order Description	GI-000037-2011	
	Customer #	433376		Promised Delivery Date		
Work Order list tree	Quote #/Rev #	CO-000010-2011/0		Quote Ind.	Quoted	
structuro						
Siluciule						
Order Execution & Warranty Task Summary Details Par	t Requirements Resource Requirements	Charge Details				
Order Execution Details						
Repair Process Code Test/Bench Check 💌	Repair Classifica	tion				
B Warranty Info.						
Warranty Requested No	Warranty No	otes				
Under Warranty ? Not Evaluated	Warranty Inst	t.#	•			
	Save					

Figure 2.10 Recording work estimates

Work Order List Tree

The system displays the "Work Order List" tree in the left pane, which displays the execution document selected in the "Record Work Estimates" page, and its child work orders. The Package # / parent shop work order is displayed as the first level node. The child work orders are displayed as sub-nodes under the following folders:

- **Pending Estimates**: All the child work orders whose estimation status is "Pending Estimates", are displayed under this folder.
- **Pending Confirmation**: All the child work orders whose estimation status is "Pending Confirmation", are displayed under this folder.
- **Pending Re-estimates**: All the child work orders whose estimation status is "Pending Re-estimates", are displayed under this folder.
- **Confirmed Estimates**: All the child work orders whose estimation status is "Confirmed Estimates", are displayed under this folder.
- **Released Estimates**: All the child work orders whose estimation status is "Released Estimates", are displayed under this folder.
- Not Applicable: All the child work orders whose estimation status is "Not Applicable", are displayed under this folder.

The tree structure is as follows:

AME # / Parent SWO # :: Work Center :: Order Description :: Estimation Status

- Pending Estimates
 - Child SWO # :: Work Center # :: SWO Desc. :: Order Status
 - Pending Confirmation
 - Child SWO #:: Work Center # :: SWO Desc. :: Order Status
 - Pending Re- Estimates

- Child SWO #:: Work Center # :: SWO Desc. :: Order Status

- Confirmed Estimates

- Child SWO # :: Work Center # :: SWO Desc. :: Order Status

- Estimates Released

- Child SWO #:: Work Center # :: SWO Desc. :: Order Status

- Not Required
 - Child SWO #:: Work Center # :: SWO Desc. :: Order Status

In the right pane, the system displays Reference Document Details, Main Core Details, Order Execution Details and Customer Order Details for the work order selected in the tree.

To proceed,

- Select the <u>Order Execution and Warranty</u> tab to estimate the warranty Information details of the part within the work order.
- Select the <u>Task Summary Details</u> tab to confirm the estimates of the tasks in the work order.
- Select the <u>Part Requirements</u> tab to estimate part requirements for the execution of tasks within the work order.
- Select the <u>Resource Requirements</u> tab to estimate resource requirements for the execution of tasks within the work order.
- Select the <u>Charge Details</u> tab to estimate the charges of the task within the work order.

Order Execution and Warranty Details

This tab provides an overview of the warranty Information details of the part within the work order. You can also save the part Warranty Information.

The Order Execution and Warranty tab appears by default in the Edit Work Estimates main page. See figure 2.11.



Figure 2. 111 Edit work estimates - Order Execution and Warranty

In the Order Execution Details group box,

6. Select Repair Process Code drop-down list to specify the repair process code of the part.

In the Warranty Info. group box,

- 7. Click the hyperlinked field which could be "Yes", "No" or "Not Applicable" in order to view the warranty instance of the part.
- 8. Select the Warranty Inst. # which is applicable only for the warranty offered by the MRO.
- 9. Click the **Save** pushbutton to record the Order Execution and the warranty information details of the part.

Task summary details

This tab provides an overview of the estimation details of the task within the work order. You can also confirm the part / resource estimates. *See figure 2.11*.

- atails Part Requirements Resource Requirements Charge Details Order Execution & Warranty Task Su nary D Work Scope Items Octailed Items - Task Summary Details Task summary ≪ < 1 -5/5 → → + □ © © T T, Q details tab # Task # Task Descript Est. Read. for Parts Est ted? 1 3-00026808 300 TST-ARVL Planned Pending Confirmation Skills / Tools & Equipments Yes Materials / Skills / Tools & Pending Estimates 3-00026807 500 DISASSEM Plannec No 3 3-00026809 800 ASSEMBLE Planned Pending Estimates Materials / Skills / Tools & No 3-00026811 1,200 TST-FINL Planned Pending Confirm / Skills / Tools & No 1,700 DEC-SERV 3-00026810 Planned Pending Estimates / Skills / Tools & 5 Enter the estimation No remarks < > - Task Details Order Details Click this pushbutton to Est. Remarks Change confirm part and resource estimates Confirm Estimates Update Requi View Part File ed Doc. Attac inty Evalua
- 10. Select the Task Summary Details tab in the Edit Work Estimates main page. See figure 2.12.

