

RAMCO AVIATION SOLUTION

ENHANCEMENT NOTIFICATION

Version 5.8.9

Maintenance

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Contents

WHAT'S NEW IN CONFIGURATION MANAGEMENT? 9

Ability to specify 'Position Type' upon Part Movement between positions in a physical configuration 9

Background 9

Change Details 9

Ability to inherit the sequence of the newly inserted position(s) from Model/Part to their corresponding Aircrafts/Components 11

Background 11

Change Details 11

WHAT'S NEW IN COMPONENT MAINTENANCE PLANNING?.... 14

Ability to define the Repair or Not conditions for Part Based Rules..... 14

Background 14

Change Details 14

Ability to Review Repair Rules of a Part 16

Background 16

Change Details 16

WHAT'S NEW IN MAINTENANCE TASK? 18

Ability to define the user level security at Maint. Operator level to restrict modification of Task 18

Background 18

Change Details 18

Ability to update alternate part effectivity for repair scheme and to copy the repair scheme of child parts and its alternates in the child work order when it is removed from the higher assembly..... 20

Background 20

Change Details 20

WHAT'S NEW IN MAINTENANCE PROGRAMS? 22

Ability to define multiple restoration tasks having different Maint. Operators for a single part # 22

Background	22
Change Details	22
Validation upon multiple employees modifying the task schedule.....	24
Background	24
Change Details	24
Ability to activate the schedule status of the Task in Program upon activation of the Task status in Task Master.....	26
Background	26
Change Details	26
Ability to auto adjust the Aircraft & Component Program based on Advanced Schedule adjustments.....	28
Background	28
Change Details	28
WHAT'S NEW IN COMPONENT MAINTENANCE?	31
Ability to specify the Maint. Operator # for a Planner Group	31
Background	31
Change Details	31
WHAT'S NEW IN COMPONENT REMOVAL?	34
Ability to auto update the Line Status of Tasks in Short Term Escalation as "Cancelled" upon removal.....	34
Background	34
Change Details	34
WHAT'S NEW IN AIRCRAFT EXECUTION HUB, FLIGHT LOG AND SHOP WORK ORDER?	36
Ability to maintain Sign Off History for AME & SWO in Desktop and MechanicAnywhere and show Action in History	36
Background	36
Change Details	36
WHAT'S NEW IN AME HUB?	39
Ability to report Discrepancy against a specific Work Center in AME Hub.....	39

Background	39
Change Details	39
Ability to set Task/Discrepancy as Source Task/Discrep. for non-routines and show them as hierarchy in the tree	41
Background	41
Change Details	41
WHAT'S NEW IN AIRCRAFT MAINTENANCE PLANNING?	42
Ability to Inherit Task Revisions to AME Package by the Planner	42
Background	42
Change Details	42
Ability to short-close and re-generate all Material Requests for Discrepancies during Package Release based on open Part Requirements at that time	44
Background	44
Change Details	44
WHAT'S NEW IN SHOP WORK ORDER?	46
Ability to Save as Draft the Component Replacement in Shop Work Order	46
Background	46
Change Details	46
Ability to display Main Core routing status for Externally routed tasks in View Work Order	48
Background	48
Change Details	48
Ability to print COC remarks in additional pages as per regulatory instruction (FAA) ..	50
Background	50
Change Details	50
Ability to request different Part # MR instead of Removed Part #	53
Background	53
Change Details	53
WHAT'S NEW IN ENGINEERING CHANGE MANAGEMENT?	55
Enhancements in Engineering Change Management	55
Background	55

Change Details	55
----------------------	----

Ability to specify Effective From Date at Maintenance Object level in MCR and EO65

Background	65
------------------	----

Change Details	65
----------------------	----

WHAT'S NEW IN AIRCRAFT MAINTENANCE EXECUTION? 73

Ability to Mandate Sign Off Comments during Sign Off/Void/Reverse/Reject73

Background	73
------------------	----

Change Details	73
----------------------	----

Ability to provide Subtask Seq # in the Record Sign-Off & Work Completion page76

Background	76
------------------	----

Change Details	76
----------------------	----

Ability to demarcate any voided sign off when there is a pending sign off and also to show sign off status exclusively for Pending RII77

Background	77
------------------	----

Change Details	77
----------------------	----

Ability to provide Customer Ref. # in Edit Package Additional Information screen and push it to the Customer Order81

Background	81
------------------	----

Change Details	81
----------------------	----

Ability to capture Maint. Manual Ref. # in Work Reporting Hub, Edit Package Additional Information and Plan Work Order for Non Standard Tasks and view for Standard Tasks83

Background	83
------------------	----

Change Details	83
----------------------	----

Ability to Display Actual Man Hours as Zero if Time booking is not done85

Background	85
------------------	----

Change Details	85
----------------------	----

Ability to reverse a NCR in AME page for Lot controlled parts86

Background	86
------------------	----

Change Details	86
----------------------	----

Ability to prevent Mechanic from Reverting Inspector Sign Off.....88

Background	88
------------------	----

Change Details	88
----------------------	----

WHAT'S NEW IN RELIABILITY MANAGEMENT? 89

Ability to define Reliability Process Parameters.....89

Background89

Change Details89

Ability to display and edit Component Removal Information and Aircraft Utilization Information93

Background93

Change Details.....93

Auto Categorization of LTR and NFF.....95

Background95

Change Details95

Run MTBUR Analysis for a Fleet based on Alert Definition Setup97

Background97

Change Details97

Component Removal Assessment Dashboard.....99

Background99

Change Details99

Ability to generate PDF Reliability Reports in Excel using DW Framework- UI changes to select PDF or XL format on generation & tool changes 103

Background103

Change Details103

WHAT'S NEW IN FLIGHT OPERATIONS? 105

Ability to upload documents against a Journey Log 105

Background105

Change Details105

Configure and Validate Duty Limitations..... 108

Background108

Change Details108

WHAT'S NEW IN ROSTER MANAGEMENT? 113

Ability to view qualification details of employees at any particular work center..... 113

Background113

Change Details113

Ability to view certificate details of employees based on report filters..... 115

Background115

Change Details115

Ability to view Roster details of employees at any particular Roster Level 117

Background117

Change Details117

**WHAT'S NEW IN AIRCRAFT MAINTENANCE EXECUTION AND
SHOP WORK ORDER?119**

Ability to capture and view Sign Off Date & Time for AME and SWO 119

Background119

Change Details119

WHAT'S NEW IN CONFIGURATION MANAGEMENT?

Ability to specify 'Position Type' upon Part Movement between positions in a physical configuration

Reference: APRP-164

Background

Currently, all the components attached below an engine have the position type as engine. When such a position is moved to an aircraft level, the system validates, as there will be a mismatch between the number of engine positions and the configuration class definition. In order to rectify this, users have to first revise the part and component configuration in order to resolve it. This gets cumbersome for them. Hence, a provision to specify the position type, upon moving parts between positions in a configuration is needed that could help the users in overcoming this problem.

Change Details

Common Master

Two new process parameters are added under the Entity Type 'Tech Records Process Ctrl' and Entity 'Configuration' in the **Define Process Entities** activity of the **Common Master** business component.

- Process parameter 'Auto-update component type of the component that is moved in the configuration with the specified position type?' with the following permitted values:
 - 0 (No) – Component Type does not update automatically upon position type modification for a position.
 - 1 (Yes) – Component Type automatically updates upon position type modification for a position.
- Process parameter 'Inherit position type of component to its sub-components upon position type change during Parts movement in Aircraft/Component Configuration' with the following permitted values:
 - 0 (No) – Position Type does not inherit to child components upon parts movement post position type modification to a new position type.
 - 1 (Yes) – Position Type is inherited to child components upon parts movement post position type modification to a new position type.

Parts Movement between Positions

A new drop-down field 'Position Type' is added in the "Movement Details" multiline of the **Move Parts between Positions** screen of the **Component Replacement** business component. This field specifies the position type of the position that is being moved to the new location. The system lists the position type values 'Others', 'APU', 'Engine', 'Landing Gear' and 'Cabin'.

Exhibit 1: Identifies the **Move Parts between Positions** screen

The screenshot displays the 'Move Parts between Positions' screen. At the top, there are fields for 'Maint. Object Details' including 'Aircraft Reg # 841', 'Component #', and 'Part #'. Below this is the 'Movement Details' section, which contains a table with columns: '#', 'Position Code', 'Level Code', 'Part #', 'Serial #', 'Component #', 'Position Type', and 'NHA Position Code'. The table has one row with data: '1', 'ACT', '1.5.2', '109-3501-04-1', '841-222', 'C002619-2016', and a dropdown menu for 'Position Type'. The dropdown menu is open, showing options: 'Others', 'APU', 'Engine', 'Landing Gear', and 'Cabin'. A red box highlights the 'Position Type' dropdown, and a yellow callout points to it with the text 'New drop-down field added'. Below the table is the 'Default Details' section, which includes a 'Move To' dropdown set to 'Specified NHA' and a 'Remarks' text field. At the bottom center is a 'Move Parts' button.

#	Position Code	Level Code	Part #	Serial #	Component #	Position Type	NHA Position Code
1	ACT	1.5.2	109-3501-04-1	841-222	C002619-2016	Landing Gear	

Ability to inherit the sequence of the newly inserted position(s) from Model/Part to their corresponding Aircrafts/Components

Reference: APRP-165

Background

Currently, when a new position is inserted in a Model/Part Configuration, the same will be inherited in the corresponding Aircraft/Component Configurations, but with the sequence # as the last one. Currently, the provision of inheriting the sequence # in the exact sequence from the Model/Part to the corresponding Aircraft/Component configuration upon addition of a new position in the Model/Part configuration is not available. In this enhancement, the same sequential inheritance of the newly added position from Model/Part to Aircrafts/Components under them is provided, in order to avoid the additional steps of user having to manually change the sequence #s in all the affected Aircrafts/Components.

Change Details

Common Master

Define Process Entities

The following process parameters are added under the Entity Type 'Tech Records Process Ctrl' and Entity 'Configuration' in the **Define Process Entities** activity of the **Common Master** business component.

- i. The process parameter 'Inherit Sequence of Position Code from Model to applicable Aircrafts?' is added with the following permitted values:
 - '0' (No) – Retains the existing behavior of inheriting the newly inserted position from Model as the last in sequence for the corresponding applicable Aircrafts.
 - '1' (Yes) – Inherits the Sequence # of the new position from Model as the same in sequence for the corresponding applicable Aircrafts.
- ii. The process parameter 'Inherit Sequence of Position Code from Part to applicable Components?' is added with the following permitted values:
 - '0' (No) – Retains the existing behavior of inheriting the newly inserted position from Part as the last in sequence for the corresponding applicable Components.
 - '1' (Yes) – Inherits the Sequence # of the new position from Part as the same in sequence for the corresponding applicable Components.

Configuration

Approve Model & Aircraft Configuration

- On click of the "Approve Configuration(s)" pushbutton in the **Approve Model & Aircraft Configuration** screen, if the process parameter 'Inherit Sequence of Position Code from Model to applicable Aircrafts?' is set as '1' and if "Inherit Changes to Aircraft" checkbox is checked, then the Sequence # of the new position in Aircraft model is inherited to the corresponding applicable Aircrafts.
- On click of the "Approve Configuration(s)" pushbutton in the **Approve Model & Aircraft Configuration** screen, if the process parameter 'Inherit Sequence of Position Code from Model to applicable Aircrafts?' is

set as '0' and if "Inherit Changes to Aircraft" checkbox is checked, then the system retains the existing behavior of inheriting the newly inserted position as the last in sequence for the corresponding applicable Aircrafts.

Exhibit 1: Identifies the **Approve Model & Aircraft Configuration** screen

Search Criteria

Search Option: Aircraft Reg #: Aircraft Model #: Configuration Class:

Search Results

#	Base Line Revision	Approve Lower Levels?	Aircraft Model #	Aircraft Reg #	Configuration Class	Assembly
1	Yes	Yes	0612		AI-707	Not Applic
2	Yes	Yes	A310		AI-707	Not Applic
3	Yes	Yes	A9785		AI-707	Not Applic
4	Yes	Yes	VIS-3		AI-707	Not Applic
5	Yes	Yes	A310		AVEOS	Not Applic
6	Yes	Yes	A320-211		AVEOS	Not Applic
7	Yes	Yes	B767-200		PBS	Not Applic
8	Yes	Yes	A320-211	12183	AI-707	Complete
9	Yes	Yes		1471	AVEOS	Dormant
10	Yes	Yes		1473	AVEOS	Dormant

Upon approval of Model configuration, Seq # will be inherited to the respective Aircraft Configurations

Approve Configuration(s) Cancel Configuration(s)

Compare Model Configuration Revisions Compare Aircraft Configuration Revisions

Approve Part & Component Configuration

- On click of the "Approve Configuration(s)" pushbutton in the **Approve Part & Component Configuration** screen, if the process parameter 'Inherit Sequence of Position Code from Part to applicable Components?' is set as '1' and if "Inherit Changes to Component" checkbox is checked, then the Sequence # of the new position in Part is inherited to the corresponding applicable Components.
- On click of the "Approve Configuration(s)" pushbutton in the **Approve Part & Component Configuration** screen, if the process parameter 'Inherit Sequence of Position Code from Part to applicable Components?' is set as '0' and if "Inherit Changes to Component" checkbox is checked, then the system retains the existing behavior of inheriting the newly inserted position as the last in sequence for the corresponding applicable Components.

Exhibit 2: Identifies the Approve Part & Component Configuration screen

Configuration Management > Configuration > Approve Part & Component Configuration

Approve Part & Component Configuration

Search Criteria

Search Option:
Part #:
Operator #:
Component #:
Serial #:

Search Results

#	Base Line Revision	Approve Lower Levels?	Component #	Part #	Serial #	Operator #
1	<input type="checkbox"/> Yes	<input type="checkbox"/> Yes		0U144659:FB244		
2	<input type="checkbox"/> Yes	<input type="checkbox"/> Yes		PA1-2		
3	<input type="checkbox"/> Yes	<input type="checkbox"/> Yes		0-0440-4-0001:36361		
4	<input type="checkbox"/> Yes	<input type="checkbox"/> Yes		0-1000PSI:61049		
5	<input type="checkbox"/> Yes	<input type="checkbox"/> Yes		0-0440-4-0005:36361		
6	<input type="checkbox"/> Yes	<input type="checkbox"/> Yes		P-1		
7	<input type="checkbox"/> Yes	<input type="checkbox"/> Yes		PART - 52670 -239		
8	<input type="checkbox"/> Yes	<input type="checkbox"/> Yes		HW4102-2:81205		
9	<input type="checkbox"/> Yes	<input type="checkbox"/> Yes		P-028-311-0:F0301	50X31502	AC
10	<input type="checkbox"/> Yes	<input type="checkbox"/> Yes		P-003-522-0:07482	50X41849	AC

[Compare Part Configuration Revisions](#) [Compare Component Configuration Revisions](#) [View Affected Entities](#)

Upon approval of Part configuration, Seq # will be inherited to the respective Component configurations

WHAT'S NEW IN COMPONENT MAINTENANCE PLANNING?

Ability to define the Repair or Not conditions for Part Based Rules

Reference: APRP-217

Background

In Parts pool management organization, normally the parts will be loaned to the customer for exchange of another unit, the parts received from the customer may or may not be in serviceable condition. Since the organization needs to keep its own inventory in sufficient level, the unserviceable unit may go to internal/external repair. In order to automate the process to execution order generation during the Customer exchange unserviceable unit receiving, the Repair Rules definition has been introduced. The 'Repair Automation Rules' will help the users to define certain rules based on its part attributes and automate the execution order generation through scheduler.

Change Details

- A new activity **Manage Repair Automation Rules** has been introduced in the **Component Maintenance Planning** business component under the Component Maintenance business process.
- Following process parameters have been added under the Entity Type 'Component Maint. Planning' and the Entity 'Manage Rep. Auto. Rules' in the **Define Process Entities** activity of **Common Master** business component.

Process Parameter: Parameter for part based rules identification?	
Parameter Value	Impact during Part Based Rules Rule definition
'0' for 'Part'	The Repair Automation Rules can be defined for Part # only for Part Based Rules
'1' for 'Part Type'	The Repair Automation Rules can be defined for Part Type only for Part Based Rules
'2' for 'Part Classification'	The Repair Automation Rules can be defined for Part Classification only for Part Based Rules
'3' for 'Part Category'	The Repair Automation Rules can be defined for Part Category only for Part Based Rules

Process Parameter: Sources applicable for 'Part Ownership - Internal' for Automatic Execution Order Generation Rules	
Parameter Value	Impact during Part Based Rules Rule definition
'0' for 'Adv. Exchange CGR'	The Part Source combo in Part Based Rules & Parameter Based Rules will load only the 'Customer Exchange Return'
'1' for 'Rental Receipt'	The Part Source combo in Part Based Rules & Parameter Based Rules will load only the 'Rental Receipt'



Note: The process parameter 'Sources applicable for 'Part Ownership - Internal' for Automatic Execution Order Generation Rules' is defined as '0' for 'Adv. Exchange CGR' and '1' for 'Rental Receipt', the part source combo will load both the values in the **Manage Repair Automation Rules** screen.

Exhibit 1: Manage Repair Automation Rules – Part Based Rules tab

Component Maintenance > Component Maintenance Planning > Manage Repair Automation Rules

★ Manage Repair Automation Rules RAMCO OU-Ramco Role

Search Criteria: Part #, Part Description

Search

Part Based Rules | Parameter Based Rules

#	Part Ref. Code	Part Ref. Description	Part #	Part Description	Part Type	Part Classification	Part Category	Includes Alternatives?	Mfr. Serial # From
1	PRR000001	test	000:99999	ELECTRICAL TEST HARNESS				No	
2	PRR000002	test2	000:99999_1	000:99999_1				No	
3	PRR000004	test01	0006485-801:C2...	CARGO CONTROL BOX				No	
4	PRR000003	ACTUATOR VALVE - RU...	0019201-4	Actuator Valve				No	MSN001
5								No	

Save Confirm Quick Links

Exhibit 2: Manage Repair Automation Rules – Parameter Based Rules tab

Component Maintenance > Component Maintenance Planning > Manage Repair Automation Rules

★ Manage Repair Automation Rules RAMCO OU-Ramco Role

Search Criteria: Part #, Part Description

Search

Part Based Rules | Parameter Based Rules

#	Rule ID	Parameter Ref. Description	Part #	Part Description	Customer #	Customer Name	Part Ownership	Part Source	Parameter Type	Param
1	ARPR-000001-20	P-Exp-2	000:99999	ELECTRICAL TEST HARNESS			Internal	Customer Exchange Return	Repair Classification	DOD
2	ARPR-000002-20	P-Exp-3	00-01:99999	ANTIFREEZE & COO TESTER	1090000	Customer 3	Internal	Customer Exchange Return	Component Reliability	NFF
3							Internal			

Save Confirm Quick Links

Ability to Review Repair Rules of a Part

Reference: APRP-42

Background

Whenever a Customer exchanged part is received, the scheduler will execute the user defined 'Repair Rules' to generate automatic execution order. If the scheduler is failed to generate execution order, because of the explicit rules defined by the user or the rules match but the attributes defined against the rules are not satisfied with the receiving part, then the unserviceable part will be appear in the **Route Unserviceable Components/Parts** screen. There should be a provision to review the applicable repair rules in **Route Unserviceable Components/Parts** screen so that the users will take actions or overriding those rules by manually routing those parts to Internal/External repair.

Change Details

- Following columns have been added in the **Route Unserviceable Components/Parts** screen.
 - Auto Evaluation (Hyperlink)
 - User Status (Display Only)
 - Repair Order # - Display Only
- A new pop up 'Review Repair Rules' has been added in the **Route Unserviceable Components/Parts** screen. On click of 'Auto Evaluation Values', system will launch the 'Review Repair Rules' pop up
- Following process parameters have been introduced under the Entity Type 'Component Maint. Planning' and the Entity 'Manage Rep. Auto. Rules' in the **Define Process Entities** activity of **Common Master**.

Process Parameter: Evaluation of Automatic Execution Order Generation Rules for Unserviceable Stock	
Parameter Value	Impact during scheduler run
'Enter '0' for 'Not Required'	The Repair Rules scheduler will not run
"1" for 'Required'	The Repair Rules scheduler should automatically run

- A new link 'Create Scrap Note' has been added in the **Route Unserviceable Components/Parts** screen to generate a scrap note for the parts.
- A new button 'Evaluate Vendor' to identify the 'Vendor' for the part based on the 'Vendor Identification Rules'



Note: If the Repair Rules scheduler has not been run for the parts, the Auto Evaluation? Column will not display any values. It will display the following values only if the Repair Rules scheduler has been run:

- Yes-With Failure** – System notes that the execution order is failed to generate automatically for a part
- Yes-Part Not Issued**- System notes that the execution order is generated but the part is failed to automatically issued to the respective Repair Agency/Work Center.

Exhibit 1: Review Repair Rules pop-up

Component Maintenance > Component Maintenance Planning > Route Unserviceable Components / Parts

P-EXP-1 Serial #/Lot # Customer #/Name Removed From A/C Reg. #/Model # Removed From NHA Part #/Serial # Source Document # Date & Time
P-Exp-1 LO000017-2014

Supplier Info.

#	Rule ID	Repair Rules	Rule Parameter	Actual Value	User Status
1	PRMR000052	P-EXP-1/Repair Rules-02			
2	PRMR000053	P-EXP-1/Repair Rules-03	Receipt Serial#/Lot # Info - Return As Is		
3	PRMR000054	P-EXP-1/Repair Rules-04	Repair Classification - FORCE MAJE		

Get Current Value

Message Center

Component Maintenance Planning -> Route Unserviceable Components / Parts | 02-25-2020 11:51:24 | (Server: 1.262 /Client: 1.11) | No error(s) | 59 Minute(s) | 11:56 AM

WHAT'S NEW IN MAINTENANCE TASK?

Ability to define the user level security at Maint. Operator level to restrict modification of Task

Reference: APRP-726

Background

Currently, the **Maintenance Task** business component allows the users to modify the task irrespective of the Maint. Operator #. This enhancement allows users mapped to a specific Maint. Operator / AOCs (Air Operator Certificate) to modify the tasks specific to that AOC from Task Master screens. This way in a global organization consisting of multiple AOCs, users from one AOC can only view and work on tasks mapped to that AOC as opposed to all tasks in the system.