Figure 2.12 Edit work estimates - Task summary details

- 11. Select one of the following radio buttons above the multiline:
- ➤ Work Scope Items Select this radio button to display all the tasks that have WBS code for which the process parameter 'Workscoping Element' is set as "Yes" in the "Set Process Parameters" page of the "Common Master" business component.
- **Detailed Items** Select this radio button to display all the tasks that have WBS code for which the process parameter 'Execution Operations?' is set as "Yes".

In the Task Summary Details multiline, the system displays the following estimation details:

- Est. Reqd. for which indicates whether estimation is required for parts, resources or specific part. The system displays the following values:
 - Mtl. Est Indicates that estimation is required for the parts.
 - Res. And Mtl. Est Indicates that estimation is required for both parts and resources.
 - Specific Part Indicates that estimation is required for a specific part.
- **Parts Estimated?** which indicates whether part estimates are available for the task.
- **Resource Estimated?** which indicates whether resource estimates are available for the task.



- Est. Reqd.? indicating whether part / resource estimation is required for external work orders.
- Parent task details, Root task details.
- 12. Select 'Yes' or 'No' in the **Warranty Reco.?** drop-down list to specify whether warranty is recommended for the part.
 - If Warranty Resolution for the work order is set as "Accepted", 'Warranty Reco.?' must be selected as "Yes" for the tasks.
 - If Warranty Resolution for the work order is set as "Rejected", 'Warranty Reco.?' must be selected as "No" for the tasks.
 - If Warranty Resolution for the work order is set as "Partial", 'Warranty Reco.?' must be selected as "Yes" for at least one task in the multiline.
- 13. Enter the **Estimation Remarks** for the part / resource.
- 14. In the **Task Details** group box, use the **Change Status to** drop-down list box to change the status of the task. You can select the value "Not Required" only if the Estimation Status of the task is "Pending Estimates" or "Pending Confirmation".
- 15. In the Order Details group box, enter the Est. Remarks.
- 16. Check the **Update Requirements** box to update the part and resource requirement details in the execution side.
- 17. Select the **Confirm Estimates** pushbutton to confirm the part and resource estimates.

Note: Only tasks with Estimation Status as "Pending Confirmation", can be confirmed.

- On clicking this pushbutton, the system triggers Quotation service, if the work order has a customer order reference.
- Generates material request for a part, only when the following conditions are satisfied:
 - The status of the task is "Planned' or "In-Progress".
 - 'Need Frequency' of the part is "Always".
 - Part # for which the MR is generated, must be always 'Effective' to the main core component defined in the "Aircraft" business component.
 - MR is generated for the newly added part and for the part retrieved for which the 'Est. Qty' is modified in the "Part Requirements" tab page.
 - The process parameter 'Prevent Material Request?' for the Entity Type "Hold Code" is not set as "Yes" in the "Set Process Parameters" page of the "Common Master" business component.

To proceed,

▼ Select the View Associated Doc. Attachments link to view the associated document attachments.

Estimating part requirements

In this page, you can retrieve all the tasks within the work order and the estimate the part requirements.

18. Select the Part Requirements tab in the Edit Work Estimates main page. See figure 2.133.

27 | Aircraft / Shop Work Management



Dis	nlav Fi	Iters											
013	piayii	Task # /	Description				Part	# / Mfr. Part #					
			Search by		T	•		Part Description					
							Search						
							J				Currency CAD		
Par	t Requ	irements											
4	1	-4/4 🗩 🗰	+ - 0	¥ 0 0 1	T _x				x e #	H III	All	T	Q
*	П	ask # 🔎	#	Task Descripti	on	Exec. State	us Es	timation Status	Es	t. Baseline #		Estimation Remarks	
	Ξ 3	-TRE-00-CMM-00495	1	OPS-1		Fresh	No	t Estimated					
	Ξ 3	-TRE-00-CMM-00497	1	OPS-3		Fresh	No	t Estimated					
	Ξ 3	-TRE-00-CMM-00498	2	OPS-4		Fresh	No	t Estimated					
ł	E 3	-TRE-00-CMM-00496	2	OPS-2		Fresh	No	t Estimated					
;													
					ick this pushbu tual parts utiliz	itton to retrieve ed for the task	the						
		<		1									>
				·									
		Gel	t work Actu	lais				Estimate Parts					