Change Details

To enable this functionality, the following new developments have been incorporated in the **Maintenance Task** business component

- New Combo Control – 'Maint. Operator #' has been added in the Select screen of **Edit Task and Maintain Activated Tasks**.
- New Combo Control – 'Maint. Operator #' has been added in the **Authorize Tasks** screen.
- A new process parameter "Allow retrieval/modification of tasks from other Maint. Operator codes in Task Master screens?" has been added in the **Define Process Entities** activity of the **Common Master** business component. Entity Type: Maintenance Task, Entity: Task, Permitted values: 0 (Not Allowed); 1 (Allowed).
- Maint. Operator # drop-down box lists values based on the above parameter. If it is set as "0" the Maint. Operator # combo should list only the active Maint. Operator codes linked to the login user through the Planner Group that he/she belongs, along with a blank value. If Login user is not mapped to any of the Active Planner Groups, then system will consider that the login user is not having access to any of the maintenance operators. If it is set as "1" the Maint. Operator # combo should load all the active Maint. Operator codes available in the system along with a blank value. Blank value would mean that the Maint. Operator # search should consider only all the values inside the same combo, irrespective of validating whether the login user is mapped to Maintenance Operator/Planner group.
- Based on the above process parameter, system will fetch/restrict modification of the tasks mapped to other Maint. Operator codes, from the Task Master screens (**Edit Task, Authorize Task, Maintain Activated Tasks, Manage Task Effectivity, Maintain Task Relationship** screens).

Process Parameter: Allow retrieval/modification of tasks from other Maint. Operator codes in Task Master screens?	
1 for Allowed	Allows retrieval/modification of the tasks from other Maint. Operator codes in Task Master
0 for Not Allowed	Does not allow retrieval/modification of tasks from other Maint. Operator codes in Task Master
Default: '1' Allowed	

Exhibit 1: Indicates the new control in **Select Task** screen of **Edit Task** activity

The screenshot shows the 'Select Task' screen in the 'Edit Task' activity. The 'Task Details' section includes fields for Task #, Task Description, Task Applicability, ATA #, Work Center #, and Maint. Operator #. A yellow callout box points to the 'Maint. Operator #' dropdown menu, indicating a new control has been added. The 'Search Results' section shows a table with columns: #, Task Applicability, Base Aircraft Model #, Task #, Revision #, Task Desc, and Operations Type. The table is currently empty, displaying 'Found no rows to display!!!'. The bottom of the screen contains links for 'Edit Task Details', 'Maintain Repair Scheme', 'View Status Log', 'Manage Task File Attachment', and 'Maintain Task Relationship'.

Exhibit 2: Indicates the new control in **Select Task** screen of **Maintain Activated Tasks** activity

The screenshot shows the 'Select Task' screen in the 'Maintain Activated Tasks' activity. The 'Search Criteria' section includes fields for Task #, Task Description, Task Applicability, ATA #, Work Center #, Status, Base Aircraft Model #, Task Type, Operations Type, and Maint. Operator #. A yellow callout box points to the 'Operations Type' dropdown menu, indicating a new control has been added. The 'Search Results' section shows a table with columns: #, Task Applicability, Base Aircraft Model #, Task #, Revision #, Task Desc, Operations Type, Task Class, Status, ATA #, Revision Date, Task Type, and Work Center #. The table is currently empty, displaying 'Found no rows to display!!!'. The bottom of the screen contains links for 'Maintain Task Relationship', 'Maintain Repair Scheme', and 'Manage Task File Attachment'.

Ability to update alternate part effectivity for repair scheme and to copy the repair scheme of child parts and its alternates in the child work order when it is removed from the higher assembly

Reference: APRP-156

Background

Part specific repair scheme for the main core parts and repair schemes of child parts of main core for different maintenance types are maintained in our ramco M&E system. When configuration is not maintained for the components (including its child assemblies) for which they do repair and overhaul services. Provision is required to update alternate part effectivity for repair scheme and to copy the repair scheme of child parts and its alternates in the child work order when it is removed from the higher assembly. Hence in this enhancement, provision to automatically create the child work order with child repair scheme task on removal of a part which could be an alternate of the child part's repair scheme is enabled. Also provision to copy the child part's repair scheme and its alternates to the respective child repair scheme task's effectivity list is supported.

Change Details

Maintenance Task

Manage Repair Scheme Definition

A new drop-down field 'Effective for Alternates' is added in the "Task Details" section of the **Maintain Repair Scheme** screen. The system lists the following drop-down values:

- 'Yes' – Indicates that the Repair scheme is applicable for the Parent part alternates.
- 'No' – Indicates that the Repair scheme is not applicable for the Parent part alternates.



Note: This field is enabled only if the 'Effectivity Control' field is set as "Specific".

A new drop-down field 'Effective for Alternates' is added in the "Repair Scheme Details" multiline of the **Maintain Repair Scheme** screen. The system lists the following drop-down values:

- 'Yes' – Indicates that the Repair scheme is applicable for the Child part alternates.
- 'No' – Indicates that the Repair scheme is not applicable for the Child part alternates.

Effectivity Copying Logic for Main Repair Scheme:

The effectivity list of the Repair Scheme Task is updated with this specific repair scheme Part # and its alternate Part # if the following conditions are satisfied:

- If the Repair scheme Task has effectivity control set as "Specific" and a specific Part # is entered, and 'Effective for Alternates' field is selected as 'Yes'.
- If the process parameter "Automatic update of Task-Part Effectivity based on Repair Scheme Definition" in the **Define Process Entities** activity of the **Common Master** business component is set as '1' (Yes).

Effectivity Copying Logic for Child Repair Scheme:

The effectivity list of the child Task is updated with this child Part # and its alternate Part # if the following

conditions are satisfied:

- If the Repair scheme Task has effectivity control set as "Specific" and a specific Part # is entered.
- If the process parameter "Automatic update of Task-Part Effectivity based on Repair Scheme Definition" in the **Define Process Entities** activity of the **Common Master** business component is set as '1' (Yes).
- If any Child Task exists against which Child Part # is defined and 'Effective for Alternates' field in multiline is selected as 'Yes'



Note: The Effectivity copying logic is applicable only for Component and Engine Tasks and not for Aircraft Tasks.

Exhibit 1: Identifies the **Maintain Repair Scheme Definition** screen

The screenshot displays the 'Maintain Repair Scheme' interface. At the top, the breadcrumb trail is 'Maintenance Programs > Maintenance Task > Maintain Repair Scheme'. The main section is titled 'Task Details' and shows the following information:

- Task #: 1-50C-0000-CMM-00006450
- Description: PME-1
- Effectivity Control: Specific (dropdown)
- Maint. Object #: Part # (text field)
- Base Model #: (text field)
- Operator #: 03
- Effective for Alternates: No (dropdown, highlighted with a red box and a yellow callout 'New field added')

Below the task details is a section for 'Repair Scheme details' which contains a table. The table has the following columns: Rep. Seq. #, Prev. Rep. Seq. #, Task #, Task, Relationship, Effective for Alternates, Child Position, Child Part #, Job Type, Exec. Doc. Type, and Prime. The 'Effective for Alternates' column is highlighted with a red box and a yellow callout 'New field added'. The table currently shows one record with the value 'Yes' in the 'Effective for Alternates' column.

Shop Work Order

Record Shop Execution Details

On generating the child Work Order based on Disposition Code option (set as Yes), system adds the child Repair Scheme task along with its related tasks to the child work order from parent work order provided the child RS task is effective for the removed part and updates the Part # in the task details of child Work Order with the removed Part #, and the separation flag as 'Yes' for the rows to which the part # is updated if the following conditions are satisfied:

- Removed Part # is an exact part or its 'Alternate Part' to the 'Child Part' defined under the Repair Scheme of Parent part # in **Maintain Repair Scheme Definition** screen.
- If Effective for Alternates is set as 'Yes' against the Child Repair Scheme task in **Maintain Repair Scheme Definition** screen.

WHAT'S NEW IN MAINTENANCE PROGRAMS?

Ability to define multiple restoration tasks having different Maint. Operators for a single part

Reference: APRP-272

Background

Different AOCs (Air Operator Certificate) require different restoration tasks to be performed on the same part #. Hence a provision to define multiple restoration tasks for a single Part # is needed in our system. In this enhancement, ability to define multiple restoration tasks having different Maint. Operators for single part # are provided.

Change Details

Common Master

A new process parameter 'Allow multiple restoration tasks for the same part based on Maint. Operator Code?' is added under the Entity Type 'Maintenance Task' and Entity 'Task' in the **Set Process Parameters** screen of the **Define Process Entities** activity with the following permitted values:

- 0 (Not Required) – System does not permit the definition of multiple restoration tasks for a same part # based on Maint. Operator Code.
- 1 (Required) – System permits the definition of multiple restoration tasks for same part # based on Maint. Operator Code.

Component Maintenance Program

A new display field 'Maint. Operator #' is added in the "Restoration Work Unit Details" multiline of the **Maintain Restoration Work Unit Information** screen.

If process parameter 'Allow multiple restoration tasks for the same part based on Maint. Operator Code?' is set as '1'(Required) and if multiple Work Units of Work Unit Type 'Task' with different Maint. Operator # is available for the same Part #, then the system saves the multiple tasks for the same part #.

Exhibit 1: Identifies the Maintain Restoration Work Unit Information screen

Maintain Restoration Work Unit Information

Date Format: mm-dd-yyyy

Search Criteria

Part #:
 Work Unit Type: Task
 ATA #:

Restoration Work Unit Details

#	Part #	Work Unit Type	Work Unit #	Maint. Operator #	Comments
1	0-3000-25LBDIV:08664	Task	1-50C-0000-CMM-00006451	0c	
2	0-3200-0-0002:30000	Task	1-50C-0000-CMM-00006451	0c	
3	0-3200-0-0002:30003	Task	1-50C-0000-CMM-00006451	0c	
4	0-3200-0-0002:3001	Task	1-50C-0000-CMM-00006451	0c	
5	0-3200-0-0002:3001	Task	1-50C-0000-CMM-00006451	0c	
6	PART0109	Task	1-50C-0000-CMM-00006451	0c	
7	PART0117	Task	1-50C-0000-CMM-00006451	0c	
8	PART0800	Task	1-50C-0000-CMM-00006451	0c	
9	PART0892	Task	1-50C-0000-CMM-00006451	0c	
10	PART1049	Task	1-50C-0000-CMM-00006451	0c	

New field added

Edit Work Units

Maintenance Task

On click of the 'Update Effectivity' pushbutton in the **Manage Task Effectivity** screen, the system does not permit multiple Maint. Operator # effectivity definition for a single Task # of Task Applicability 'Component' or 'Engine' if the following conditions are satisfied:

- If the "Task #" and the "Maint. Operator #" values are provided with 'Effectivity Change' field set as 'Effective'.
- If process parameter 'Allow multiple restoration tasks for the same part based on Maint. Operator Code?' is set as '1'(Required).

Exhibit 3: Indicates the new control in Authorize Tasks screen

Authorize Tasks

Date Format: yyyy-mm-dd

Search Criteria

Task #:
 Task Description:
 Task Applicability:
 ATA #:
 Work Center #:
 Created By:

Search Results

#	Task Applicability	Base Aircraft Model #	Task #	Revision #	Task Desc.	Operations Type	Status	Revision Date	Task Type	ATA #	Work Center #	Authorization Comments	Created By
1													

New control added

Authorize Task(s) ReturnTask(s)

Edit Task Information
View Task Information

Maintain Repair Scheme
View Status Log

Initialize Maint. Prog. & Update Compliance

Validation upon multiple employees modifying the task schedule

Reference: APRP-755

Background

When two users work in parallel on the same Aircraft Program from two different screens i.e. in the 'Initialize Maint. Program & Update Compliance' screen and in the Program screens, the changes made in one screen is not reflected in the other screen until screen refresh takes place. After saving some changes in 1st screen, upon Save of the 2nd screen details, these changes are saved and the ones done by the 1st user are overwritten since the 2nd screen did not retrieve the saved changes from 1st screen due to this 2nd screen not being refreshed post changes in the 1st screen. Due to this, the 1st user has no clue of how this overwriting happened. Hence in this enhancement, a provision to notify the second user of the changes made in the program by some other user is developed.

Change Details

Maintenance Programs

A new validation message is included and it appears in the pop-up when user tries to modify the tasks within a Maintenance Program if the program has been modified by another user from the 'Initialize Maint. Program & Update Compliance' screen and vice versa. The validation message informs the user that tasks had been modified by some other user, and hence advise the user to refresh the screen to proceed ahead.

This new validation appears when users work in parallel in the following screen combinations:

Combination 1:

- Initialize Maint. Prog. & Update Compliance
- Edit Aircraft Specific Maintenance Program

Combination 2:

- Initialize Maint. Prog. & Update Compliance
- Maintain Component Maintenance Program

Combination 3:

- Initialize Maint. Prog. & Update Compliance
- Edit Aircraft Maint. Schedule Information

Combination 4:

- Initialize Maint. Prog. & Update Compliance
- Edit Schedule Date/Value

Combination 5:

- Initialize Maint. Prog. & Update Compliance
- Edit Date Based Schedule Information

Combination 6:

- Initialize Maint. Prog. & Update Compliance
- Edit Usage Based Schedule Information

Exhibit 1: Identifies the **Edit Usage Based Schedule Information** screen:

Component Details

Part # LBV25EA032-92:M0359
Serial # A747002
Maintenance Process On-Condition
CMP Status Fresh
Part Description 90 DEGREE ANGLE DRILL
Component # 000014
Revision # 3

Maintenance Activity Details

Work Unit # TSK-1-50C-0000-CMM-00006120
Work Unit Description PME-2
Maintenance Type Repair
Work Center #
Work Center Description

Usage Based Schedule Details

#	Parameter	UOM	Schedule Type	Last Performed Value	Current Value	Next Schedule Value	Threshold
1			Recurring				

On click of the pushbutton, a validation appears if another user has modified the same task from the 'Initialize Maint. Prog. & Update Compliance' screen

Edit Usage Based Schedule

Ability to activate the schedule status of the Task in Program upon activation of the Task status in Task Master

Reference: APRP-753

Background

Currently, when a Task Status is changed as 'Inactive' in the Task master, system automatically updates the Schedule Status of the corresponding Task as 'Inactive' in Maintenance Programs. But when the Task Status is changed to 'Active', system does not automatically change the Schedule Status of the Task as 'Active' in Maintenance Programs. User is required to manually change the Schedule Status as 'Active' in Maintenance Programs. In this enhancement provision to activate the schedule status of the Task in Maintenance Program upon activation of the Task status in Task Master is developed. Hence, the need to revise the Maintenance Program to update Schedule Status is eliminated and it will save time because multiple programs need to be updated.

Change Details

Common Master

Define Process Entities

A process parameter "Auto update the Schedule Status of Task as 'Active' in Maintenance Programs when the Task Status is activated in the Task master?" is added under the Entity Type 'Maintenance Task' and Entity 'Task' with the following permitted values:

- '0'(No) – The schedule status of the task does not change automatically as 'active' in Maintenance Programs when the Task Status is activated in the Task master.
- '1'(Yes) – The schedule status of the task changes automatically as 'active' in Maintenance Programs when the Task Status is activated in the Task master.

Maintenance Program

On activating the Task Status in Task master, if the process parameter 'Auto update the Schedule Status of Task as 'Active' in Maintenance Programs when the Task Status is activated in the Task master?' is set as '1' the system will automatically activate the Schedule Status of the Task in the following screens:

- **Edit Aircraft Maintenance program** screen of the **Maintenance Task** business component.
- **Maintain Component Maintenance Program** screen of the **Maintenance Task** business component.

The Status of tasks can be modified only in **Maintain Activated Task** screen.



Note: In the following conditions, system will not automatically update the Schedule Status as 'Active' though the Task Status is changed as 'Active' in the Task master:

- If Schedules are not defined for the Task in Maintenance Programs for the Program Item Type: Base, Block and Non-block.*
- Component Maintenance Programs will not be updated if the Component is Phased Out.*
- Engineering Order Tasks.*
- If the schedule status of the task changed manually to Inactive in either Maintenance Program or IMPUC screen, the system will not update the changes made in task master.*

Ability to auto adjust the Aircraft & Component Program based on Advanced Schedule adjustments

Reference: APRP-512

Background

There is a need to maintain schedules for the parts/components at Model - Operator level. A schedule for Parts / Components varies depending on the Operator to which the part is issued or the model to which it is being attached. So, there is a need to define / maintain schedules at Model - Operator level.

Change Details

Common Master

New process parameter 'Effect Maint. Sch. Adjustments during Customer Direct Issue' has been added under the Entity Type 'Component Maint. Planning' and Entity 'Next Due Comptn. Logic' in the **Set Process Parameters** screen of the **Define Process Entities** activity with the following permitted values:

- 0 (No) – System does not permit the effect of schedule adjustment during customer direct issue.
- 1 (Yes) – System permits the effect of schedule adjustment during customer direct issue.
- Default value: 0(No)

New process parameter 'Effect Maint. Sch. Adjustments during Customer Rental Issue' has been added under the Entity Type 'Component Maint. Planning' and Entity 'Next Due Comptn. Logic' in the **Set Process Parameters** screen of the **Define Process Entities** activity with the following permitted values:

- 0 (No) – System does not permit the effect of schedule adjustment during customer rental issue.
- 1 (Yes) – System permits the effect of schedule adjustment during customer rental issue.
- Default Value: 0(No)

Existing process parameter "Sch. Impact on Position Change" has been renamed as "Impact on Sch. Adj". It will be loaded with the existing values as listed below in the Set Option activity of Component Maintenance Program component:

- Retain Existing schedules (Default value)
- Reset to template schedules

Manage Schedule Adjustments for Components

To cater to this requirement, new activity and user interface named **Manage Schedule Adjustments for Components** under the **Component Maintenance Program** component has been developed. The **Part Details** section in the page will display the following details:

- Part # - for which schedules needs to be adjusted, with on enter facility. If Sch. Adj. is already defined for a part, on click of Enter for the part #, systems to auto retrieve the "Sch. Adj. At" combo with the appropriate value. The Part # must have the part program defined for it.
- Sch. Adj. At – The drop-down list box displays the following
 - Model
 - Position Based
 - Operator
 - Model :: Operator

- Operator :: Position Based
- For any part, the schedules can be adjusted at a one adjustment level only.

Schedule Adjustment Details: This multiline has fields to be defined for Part # to adjust the schedules. Once the schedule adjustment level is chosen for Part # then Date based and Usage based schedules can be defined for the part. If the schedule adjustment level is chosen as Model, the Aircraft Effectivity information can be defined for the part. The relevant screens are navigable from the multiline to define date based and usage based schedules and effectivity information.

Date based Schedule: By default, the Date based schedules to be displayed as BLANK. On save, the system will auto fetch "Not Defined" as a data hyperlink, which can be used to launch the existing **Edit Date Based Schedules** page of the **Maintain Position Based Schedules** activity. In Edit Date Based Schedules interface, a new display only field **Operator #** has added in the header in order to show the operator entered in the **Manage Schedule Adjustments for Components** user interface. If the option "Allow retrieval/modification of tasks from other Maint. Operator codes in Component Program screens" is set as "Not Allowed" the system will list only the tasks for which login user has access. Contrarily, the system will display all the tasks for schedule adjustments. Once Schedules are defined, the system will update the Date based schedules as DEFINED. If the date based schedules are not defined, "NOT DEFINED" will be displayed to the users.

Usage Based Schedule: By default, the Usage based schedules will be displayed as BLANK. On save, the system will auto fetch "Not Defined" as a data hyperlink that can be used to access the "Edit Usage Based Schedules" of Maintain Position Based Schedules activity. In the Edit Usage Based Schedules page, a new display only control "Operator #" has been added in the header in order to show the operator specified in the **Manage Schedule Adjustments for Components** page. If the option "Allow retrieval/modification of tasks from other Maint. Operator codes in Component Program screens" is set as "Not Allowed" the system will list only the tasks for which login user has access. On the contrary, the system will display all the tasks for schedule adjustments. Once schedules are defined, the system to update the Date based schedules as DEFINED. If the usage based schedules are not defined, "NOT DEFINED" will be displayed to the users.

Aircraft Effectivity: By Default on Save, display ALL. On click of ALL, the system will launch the **Define Aircraft Effectivity** page wherein position based schedules can be restricted for aircraft. If the **Edit Effectivity** button in the **Define Aircraft Effectivity** is clicked & Aircraft specific restrictions are done, the system will display the Aircraft Effectivity column as "RESTRICTED".

Inherit Changes to Attached Component: By default the 'Inherit Changes to Attached Components' checkbox should be in checked state. This field controls the Auto adjustment of the schedules of the components attached to aircraft based on the schedule adjustment definitions. If the schedule adjustment definition matches any of the attached components which are fitted to aircraft already, the system will auto update the schedules from the schedule adjustments to component program. However, the system will adjust schedules for the unattached components in the upcoming component attachment transactions.



Note: Auto Adjustment of schedules (Inherit Changes to Attached Components) will happen only for the ACTIVE schedule Adjustments.

Component Program Update for the matching records in Schedule adjustments: Based on the schedule adjustments definitions, the system will re-compute the next schedules for the tasks in components. Online Forecast will be invoked for the components already fitted to aircraft & for the unattached components on attachment to aircraft. The Pending Tray update will happen automatically & existing due list process flow will be carried out. Existing provisions to update program/schedules in IMPUC along with compliance will be retained.

For Removals, the system to act based on the option setting, "Impact on Sch. Adj. Change" in the Set Options activity of Component Maintenance Program component. If the above option is set as "Retain Existing Schedules", the system will retain the existing schedules for the Sch. adj. task in component program. If the above option is set as "Reset to Template Program", the system to reset the existing schedules for the Sch. adj. tasks in component program based on part program.

Exhibit 1: Identifies the **Manage Schedule Adjustments for Components** screen

Exhibit 2: Identifies the **Manage Schedule Adjustments for Components** screen with links

WHAT'S NEW IN COMPONENT MAINTENANCE?

Ability to specify the Maint. Operator # for a Planner Group

Reference: APRP-268

Background

In order to provide data level security for the Customers, provision is required to map the planner group # with the Maint. Operator #. In this enhancement ability to specify the Maintenance Operator # for a planner group is provided. This limits the users associated to the planner group, have access to editing of Tasks mapped to the same Maint. Operator #.

Change Details

Component Maintenance Planning

A new drop-down field "Maint. Operator #" is added in the 'Planner Group Details' section of the **Create Planner Group** and **Edit Planner Group** screens. This field lists all the 'active' Maint. Operators as defined in the **Create Airline Operator** screen of **Common Master** business component.

This field is added as a 'display-only' field in the **View Planner Group** screen. This field enables to map the Maintenance Operator to the planner group so that only the users associated to this planner group can have access to editing of Tasks mapped to the same Maint. Operator #.

Exhibit 1: Identifies the **Create Planner Group** screen

Create Planner Group

Planner Group Details

Planner Group:
 Planner Category: GOMP
 Planner Group Basis: Generic
 Description:
 User Defined 1:
 Maint. Operator #: 1A (New field added)
 Comments:

Copy Details

Planner Group: ENGINE
 Option: ☐ All, ☒ User Details, ☒ Planning Objects

User Details

#	User Name	Employee #	Employee Name	Remarks
1	11363			asdf
2				

Create Planner Group

Associate Planning Objects Associate Aircrafts

A new drop-down field “Search By” is added in the ‘Search Criteria’ section of **Select Planner Group** screen of the **Edit Planner Group** and **View Planner Group** activities. The “Planner Category” field is replaced by the “Search By” field. This field lists the following values:

- Maint. Operator # - When ‘Maint. Operator #’ is selected, the second drop-down field lists all the ‘active’ Maint. Operators defined in the **Create Airline Operator** screen of **Common Master** business component.
- Planner Category – When ‘Planner Category’ is selected, the second drop-down field lists all the ‘active’ planner categories created in the **Create Quick Codes** screen of **Component Maintenance Planning** business component.

Exhibit 2: Identifies the **Select Planner Group** screen of the **Edit Planner Group** activity

The screenshot displays the 'Select Planner Group' screen. In the 'Search Criteria' section, the 'Search By' dropdown is highlighted with a red box, and a yellow callout bubble indicates 'New field added'. The dropdown menu is open, showing options: 'Maint. Operator #', 'Planner Category', and 'Maint. Operator #'. Below the search criteria, there is a 'Search Results' table with columns: #, Planner Group, Description, Planner Category, Status, and Planning Object Type. The table contains 10 rows of data.

#	Planner Group	Description	Planner Category	Status	Planning Object Type
1	ENGINE	ENGINE PLANNER GROUP		Active	ATA#
2	FB66	PLANNER GROUP CREATION		Active	ATA#
3	II32	PLANNER GROUP CREATION		Active	ATA#
4	JW67	PLANNER GROUP CREATION		Active	ATA#
5	NON-ENGINE	NON-ENGINE PLANNER GROUP		Active	ATA#
6	P12	SS		Active	ATA#
7	PG1-1	TEST		Active	ATA#
8	PG1-11	TEST		Active	ATA#
9	PL 1	PL 1		Active	ATA#
10	PLA3	PLA3		Active	ATA#

A new drop-down field “Maint. Operator #” is added in the ‘Search Criteria’ section of **Help on Aircraft Identifiers** screen to facilitate retrieval of Aircrafts belonging to a specific Maint. Operator #. This field lists all the ‘active’ Maint. Operators as defined in the **Create Airline Operator** screen of **Common Master** business component.

Exhibit 3: Identifies the Help on Aircraft Identifiers screen

Help on Aircraft Identifiers

Search Criteria

Aircraft Reg. #

Variable Tab #

Customer Effectivity #

Aircraft Model #

Flight Hours < =

Planning Base **RAMCO OU** ▼

Customer #

Search ID ▼ [Edit](#)

Manufacturer Serial #

Nose #

Engine Set #

Flight Cycles < =

Maint. Operator # ▼

Customer Name

Search Results

1 - 10 / 500

#	Aircraft Reg. #	Manufacturer Serial #	Variable Tab #	Nose #	Flight Hours	Flight Cycles	Customer Effectivity #	Engine Set #	Aircraft Model #	Planning B
1	101	SR101	SR101	SR101	2851:30		1,101		A310	RAMCO OU
2	102	ASDFASFD445	ASDFASDF	ASFA34	4:0		2		A320-211	RAMCO OU
3	11001	23473773	123120	343534	00:00				KA350	RAMCO OU
4	1132	1132	1132	1132	757:30				B767-200	RAMCO OU
5	1133	1133	1133	1133	563:0				B767-200	RAMCO OU
6	12181	12181	12181	12181	00:00				A320-211	RAMCO OU
7	1573	AI1573	VT1573	N1573	00:00				737-800	RAMCO OU
8	1573-01	1573-01	1573-01	1573-01	00:00				737-800	RAMCO OU
9	1819	JSJ1819	JSJ1819	JSJ1819	00:00				A320-211	RAMCO OU

New field added

WHAT'S NEW IN COMPONENT REMOVAL?

Ability to auto update the Line Status of Tasks in Short Term Escalation as "Cancelled" upon removal

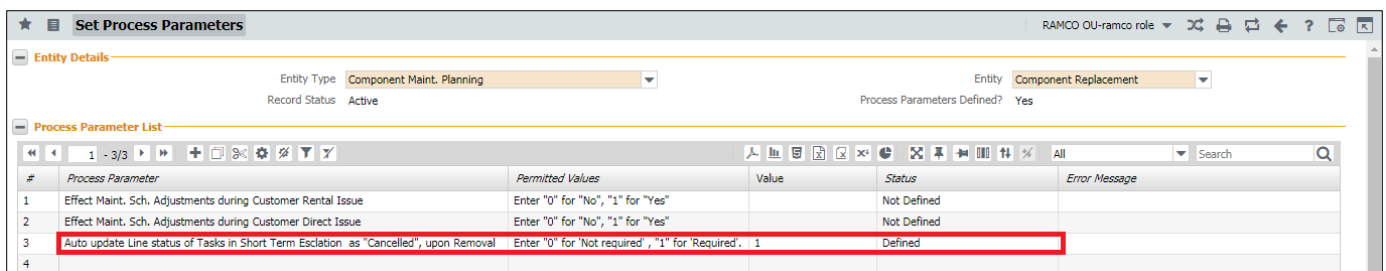
APRP-711

Background

Short term escalations are typically extensions in delay a set of job/tasks which could be due for an aircraft/component. But when a component for which STE has been approved is removed from an Aircraft for maintenance, the due/alert tasks can typically be performed without any need for extension. In such scenario, the STE which is already approved would be obsolete and ideally would need to be closed/cancelled.

Change Details

This enhancement allows users to update the Line level status of Tasks in Short Term Escalation as "Cancelled" upon removal of applicable component from the Aircraft prior to its escalated due date. This can be achieved by setting up the parameter "Auto update the Line status of Tasks in Short Term Escalation as "Cancelled" upon removal" under the Entity Type, 'Component Maint.' & Planning of Entity 'Component Replacement'. When user sets the parameter as **Required** then system will update the Line status as Cancelled on removal of applicable component from an aircraft prior to the escalated due date and if it is **Not Required** system will follow the existing behavior.



The screenshot shows the 'Set Process Parameters' interface. The 'Entity Type' is set to 'Component Maint. Planning' and the 'Entity' is 'Component Replacement'. The 'Process Parameter List' table contains the following data:

#	Process Parameter	Permitted Values	Value	Status	Error Message
1	Effect Maint. Sch. Adjustments during Customer Rental Issue	Enter "0" for "No", "1" for "Yes"		Not Defined	
2	Effect Maint. Sch. Adjustments during Customer Direct Issue	Enter "0" for "No", "1" for "Yes"		Not Defined	
3	Auto update Line status of Tasks in Short Term Escalation as "Cancelled", upon Removal	Enter "0" for "Not required", "1" for "Required"	1	Defined	
4					

This feature can be categorized as given below:

1. **Removal Date & Time is earlier than the STE Approved Date & Time:** On recording a backdated removal, the corresponding "Line Status" in STE will be updated as "Cancelled" and/or the Status of STE documents will be updated as "Cancelled", provided the tasks are already not complied and the schedules will be reset back to original schedules.
2. **Removal Date & Time is earlier than the STE Approved Date & Time & component removal is reversed:** On reversal of a back dated removal, the STE which was cancelled during removal will be activated again and the scheduled with be reset with the escalated limits once again.
3. **Removal Date & Time later than STE Approved Date & time:** On recording a removal, as long as there is no compliance of tasks recorded, the STE will still be updated with Cancelled status and the component schedules will be reset back to original schedules.

Upon Removal, system will check the above set option and updates the schedules to the values which were prior to the escalation, based on the set option. Remaining units would be 10 FH & 5 FC.



Note: Above check should be happening only if, the line status is "Pending".

Below are the impacted columns in program,

1. NSV
2. NSD
3. Next Due Calc. On
4. Calc. Ref. Date / Value
5. Last Schedule Date / Value
6. Remaining Value
7. Short Term Esc. Ref #

The impacted screens are Update Aircraft Configuration, Tech. Records Hub, Initialize & Update Component Configuration, Work Reporting Hub, AME, Parts Hub, etc.

WHAT'S NEW IN AIRCRAFT EXECUTION HUB, FLIGHT LOG AND SHOP WORK ORDER?

Ability to maintain Sign Off History for AME & SWO in Desktop and MechanicAnywhere and show Action in History

Reference: APRP-202

Background

Aviation being a stringent industry requires recording / maintaining history of all vital activities performed on aircraft. Currently in Ramco Aviation, the users can perform Sign Off/ Void/ Reject/ Reversal of sign off based on the sign requirements pre-set for the task. However, a log that supports recording of these vital actions is not available in the product. Therefore, a provision for the maintenance of a log for all the sign off/void/ reject/reversal/ actions performed on a task/discrepancy in a package/work order is required for supervisors to review operational efficiency. Further, the log can be used for future reference as well.

Change Details

In order to maintain a complete log of all the sign off actions performed by a user for both AME Packages and Shop Work Order, the following enhancements have been developed:-

- Sign off/Void/Reject/Reversal performed for a particular task/discrepancy will be captured from both **Ramco Aviation Desktop** and **MechanicAnywhere**.
- A new popup **View Sign Off History** introduced wherein users can see a sign off log for task/discrepancy both at task level and subtask level.
- A new link **View Sign Off History** added in **Work Reporting Hub** screen under Quick Links for both task and discrepancy tabs.
- A new link **View Sign Off History** added in **View Work & Sign-off Information** screen near View Comments Information.
- A new link **View Sign Off History** added in **View Work Order Details** screen.

The **View Sign Off History** popup lists all the sign off actions performed against a task/discrepancy in a package/ shop work order in the hierarchical order of the sign off actions with task being the main node and subtask being the sub-node. It also shows previous and subsequent changes in the sign off status upon user action.

Exhibit 1: View Sign Off History popup

Flight Operations > Flight Log > View Work & Sign-off Information

View Sign Off History

1 - 16/16

Task/Discrep. #	Task/Subtask Desc./Corr. Action	Performed By	Resource Group	Skill #	From Sign Off Status	Action	To Sign Off Status	Signed Off Comments	Performed Date & Time
t-00 :: 1	Task				Pending Mech & Insp		Signed Off		
t-00 :: 1.1	sub-1				Pending Mech & Insp		Signed Off		
t-00 :: 1.1	sub-1	00001413	Inspector	00	Pending Inspector	Sign Off	Signed Off	Inspection over	02-21-2020 16:52:00
t-00 :: 1.1	sub-1		Inspector	00	Signed Off	Reverse	Pending Inspector	Sign	
t-00 :: 1.1	sub-1	00000001	Mechanic	00	Pending Mechanic	Sign Off	Signed Off		02-21-2020 16:44:00
t-00 :: 1.1	sub-1	00001413	Inspector	00	Pending Inspector	Void	Signed Off	Sign Off not required	02-21-2020 16:44:00
t-00 :: 1.2	sub-2				Pending Mechanic		Signed Off		
t-00 :: 1.2	sub-2	00000001	Mechanic	00	Pending Mechanic	Sign Off	Signed Off		02-21-2020 16:44:00
NSTD0006292019 :: 2	Engine checks				Pending Mech & Insp		Signed Off		
LP-000495-2020/1 :: 3	Faulty bulb				Pending Mech & Insp		Signed Off		

Resource Group: [Dropdown]

Get Details

Flight Log -> View A/C Maint. Exe. Ref # | 02-21-2020 17:35:23 | (Server: 2.255 /Client: 1.154) | No error(s) | 59 Minute(s) | 5:51 PM

Exhibit 2: View Sign Off History link in Work Reporting Hub screen

Aircraft/Shop Work Management > Aircraft Execution Hub > Aircraft Work Reporting Hub

Aircraft Work Reporting Hub

RAMCO OU-ramco role

2 ALL 0 Planned 2 In-Progress 0 Completed 0 Other

View: Simple Detail

1 - 2/2

#	Error	IC	WS	S	Task #	Description	Status	Sign Off Status
1					1	t-00		Signed Off
2					2	NST		Signed Off
3								

View Sign Off History link added under Quick Links in Work Reporting Hub

Quick Links:

- Return & Report Consumption
- Report Resource
- Manage Timesheet
- View Task Details
- View Task Dates & References
- View Sign Off History**
- Upload Documents
- View Documents
- Author Repair Procedure
- Record Parameter Reading
- Create ESR
- Inquire ESR Status
- View EAN
- View AMM Reference
- View Comments Info
- Generate Maint. Logbook

Start Clock Stop Clock Reset

Save Complete

Report Discrep. Task Action

Request Part Change Part Sign Off Subtasks Quick Links

Aircraft Execution Hub -> Aircraft Work Reporting Hub | 02-24-2020 12:43:08 | (Server: 6.728 /Client: 2.103) | No error(s) | 59 Minute(s) | 12:45 PM

Exhibit 3: View Sign Off History link in View Work & Sign-off Information screen

View Work & Sign-off Information

Execution Ref # RAH package VP-001183-2019 Status In-Progress
Aircraft Reg. # 1133 Log #

Discrepancy # Get Details

Work Execution Details

#	Task #	Task Description	Execution Status	Task Type	ATA #	Sign-Off Info.	RUI Sign-Off
1	NST-004184-2019	TEST	In-Progress	Non Routine	00-00	Signed - Off	N
2	DR-000235-2019	tested	Completed	Non Routine	00-00	Signed - Off	N
3	DR-000236-2019	dis test	Closed	Non Routine	00-00	Signed - Off	N
4	DR-000237-2019			Non Routine	00-00	Signed - Off	N
5	DR-000238-2019			Non Routine	00-00	Signed - Off	N

View Sign Off History View Comments Information View Associated Doc. Attachments Print Task/Discrepancy Card

Work Unit Sign-off Information Get Details

Sub Task Information

Flight Log -> View A/C Maint. Exe. Ref # Last Login on 08-10-2019 at 04:33:59 PM 57 Minute(s) 5:35 PM

Exhibit 4: View Sign Off History link in View Work Order Details screen

View Work Order Details

Main Core Details

Part # n 1 Serial # Component #
Qty. 1.00 Lot # Multiple Cores No
Main Core Status Not Applicable Stock Status Accepted Part Description N 1
Mfr. Part # Mfr. # Mfg. Serial #
Mfg. Lot # Facility Object # Facility #
Description

Modified Part Details

Modified Part # Modified Serial # Modified Lot #
Modified Mfr. Part # Modified Mfr. #

Workscoping Details

Workscoping Status Initial Revision # 2 Action on Revision
Comments

Important Dates

Planned Start Date 01-08-2020 17:07:00 Plan End Date 02-21-2020 09:02:34 Prom. Del. Date
Actual Start Date 20 17:07:00 Cust. Receipt Date
Proj. Completion Date 20 09:02:34

View Order Details View Employee Timesheet Records View Status Log View Addl. Main Cores View Replacements View Work Holds View Associated Service Purchase Orders
View Parameters Recorded View Associated Doc. Attachments Print Tag for Removed Object

View Sign Off History

Shop Work Order -> Review Work Execution 02-24-2020 12:43:08 (Server: 1.949 /Client: 2.448) No error(s) 59 Minute(s) 12:49 PM

WHAT'S NEW IN AME HUB?

Ability to report Discrepancy against a specific Work Center in AME Hub

Reference: APRP-152

Background

In certain MRO organizations, the discrepancies including Structural Inspection or NDT inspection are executed by the aircraft maintenance engineers in work centers associated with them and not in the work center to which the package has been assigned. Hence, it is required that the mechanics be given an opportunity to specify the work center at the time of reporting the discrepancy. This automatically enables the generation of material requests against the work center specified for the discrepancy instead of the package work center leading to seamless supply of parts to the work center.

Change Details

To enable the mechanics to specify the work center for a reported discrepancy, the following changes have been incorporated in the **AME Hub** screens:

- New field – **Work Center #** has been added in the following screens to enable the users to specify the work center for the discrepancy:
 - Multiline of the **Discrepancy** tab of the **Work Reporting Hub** page
 - **Manage Discrepancy** popup of the **Work Reporting Hub** page
- The **Work Center #** drop-down list box will display all the Active work centers for which the login user has access privileges.
- In the **Create Mode** of the screen, the work center for the Source Task / Discrepancy work center # is displayed in the **Work Center #** field by default. However, if the Source Task #/ Discrepancy # is not specified for the discrepancy, the work center # for the package is defaulted in the field.
- The system will now allow the users to modify the work center # for a discrepancy in the Edit Mode. However, change in Work Center # is possible only under the following conditions:
 - Any material request in the Authorized status and the related Issue in the Fresh status against the discrepancy
- The work center # cannot be changed, if one or more material requests for a task / discrepancy are available in the **Partially Issued** or **Closed** status
- If the new work center # specified by the user is attached to the same Serv. Request Warehouse # as the previous work center #, the system updates the work center # in the material request.
- However, if the new work center # is associated with Serv. Request Warehouse # that is different from that of the previous work center #, the system generates a new material request and stamps the old material request # in the new material request under the following condition:

- The process parameter 'Auto-Short closes the Open material requests that have Planning Documents on Work Center Change of Tasks & Discrepancies?' is set as '0' for 'Not Required'

Exhibit 1: Identifies the changes in the Discrepancy tab of Work Reporting Hub

Work Reporting Hub

I want to ☐ Create ☒ Work on **Aircraft Maint. Exe. #** **LP-000004-2019** Reporting Date Time FH 482.00 HRS FC 7.00 CYC

LP-000004-2019 Package Type **Line Package** Aircraft Reg # **1133** Work Center # **185-20**

Document Info

Task **Discrepancy**

Source Task/Discrep. # **CDP-023109-2019** Search By View: ☒ Simple ☐ Detail

Additional Search

#	Error	CS	WS	Att	Type	Log Item	SS	ATA #	Discrepancy #	Source Task/Discrep. #	Source Tracking #	Work Center #	Sign Off Status
1					MIREP	L2411		00-00	CDP-023109-2019			185-20	Not Required
2					MIREP								

Start Clock **Stop Clock** **Reset**

[Request Part](#) [Change Part](#) [Sign Off Subtasks](#) [Quick Links](#)

Exhibit 2: Identifies the changes in the Manage Discrepancy popup of Work Reporting Hub

Manage Discrepancy

Source Task/Discrep. # **CDP-023109-2019** Source Desc. **Crack in the rudder- edge pointing forward**

Type **MIREP** Log Item # ATA #

Reported By **00001413** Reported Date Reported Time

Description

Radio Comm.

More Info

Parts Required? Corrosion Related? Major Item?

Category Repair Class. Repeat? **No**

Skill # Zone # Work Area #

Est. Man Hrs. Exe. Phase Exec. Category

Work Center # **185-20**

Action

Ability to set Task/Discrepancy as Source Task/Discrep. for non-routines and show them as hierarchy in the tree

Reference: APRP-257

Background

At times during hangar execution, mechanics may need steps to perform a Standard Task. These steps are **reported against different Non-standard Tasks**. These added Non-standard tasks may be linked to the Standard Tasks for reference purposes. This enhancement brings a provision to map the Source Task/Discrepancy # for the already created Non-Standard Task and load the same as per hierarchy wise in the tree.

Change Details

- A task/discrepancy can be defined as a Source Task/Discrepancy # for a task as long it is available in the current package.
- User can map Source Task/Discrepancy # for Non-Standard Task or Discrepancy by entering the Task # or Discrepancy # in Source Task/Discrep.# column available in the multiline of Work Reporting Hub screen respective Task or Discrepancy and clicking the 'Save' button.
- A set option is provided for the user to choose whether the Source Task/Discrepancy # is mandatory or not while creating Non-Standard Tasks.

Exhibit 1: Identify the **Work Reporting Hub** screen where user can map Source Task/ Discrepancy # for a Non-Standard Task

The screenshot displays the 'Work Reporting Hub' interface. On the left, a tree view shows a hierarchy of tasks and discrepancies under the package 'LP-000004-2019'. The main area contains a table with columns for task details. A yellow callout box with the text 'Enter a Task #/Discrepancy # which is available in the same package as Source Task/Discrep. #' points to the 'Source Task/Discrep. #' column in the table. The table shows several tasks, including 'NST-049866-2019', 'NST-049869-2019', and 'NST-049870-2019', all with a status of 'Planned'.

#	Error	CS	WS	Seq	Task #	SS	Att	ATA #	Status	Source Task/Discrep. #	Source Tracking #
9				18	NST-049866-2019			00-00	Planned	E0-1132-2015	
10				20	NST-049869-2019			00-00	Planned		
11				21	NST-049870-2019			00	Planned		
12											

WHAT'S NEW IN AIRCRAFT MAINTENANCE PLANNING?

Ability to Inherit Task Revisions to AME Package by the Planner

Reference: APRP-743

Background

In Ramco Aviation, the maintenance planners assign tasks to work packages for execution on aircraft. Normally, the latest Active revision of the task is automatically assigned to the package. However, the tasks can be updated and revised based on engineering orders or other notifications at any point of time. Currently, when tasks already assigned to packages are revised, the revision changes are not automatically carried forward to these packages. The maintenance planners are required to manually look for the existence of the revised tasks in packages and then update the task revision change in each of these packages. This exercise proves to be tedious and time consuming. Hence an automatic mechanism wherein the task revision changes are inherited by packages that have been assigned the previous revision of tasks is required in the system.