Figure 2.13 Estimating part requirements

- 19. Enter the search criteria in the **Display Filters** group box and click the **Search** pushbutton to retrieve the details of part requirements estimated for execution of task within the work order.
- 20. In the Part Requirements multiline, enter the sequence # of the task and the Task #.
- 21. Enter the Part # / Mfr. Part # Mfr. # and UOM for the part.
- 22. Enter the **Est. Qty.** indicating the estimated quantity of parts required to complete the task within the work order.
- 23. Click the **Get Work Actuals** pushbutton to retrieve the execution related details i.e. actual parts utilized for the execution of the task.
- 24. Click the Estimate Parts pushbutton to estimate the part requirements.

Estimating resource requirements

In this tab, you can retrieve the actual resources utilized for the execution of the task, and estimate the resource requirements.

25. Select the Resource Requirements tab in the Edit Work Estimates main page. See figure 2.14.

28 | Aircraft / Shop Work Management



Orde	r Exec	cution & Warranty	Task Sun	nmary Details	Part Requirements	Resource Requirements	Charge Deta	ls					
Di	play	Filters											
		Task # /	Description				F	esource #		r			
			Search by		•	v							
							Search						
Re	sourc	æ Requirements											
1	1	1 -4/4 🕨 🕨	+ - 0	* 0 C T	Tx				🗎 X4 C	# # 10 Al		•	Q
		Task # 🔎	#	Task Descripti	n	Exec. Status	Estimation St.	itus	Est. Basei	ine #	Estimation Remarks		
		3-TRE-00-CMM-00495	1	OPS-1		Fresh	Not Estimated						
		3-TRE-00-CMM-00497	1	OPS-3		Fresh	Not Estimated						
		3-TRE-00-CMM-00498	2	OPS-4		Fresh	Not Estimated						
		3-TRE-00-CMM-00496	2	OPS-2		Fresh	Not Estimated						
		<			Click this p actual reso utilized for	ushbutton to retri purce requirement the execution of t	eve the s he task						>
		Gel	t Work Act	uals			E	timate Resources					

Figure 2.14 Estimating resource requirements

- 26. Enter the search criteria in the **Display Filters** group box and click the **Search** pushbutton to retrieve the details of resource requirements estimated for execution of task within the work order.
- 27. In the Resource Requirements multiline, enter the sequence # of the task and the Task #.
- 28. Select the Resource Type as 'Skills', 'Tools', 'Equipment' or 'Others', and enter the Resource #.
- 29. Enter the **Est. Nos** indicating the estimated number of resources required to complete the task within the work order.
- 30. Enter the estimated elapsed time required for the resource to complete the task, in the **Est. Time** field.
- 31. Click the **Get Work Actuals** pushbutton to retrieve the execution related details i.e. actual resources utilized for the execution of the task.
- 32. Click the Estimate Resources pushbutton to estimate the resource requirements.

Estimating charges

This tab allows you to estimate the charge details for the tasks within the work order. You can specify the charge code and the variant number of the charge code. Variants indicate the individual characteristics of charge codes, which may vary as per geographies, suppliers, etc.

33.	Select the Charge	Details tab in the	e Edit Work Estimates	main page. Se	e fiaure 2.145.

Order Execution & Warranty Task S	Summary Details Part Requirements	Resource Requirements	Charge Details					
Display Filters								
Task # / Description		Search by	V V					
			Search					
Charge Details								
	0 % 0 0 T T.		A III ■ ■ ■ ■ ■ ■ ■ ■ ■ ■ ■ ■ ■ ■ ■ ■ ■					
# 🖹 Task # 👂 #	Task Description	Exec. Status	Estimation Status Est. Baseline # Estimation Remarks					
1 🗉 3-TRE-00-CMM-00495	1 OPS-1		Not Estimated					
2 🗉 3-TRE-00-CMM-00497	1 OPS-3		Not Estimated					
3 🖾 3-TRE-00-CMM-00498	2 OPS-4		Not Estimated					
4 🛛 3-TRE-00-CMM-00496	2 OPS-2		Not Estimated					
5								
			Click this pushbutten to					
estimate the charges for the								
			nart / recourse estimates					
			part / resource estimates					
<			>					
		Estima	e Charge Details					

Figure 2.15 Estimating charges

34. Enter the search criteria in the **Display Filters** group box and click the **Search** pushbutton to retrieve the charge details in the multiline.