Change Details

In order to ensure that the packages inherit the latest task revision changes, the following new developments have been built in the system:

- New activity - **Inherit Task Revisions to Package** has been introduced in the **Aircraft Maintenance Planning** business component. The activity helps the users to identify the packages that have previous revisions of the tasks. The users then can select the revision of the task that must be updated in the execution document.
- The **Inherit Task Revisions to Package** activity enables the users to search and find tasks that have been revised **since** they were assigned to packages by means of a search facility. The search facility includes **Task #**, **Task Description** and **Execution Document #**.
- The search retrieves the tasks in the Draft/Fresh/Planned/In progress status from the AME packages whose **Package Assigned Date** is equal to or earlier than **New Revision Date** of later revisions. For instance, if a task has been revised multiple times since it was assigned to packages, the search will retrieve and display details of all the revisions including **Packaged Task Status**, **Previous Revision #**, **New Revision #** and **Task New Rev. # Date**.
- The system maintains a history of all the successful inheritances of task revision changes in packages.

Exhibit 1: Identifies the new activity – Inherit Task Revisions to Package in Aircraft Maintenance Planning

★ Inherit Task Revisions to Package

Date Format: dd-mm-yyyy

Search Criteria

Task # Task Desc. Exe. Doc #

Search Results

1 - 10 / 165

#	Exe. Doc #	Task #	Task Description	Task Status	Prev. Rev. #	New Rev. #	Task New Rev. # Date
1	LC-010227-2019	BASE TASK 1 - LAW	Base Task 1 - LAW	Planned		2	
2	LC-010227-2019	BASE TASK 1 - LAW	Base Task 1 - LAW	Planned		3	
3	LC-010258-2019	Base Task 1		Planned		2	
4	LC-010258-2019	Base Task 1		Planned		3	
5	LC-010227-2019	BASE TASK 1		Planned		2	
6	LC-010227-2019	BASE TASK 1		Planned		3	30-05-2019
7	LC-010227-2019	BASE TASK 4 - LAW	Base Task 4 - LAW			1	30-05-2019
8	LC-010227-2019	BASE TASK 4 - LAW	Base Task 4 - LAW			2	30-05-2019
9	LC-010289-2019	Base Task 1 - LAW	Base Task 1 - LAW			2	30-05-2019
10	LC-010289-2019	Base Task 1 - LAW	Base Task 1 - LAW			3	30-05-2019

Annotations:

- Specify criteria to retrieve revised tasks
- Select package that must inherit task revision
- Select new revision to be inherited by the package
- Click here for tasks in packages to inherit revision changes

Ability to short-close and re-generate all Material Requests for Discrepancies during Package Release based on open Part Requirements at that time

Reference: APRP-401

Background

Normally, the part requirements for discrepancies are planned at the time of allocating a discrepancy to a package. However, in real time, part requirements could change subsequently leading to demand-supply imbalance. Hence, a provision to record the most current part requirements for discrepancies at the time of package release is required for maintenance planners.

Change Details

Based on new enhancement, the part requirements for a discrepancy can now be estimated as on the package release date (at the time the package is being released for execution).

To arrive at the latest / precise part requirements for discrepancies, new process parameter 'Auto Generate Material Requests for Discrepancies on Package Release?' has been added under the entity type Package Type and the entity Log Card, User Defined Values in the **Define Process Entities** activity of **Common Master**. The table next illustrates the functionality of the process parameter.

Process Parameter: Auto Generate Material Requests for Discrepancies on Package Release?	
Value	Impact on MR generation for discrepancies
0 for Not Required	The system will auto generate MRs for the part requirements against the discrepancies at the time of allocation to package.
1 for New Part Requirements	<p>If the process "Auto Generate MR on Discrepancy Allocation for Parts/Quantities previously issued against the Discrepancy?" is also set as '0' for 'No', the system will deduct from the part requirements estimated at time of package release:</p> <ol style="list-style-type: none"> 1. The quantities that were already requested by MRs against previous instances of the discrepancy in previous packages. 2. The quantities that are already issued against previous instances of the discrepancy in previous packages <p>And</p> <ol style="list-style-type: none"> 1. Generate new MRs for remaining quantities of required parts against the current package, if any
2 for All Part Requirements	<p>If the process "Auto Generate MR on Discrepancy Allocation for Parts/Quantities previously issued against the Discrepancy?" is also set as '0' for " 'No', the system will:</p> <ol style="list-style-type: none"> 1. Short close all MRs generated against previous instances of the discrepancy (in other packages)

	<ol style="list-style-type: none">2. Deduct quantities that are already issued against previous instances of the discrepancy in previous packages from the part requirements estimated at time of package release3. Raise new MRs for the remaining parts/quantities of part requirements against the current package, if any.
--	---

WHAT'S NEW IN SHOP WORK ORDER?

Ability to Save as Draft the Component Replacement in Shop Work Order

Reference: APRP-744

Background

In **Shop Work Order**, whenever a part is removed from component, the system instantly generates the Component Removal / Attachment # followed by the work order / repair order. In cases where an incorrect part has been removed from the parent part work order, the users are left with no option but to cancel the incorrect child work order / repair order. Hence, a provision to save the component replacement records in the Draft mode is needed so that the users get an opportunity to verify the record details before the generation of Component Replacements.

Change Details

To enable saving of the component replacements in the Draft mode and hold back the generation of Comp. Removal/Attachment #, the following new developments have been incorporated in the system:

- New **Save as Draft** button has been added in the **Disassemble & Assemble Core** tab of the **Record Shop Execution Details** screen in **Shop Work Order**
- When the users click **Save as Draft**, the system saves the records in the **Part Details** multiline of the **Disassemble & Assemble Core** tab without generating the **Comp. Removal #/Comp. Attachment #**. The users will now be able to validate the component replacement details and then confirm the component replacement by clicking the existing **Update / Remove or Attach/Replace** button
- However, the push button - **Save as Draft** will be enabled only for the following actions:
 - **Disassembly**
 - **Assembly**
 - **Disassembly & Assembly**
- New process parameter 'Enforce Save as Draft before Confirmation of Disassemble & Assemble Core?' has been added under the entity type Shop Work Order Type and the entity --All Work Order—in the **Define Process Entities** screen of **Common Master** to mandate the saving of the CR record

Process Parameter: Enforce Save as Draft before Confirmation of Disassemble & Assemble Core?	
Process Parameter Value	Impact in the Disassemble & Assemble Core tab
0 for No	The system will allow the users to click the Update/Remove or Attach/Replace button without clicking the Save as Draft button
1for Yes	The system will NOT allow the users to click the Update/Remove or Attach/Replace button prior to clicking the Save as Draft button

- Such **Component Replacement** records will not be retrieved for display in the **View Component Replacement** screen.

Exhibit 1: Identifies changes in the Record Shop Execution Details screen

Record Shop Execution Details

Search On: Shop Work Order # Get Date & Time

Work Actual | Report Findings | **Disassemble & Assemble Core** | Initial Workscoping | Material Request

Execution Details

Main Core Details

Customer Order Details

Replacement Details

Restoration Task # NST-003370-2018 Reason

Action ☒ Disassembly ☐ Assembly ☐ Disassembly & Assembly ☐ View

Part Details

#	Off Part #	Off Serial #	Off Comp. #	Initial Disposition	Std. Exch.?	Removal Qty.
1	0-0440-4-0055:36361			6-SERVICEABLE	No	1
2					No	1
3	dsefvew				No	1
4						

The system mandates the users to click the button based on process parameter

Reqd. Date: Jul/15/2019 05:53:24 PM Location Routing Details

Save as Draft Update/ Remove Attach Removed Part Attach/ Replace Re-print Routing Slip

Print Part Tag Inquire Stock Availability Create New Part Request Inquire Part Request Status

Help on Non-Comp. Removed Serial # Help on Non-Comp. Installed Serial # Generate Serviceable Certificate

View File

Links

- Record Missing Parts List
- Record Part Deviation List
- Report Resource Actual
- Record Parameter Reading
- Route Parts
- Record Part Consumption
- Track Response
- Manage Teardown Information
- Record Part # / Serial # Change
- View MOD Details
- Manage Part Serial MOD Details
- Edit Work Estimates
- Plan Work Order
- Generate Sub-Work Order
- Manage Work Assignments and Reporting
- Edit Work Order Addl. Info.

Ability to display Main Core routing status for Externally routed tasks in View Work Order

Reference: APRP-166

Background

Currently, in **Ramco Aircraft Maintenance**, whenever a main core is routed to external repair, the execution status of the outsourced task is set as "Ext. Routed". A repair order is created to this effect and then the main core part is shipped to the external agency. The part is received back into the organization after the completion of the planned tasks. To signal the receipt of the externally routed part into the work center post execution / completion of the external task, it is required that the execution status be set as "Closed" / "Received". This will inform the users that the associated task has been closed and the unit has moved on to the next phase in the maintenance workflow.

Change Details

To indicate the receipt of the part from the repair agency upon completion of repairs, the following changes have been undertaken in the **View Workorder Details** screen of **Shop Work Order**.

- New process parameter 'Additional Display of Main Core routing status for Externally routed tasks in View Work Order?' has been added under the entity type **Shop Work Order Type** and the entity All Work Order Types in the **Define Process Entities** activity of **Common Master** to indicate the completion of the external task planned in the repair order.

Process Parameter: Additional Display of Main Core routing status for Externally routed tasks in View Work Order?	
Parameter Value	Impact on the Exec. Status field in the View Workorder Details screen
1 for Yes	The Exec. Status field for external tasks will display the status of the external task along with the Main Core status. Example: Ext. Routed MC-Issued, Ext. Routed MC-Ext. Routed BER.
0 for No	The Exec. Status field will continue to display only the status of external tasks as "Ext. Routed" even after the parts are received back from the repair agencies.

- New field **Repair Order #** has been added in the **View Order Details** multiline to provide visibility to the repair order # against which the part was routed to external repair agency.

Exhibit 1: Identifies the changes in the View Workorder Details screen

View Workorder Details

Part #	014963:P3625	Serial #	MSN-2016-19	Component #	C002681-2016
Multiple Cores?	No	Main Core Status	Issued	Stock Status	Accepted
Part Description	ENGINE	Modified Part #	Modified Serial #	Modified lot #	

WorkScoping Details

Workscoping Status	Initial	Revision #	Action on Rev
Comments			

Get Details

Display Child Orders Get Details

View Order Details

Child Work Order #	Repair Order #	Seq #	O.Seq #	Task #	Task Description	WBS Code	Exec. Status	Est. Status	User Status	Hold S
				2019						
	AFRO-002863-2019	2		NST-039662-2019	Task-02	4-NR	Ext. Routed MC-Issued	Not Required		
		3		NST-039663-2019	Task-03	4-NR	Completed	Not Required		
	AFRO-002868-2019	4		NST-039664-2019	Task-04	4-NR	Ext. Routed MC-Issued	Not Required		

Related Links

- [View Part Estimates vs Actuals](#)
- [View Resource Estimates vs Actuals](#)
- [View Removed Part Status](#)
- [View Employee Timesheet Records](#)
- [View Shop Findings](#)
- [View Comments](#)
- [View Sign-Off Details](#)
- [View Status Log](#)
- [View Replacements](#)
- [View Work Exec. Certificates](#)
- [View Parameters Recorded](#)
- [View Addl. Main Cores](#)

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Ability to print COC remarks in additional pages as per regulatory instruction (FAA)

Reference: APRP-151

Background

In the electronically-printed Certificate of Conformance (CoC), when the text in the **Description of Work** block exceeds certain lines, the rest of the block including certifying statement, signature and date is pushed to the next page. However, this is not valid as all blocks of the CoC must be covered in one page and must not exceed one page according to the Aviation regulatory authorities.

Hence, a provision is needed wherein the excess lines of text in the **Description of Work** block are accommodated while retaining the size of the main page of the CoC to a single page.

Change Details

To enable generating the CoC in a single page, the following changes have been incorporated in the report format:

- If the **Description of Work** block of the COC has content exceeding one page, then **Work Order Number** block will display the number of pages attached along with the date in the following format:

- <%1> page(s) attached, dated <date of CoM printing, as per the login user preference format>



Note : This is applicable for both print options: 'Print MRO C of C' and 'Print Part 21 C of C'

- The excess content from the **Description of Work** block will be displayed in an additional page with the following information in the listed order from left to right in the header:
 - Tracking Number - CoC #
 - Title of the continuation page (Certificate of Conformance Continuation Page <%1> of <%2>)
 - Issuing Organization Name
 - Dated - Current date of CoC printing as per login user preferred date format

Exhibit 1: New format for Certificate of Conformance


 Certificate of Conformance		
Tracking Number COC-000039-2019	Part Description TERMINAL	Quantity 1
Work Order Number AWO-000095-2019 1 page(s) attached, dated Jul/05/2019	Part Number 0-0033466-0-2D671	Serial # / Lot #
Customer P.O. Number 789786767887	Customer Name and Address Customer 38 Prolongacion Reforma No 490 Piso 1 (Edificio GE) Col. Santa FE Mexico MX 01210	Ship to Name and Address Prolongacion Reforma 490, Col. Santa FE Piso 1 (Edificio GE) Alvaro Obregón 01210 MX
Note indicates additional page attached to the report to accommodate extra text in the Description of Work block		
Customer Order Number CO-008820-2019	Address of Organization Who Accomplished the Work Ramco Airways 64, Sardar Patel Road,, 1, New Tower, Chennai. Chennai, Tamil Nadu India 600113	
Type of Work Others		
Description of Work	<p>-All work has been performed using approved or accepted data including the 107 maintenance manuals, maintenance manual supplements, and any applicable ICA. All applicable AD's have been reviewed for compliance. For further pertinent details, see VP-000170-17, AVP-000002-18, See attached list of remaining discrepancies.</p> <p>The following Service bulletins were compiled/verified with at this aircraft total time:</p> <p>-Verified that SB 107-73-0001 RH Fuel Pressure Transmitter Interfaces with the Structure has been previously complied with and the intent of the service bulletin is still embodied in the aircraft (107-7300-EO-0001)</p> <p>-Verified that SB 107-27-0012 Alternative Longitudinal Cyclic Trim Actuator P/N C07CS001-1 has been previously complied with and the intent of the service bulletin is still embodied in the aircraft (107-2700-EO-0013)</p> <p>Verified that SB # 107-54-0002 COUNTERSINKING OF PROTRUDING HI-LOK IN THE LH MIX BOX ENGINE MOUNT was PCW</p> <p>Verified SB # 107-53-0005 WL +63 CANTED DECK MODIFICATION FOR IMPROVED AFT TRANSMISSION CLEARANCE, PCW</p> <p>Verified that SB # 107-53-0006 INSTALLATION OF WEAR PLATES ON THE AFT FUSELAGE DIAGONAL BULKHEAD, PCW</p>	
This is to certify that the above identified items have been processed through Ramco Airways maintenance facility and meet the requirements of the referenced purchase order and details of that work are on file under the referenced work order number.		
Signature	The excess text from here will be accommodated in the next page	Date of Completion (m/d/y) Jul/05/2019

Exhibit 2: The additional page in Certificate of Conformance

Tracking Number COC-000039-2019	Certificate of Conformance Continuation Page 1 of 1	Ramco Airways Jul05/2019
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Inspections
-#1 AND #2 ENGINE FIRE BOTTLE WEIGHT CHECK, NEXT WEIGHT CHECK INSPECTION DUE 7/31/2019.
-#1 AND #2 ENGINE FIRE BOTTLE #1 AND #2 SQUIBS: 10 YEAR SERVICE LIFE DUE 1/31/2028.
-#1 ENGINE FIRE BOTTLE HYDROSTATIC TEST: NEXT DUE: 05/31/2022
-#2 ENGINE FIRE BOTTLE HYDROSTATIC TEST: NEXT DUE: 3/31/2023

The excess text from Description of Work accommodated in the additional page

Ability to request different Part # MR instead of Removed Part

Reference: APRP-149

Background

In Ramco Aircraft Maintenance, when a part is scrapped after removal or identified as BER part in the repair order, the system automatically generates a material request for the scrapped / BER part. However, many a times enhanced / upgraded parts are substituted for the scrapped parts and hence a provision to generate material request for upgraded parts specified by the users is required

Change Details

To facilitate the generation of the material requests for parts specified by the users against scrapped / BER parts, the following changes have been undertaken in **Shop Work Order**:

- New input field – **Requested Part #** has been added in the **Part Details** multiline of the **Disassemble & Assemble Core** tab of the **Record Shop Execution Details** screen. This field will enable the users to specify the part# for which the material request must be generated in order to replenish the scrapped / BER part.
- New process parameter 'Allow Requested Part # which is not an alternate of the Removed Part # during Disassembly & Assembly?' has been added under the entity type **Shop Work Order Type** and the entity **All Work Order** in the **Define Process Entities** activity of Common Master to allow the generation of a material request for a part other than the scrapped part or its Alternate.

Process Parameter: Allow Requested Part # which is not an alternate of the Removed Part # during Disassembly & Assembly?	
Value	Impact on generation of material requests
1 for Allowed	The system allows the generation of a material request for the requested part regardless of whether the requested part is the scrapped part or its Alternate
0 for Not Allowed	The system does not allow the generation of a material request for the requested part if the requested part is the scrapped part or its Alternate

Exhibit 1: Identifies the changes in the **Disassemble & Assemble Core** tab of the **Record Shop Execution Details** screen

The screenshot displays the 'Record Shop Execution Details' interface. On the left is a 'Links' sidebar with various navigation options. The main area features a 'Part Details' table with columns: #, Serial #, NHA Comp. #, Requested Part #, Material Request #, Comp. Removal #, Removal Task #, and Removal Work Order #. The 'Requested Part #' column is highlighted with a red box, and a yellow callout box points to it with the text: 'You can specify a part for material request different from the removed / scrapped/ BER part.' Below the table, there are input fields for 'Reqd. Date' (13-05-2019 03:24:43 PM) and 'Location', along with buttons for 'Update/ Remove', 'Attach Removed Part', 'Attach/ Replace', 'Re-print Routing Slip', and 'Inquire Part Request Status'. At the bottom, there are links for 'Print Part Tag', 'Help on Non-Comp. Removed Serial #', 'View File', 'Inquire Stock Availability', 'Help on Non-Comp. Installed Serial #', and 'Create New Part Request'.

#	Serial #	NHA Comp. #	Requested Part #	Material Request #	Comp. Removal #	Removal Task #	Removal Work Order #
1		C002628-2015					
2							

WHAT'S NEW IN ENGINEERING CHANGE MANAGEMENT?

Enhancements in Engineering Change Management

APRP-240, APRP-241, APRP-242, APRP-243, APRP-244, APRP-611, APRP-676

Background

The engineering change management process has been primarily enhanced with capturing additional criteria to decide the components affected by an engineering change and including a restriction framework as a part of engineering change management. This way the Engineering team can enter an SB/AD/SIL directly into the system without having to decode the components affected by them. An auxiliary impact assessment process has been introduced to understand the impact of an Engineering Change on components and customer contracts in the system.

Change Details

Maintenance Change Request

In **Maintenance Change Request** business component, the following controls are added to meet various requirements:

- Two fields 'Mandatory?' and Reliability 'Impact?' are added to identify if an engineering change is mandatory and if an engineering change will affect the reliability.
- Four user defined fields have been added in the MCR as a data capture that can then be used for reporting purposes. Out of the four, two user defined fields have been provided as a drop-down and two others as editable fields.
- 'External Ref. #' field has been added to capture the SB/AD/SIL number against which the MCR is being created.

Exhibit 1: New controls addition in **Create Maintenance Change Request** screen

The screenshot displays the 'Create Maintenance Change Request' screen. The interface is divided into several sections with various input fields and controls. Annotations highlight the following new controls:

- External Ref. #**: A text field in the 'MCR Identification Details' section, highlighted with a yellow callout.
- Mandatory Flag**: A dropdown menu labeled 'Mandatory?' in the 'MCR Details' section, highlighted with a yellow callout.
- Reliability Impact Flag**: A dropdown menu labeled 'Reliability Impact?' in the 'MCR Details' section, highlighted with a yellow callout.
- User Defined Fields (Drop-down)**: Two dropdown menus labeled 'User Defined 1' and 'User Defined 2' in the 'MCR Details' section, highlighted with a yellow callout.
- User Defined Fields (Editable)**: Two text input fields labeled 'User Defined 3' and 'User Defined 4' in the 'MCR Details' section, highlighted with a yellow callout.

The screen also shows other standard fields like 'MCR # / Rev. #', 'Subject', 'Doc. Issue Date', 'Eff. From Date', 'Eng. Doc. Level', 'Receipt Date', 'User Status', 'MCR Class', 'Part Identifier', 'Reason Category', 'Impact Assessment?', 'Reason', and 'Background'.

- d. 'Impact Assessment?' flag has been introduced to decide if a change request needs an impact assessment carried out on it. Impact assessment is nothing but understanding which components are affected by the engineering change and which customer contracts are in place to cover these changes. A process parameter is added to decide if the impact assessment process is applicable to an organisation. This flag is only activated if the process parameter is configured to make impact assessments applicable to engineering change on a case to case basis.

If a maintenance change request is flagged as impact assessment not required, system will not consider the MCRs in 'Confirmed' status without impact assessment document towards MCRs pending impact assessments. Further details about impact assessment are covered in the Impact Assessment section of the enhancement notification.

Exhibit 2: Impact Assessment flag in Create Maintenance Change Request screen

The screenshot shows the 'Create Maintenance Change Request' screen. The 'Impact Assessment?' dropdown is highlighted with a red box and a yellow callout bubble pointing to it with the text 'Impact Assessment drop-down list box'. The dropdown is currently set to 'Not Required'. Other fields include MCR #, Subject, Doc. Issue Date, Eff. From Date, External Ref. #, Status, Receipt Date, User Status, MCR Class, Part Identifier, Reason Category, Reliability Impact?, User Defined 1-4, Reason, and Background.

Apart from controls that are added on MCR screens, few new links have been added. Firstly, a new link called "Edit Advanced Part Effectivity" has been introduced to capture part serial effectivity for an engineering change. On click of this link the "Edit Advanced Part Effectivity" screen is launched that has some part criteria to decide the part numbers that are affected and serial criteria to decide the specific serials under the part number that are affected by the Engineering Change.