- 35. In the Charge Details multiline, enter the sequence # of the task and the Task #.
- 36. Enter the **Charge Code** identifying the charge levied for the task execution. The charge code entered must be in 'Active' status with TCD Type "Charge" and TCD Basis "Flat", as defined in the **Tax**, **Charges & Discount (TCD)** business component.
- 37. Enter the Variant # which is the identification number of the variant of the charge.
- Note: Variants indicate the individual characteristics of charge codes, which may vary as per geographies, suppliers, etc. For example, you can define TCD code as 'Excise duty' and variants as 'Excise duty of USA' or 'Excise duty of Europe'. You can define multiple variants for a TCD code. The variant details can be defined for each organization unit.
 - 38. Enter the TCD Amount, TCD Currency, and Estimation Remarks.
 - 39. Click the **Estimate Charge Details** pushbutton to estimate the charges for the part / resource estimates.

2.4 REVIEWING WORK EXECUTION AND REPORTING ACTUALS

This activity acts as a single interface to upload information relating to the maintenance / service of the aircraft into the system in cases where online recording of such information is not viable. For example the maintenance-related jobs that are carried out in remote locations. Subsequent to which the tasks are released for execution as well as status of the tasks are updated.

The panel in the right of the screen displays links that directs the commercial personnel to the next possible action in sequence as per the document status.



Note: The system on launch of the page defaults either the Customer Order, Work Order or AME tab pages based on the access rights for the user.



Note: If you launch this screen from the Manage Customer Order or Approve / Close Customer Order page, the system defaults the Customer Order tab in this page.

1. Select the **Review Work Execution and Report Actuals** activity in the **Work Monitoring and Control** business component. The **Review Work Execution and Report Actuals** page appears. *See figure 2.15.*

* 🔋 Review Work Execution and Report Actuals						
Customer Order Work Order AME Select Ref. Document	- Links Work Planning					
Ref. Doc. # P Customer Order # / Location						
Select Exe. Doc. # Plan / Actual Date						
Select Tasks	1					
Search by Repair Classification 🗸 🖌 Addl. Search All Tasks 🗸 Date	Work Execution					
WS Level O Detail Level Search Panel with links to carr out the next possible action in sequence as	y					
1 C Act End Der the document stat	US. Reporting					
	Work Completion					
	the competion					
4 F						
Release Update Task Skatus	Work Review					

Figure 2.16 Reviewing work execution and report actuals

- 2. In the Select Ref. Document group box:
- 3. Enter the number identifying the reference document, which could be CO / WO / AME in Ref.Doc. #.
- 4. In the Select Exe. Document group box:
- 5. Use the **Exec. Doc. #** drop-down list box to select the code identifying the reference document relating to task execution and the other search criteria details.
- 6. In the Select Tasks group box:
- 7. Use the **Search By** and or **Addl**. **Search** drop-down list box to select the basis on which you wish to retrieve details in the multiline.
- 8. Provide the period effectivity of the task in the **Date** field within which you wish to retrieve details in the multiline.

- 9. Select the **WS Level** radio button to retrieve and display all the tasks for which Workscoping property is set as 'Yes' for their WBS Code and root task if there are multiple workscoping tasks with a hierarchy defined.
- 10. Select the **Detail Level** radio button to retrieve and display all the tasks (including the non-routines / non-standard tasks) for which Execution Operations is set as 'Yes' for their WBS Code and click the **Search** pushbutton to retrieve the search details in the multiline.
- 11. In the Tasks Details group box:
- 12. Provide the start and end date and time of execution of the selected tasks in the Act. St. Date/Time and Act. End Date/Time column respectively.
- 13. Select the execution-related action to be performed on the task from the **Exec. Action** drop-down list box.
- 14. Enter the percentage of work completed in the **% complete** column.
- 15. Select the Release pushbutton to release the work order for execution and select the **Update Task Status** pushbutton to update task details.

Index

Α

Aircraft Reg #, 7, 17 Assigned Hours, 19 Assigned Records, 18 Assignment, 19 Assignment Comments, 19 Author Repair Procedure, 13 Authorize Booking, 19

В

Bulk Material Request, 12

С

Change Status, 11 Charge Code, 29 Check Part Availability, 13 Conditional Maintenance Evaluation, 17 Create Eng. Service Requests, 13 Create Engg. Service Request, 13 Create Maintenance Return, 12 Current Value, 17 Customer Order Details, 24

D

Default Assignment Comments, 18 Delayed End, 9 Delayed Start, 9 Detailed Items, 25 Display Option, 8, 18

Ε

Edit / Authorize Labour Hours, 13 Edit Discrepancy Additional Information, 12 **Edit Package Additional Information**, 12 **Edit Task Additional Information**, 12 Employee #, 18 Employee Comments, 19 employee work: managing, 17 End Date / Time, 11 Est. Nos, 28 Est. Qty, 27 Est. Reqd. for, 25 Est. Regd.?, 25 Est. Time, 28 Estimating: charges, 28; part requirements, 26; resource requirements, 27 Estimation Remarks, 26, 29 Evaluation Remarks, 17 Exe. Doc. Type / Ref #, 15 Exe. Priority, 11 Exec. Phase, 18 Execution Details, 15 Execution Document #, 9

F

Follow-up Action, 17 Follow-up Task #, 17 From Date & Time, 18 namo

G

Gantt Chart, 8

Η

Hold Code, 12 Hold Status, 9

I

Issue Certificate of Maintenance, 12

L

Level: WS, 31

Μ

Main Core Details, 24 Manage Employee Work, 8 **Manage Tear Down Report**, 13 Managing: employee work, 17; work assignment and reporting, 7 **Mandatory?**, 17 Mfr. #, 27 Mfr. Part #, 27

Ν

New Updates, 18

0

Order Execution Details, 24

Ρ

Parameter, 17 Parameter Desc., 17 parameter details and conditional evaluation details: recording, 14 Part #, 27 Part #, 27 Part # / Serial #, 17 Part Tag Report, 13 Parts Estimated?, 25 Perform Opportunity Maintenance, 12 Permitted Values, 17 Processed?, 17

R

Record Parameter Reading / Cond. Eval. Form, 12 **Record Part Consumption**, 12

Record Signoff & Work Completion, 12 Record Work Hold, 12

Recording: parameter details and conditional evaluation details, 14; Work estimates, 22; work hold details, 20 Records Follow-up Instructions, 17 Ref. Doc. #., 7 Ref. Doc. Details, 20, 30 Ref. Doc. Type / Doc. #, 20, 30 Reference Document Details, 24 Releasing: work hold, 21 Report Fuel / Oil Log, 12 Report Resource Estimates / Actuals, 12 **Report Work Actuals**, 12 reporting actuals, 30 Resource Estimated?, 25 Resource Type, 28 Return Parts, 12 Review Work, 8 Reviewing: employee work, 8; work execution, 30; work hold details, 20 **Revise Deferral Limits**, 12

S

Seq #, 18 Service Requests, 13 Start Date / Time, 11 Sub Task Desc., 17 Sub Task Seq #, 17

Т

Task #, 10, 16, 18 Task Category, 18 Task Desc., 17 Task Status, 18; update, 31 Task summary details, 24 TCD Amount, 29 TCD Currency, 29 To Date & Time, 18 Top Assly. Work Orders, 22 Track Response, 13 Trigger Value, 17 Trigger Value (Max), 17 Trigger Value (Min), 17

U

UOM, 27 Update: task status, 31 Update Date & Time, 17 Update Mode, 17, 19 Update Plan, 11 Updated by, 17

V

Value / Eval. Response, 17 Variant #, 29 View A/C Maint. Exe. Ref. #, 13 View Comments Information, 13 View Discrepancy, 13 View Engg. Advice Note, 13 View Task, 13 View Task Date & References, 13

W

Work Actuals, 18, 19 work assignments and reporting: managing, 7 Work Center #, 9, 15 work execution: reviewing, 30 work hold details: recording, 20, 30 Work Monitoring and Control, 6 Work Order List Tree, 23 Work Reporting, 12 Work Scope Items, 25 Worked Hours, 19 WS: Level, 31

ramco

Corporate Office and R&D Center

Ramco Systems Limited, 64, Sardar Patel Road, Taramani, Chennai – 600 113, India Office + 91 44 2235 4510 / 3090 4000 Fax +91 44 2235 2884 Website - www.ramco.com