Exhibit 3: Advanced Part Effectivity link in Edit Maintenance Change Request screen

The screenshot displays the 'Edit Maintenance Change Request' screen. At the top, there's a breadcrumb trail: Engineering Change Management > Maintenance Change Request > Edit Maintenance Change Request. Below this, a table with the following columns is shown: #, Aircraft Model #, Model Type, and Model Description. The table currently shows one row with the number '1' in the first column. Below the table, there are three main sections: 'Document Attachment Details' with fields for File Name and buttons for Edit MCR, Confirm MCR, and Cancel MCR; 'Link Info' with a list of links including 'Edit Advanced Part Effectivity' (highlighted with a red box and a yellow callout); and 'Record Statistics' with fields for Created by, Last Modified by, Confirmed by, and Comments, along with dates.

Part criteria includes a specific part# and part# range. A range of affected parts can either be defined in terms of a from and to part# in which case system will fetch all parts that fall between the two part# or by including one or more "*" in the part# in which case system will replace the "*" with Alphanumeric characters and identify parts from the system that match the criteria.

Serial criteria include a specific serial#, serial# range and manufacturing date range. A range of affected serials to a part or group of parts can either be defined in terms of a from an to serial# in which case system will fetch all serials that fall between the two serial# or in terms of a from and to manufacturing date in which case the system will fetch all serials that were manufactured between the two dates provided. Specific component# can also be entered directly instead of part criteria and serial criteria. If user enters an aircraft model, system will check if the part criteria mentioned is mapped to the aircraft model in "Manage Part Effectivity" screen.

Apart from part and serial criteria this screen also has some data capture fields to capture mod information, repair agency and repair date range. This screen also carries the restriction framework which is nothing but associating a restriction code to a specific part or component in the system. As a part of restriction framework a flag to capture if restriction is applicable to a row and the restriction code to be associated to the components covered in a row are introduced along with any restriction remarks. Applicability group can also be defined to each row in advanced part effectivity. All this information will then flow into a process change request document created from the MCR.

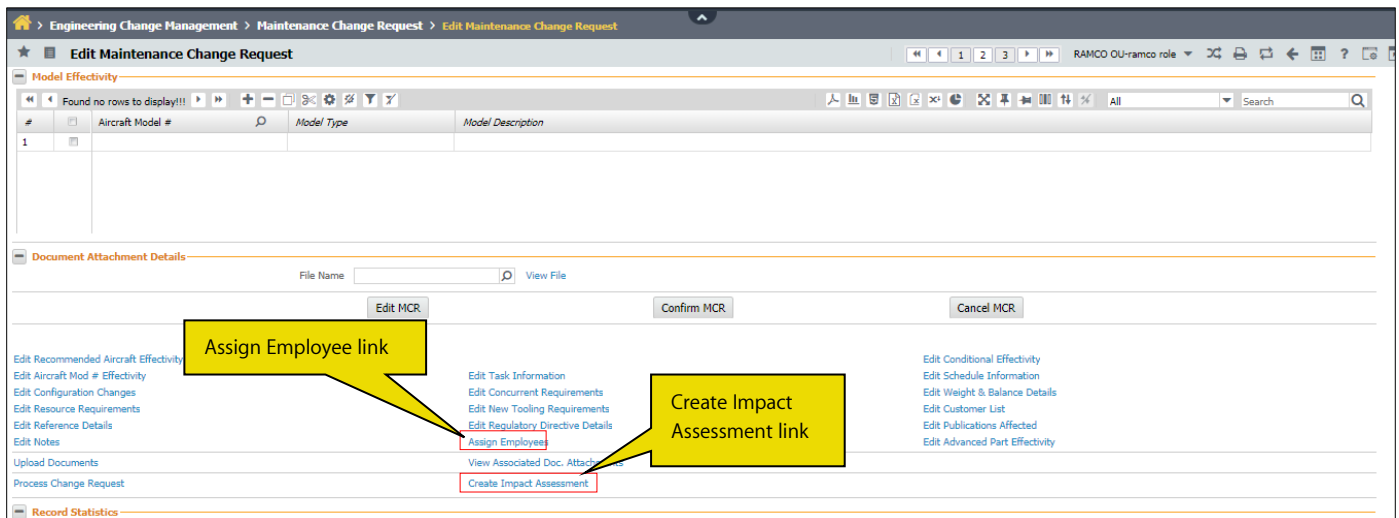
Exhibit 4: Edit Advanced Part Effectivity screen (Part Criteria & Serial Criteria)

The screenshot displays the 'Edit Advanced Part Effectivity' screen. At the top, there's a breadcrumb trail: Engineering Change Management > Maintenance Change Request > Edit Advanced Part Effectivity. Below this, there's a 'Document Details' section with fields for Doc Type (MCR), Subject (Cleaning of the Fullface Oxygen ...), Doc. # (MCR000097), Source Doc Type (SB), Revision # (000), and Applicability (Component). Below this, there's a table with the following columns: #, Part #, Part # From, Part # To, Aircraft Model #, MSN, MSN - From, MSN - To, Mfg. Date From, and Mfg. Date To. The table currently shows one row with the number '1' in the first column. A yellow callout box points to the 'Part Criteria' section (Part #, Part # From, Part # To), and another yellow callout box points to the 'Serial Criteria' section (MSN, MSN - From, MSN - To, Mfg. Date From, Mfg. Date To). At the bottom, there's a button labeled 'Edit Part Effectivity'.

The next link that has been added is the “Assign Employee” link. This is to identify the employee who is assigned to a particular Engineering Change in any organisation. This link was previously only available for an Engineering Order document but this is now available in Maintenance Change Request as well.

Finally a new link called **Create Impact Assessment** has been added to enable users to create an impact assessment document from Maintenance Change Request. This link can only be launched for an MCR in “Confirmed” status. Further details about impact assessment can be found in the Impact Assessment section of the document.

Exhibit 5: Assign Employee & Create Impact Assessment links in Edit Maintenance Change Request screen



Impact Assessment

Impact assessment is carried out by the Engineering Team in an organization to primarily understand the financial benefit in performing an Engineering Change. This is mostly applicable to engineering changes that are not mandatory but have a reliability benefit. System will display the number of components that are affected by the change and any MRO can analyze the cost benefit in carrying out the change based on this number.

In case of organizations that operate in an ITM model, they can also analyze the customer contracts in place to cover the maintenance of the affected parts. They can then estimate the number of affected parts for each customer and initiate a customer request to perform the change and showcase the financial benefit that arises from the change.

The impact assessment document that is rolled out can display the impacted components and impacted contracts based on a maintenance change request entered in the system. Once the impact is analyzed, approvals against the impact can also be recorded and tracked within the document. An entry point screen is provided to categorize impact assessment documents pending different approvals, through tiles. A search page is also provided to search for a specific impact assessment.

Exhibit 6: Select Documents for Processing screen (Select screen for Impact Assessment documents)

RAMCO OU-ramco role

Select Documents for Processing

Pending Impact 8 Pending Confirmation 5 Pending Internal Approval 7 Pending Engineering Approval 8 Pending Customer Approval 8

Tiles to categorize documents pending

Impact Assessment Details

#	Ref. Doc. Type	Ref. Doc. #	Ref. Doc. Rev. #	Assessment #	Assessment Rev. #	Assessment Status	Assessment Date	Assessment Summary
1	MCR	IMPACTASST002	123	Asmt2	1	Fresh	11-21-2019	Summ2
2	MCR	IMP ASS DOC 2	1	Asmt12345	5	Fresh	12-04-2019	Sum1
3	MCR	TEST800	00	Test800	4	Fresh	01-17-2020	Test800
4	MCR	IMP ASS DOC 3	1	Imp098	1	Fresh	01-21-2020	rt321
5	MCR	TEST798	01	Test798b	0	Fresh	01-22-2020	Test798b

Create Impact Assessment Document

The impacted component tab displays all 'active' components in the system, that are affected by the Engineering Change based on the advanced part affectivity. This tab will also display the stock status, ownership, mod information and availability of the components in the system.

Exhibit 7: Impacted Component Info. tab

Engineering Change Management > Engineering Document > Manage Engineering Impact for Customer Contracts

Manage Engineering Impact for Customer Contracts

Create Edit/View

Impact Assessment # / Rev # Test800 4 Status Fresh

Document Details

Impact Summary Test800

Ref. Doc. Type MCR

Subject Testing Impact Assessment

Impact Date 01-17-2020

Ref. Doc. # / Rev. # TEST800 00

Source Doc. Type CG70

Impact Category

Ref. Doc. Class

Mandatory/Reliability Impact? Yes/Yes

Impact Assessment Details

Impacted Component Info. Assess Contract Impact Approvals

View Option Internal Parts Customer Parts Supplier Parts

Get Impacted Components

#	Part #	Part Description	Serial #	MSN	Component #	Stock Status	Ownership	Trading Partner	In-Stock?	Already Compl
1	00001	<3	SL-000403-2019	09676543	COMP-000608-2019	A1 Owned	Customer	400007	Yes	
2	00001	<3	SL-000415-2019	MSN-27Nov2017-07	COMP-000609-2019	Accepted	Owned		No	
3	00001	<3	SL-000422-2019	hji	COMP-000610-2019	Accepted	Owned		Yes	
4	00001	<3	SL-000423-2019	gi	COMP-000611-2019	Accepted	Owned		Yes	
5	00001	<3	SL-000450-2019	00001-1	COMP-000613-2019	Accepted	Owned		No	
6	00001	<3	SL-000451-2019	00001-2	COMP-000614-2019	Accepted	Owned		Yes	
7	00001	<3	SL-000452-2019	00001-3	COMP-000615-2019	Accepted	Owned		Yes	
8	00001	<3	SL-000453-2019	00001-4	COMP-000616-2019	Accepted	Owned		Yes	
9	00001	<3	SL-000454-2019	00001-5	COMP-000617-2019	Accepted	Owned		Yes	
10	00001	<3	SL-000455-2019	00001-6	COMP-000618-2019	Accepted	Owned		Yes	
11	00001	<3	SL-000456-2019	00001-7	COMP-000619-2019	Accepted	Owned		Yes	

Save

Initiate Cost Benefit Analysis

Confirm

Cancel

Record Statistics

Created by DMUSER

Last Modified by DMUSER

Created Date 01-21-2020

Last Modified Date 01-21-2020

The assess contract impact assessment tab can either be used to enter parts and their contract information and system will fetch the affected number of parts attached to a specific aircraft model or specific aircraft or the help on impacted contracts can be used to fetch contracts that are impacted based on the parts that are affected by the engineering change from advanced part effectivity in MCR.

Exhibit 8: Assess Contract Impact tab

Document Details

Impact Summary: Test800
 Ref. Doc. Type: MCR
 Subject: Testing Impact Assessment

Impact Date: 01-17-2020
 Ref. Doc. # / Rev. #: TEST800 / 00
 Source Doc. Type: OG70

Impact Category:
 Ref. Doc. Class:
 Mandatory/Reliability Impact?: Yes/Yes

Impact Assessment Details

Impacted Component Info. | **Assess Contract Impact** | Approvals

#	Cust. Ref. #	Status	Part #	Part Description	Customer #	Contract #	Sale Type	Rem. from A/C Reg.	Rem. from A/C Model	Contracts
1	1	Confirmed	00001	<3	400007	SC-22	T & M		A310	
2	2	Fresh	00001	<3	400007	CNT-PARTS-FD246581	Blended			
3	3	Fresh	00001	<3	400007	SC-22	T & M		A310	
4										

Help on Impacted Contracts link

Buttons: Save, Confirm, Cancel

Record Statistics: Created by: DMUSER, Last Modified by: DMUSER, Created Date: 01-21-2020, Last Modified Date: 01-21-2020

Exhibit 9: Help on Impacted Contracts screen

Help on Impacted Contracts

Ref. Doc. Type: MCR
 Ref. Doc. # / Rev. #: TEST800 / 00

Search Criteria

Customer #:
 Contract #:
 Rem. from A/C Model:
 Aircraft Reg. Level:
 Aircraft Model Level:
 Search

Impacted Parts in Contracts

#	Part #	Part Description	Customer #	Contract #	Sale Type	Rem. from A/C Reg.	Rem. from A/C Model
1	00001	<3	400007	Airindia023	T & M		A310
2	00001	<3	400007	AirIndiacnw	T & M		A310
3	00001	<3	400007	EvaCon01	T & M		A310
4	00001	<3	400007	EvaCon01Exch	T & M		A310
5	00001	<3	400007	PARTFPMAC01	PBH		A310
6	00001	<3	400007	RegressionContract	T & M		A310
7	00001	<3	400007	RORRTEST	T & M		A310
8	00001	<3	400007	SC-001	T & M		A310
9	00001	<3	400007	sc-20	T & M		A310
10	00001	<3	400007	SC-22	T & M		A310

Buttons: Ok, Confirm, Cancel

Record Statistics: Created by: DMUSER, Last Modified by: DMUSER, Created Date: 01-21-2020, Last Modified Date: 01-21-2020

The impact assessment document comes with a third tab for managing the approvals on each row in contract impact tab. The significance of each row is that they carry the impact of a part on a specific customer contract. System can capture an internal approval, engineering approval and a customer approval. If any of these approvals are flagged as required in the contract impact tab, on confirmation of the row it shows up for approval in the approval tab.

Exhibit 10: Approvals tab

Engineering Change Management > Engineering Document > Manage Engineering Impact for Customer Contracts

★ Manage Engineering Impact for Customer Contracts

Create Edit/View Impact Assessment # / Rev # **Test800** 4 Status Confirmed

Document Details

Impact Summary **Test800** Impact Date **01-17-2020** Impact Category
 Ref. Doc. Type **MCR** Ref. Doc. # / Rev. # **TEST800** 00 Ref. Doc. Class
 Subject **Testing Impact Assessment** Source Doc. Type **CG70** Mandatory/Reliability Impact? **Yes/Yes**

Impact Assessment Details

Impacted Component Info. Assess Contract Impact: **Approvals**

#	Part #	Part Description	Customer #	Sys. Imp. Qty.	Proposed Qty.	Internal Approval Status	Internal Approval Date
1	00001	<3	400007			Rejected	
2	00001	<3	400007			Rejected	
3	00001	<3	400007	12	12	Approved	01-24-2020

Record Approval

Confirm Cancel

Record Statistics

Created by: DMUSER Created Date: 01-21-2020
 Last Modified by: DMUSER Last Modified Date: 01-21-2020

Process Change Request

In Process Change Request, an auto-embodiment flag is introduced to enable auto-embodiment during the decision for executing the engineering change. This flag will then flow to an Engineering Order that is created from the PCR.

Some user defined fields are now added to PCR document to capture any additional data during the processing of an engineering change which can be used for reporting purposes. User defined fields are added both in the header and the multiline of the document.

Exhibit 11: Auto-Embodiment Flag and User Defined fields in Header in Process Change Request screen

Engineering Change Management > Engineering Document > Process Change Request

★ Process Change Request

MCR Details

Process Ref. # **PCR-000150-2020** Process Ref. Status **Confirmed** MCR # **TEST396**
 MCR Rev. # **1** Reliability Impact? **No**
 Source Doc. Type **CG70**

Processing Details

Execution Decision **Execute** Reason for Non-Execution
 Processing comments
☐ Auto-Embodiment Required?

Default Details

User Defined Details

User Defined 1 User Defined 2 User Defined 3
 User Defined 4 User Defined 5 User Defined 6

Effectivity Details

#	Aircraft Reg. #	Part #	Serial #	MCR Appl. Group #	Applicable?	Mode of Execution	Eng. Doc Type	Category
1		00001	SL-000402-2019	0	Yes	New Eng. Doc.	DWG	
2		00001	SL-000415-2019	0	Yes	New Eng. Doc.	DWG	
3		00001	SL-000422-2019	0	Yes	New Eng. Doc.	DWG	
4		00001	SL-000423-2019	0	Yes	New Eng. Doc.	DWG	
5		044578:61349	027	2	Yes	New Eng. Doc.	DWG	
6		044578:61349	028	2	Yes	New Eng. Doc.	DWG	
7		044578:61349	029	2	Yes	New Eng. Doc.	DWG	
8		044578:61349	031	2	Yes	New Eng. Doc.	DWG	
9								

Exhibit 12: User defined fields added in multiline of Process Change Request screen

The screenshot displays the 'Process Change Request' screen. The 'User Defined Details' section shows six user-defined fields (User Defined 1 through User Defined 6). A yellow callout box labeled 'User defined fields' points to the multiline table below. The table has columns for User Defined 7 through User Defined 12, and a 'Created by' column. The table contains 9 rows of data, all created by 'DMUSER' on '01-10'.

#	User Defined 7	User Defined 8	User Defined 9	User Defined 10	User Defined 11	User Defined 12	Created by	Ch
1							DMUSER	01-10
2							DMUSER	01-10
3							DMUSER	01-10
4							DMUSER	01-10
5							DMUSER	01-10
6							DMUSER	01-10
7							DMUSER	01-10
8							DMUSER	01-10
9							DMUSER	01-10

One of the key enhancements in PCR is for the system to explode the impacted part serials based on the criteria mentioned in the new advanced part effectivity screen.

Disposition code and Disposition remarks are added in the multiline to capture if this change will be carried out on-attrition or on a retrofit program or on next shop visit. Remarks to these disposition decisions can also be captured. The restriction flag, restriction code and restriction remarks flows from advanced part effectivity to Process Change Request. All components that arrived at based on a set of criteria from a particular row in advanced part effectivity will inherit the restriction flag, restriction code and restriction remarks in that row. A similar behaviour will be observed for advanced part effectivity.

Exhibit 13: Restriction framework in PCR

The screenshot displays the 'Process Change Request' screen. The 'User Defined Details' section shows six user-defined fields (User Defined 1 through User Defined 6). A yellow callout box labeled 'Restriction framework' points to the multiline table below. The table has columns for Disposition Code, Disposition Remarks, Restricted?, Restriction Code, Restriction Remarks, and Reason for Non-Execution. The table contains 9 rows of data.

#	Disposition Code	Disposition Remarks	Restricted?	Restriction Code	Restriction Remarks	Reason for Non-Execution
1			No			
2			No			
3			No			
4			No			
5			No			
6			Yes	Obsolescence		
7			Yes	Goods Inward		
8			No			
9			No			

Engineering Document

Engineering Document has been enhanced to apply the restrictions defined in PCR to the component on release of EO. The auto embodiment function has also been enhanced to auto embody based on the new advanced part effectivity and the criteria mentioned there. Apart from this, a set of user defined fields have been provided on the header and multiline of Engineering Document as well. These fields can be used to capture any data which can be used for reporting.

Exhibit 14: User Defined fields in Header of Manage Eng. Document screen

The screenshot shows the 'Manage Eng. Document' screen. The left sidebar contains a search bar and a list of documents. The main area displays the document details for 'EO-TEST396 / 0'. A yellow callout box labeled 'User defined fields' points to a section containing six dropdown menus: 'EO User Defined 1' (value: test), 'EO User Defined 2' (value: test), 'EO User Defined 3' (value: test), 'EO User Defined 4' (value: TET), 'EO User Defined 5' (value: EOUD5), and 'EO User Defined 6' (value: EOUD6).

Exhibit 15: User Defined fields in multiline of Manage Eng. Document screen

The screenshot shows the 'Manage Eng. Document' screen with the 'Effectivity' tab selected. A yellow callout box labeled 'User defined fields' points to a table with columns for 'User Defined 8', 'EO User Defined 9', 'EO User Defined 10', 'EO User Defined 11', and 'EO User Defined 12'. The table contains data for various parts and serials.

#	Part #	Serial #	MSN	Serial Exists?	User Defined 8	EO User Defined 9	EO User Defined 10	EO User Defined 11	EO User Defined 12
1	00001	SL-000402-2019	09876543	Yes					
2	00001	SL-000415-2019	MSN-27Nov20...	Yes					
3	00001	SL-000422-2019	hij	Yes					
4	00001	SL-000423-2019	gi	Yes					
5	044578-61349	027	027	Yes					
6	044578-61349	n7R	n7R	Yes					

Controls such as disposition code, disposition remarks, restriction flag, restriction code and restriction remarks are added in the multiline in Effectivity tab for data coming from PCR and provide the ability to edit any of this data before releasing an engineering document.

Exhibit 16: Restriction framework in Manage Eng. Document screen

The screenshot displays the 'Manage Eng. Document' screen in the RAMCO Engineering Change Management system. The interface includes a left sidebar with navigation options like 'Eng. Doc. / MCR', 'MCR', and 'Eng. Doc.'. The main area shows the 'Eng. Doc. # / Rev. #' as 'EO-TEST396 / 0'. The 'Status' is 'Fresh' and 'Revoked?' is 'No'. The 'Effectivity' tab is active, showing 'Effectivity Details' for 'At Serial Level'. A table titled 'Restriction framework' is highlighted with a red box and a yellow callout. The table has columns for '#', 'Part #', 'Serial #', 'MSN', 'Serial Exists?', 'Restricted?', 'Restriction Code', and 'Restriction Remarks'. The data rows show various serial numbers and their corresponding restriction status.

#	Part #	Serial #	MSN	Serial Exists?	Restricted?	Restriction Code	Restriction Remarks
1	00001	SL-000402-2019	09876543	Yes	No		
2	00001	SL-000415-2019	MSN-27Nov20...	Yes	No		
3	00001	SL-000422-2019	hji	Yes	No		
4	00001	SL-000423-2019	gj	Yes	No		
5	044578-61349	027	027	Yes	No		
6	044578-61349	027	027	Yes	Yes	...	Phenylene ...

Ability to specify Effective From Date at Maintenance Object level in MCR and EO

Reference: APRP-150

Background

Currently, Engineering Order function in Ramco has a provision to specify the Effective Date of Maintenance Change Request/Engineering Order only at the document level i.e., effective date is the same for all the Aircraft or Components in the MCR/EO. However, there are AD/SBs impacting multiple Aircraft or Components that is effective from the Entry into Service Date or Delivery Date or Manufacture Date. Hence, in this enhancement provision to specify Effective Date in MCR/EO at the Maintenance Object level is provided.

Change Details

Common Master

Define Process Entities

A new process parameter "Allow modification of 'Eff. From Date' basis upon revision of Eng. Doc.?" is added under the Entity Type 'Eng. Doc Type' and Entity 'All Eng. Doc' in the **Define Process Entities** activity of the **Common Master** business component. The following are the permitted values:

- '0'(No) – Does not allow modification of the Effectivity From Date Basis upon/after revision of the Eng. Doc. #.
- '1'(Yes) – Allows modification of the Effectivity From Date Basis upon/after revision of the Eng. Doc. #.

Maintenance Change Request

Create Maintenance Change Request

A new drop-down field "Eff. From Date" is added in the "MCR Identification Details" section with the following values:

- Eng. Doc. Level – Effective From Date of the MCR is specified at document level.
- Maint. Obj. Level - Effective From Date of the MCR is specified at maintenance object level.

On selection of the value 'Eng. Doc. Level', the editable field alongside gets enabled.

On selection of the value 'Maint. Obj. Level', the following fields appear in the "Model Effectivity Details" multiline:

- Reference Date Basis – The Effective From Date of the maintenance Object which could be "Induction Date", "Operational Date" or "Manufactured Date."
- Eff. From Date - The Effective From Date of the maintenance Object.

Same fields are added in the **Edit Maintenance Change Request** and **Revise Maintenance Change Request** screens.

These fields appear as display only fields in **View Maintenance Change Request** screen.

Exhibit 1: Identifies the Create Maintenance Change Request screen

Engineering Change Management > Maintenance Change Request > Create Maintenance Change Request

★ Create Maintenance Change Request

Date Format: mmm/dd/yyyy

MCR Identification Details

MCR # / Rev. #: test1
 Subject:
 Doc. Issue Date: Aug/05/2019
 Eff. From Date: **Maint. Obj. Level** (New drop down values added)
 Status:
 Receipt Date: Aug/05/2019
 User Status:
 Revision #:

Copy Details

MCR #: **Maint. Obj. Level** (New drop down values added)
 Copy Options: ☐ All ☐ Effectivity

MCR Details

Applicability:
 Effectivity Type: Direct
 ATA #:
 Reason:
 Background:
 Consequences:
 Action:
 Terminating MCR:
 MCR Class:
 Part Identifier: Internal
 Reason Category:

Source Document Details

Manufacturer #:
 Manufacturer Name:
 Source / Doc Type:
 Regulatory Authority:
 Source Doc Type:

Execution Details

Warranty Information

Warranty Applicability: ☐ Material ☐ Facilities ☐ Labour ☐ Others

Contact Details

Manufacturer Address:
 Contact Person:
 Work Phone #:
 Email:

Model Effectivity Details

#	Aircraft Model #	Reference Date Basis	Eff. From Date	Model Type	Model Description
1		Induction Date (New fields added) Operational Date Manufactured Date			

Document Attachment Details

File Name:
 View File:
 Create Request
 Confirm Request

Link Info

[Edit Recommended Aircraft Effectivity](#)
[Edit Customer List](#)
[Edit Schedule Information](#)
[Edit New Tooling Requirements](#)
[Edit Regulatory Directive Details](#)
[Edit Notes](#)
[Upload Documents](#)
[Edit Maintenance Change Request](#)

[Edit Recommended Part Effectivity](#)
[Edit Aircraft Mod # Effectivity](#)
[Edit Configuration Changes](#)
[Edit Resource Requirements](#)
[Edit Reference Details](#)
[View Associated Doc. Attachments](#)
[Process Change Request](#)

[Edit Conditional Effectivity](#)
[Edit Task Information](#)
[Edit Concurrent Requirements](#)
[Edit Weight & Balance Details](#)
[Edit Publications Affected](#)

Edit Recommended Part Effectivity

Two new fields 'Reference Date Basis' and 'Effective From Date' are added at part level in the "Part Effectivity Details" multiline of the **Edit Recommended Part Effectivity** screen. These fields appear only if the 'Effective From Date' is specified at Maintenance Object Level in MCR. These fields appear as display only fields in **View Recommended Part Effectivity** screen.

Exhibit 2: Identifies the **Edit Recommended Part Effectivity** screen

The screenshot displays the 'Edit Recommended Part Effectivity' screen. At the top, the breadcrumb navigation shows 'Engineering Change Management > Maintenance Change Request > Edit Recommended Part Effectivity'. The main header area contains 'MCR Details' with fields for MCR # / Rev. # (MCR23), Subject (Creation1), Part Identifier (Internal), Revision # (1), Source Doc Type (AD), and Applicability (Component). Below this is the 'Part Effectivity Details' section, which features a table with columns: #, Part #, Part Description, Manufacturer Name, Reference Date Basis, and Eff. From Date. The first row shows Part # 03T034M064-503:05UN6, Part Description KIT, and Eff. From Date May/21/2019. A dropdown menu for the 'Reference Date Basis' column is open, showing options: Induction Date, Operational Date, and Manufactured Date. A yellow callout box with the text 'New fields added' points to the 'Reference Date Basis' and 'Eff. From Date' columns.

Edit Recommended Aircraft Effectivity

Two new fields 'Reference Date Basis' and 'Effective From Date' are added at aircraft level in the "Aircraft Effectivity" multiline of the **Edit Recommended Aircraft Effectivity** screen. These fields appear only if the 'Effective From Date' is specified at Maintenance Object Level in MCR. These fields appear as display only fields in **View Recommended Aircraft Effectivity** screen.

Exhibit 3: Identifies the **Edit Recommended Aircraft Effectivity** screen

The screenshot displays the 'Edit Recommended Aircraft Effectivity' screen. At the top, the breadcrumb navigation shows 'Engineering Change Management > Maintenance Change Request > Edit Recommended Aircraft Effectivity'. The main header area contains 'MCR Details' with fields for MCR # / Rev. # (5890), Subject (test for mcr), Manufacturer #, Revision # (168), and Source Doc Type (XZ16). Below this is the 'Aircraft Identification Detail' section, which features a dropdown for Aircraft Identifier Type (Aircraft Reg #). The 'Aircraft Effectivity' section features a table with columns: #, From Aircraft Identifier #, To Aircraft Identifier #, Applicability Group #, Reference Date Basis, and Eff. From Date. The first row shows a single record with no data in the identifier fields. A dropdown menu for the 'Reference Date Basis' column is open, showing options: Induction Date, Operational Date, and Manufactured Date. A yellow callout box with the text 'New fields added' points to the 'Reference Date Basis' and 'Eff. From Date' columns.

Edit Recommended Component Effectivity

Two new fields 'Reference Date Basis' and 'Effective From Date' are added at component level in the "Component Effectivity" multiline of the **Edit Recommended Component Effectivity** screen. These fields appear only if the 'Effective From Date' is specified at Maintenance Object Level in MCR. These fields appear as display only fields in **View Recommended Component Effectivity** screen.

Exhibit 4: Identifies the **Edit Recommended Component Effectivity** screen

The screenshot displays the 'Edit Recommended Component Effectivity' screen. It includes sections for MCR Details, Part Details, and Component Effectivity. The Component Effectivity section features a table with columns for serial numbers, applicability group, and two new fields: 'Reference Date Basis' and 'Eff. From Date'. A dropdown menu is shown for the 'Reference Date Basis' field, listing 'Induction Date', 'Operational Date', and 'Manufactured Date'. A yellow callout box highlights these new fields with the text 'New fields added'.

Edit Advanced Part Effectivity

Two new fields 'Reference Date Basis' and 'Effective From Date' are added at part level in the "Part Effectivity Details" multiline of the **Edit Advanced Part Effectivity** screen. These fields appear only if the 'Effective From Date' is specified at Maintenance Object Level in MCR. These fields appear as display only fields in **View Advanced Part Effectivity** screen.

Exhibit 5: Identifies the **Edit Advanced Part Effectivity** screen

The screenshot displays the 'Edit Advanced Part Effectivity' screen. It includes sections for Document Details and Advanced Part Effectivity Details. The Advanced Part Effectivity Details section features a table with columns for serial numbers, restriction codes, MCR remarks, and two new fields: 'Reference Date Basis' and 'Eff. From Date'. A dropdown menu is shown for the 'Reference Date Basis' field, listing 'Induction Date', 'Operational Date', and 'Manufactured Date'. A yellow callout box highlights these new fields with the text 'New fields added'.

Engineering DocumentProcess Change Request

On click of the "Confirm Assessment" pushbutton in the **Process Change Request** screen, if 'Eff. From Date' basis of the MCR is set at "Maint. Obj. Level", then the Ref. From Date basis and Effec. From Date of the Maint. Objects

(Aircraft Model #, Aircraft Reg. #, Part #, Component #) applicable for the corresponding MCR # are saved and inherited to the created Eng. Doc. #.

Manage Engineering Document

A new drop-down field "Eff. From Date" is added in the "Main" tab of the **Manage Eng. Document** screen with the following values:

- Eng. Doc. Level - Effective From Date of the EO is specified at document level.
- Maint. Obj. Level - Effective From Date of the EO is specified at maintenance object level.

On selection of the value 'Eng. Doc. Level', the editable field alongside gets enabled.

On selection of the value 'Maint. Obj. Level', the following fields appear in the "Effectivity Details" multiline (both Serial Range and the Serial Level) in the "Effectivity" tab:

- Reference Date Basis - The Effective From Date of the maintenance Object which could be "Induction Date", "Operational Date" or "Manufactured Date."
- Eff. From Date - The Effective From Date of the maintenance Object.



Note: The 'Effec. From Date' field in the "Schedules" tab will be disabled if the 'Effec. From Date' field in the "Main" tab is selected as 'Maint. Obj. Level'.

Exhibit 6: Identifies the **Manage Eng. Document** screen

The screenshot displays the 'Manage Eng. Document' interface. The left sidebar contains a search bar and a list of links. The main area shows the 'Main' tab with various fields for document management. A red box highlights the 'Eff. From Date' dropdown menu, which lists 'Eng. Doc. Level', 'Eng. Doc. Level', and 'Maint. Obj. Level'. A yellow callout box points to this dropdown with the text 'New drop down values added'.

Exhibit 7: Identifies the **Effectivity** tab in **Manage Eng. Document** screen

The screenshot shows the 'Effectivity' tab in the 'Manage Eng. Document' screen. It features two tables, each with a 'Display Serial Details' button above it. Both tables have columns for '#', 'Part #', 'Aircraft Model #', 'Include All', 'A/C', 'MSN - From', 'MSN', 'Applicable?', 'Reference Date Basis', and 'Effect. from Date'. The 'Reference Date Basis' and 'Effect. from Date' columns are highlighted with red boxes, and yellow callouts point to them with the text 'New fields added'. The bottom of the screen includes a 'Save' button and a 'Revision comments' field.

Update Eng. Doc Effectivity

Two new fields 'Reference Date Basis' and 'Effective From Date' are added in the "Eng. Doc. Details" multiline of the **Update Eng. Doc Effectivity** screen. These fields appear only if the 'Effective From Date' is specified at Maintenance Object Level in EO.

The search logic for the 'Date From/To' field 'Effective From' value in the "Search Criteria" section has been modified such that if the Effective From Date of the Maintenance object in an EO falls between the given search values, then that Maintenance Object will be retrieved.

Exhibit 8: Identifies the Update Eng. Doc Effectivity screen

The screenshot shows the 'Update Eng. Doc Effectivity' screen. The 'Search Criteria' section includes fields for Maintenance Object (Model #), Eng. Doc # / Rev #, Source Doc. Type, MCR # / Rev #, Eng. Doc Attributes (Exe. Type), Date From / To, and Eff. From Date. A yellow callout 'Search logic modified' points to the 'Date From / To' and 'Eff. From Date' fields. The 'Default Details' section includes Compliance Status, Compliance Date, Compliance Remarks, Reason for Non-Exec, and Ref. Doc. #. The 'Eng. Doc Details' section shows a table with columns: #, Exe. Type, ATA #, Release Date, Doc. Issue Date, Effec. from Basis, Reference Date Basis, and Effec. from Date. A yellow callout 'New fields added' points to the 'Reference Date Basis' and 'Effec. from Date' columns. The 'Object Details' section includes Maintenance Object (Aircraft Reg #) and an 'Update Effectivity' button. At the bottom, there are links for 'Initialize Maint. Prog. & Update Compliance' and 'Process Change Request'.

Initialize Eng. Doc Schedules

The 'Effective From Date' field displays the value "Maint. Object Level" if the Engineering Document is applicable at Maintenance object level.

The 'Next Due Calc. On (Eng. Doc.)' and 'Calc. Ref. Date/Value (Eng. Doc.)' fields in the "Eng. Doc Schedule Details" multiline displays the value based on the Effective From Date considered for each Maintenance object.

Exhibit 9: Identifies the Initialize Eng. Doc Schedules screen

The screenshot shows the 'Initialize Eng. Doc Schedules' screen. The 'Eng. Doc Details' section includes Eng. Doc # (EO-000549-2014) and Source Doc. Type. The 'Exception Summary' section shows buttons for All (1), Overdue (1), and Alert (0). The 'Eng. Doc Schedule Details' section shows a table with columns: #, Iization Value, Next Sch. Date (Eng. Doc.), Next Sch. Value (Eng. Doc.), Current Value, Rem. Value (Eng. Doc.), Next Due Calc. On (Eng. Doc.), Calc. Ref. Date/Value (Eng. Doc.), Alert Date (Eng. Doc.), and Alert Value (Eng. Doc.). A yellow callout 'Displays "Maint. Object Level" if the Engineering Document is applicable at Maintenance object level' points to the 'Effective From Date' field. Another yellow callout 'Effective From Date value considered for each Maintenance object will be displayed' points to the 'Next Due Calc. On (Eng. Doc.)' and 'Calc. Ref. Date/Value (Eng. Doc.)' fields. The 'Initialize Schedules' button is at the bottom. At the bottom, there are links for 'View Aircraft Schedules', 'View Comp. Schedule Details', 'Plan Material Requirements', and 'Release Eng. Doc.'.

Engineering Doc. Compliance Status Report

The search logic for the 'Date From/To' field 'Effective From' value has been modified such that if the Effective From Date of the Maintenance object in an EO falls between the given search values, then that Maintenance Object will be retrieved.

Structural Damage ReportManage Damage Report

On click of 'Save Repair Details' button when the Eng. Doc. specified under the 'Repair Details' tab has the Eff. From Date basis as 'Maint. Object Level' then the system displays the Eff. From Date value of the Maint. Object for which the Damage Report is being modified in the 'Effective From' field (under the same 'Repair Details' tab).

WHAT'S NEW IN AIRCRAFT MAINTENANCE EXECUTION?

Ability to Mandate Sign Off Comments during Sign Off/Void/Reverse/Reject

Reference: APRP-181

Background

Currently, in Ramco Aviation, recording of sign off comments during signoff, voiding, signoff reversal and signoff rejection for tasks is not mandatory. However, the mechanics / inspectors would want to know the grounds particularly for voiding, rejecting and reversing of sign off against tasks. Hence, a provision to mandate the sign off comments which are akin to future reference for these actions against the tasks must be supported in **AME** and **AME Hub**.

Change Details

To ensure that the mechanics provide sign off comments during sign off, reversal of sign off, voiding of tasks and sub tasks the following developments have been incorporated in **AME** and **AME Hub**:

- New process parameter 'Mandate Sign Off Comments during Void?' has been added under the entity type Package Type and the entity Log Card, User Defined Values in the **Define Process Entities** activity of **Common Master** to mandate the sign off comments during voiding of a task.

Process Parameter: Mandate Sign Off Comments during Void?	
Parameter Value	Impact on the entry of sign off comments in the Record Sign Off & Work Completion screen
1 for Yes	The Sign off comments is mandatory for voiding of the task.
0 for No	The Sign off comments is not mandatory for voiding of the task.

- New process parameter 'Mandate Sign Off Comments during Reversal of Sign Off?' has been added under the entity type Package Type and the entity Log Card, User Defined Values in the Define Process Entities activity of Common Master to mandate the sign off comments during reversal of sign off of a task.

Process Parameter: Mandate Sign Off Comments during Reversal of Sign Off?	
Parameter Value	Impact on the entry of sign off comments in the Record Sign Off & Work Completion and Task tab and Discrepancy tab multilines, Task Actions and Discrepancy Actions windows in the Work Reporting Hub screen
1 for Yes	The Sign off comments is mandatory for reversal of sign off of the task.
0 for No	The Sign off comments is not mandatory for reversal of sign off of the task.

To ensure that the mechanics provide signoff comments during signoff, reversal of signoff, voiding and rejection of tasks in Shop Work Order, the following new developments have been incorporated in the system:

- New process parameter 'Mandate Sign Off Comments during Sign Off?' has been added under the entity type Shop Work Order Type and the entity User Defined Values in the **Define Process Entities** activity of

Common Master to enforce entry of the sign off comments during sign off of a task.

Process Parameter: Mandate Sign Off Comments during Sign Off?	
Parameter Value	Impact on the entry of sign off comments in the Record Shop Execution Details screen
1 for Yes	The Sign off comments is mandatory for sign off of tasks.
0 for No	The Sign off comments is not mandatory for sign off of tasks.

- New process parameter 'Mandate Sign Off Comments during Void?' has been added under the entity type Shop Work Order Type and the entity User Defined Values in the **Define Process Entities** activity of **Common Master** to enforce entry of the sign off comments during voiding of a task.

Process Parameter: Mandate Sign Off Comments during Void?	
Parameter Value	Impact on the entry of sign off comments in the Record Shop Execution Details screen
1 for Yes	The Sign off comments is mandatory for voiding tasks.
0 for No	The Sign off comments is not mandatory for voiding tasks.

- New process parameter 'Mandate Sign Off Comments during Reversal of Sign Off?' has been added under the entity type Shop Work Order Type and the entity User Defined Values in the **Define Process Entities** activity of **Common Master** to enforce entry of the sign off comments during reversal of sign off of a task.

Process Parameter: Mandate Sign Off Comments during Reversal of Sign Off?	
Parameter Value	Impact on the entry of sign off comments in the Record Shop Execution Details screen
1 for Yes	The Sign off comments is mandatory for reversal of signoff of tasks.
0 for No	The Sign off comments is not mandatory for reversal of signoff of tasks.

- New process parameter 'Mandate Sign Off Comments during Rejection of Sign Off?' has been added under the entity type Shop Work Order Type and the entity User Defined Values in the **Define Process Entities** activity of **Common Master** to enforce entry of the sign off comments during rejection of tasks.

Process Parameter: Mandate Sign Off Comments during Rejection of Sign Off?	
Parameter Value	Impact on the entry of sign off comments in the Record Shop Execution Details screen
1 for Yes	The Sign off comments is mandatory for rejection of tasks.
0 for No	The Sign off comments is not mandatory for rejection of tasks.

Exhibit 1: Identifies the changes in the **Record Sign Off & Work Completion** screen from the **Record Aircraft Maintenance Execution Details** screen

The screenshot shows the 'Record Sign-Off & Work Completion' screen. It includes sections for 'Execution Document Details', 'Search Option', 'Default Option', and 'Task Sign-Off Details'. A table lists tasks with columns for Task Description, Sub Task Description, Sign-Off Action, Mechanic, Inspector, Sign-Off Comments, and Previous Sign-Off Comments. Callouts highlight specific changes:

- Sign-Off Action:** A callout points to the 'Sign-Off' dropdown in the table, stating: "This field becomes mandatory for voiding and reversing Sign-Off of tasks based on process parameter setting".
- Record Sign-Off & Completion Button:** A callout points to the button at the bottom, stating: "Click here to record sign off details of tasks."

At the bottom, there is an 'Update Option' section with a 'Change Status to Completed' dropdown set to 'Yes', a 'Compliance Date & Time' field set to '30-07-2019', and a timestamp '05:18:26 PM'.

Exhibit 2: Identifies the changes in the **Task** tab of the **Work Reporting Hub** screen

The screenshot shows the 'Work Reporting Hub' screen, specifically the 'Task' tab. It includes a 'Discrepancy' section with filters for 'ALL', 'My Clock Running', 'All Clock Running', and 'Work on Hold'. A table lists tasks with columns for #, Error, CS, WS, Att, Type, Log Item, SS, ATA #, Add New Sign Off Comments, and Previous Sign Off Comments. Callouts highlight specific changes:

- All Clock Running Filter:** A callout points to the 'All Clock Running' filter, stating: "This field becomes mandatory for voiding and reversing Sign-Off of tasks based on process parameter setting".
- Save Button:** A callout points to the 'Save' button at the bottom, stating: "Click here to record sign off details of tasks."

At the bottom, there are buttons for 'Start Clock', 'Stop Clock', 'Reset', 'Save', 'Close', 'Report Discrep.', 'Discrep. Action', 'Hold', and 'Release'.

Ability to provide Subtask Seq # in the Record Sign-Off & Work Completion page

Reference: APRP-180

Background

During recording of sign-off and work completion details, the mechanics may want to know the sequence or order for execution of the sub tasks within a task. However, visibility for the sequence # of the sub tasks under tasks is currently not available at the time of sign-off. Cognizance of the sub task sequence # would aid the mechanics / inspectors in seamless maintenance execution and hence must be made available to them.

Change Details

To provide visibility to the sub task sequence #, the following changes have been incorporated in the **Record Sign-Off and Work Completion** screen. (Note: This screen can be accessed from both the **Record Aircraft Maintenance Executions Details** and **Work Reporting Hub** activities.)

- New display-only field **Sub Task Seq #** has been added in the **Task Sign-Off Details** section of **Record Sign-Off & Work Completion** screen. This field will enable the mechanics to know the order of execution of the sub task within a task. However, this field will be available only if **Display Option** is selected as **Subtask Level**. The field will not be available, if **Display Option** is selected as **Task Level**.

Exhibit 1: Identifies the changes in the **Record Sign-Off and Work Completion** screen

The screenshot displays the 'Record Sign-Off & Work Completion' interface. At the top, there's a search bar with 'Task #' and 'NSTD0001582019'. Below it, the 'Display Option' is set to 'Subtask level'. A yellow callout box highlights this dropdown with the text: 'Display Option must be selected as Subtask Level to display Sub Task Seq # field'. The 'Task Sign-Off Details' section contains a table with columns: '#', 'Previous Sign-Off Comments', 'Task # / Description', 'Task Seq. #', 'Sub Task Seq. #', 'Tracking #', and 'MPD Item #'. A yellow callout box points to the 'Sub Task Seq. #' column with the text: 'New field -Sub Task Seq # field'. At the bottom, there's an 'Update Option' section with a 'Change Status to Completed' dropdown set to 'Yes' and a 'Record Sign-Off & Completion' button. The compliance date and time are shown as '09-18-2019' and '05:57:02 PM'.

Ability to demarcate any voided sign off when there is a pending sign off and also to show sign off status exclusively for Pending RII

Reference: APRP-178

Background

In Ramco Aviation Aircraft Maintenance, a task / sub task can have any combination of Mechanic, Inspector and RII for Sign Off requirements. On sign off by each resource group, the sign off status changes to reflect the updated status of the task. For example, once the mechanic has signed off a task with requirement as Mechanic and Inspector, Sign Off Status becomes Pending Inspector. If both Mechanic and Inspector have signed off a task, the sign off status becomes Signed Off. However, in scenarios of Voided sign offs and Pending RII sign offs, the sign off status of tasks does not reflect the actual situation. Currently, if the Mechanic has voided sign off, the sign off status is displayed Pending Inspector for tasks requiring Mechanic and Inspector Sign Off. In such circumstances, the resource group that signs off the task subsequently will not be aware of the voiding of the task by the preceding resource group. Further, whenever RII sign off is pending for a task, the sign off status is displayed as Pending Inspector and thus no distinction is made between pending Inspector and RII Sign Off. Hence, it is required that the Sign Off Status attribute for a task must provide unambiguous information on the real time / changed sign off status of tasks for enhanced maintenance execution.

Change Details

To derive and display actual Sign-Off Status for sub tasks that indicates sign off or voiding by specific resource groups, the following changes have been carried out as part of the enhancement.

- The **Sign Off Status** fields in the **Task And Discrepancy** tab multilines in the **Work Reporting Hub** and the **Record Sign-Off and Work Completion** screens will now display values that reflect the real time Sign Off Status of tasks as illustrated in the following table.

Scenario: 1 Pending RII						
Type	Sign Off Requirement	Mechanic	Inspector	RII	Sign Off Status As Is	Sign Off Status To Be
Tasks Pending RII Sign Off	RII			Pending	Pending Inspector	Pending RII
	Mechanic and RII	Pending		Pending	Pending Mech&Insp	Pending Mech&RII
	Mechanic and RII	Fully Signed Off		Pending	Pending Inspector	Pending RII
	Inspector and RII		Pending	Pending	Pending Inspector	Pending Insp&RII
	Inspector and RII		Fully Signed Off	Pending	Pending Inspector	Pending RII
	Mechanic, Inspector & RII	Pending	Pending	Pending	Pending Mech&Insp	Pending Mech,Insp&RII

	Mechanic, Inspector & RII	Fully Signed Off	Pending	Pending	Pending Inspector	Pending Insp&RII
	Mechanic, Inspector & RII	Fully Signed Off	Fully Signed Off	Pending	Pending Inspector	Pending RII
	Mechanic, Inspector & RII	Fully Signed Off	Fully Signed Off	Fully Signed Off	Signed Off	Signed Off

Scenario: 2 Fully Voiced Sign Off display

Type	Sign Off Requirement	Mechanic	Inspector	RII	Sign Off Status Existing	Sign Off Status After Enhancement
Only Some Fully Voiced with Pending Sign Off	Mechanic and Inspector	Fully Voiced	Pending		Pending Inspector	Pending Insp (Mech Voiced)
	Mechanic and RII	Fully Voiced		Pending	Pending Inspector	Pending RII (Mech Voiced)
	Inspector and RII		Fully Voiced	Pending	Pending Inspector	Pending RII (Insp Voiced)
	Mechanic, Inspector & RII	Fully Voiced	Pending	Pending	Pending Inspector	Pending Insp&RII (Mech Voiced)
	Mechanic, Inspector & RII	Fully Voiced	Fully Voiced	Pending	Pending Inspector	Pending RII (Mech&Insp Voiced)
All Tasks Fully Voiced and NO Pending Sign Off	Mechanic and Inspector	Fully Voiced	Fully Voiced		Signed Off	Signed Off (Voiced)
	Mechanic and RII	Fully Voiced		Fully Voiced	Signed Off	Signed Off (Voiced)
	Inspector and RII		Fully Voiced	Fully Voiced	Signed Off	Signed Off (Voiced)
	Mechanic, Inspector & RII	Fully Voiced	Fully Voiced	Fully Voiced	Signed Off	Signed Off (Voiced)
Some Tasks Fully Voiced and Some Signed Off	Mechanic and Inspector	Signed Off	Fully Voiced		Signed Off	Signed Off
	Mechanic and RII	Signed Off		Fully Voiced	Signed Off	Signed Off
	Inspector and RII		Signed Off	Fully Voiced	Signed Off	Signed Off
	Mechanic, Inspector & RII	Signed Off	Signed Off	Fully Voiced	Signed Off	Signed Off
	Mechanic, Inspector & RII	Signed Off	Fully Voiced	Fully Voiced	Signed Off	Signed Off
	Mechanic and Inspector	Signed Off	Signed Off		Signed Off	Signed Off
	Mechanic and RII	Fully Voiced		Signed Off	Signed Off	Signed Off
	Inspector and RII		Fully Voiced	Signed Off	Signed Off	Signed Off
	Mechanic, Inspector & RII	Fully Voiced	Fully Voiced	Signed Off	Signed Off	Signed Off

Scenario: 3 Partially Voided Sign Off display

Type	Sign Off Requirement	Mechanic	Inspector	RII	Sign Off Status As Is	Sign Off Status To Be
Some Partially Voided and Some Pending Sign Off	Mechanic and Inspector	Partially Voided	Pending		Pending Mech&Insp	Pending Mech&Insp
	Mechanic and RII	Partially Voided		Pending	Pending Mech&Insp	Pending Mech&RII
	Inspector and RII		Partially Voided	Pending	Pending Inspector	Pending Insp&RII
	Mechanic, Inspector & RII	Partially Voided	Pending	Pending	Pending Mech&Insp	Pending Mech,Insp&RII
	Mechanic, Inspector & RII	Partially Voided	Partially Voided	Pending	Pending Mech&Insp	Pending Mech,Insp&RII
All Partially Voided	Mechanic and Inspector	Partially Voided	Partially Voided		Pending Mech&Insp	Pending Mech&Insp
	Mechanic and RII	Partially Voided		Partially Voided	Pending Mechanic	Pending Mech&RII
	Inspector and RII		Partially Voided	Partially Voided	Pending Inspector	Pending Insp&RII
	Mechanic, Inspector & RII	Partially Voided	Pending	Partially Voided	Pending Mech&Insp	Pending Mech,Insp&RII
	Mechanic, Inspector & RII	Partially Voided	Partially Voided	Partially Voided	Pending Mech&Insp	Pending Mech,Insp&RII
Some Signed Off and Some Partially Voided	Mechanic and Inspector	Signed Off	Partially Voided		Pending Inspector	No Change
	Mechanic and RII	Signed Off		Partially Voided	Pending Inspector	Pending RII
	Inspector and RII		Signed Off	Partially Voided	Pending Inspector	Pending RII
	Mechanic, Inspector & RII	Signed Off	Signed Off	Partially Voided	Pending Inspector	Pending RII

Note: Pending can be Partial/Fully Pending (even if one of the subtask(s) of a resource group is pending then the entire resource group is considered as pending for that task)

Exhibit 1: Identifies changes in the Task tab in the Work Reporting Hub screen

Work Reporting Hub

I want to ☐ Create ☒ Work on Aircraft Maint. Exe. # Reporting Date Time FH 663.30 HRS FC CYC

VP-005924-2019 Package Type Line Package Aircraft Reg # 1132 Work Center # 185-20

Document Info

Task Discrepancy

3 ALL 1 Planned 1 In-Progress 1 Completed 0 Other View: ☒ Simple ☐ Detail

#	Err	CS	WS	Seq	Task #	SS	Att	ATA #	Description	Ad	Pr	Status	Sour	Source	Work	Sign Off Status	Task
1				1	NST-010472-2019			00-00	Suspect paint			Completed			1...	Pending Inspector	Non I
2				3	NST-010623-2019			00-00	Suspect paint 1			In-Progress			1...	Pending Insp (Mech Voided)	Non I
3				5	NST-011443-2019			00-00	NST			Planned			1...	Pending Mechanic	Non I
4																	

New values in the Sign-Off Status field to represent voiding tasks and pending RII

Exhibit 2: Identifies changes in the Record Sign-Off and Work Completion screen

Record Sign-Off & Work Completion

Date & Time

Execution Document Details

Search Option

Default Option

Action ☒ Sign-Off ☐ Void

Mechanic Inspector Sign Off Comments

RII Addl. Sign-Off

Task Sign-Off Details

#	Task Description	Sub Task Description	Sign-Off Action	Mechanic	Inspector	Sign-Off Comments	Skill	Sign-Off Status	Pr
1	Suspect paint 1	Suspect paint 1	--Select--					Pending Insp (Mech Voided)	
2									

New values in the Sign-Off Status field to represent voiding tasks and pending RII

Update Option

Change Status to Completed

Compliance Date & Time 08-02-2019 10:56:15 AM

Ability to provide Customer Ref. # in Edit Package Additional Information screen and push it to the Customer Order

Reference: APRP-742

Background

In **AME Hub**, upon closure of a package that is based on a customer order, the work package details are copied to the customer order. This is done to facilitate invoicing of the customer order. Hence, a provision is required to capture the Customer Reference # as received from the customer at the package level, which in turn will be automatically pushed to the customer order on package closure.

Change Details

To enable the capture of customer reference details for a package that is based on a customer order, the following new developments have been incorporated in the **Work Reporting** screen of **AME Hub**:

- New input field **Customer Ref. #** has been added under the **Customer Order Details** section of **Reference Details** tab in the **Edit Package Additional Information** popup to capture the customer reference of the customer work order for the package.
- On closure of the package, the value from the **Customer Ref. #** field will be copied to the customer order # based on which the package was created and executed.

Exhibit 1: Identifies changes in the Edit Package Additional Information popup

Edit Package Additional Information

A/C Maint. Exe. Details

Execution Ref. # Log card VP-003441-2019 Package Status In-Progress
Aircraft Reg. # J-101 Aircraft Model # A320-211 Aircraft Status Active
Primary Work Center Package Desc Ref-148 Operations Type Repair Station

Reference Details

Customer Order Details

Customer # 400006 Customer Name Customer 7 Customer Order# CO-004040-2012
Cust. Work Requested For A/C main Contract # AI-A/C-BOM-001 Obj. Eff. Code AE-NAC-001
Customer Ref. # Ref-148

Warranty Details

Warranty Requested? Warranty Resolution Warranty Notes

New field to record customer reference # for the package

Ability to capture Maint. Manual Ref. # in Work Reporting Hub, Edit Package Additional Information and Plan Work Order for Non Standard Tasks and view for Standard Tasks

Reference: APRP-170

Background

In Aircraft Maintenance, the technicians refer to **Maint. Manual Ref. #** of task to know the MMD reference of the task. For standard tasks, **Maint. Manual Ref. #** is captured in the **Maintenance Task** business component. A provision record **Maint. Manual Ref. #** for the Non-Standard tasks at the time of creation is required in the **Work Reporting Hub**, **Edit Package Additional Information** and **Plan Work Order** screens.

Currently, visibility for **Maint. Manual Ref. #** for the Standard tasks is provided only in the **View Task Details** page. Further, it would facilitate the mechanics, if **Maint. Manual Ref. #** for all tasks (both Standard and Non-Standard) is retrieved and displayed during planning / creating packages.

Change Details

To enable the capture of **Maint. Manual Ref. #** for the new Non-Standard tasks at the time of creation and, the display of the **Maint. Manual Ref. #** for all tasks, the **Maint. Manual Ref. #** input field has been added in the following screens:

- **Task Details** tab of the **Edit Package Additional Information** screen
- **Task Details** multiline in the **Plan Work Order** screen
- **Task** tab multiline in the **Work Reporting Hub** screen

Exhibit 1: Identifies changes in the **Task** tab of the **Aircraft Work Reporting Hub** screen

The screenshot displays the 'Aircraft Work Reporting Hub' interface. On the left, a sidebar shows a task hierarchy with 'Completed' and 'In-Progress' sections. The main area is titled 'Task Discrepancy' and features a summary bar with counts for 'ALL', 'Planned', 'In-Progress', 'Completed', and 'Other'. Below this is a table with columns: #, Error, CS, WS, Seq #, Task #, SS, Alt, ATA #, Actual Man Hrs., Tracking #, and Maint. Manual Ref. #. The table lists three tasks. A yellow callout box highlights the 'Maint. Manual Ref. #' column, indicating it is a new field for recording maintenance manual reference numbers.

#	Error	CS	WS	Seq #	Task #	SS	Alt	ATA #	Actual Man Hrs.	Tracking #	Maint. Manual Ref. #
1				1	NST-041507-2019			00-00	0.00	1	
2				2	NST-042014-2019			00-00	0.00	2	
3											

Exhibit 2: Identifies changes in the **Edit Package Additional Information** screen

Edit Package Additional Information

Task Details

#	Message Center	TS	HS	ES	Seq #	Task #	Maint. Manual Ref. #
1					1	NST-041507-2019	1
2					2	NST-042014-2019	2
3							

Important Dates

Hangar-In Date: 01-02-2019
 Hangar-Out Date: 01-02-2019
 Proj. Completion Date:
 Prom. Del. Date:
 Update Details

Exhibit 3: Identifies changes in the **Plan Work Order** screen

Plan Work Order

Generate Sub-Work Order
 Certificate Information
 Manufacturing Data
 Record Work Hold
 Record Part # / Serial # Change
 Route Unserviceable Components / Parts
 Work Monitoring & Control
 Route Parts
 Author Repair Procedure
 Manage Parts under MRO Warranty

Generate Advanced WIP Document
 Initialize Component Assly.
 Initialize Parameter Values
 Initialize Maint. Prog. & Update Compliance
 Track Compliance History
 Upload File
 Track Response

View Task Details
 View Documents
 View Maintenance Log

Filter Criteria

Task Details

[No records to display]

#	M	S	EF	ES	TS	Est. Man Hrs.	Eng. Doc #	Eng. Doc Rev. #	Maint. Manual Ref. #	User Stat
1	N	N	I							

Release For Execution Cancellation Comments
 Reschedule Start Clock Start Date Adjust With PDD Reschedule From
 Print Task Card(s)

Ability to Display Actual Man Hours as Zero if Time booking is not done

Reference: APRP-522

Background

Currently, on completion of tasks / closure of discrepancies, the system derives Actual Man Hours by summing up all the time booked against the task / discrepancy by the respective employees. And if no time booking has happened against these tasks / discrepancies, Actual Man Hours is deemed to be the difference between Actual End Time and Actual Start Time of the task. However, such means of deriving Actual Man Hours is not always recommended as some tasks remain in the 'In-Progress' status for multiple days due to delays / deferment before they are quickly completed / closed. Hence, a provision is required to set Actual Man Hours of tasks / discrepancies against which no time booking has taken place as '0' on completion / closure.

Change Details

To enable 'Zero' time booking of tasks, the following new development have been incorporated in the system as part of this enhancement.

- New process parameter 'Calculate Actual Man Hours as the difference between the Actual End Time and Actual Start Time if no timesheet has been booked?' has been added under the entity type **Package Type** and the entity **All user defined package types including Log Card** in the **Define Process Entities** activity of **Common Master** to automatically set Actual Man hours as '0' for tasks on completion / discrepancies on closure, if no time booking is found against them. The below table illustrates the functionality of the process parameter.

Process Parameter: Calculate Actual Man Hours as the difference between the Actual End Time and Actual Start Time if no timesheet has been booked?	
Value	Derivation of Actual Man Hours of Tasks/Discrepancies if time booking has not been done
0 for Not Required	Actual Man Hours = 0
1 for Required	Actual Man Hours = Actual End Time - Actual Start Time

The system computes **Actual Man Hours** based on the value of the process 'Calculate Actual Man Hours as the difference between the Actual End Time and Actual Start Time if no timesheet has been booked?' in the below-listed scenarios:

- On completion of a task / on closure of a discrepancy in the **Record Aircraft Maintenance Execution Details** screen of **Aircraft Maintenance Execution**
- On completion of a task / on closure of a discrepancy in the **Aircraft Work Reporting Hub** screen of **Aircraft Execution Hub**
- On completion of a task in the **Manage Work Assignments and Reporting** screen in **Work Monitoring and Control**
- On completion of a task in the **eLog/Task Card Details** and on closure of a discrepancy in the **eLog/Discrepancy Card** screens of **MechanicAnywhere**

Ability to reverse a NCR in AME page for Lot controlled parts

Reference: APRP-543

Background

In **Aircraft Maintenance Execution**, the component replacements involving Lot-Controlled parts typically tend to encounter multiple errors. Currently, the users are allowed to cancel 'Fresh' component replacements though 'Confirmed' component replacements cannot be cancelled. The only means of rectification of these errors as cancellation of the 'Confirmed' component replacements is not doable is returning / reconciling the parts. However, the mechanics find the returning and reconciling process difficult and tedious. Hence, a provision to allow cancellation of 'Confirmed' component replacements of Lot-Controlled parts in the **Record Aircraft Maintenance Execution Details** screen is required to avoid generation / rectification of errors.

Change Details

To prevent errors arising out of faulty component replacements, the following changes have been undertaken in the **Aircraft Maintenance Execution** business component.


- The mechanics will now be able to cancel the 'Confirmed' component replacements in the **Record Aircraft Maintenance Execution Details** screen by clicking on the  icon in the Component Replacement section, if :
 - Involved part is Lot-Controlled
 - Object Type is "Other Parts"
 - No CWO / Repair Order generated yet
 - No Stock Return generated in Confirmed status
- The status of such component replacements will change to 'Cancelled' and, such cancelled records will appear in a new tree folder called 'Cancelled' in the above-said screen
- Any pending returns for the removed Lot-Controlled parts (retrieved in the **Return Cores** tab of the **Record Part Consumption & Return** page) will be deleted / knocked off on cancellation

Exhibit 1: The Record Aircraft Execution Details screen in Aircraft Maintenance Execution

Record Aircraft Maintenance Execution Details

Exe. Details | Aircraft Reg # 1133 | Go | Station Chennai Int Air | Work Center 185-20 | Date & Time | Flt. Hrs 500.00 | Flt. Cycles

Open Items (145) | Discrepancies (0) | Work Information (1) | **Component Replacement (7)** | Material Request (1)

Search Options: Log Cards Minor Major Search by --Search by-- Search For Go

Search - Filter

- LC-024964-2019 (Removal Part Information - >
- NST-041115-2019:1
 - [Click for New CR]
 - Only Removals
 - Pending Action Items
 - Cancelled
 - [OFF] - > Z342:1CH55-B :: Z342:
 - [OFF] - > DE LAVAL :: nozzle :: [NA

Exe. Ref. # Line Pack LC-024964-2019 Status In-Progress HS ES NR Category 1-Repair Ref. Time Zone IST

Log # Orig. Work Center 185-20 Maint. Event Package Desc.

Work Information

Task # - Tracking # - Seq. # 1 1 Execution Status In-Progress Sign-Off Status Pending Inspector HS ES

Component Replacement

Source Remove Status Cancelled CR status becomes 'Cancelled'

Removed Part # Z342:1CH55-B Removed Serial # 6-SERVICEABLE Serviceable Reason # mkiolp Removal Qty. 1

Ability to prevent Mechanic from Reverting Inspector Sign Off

Reference: APRP-209

Background

In **Ramco Aviation**, currently, the mechanics are allowed to reverse inspector sign off first and then reverse their own sign off. However, this could lead to sign off issues. Therefore, a provision is required wherein users with Resource Group as Mechanic must be permitted to reverse only mechanic sign off.

Change Details

A new validation is introduced to prevent the reverting of inspector sign off by an employee belonging to Resource Group as Mechanic.

WHAT'S NEW IN RELIABILITY MANAGEMENT?

Ability to define Reliability Process Parameters

APRP-193

Background

Reliability analysis for components may include MTBUR/URR analysis, Low Time removals, No fault found and many more. Each of these assessments may have varying attributes which are involved in their value computation and analysis.

A common Reliability process parameters screen is developed with set of parameters to identify the Reliability assessments and variables required for their computations. The parameters cover the following:

1. Formulae involved in MTBUR analysis varies within an organization with respect to the operator. So, there is a need to set the process parameters and map them to reliability fleet based on the requirements.
2. Necessity to perform Low Time Removals analysis or No fault found at Part and component levels
3. Also capture some additional assessments which can be newly configured, such as:
 - Mandatory Occurrence Report
 - Incident Occurrence Report

Change Details

This enhancement involves introduction of two new screens:

1. Set Reliability Process Parameters
2. Set Process Parameters

Set Reliability Process Parameters

The screen is designed to work much similar to any of the other Process parameters available in application today. The 'Set Reliability Process Parameters' screen is designated to help user create new component reliability assessment flags such as Mandatory Occurrence Report & Incidence Occurrence Report. A quick link to 'Set Process Parameters' will list all possible variables that can be configured against each of the assessments, beginning with MTBUR/URR.

Exhibit 1: Identifies the **Set Reliability Process Parameters** screen.

#	Entity Type	Entity	Description	Status	Process Parameters Defined?	Created by	Created Date	Last Modified by	Last Modified Date
1	Component Reliability	MTBUR/URR	Mean Time Between Unschedu...	Active	Yes	System	11-19-2019		
2	Component Reliability	LTR	Low Time Removals	Active	Yes	System	11-19-2019		
3	Component Reliability	NFF	No Fault Found	Active	Yes	System	11-19-2019		
4	Component Reliability	MOR	MOR	Active	Yes	DMUSER	01-13-2020	DMUSER	01-14-2020
5	Component Reliability	IOR	IOR	Active	Yes	DMUSER	01-13-2020	11363	01-14-2020
6	Component Reliability			Active					

Set Process Parameters

Unlike the usual **Set Process Parameters** screen, in this screen user can specify the Fleet Type to which the Process parameters are applicable. Considering parameters for MTBUR/URR, the user can set computation based on various factors like:

- Number of Months to be considered for MTBUR & Alert Computation
- Display RSPL based MTBUR Alert in Report?
- Rate Calc. Factor for URR based Alert
- Number of Months to be considered for URR Computation
- Number of Quarters to be considered for URR based Alert Computation
- Multiplication Factor for URR based Alert Computation
- Report Analysis Frequency

Based on the above mentioned process parameters MTBUR/URR analysis can be made.

Exhibit 2: Identifies the **Set Process Parameters** screen with Entity 'MTBUR/URR'.

#	Process Parameter	Permitted Values	Value	Status	Error Message
1	Number of Months to be considered for MTBUR & Alert Computation	Enter any value between 1 to 60.	1	Defined	
2	Display RSPL based MTBUR Alert in Report?	Enter "0" for Yes , Enter "1" for No.	0	Defined	
3	Rate Calc. Factor for URR based Alert	Enter "0" for 1000 , Enter "1" for 100.	1	Defined	
4	Number of Months to be considered for URR Computation	Enter any value between 1 to 12.	1	Defined	
5	Number of Quarters to be considered for URR based Alert Computation	Enter any value between 1 to 20.	1	Defined	
6	Multiplication Factor for URR based Alert Computation	Enter any value between 1 to 8.	1	Defined	
7	Report Analysis Frequency	Enter 0 for Monthly & 1 for Quarterly.	1	Defined	
8					

Next considering LTR, the user can set computation based on the factor,

- LTR tracking for Components

Exhibit 3: Identifies the **Set Process Parameters** screen with Entity 'LTR'.

The screenshot shows the 'Set Process Parameters' window for the 'LTR' entity. The 'Entity Type' is 'Component Reliability' and 'Process Parameters Defined?' is 'Yes'. The 'Entity' is 'LTR' and 'Status' is 'Active'. The 'Fleet Type' is 'All Fleet Types'. Below the details is a 'Process Parameter List' table with 2 rows.

#	Process Parameter	Permitted Values	Value	Status	Error Message
1	LTR tracking for Components	Enter "0" for Required, Enter "1" for Not Required.	0	Defined	
2					

For NFF, the user can set computation based on various factors like:

- NFF tracking for Components
- NFF confirmation for Components based on
- Event for NFF confirmation for Components sent on External Repair
- Event for NFF confirmation for Components sent on Internal Repair
- NFF tracking for Parts
- No. of levels for Part level NFF tracking
- Part level NFF evaluation

Based on the above mentioned process parameters, MTBUR/URR analysis can be made.

Exhibit 4: Identifies the **Set Process Parameters** screen with Entity 'NFF'.

The screenshot shows the 'Set Process Parameters' window for the 'NFF' entity. The 'Entity Type' is 'Component Reliability' and 'Process Parameters Defined?' is 'Yes'. The 'Entity' is 'NFF' and 'Status' is 'Active'. The 'Fleet Type' is 'All Fleet Types'. Below the details is a 'Process Parameter List' table with 8 rows.

#	Process Parameter	Permitted Values	Value	Status	Error Message
1	NFF tracking for Components	Enter "0" for Required, Enter "1" for Not Required.	1	Defined	
2	NFF confirmation for Components based on	Enter "0" for "Post Repair Confirmation", Enter "1" for "Initial"		Not Defined	
3	Event for NFF confirmation for Components sent on External Repair	Enter "0" for "Repair Quote Completion", Enter "1" for "Work Shop"		Not Defined	
4	Event for NFF confirmation for Components sent on Internal Repair	Enter "0" for "Work Order Completion", Enter "1" for "Work Order"		Not Defined	
5	NFF tracking for Parts	Enter "0" for Required, Enter "1" for Not Required.	0	Defined	
6	No. of levels for Part level NFF tracking	Enter any value from 1 to 3.	3	Defined	
7	Part level NFF evaluation based on	Enter "0" for Removal Instances, Enter "1" for Shop Visits	0	Defined	
8					

Similarly for every user defined component assessment flag, user can set the need to consider this assessment during the analysis with the following parameter:

- Component Level Assessment

Exhibit 5: Identifies the **Set Process Parameters** screen for the parameter 'Component Level Assessment'.

The screenshot displays the 'Set Process Parameters' interface. At the top, the title bar shows 'Set Process Parameters' and the user role 'RAMCO OU-ramco role'. Below the title bar, the 'Entity Details' section includes dropdowns for 'Entity Type' (set to 'Component Reliability'), 'Entity' (set to 'MOR'), and 'Fleet Type' (set to 'All Fleet Types'). It also shows 'Process Parameters Defined?' as 'Yes' and 'Status' as 'Active'. The 'Process Parameter List' section features a table with the following data:

#	Process Parameter	Permitted Values	Value	Status	Error Message
1	Component Level Assessment	Enter "0" for Required, Enter "1" for Not Required	0	Defined	

The above mentioned UI can be launched from **Reliability Management > Reliability Setup > Set Process Parameters**.

Ability to display and edit Component Removal Information and Aircraft Utilization Information

APRP-246

Background

Reliability Analysis involves a number of reports to be run on a monthly basis for assessments such as No Fault Found, Low Time Removals, MOR / IOR, MTBUR / URR etc. Basic data utilized for the above mentioned assessments come from the removal information wherein the components will be tagged as unscheduled removals and potential NFFs or LTRs or MOR/IOR. Though the removal information will carry all required information, there is still a need to review this information before running the necessary reports and make any corrections, wherever necessary. Similarly, yet another data required is the Aircraft utilization parameters for a given month. The data can either be available within the system or may be uploaded based on Customer's inputs. So, there is another need to input the utilization data manually for Reliability Analysis, if there is a delay from customer for providing the actual utilization values. Once, the actual data utilization information for aircraft are received and if the component removal information are reviewed, there is a need to base-line the data before publishing the reports. Reports can be published, only if the actual utilization data for aircrafts has been received and base-lined.

Change Details

This enhancement involves introduction of two new UI's under the business component **Reliability Analysis**:

1. Manage Aircraft Utilization Info.
2. Manage Component Removal Info.

Manage Aircraft Utilization Info.

The screen is intended to capture the monthly utilization of Aircrafts. This information must currently be manually entered to the system and will not derive the utilization automatically. It is assumed that the information will be available to the user from respective Customers. In case of a delay in receiving the information from a customer, users are given a provision to set a 'Planned' value against the column 'Value Type', which they may arrive at based on previous month utilizations, and simulate the necessary reports. The Planned value will only support for simulating the reports but it is mandatory to input the Actual value and confirm the details for being able to publish the final reports.

The details entered must be mandatorily confirmed prior to report generation.

Exhibit 1: Identifies the Manage Aircraft Utilization Info screen

Manage Aircraft Utilization Info.

Search Criteria: Search On **Ownership** **Customer** Utilization from/to Date: 09-01-2019 to 01-31-2020

Aircraft Utilization Info.

#	Aircraft Reg. #	Aircraft MSN	Aircraft Model #	Ownership	Owning Agency #	Owning Agency Name	Utilization from Date	Utilization to Date	Parameter	Value	Value Type	Status	Remarks	Last Modified by
1	1026	6	1313	Customer	101	Customer 2	12-01-2019	12-31-2019	FC	2.00	Planned	Fresh		DMUSER
2	11001	23473773	KA350	Customer	400007	Customer 8	11-01-2019	11-30-2019	FH	250.00	Actual	Confirmed		DMUSER
3	5007	12312	KA350	Customer	400007	Customer 8	11-01-2019	11-30-2019	FH	345.00	Actual	Confirmed		DMUSER
4	5008	23424	KA350	Customer	400007	Customer 8	11-01-2019	11-30-2019	FH	244.00	Actual	Confirmed		DMUSER
5	5009	FL-0783	KA350	Customer	400007	Customer 8	11-01-2019	11-30-2019	FH	455.00	Actual	Confirmed		DMUSER
6	6-001	2312	A310	Customer	400007	Customer 8	11-01-2019	11-30-2019	FH	23.00	Actual	Confirmed		DMUSER
7	6Y-JMR-1	1905	A320-211	Customer	400007	Customer 8	11-01-2019	11-30-2019	FH	556.00	Actual	Confirmed		DMUSER
8	N1714	N1714	737-800	Customer	400007	Customer 8	11-01-2019	11-30-2019	FH	90.00	Planned	Confirmed		DMUSER
9	RTA1C	RTA1C	B767-200	Customer	400007	Customer 8	11-01-2019	11-30-2019	FH	78.00	Actual	Confirmed		DMUSER
10	WE77121	WE77121	GG871211	Customer	400007	Customer 8	11-01-2019	11-30-2019	FH	12.00	Actual	Confirmed		DMUSER
11											Planned			

Save Confirm

The above mentioned UI can be launched from **Reliability Management > Reliability Analysis > Manage Aircraft Utilization Info.**

Manage Component Removal Info.

The screen is intended to retrieve all Component Removals done, either through Component removals from an Aircraft or a Customer Goods Receipt, which is now also recognized as a removal, based on an option setting.

The removal information includes all typical details such as Removed from A/c Reg. #, Model #, Removal Station, Removal Reason, Removal Type, Removal Condition, etc. The information is posted directly upon GI completion and this screen enables user to review the information for any incorrect attribute selection. User is permitted to modify the Removal Condition, Removal Type and Removal date & time from this screen. Only on confirmation of the data, the revised information will be considered for the respective Component Reliability Assessments.

Exhibit 2: Identifies the Manage Component Removal Info. screen

Manage Component Removal Info.

Search Criteria: Search On **Ownership** **Customer** Rem. from/to Date: 11-01-2019 to 04-30-2020

Component Removal Details

#	Part #	Serial #	Component #	NHA Component #	Rem. from A/c Reg. #	Rem. from A/c Model #	Removal Ref.	Removal Ref. Doc. #	Rem. Date/Time	Removed by	Removal Condition	Removal Reason	Remarks
1	RT-01	SL-000568-2020	C004056-2020		101	A310	GI	GI-010776-2020	01-10-2020 00:00:00	DMUSER	Unserviceable	UNSCHEDULED	Uns

Save Confirm

The above mentioned UI can be launched from **Reliability Management > Reliability Analysis > Manage Component Removal Info.**

Auto Categorization of LTR and NFF

APRP-228, APRP-231

Background

Components can be frequently removed from Aircraft for repair and maintenance purposes. Frequent removals would mean the component is becoming more unreliable. In order to track the reliability of components attached to aircraft, organizations generally perform a reliability analysis on a periodic basis. The analysis involves checking if the component removal data satisfies certain conditions based on which the component might be marked and tracked into a watch list. While the system is capable of tracking the component removal information and its utilization over a period, it would be fair to expect it to compare the removal data with some standard conditions and flag them into a watch list automatically.

A few such analysis are Low Time Removals and No faults found. Thus, the need is to set some rules based on which components can be automatically tagged as LTR/NFF and automatically flag components as LTR or NFF based on the set criteria.

Change Details

Every Goods Receipt from a Customer will be considered as a removal based on a parameter. These removal information will be considered for the periodic reliability analysis along with all properties of removal. While the history of removals is captured and retained, on each removal (receipt), system will automatically check for the rules to flag a part as LTR/NFF and see if any incoming component satisfies the condition. A component which satisfies the condition for LTR will automatically be flagged as LTR and similarly NFF along with its severity level. This whole process is made to be an offline process which can process multiple component removals at a time.

Component Level LTR Tracking:

There will be an offline backend scheduler configured automatically which will evaluate the rules set and tag the component as LTR.

For example:

- Rule 1 is set as: **LUSR12M >= '3'**.

In the above rule, LUSR12M indicates, '*Last Unserviceable Removals in 12 Months*'. System will typically carry the removal information of the component for the last 12 months from current date. Including the current receipt/removal, system will look for the number of unserviceable removals in the last 12 months, and if this number is greater than or equal to 3, the component will be flagged as LTR.

While the component is automatically flagged, the visibility of the identified watch list will be in the Component Removal Assessment Dashboard.

Component Level NFF Tracking:

Every part being received on unscheduled removal can be tagged as a **No Fault Found** in GI based on the Customer inputs. But, the component may still need to undergo certain checks internally or by a vendor before it is a confirmed NFF. This confirmation is automatically updated based on the repair shop confirmation currently from Repair Shop findings report against a Repair Order. This confirmed component NFF can be reviewed in the Component Removal Assessment Dashboard.

Part Level NFF Tracking:

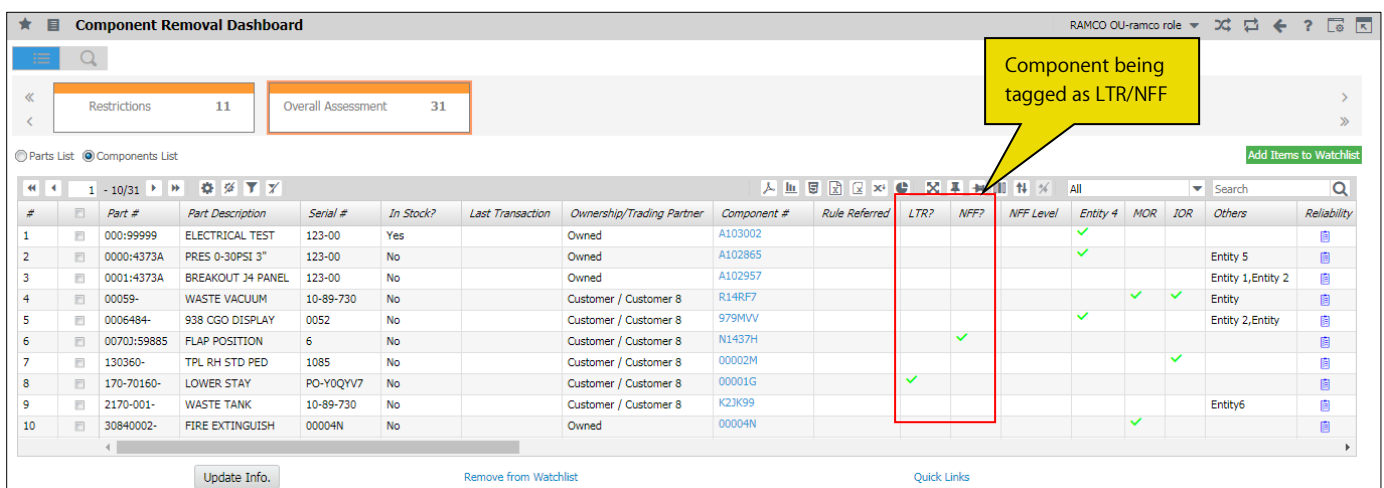
While a component can be tagged as a NFF for each instance of removal, based on an aggregate review over a period, a component which gets repeatedly removed on NFF basis may result in tagging the Part itself as a NFF part. This part level NFF tracking may also have a severity level associated to it. Similar to LTR evaluation, with the available removal details, system will automatically review all Component level NFF information of a part and accordingly tag the part as NFF with a severity level.

For example:

- Level 1 is set as: **NFF1M > '2' AND NFFRate1M > '50 URR (in %)**
- Level 2 is set as: **NFF1M > '2' AND NFFRate1M > '50 URR (in %)' AND JRR1M > '30'**
- Level 3 is set as: **NFF6M >= 5 AND NFFRate12M > '30 URR (in %)**

In the above rules, NFF1M/6M indicates the count of Confirmed NFF in last 1 or 6 months, NFF Rate indicates the confirmation rate of Component NFF flag, URR indicates the Unscheduled Removal rate and JRR indicated Justified Removal Rate.

Note: A single Part # can satisfy multiple NFF rules. But the latest highest rule will be considered in Component Removal Dashboard.



The screenshot shows the 'Component Removal Dashboard' interface. At the top, there are filters for 'Restrictions' (11) and 'Overall Assessment' (31). Below this is a table with columns: #, Part #, Part Description, Serial #, In Stock?, Last Transaction, Ownership/Trading Partner, Component #, Rule Referred, LTR?, NFF?, NFF Level, Entity 4, MOR, IOR, Others, and Reliability. A yellow callout box points to the 'LTR?' and 'NFF?' columns, stating 'Component being tagged as LTR/NFF'. The table lists 10 components, with the 8th component (Part # 170-70160-) showing a green checkmark in the 'LTR?' column.

#	Part #	Part Description	Serial #	In Stock?	Last Transaction	Ownership/Trading Partner	Component #	Rule Referred	LTR?	NFF?	NFF Level	Entity 4	MOR	IOR	Others	Reliability
1	000:99999	ELECTRICAL TEST	123-00	Yes		Owned	A103002					✓				
2	0000:4373A	PRES 0-30PSI 3"	123-00	No		Owned	A102865					✓			Entity 5	
3	0001:4373A	BREAKOUT J4 PANEL	123-00	No		Owned	A102957								Entity 1, Entity 2	
4	00059-	WASTE VACUUM	10-89-730	No		Customer / Customer 8	R14RF7						✓	✓	Entity	
5	0006484-	938 CGO DISPLAY	0052	No		Customer / Customer 8	979MNV					✓			Entity 2, Entity	
6	00703:59885	FLAP POSITION	6	No		Customer / Customer 8	N1437H			✓						
7	130360-	TPL RH STD PED	1085	No		Customer / Customer 8	00002M							✓		
8	170-70160-	LOWER STAY	PO-Y0QYV7	No		Customer / Customer 8	00001G		✓							
9	2170-001-	WASTE TANK	10-89-730	No		Customer / Customer 8	K2JK99								Entity6	
10	30840002-	FIRE EXTINGUISH	00004N	No		Owned	00004N						✓			

Run MTBUR Analysis for a Fleet based on Alert Definition Setup

APRP-247

Background

This enhancement brings improvements in MTBUR analysis of components that is periodically done for every month. The analysis outcome is to identify the list of parts that cross a certain threshold value of MTBUR (called the Alert value) and maintain a separate watchlist.

Currently, Ramco offers MTBUR analysis based on fixed Alert values and the Alert value in turn is computed periodically based on a standard formula. While the formula is standard, the multipliers involved could vary from one customer fleet to another, which requires to be configured.

Periodic MTBUR analysis is required to be performed and a watchlist is expected to be derived based on comparison with the computed Alert values at a fleet level.

Change Details

The existing user interface **Analyze MTBUR for Parts** under the component **Reliability Analysis** and the business process **Reliability Management** has been retained and enhanced to function with revised formulae. The improvements in this page are elaborated below:

- Reliability process parameters have already been identified with parameters to handle the variation in multipliers of the Alert level formula.
- Based on an option setting, the system will identify Alerts either based on existing threshold Alert MTBUR for parts or based on the computed Alert values.

- Alert Value for each Part is obtained using the following formula;

$$\text{Alert Value} = \bar{X} + (\text{Multiplication factor}) \sigma$$

Where,

$\bar{X} = \Sigma X/N$ i.e. Mean of quarterly unscheduled removal rate

N = Count of quarters from the parameter 'Number of Quarters to be considered for URR based Alert Computation'

Multiplication factor = Multiplication factor from the parameter 'Multiplication Factor for URR based Alert Computation'

σ = standard deviation of quarterly unscheduled removal rate

- The existing screen of Analyze MTBUR for parts will be retained and enhanced to represent the watchlist based on the configured Alert values
- Similar to the offline processing of LTR/NFF analysis, MTBUR is also configured as an offline process which will be run periodically, once in a day / week / month based on a parameter.
- The outcome of the offline processor will be to identify the Parts which satisfy the MTBUR alert rule and be identified with Alert flag automatically.
- Analyze MTBUR for Parts interface will show the MTBUR values for the period against the satisfied rule. For parts that are not identified as Alert, the system by default will display the values based on the past three month data. This provides the information to the user to analyze and manually tag a part as Alert, if needed.

Exhibit 1: The Analyze MTBUR for Parts screen

★ Analyze MTBUR for Parts

MTBUR <= [dropdown]

☐ Display Watch List ☐ Show only Alerts

PartDetails Alternate Part Details

Part Removal Details

Found no rows to display!!!

#	nscheduled	Analysis Period	MTBUR	RSPL-MTBUR	Unscheduled Removal Rate	Alert Value	Alert?	Investigation Comments	User Status	Analysis Notes
1										

Set MTBUR Limits for Parts

MTBUR Rule Definition:

The Rule definition for MTBUR Alerts is to be set in the **Manage Reliability Alert Definition** interface.

Let us consider **Rule1** set as,

MURR3M >= 'History based Alert' AND MUSR3M >= '3', which represents "URR for 3months greater than or equal to History based Alert" and "Unscheduled Removals for 3months greater than or equal to 3". For a given part to be Alert, the part must satisfy both the rules for it to be tagged as an Alert in the **Analyze MTBUR for Parts** page.

Exhibit 2: The Manage Reliability Alert Definition screen

★ Manage Reliability Alert Definition

Alert Rules for MTBUR / URR

Rule Details

#	Rule Id	Rule Description	Define Rules	Defined Rules Description
1	RuleA	Rule A		MURR3M >= 'History based Alert' AND MUSR3M >= '3'
2				

Component Removal Assessment Dashboard

APRP-278

Background

For an organization performing periodic Component Reliability assessments, it is a much needed provision to be able to track and review various reliability watchlist in a single interface and act on them appropriately with adequate information. The user interface is expected to display parts and components identified into a watchlist with provision to disposition these parts by either moving them out of the watchlist or restricting their usage henceforth.

Change Details

This enhancement provides the Tech Records team a wide look of different Component Reliability assessments on a single screen. A dashboard version of Component Removal assessments has been introduced to achieve this.

The new dashboard can be launched from Business process **Reliability Management > Component Reliability Analysis > Activity Component Removal Assessment Dashboard**.

A few highlights are:

1. **Watchlists:** Based on the removal data and auto evaluation with respect to the assessment rules, the components & parts identified as either LTR or NFF or any other user defined assessments by the system data, will be listed under individual tiles. While LTR and NFF are predefined tiles, 3 other user defined tiles can be chosen to be displayed in the dashboard. Additionally, Restrictions is yet another watchlist that will contain list of parts or components restricted based to reliability analysis. An **Overall Assessment** tile has also been positioned for complete visibility of all Reliability assessments applicable to a part/component.

Exhibit 1: The Component Removal Dashboard page

2. **Add Items to watchlist:** This link facilitates the user to add records manually to the watchlist. In order to upload/access the existing records, this link for manually uploading is being added to the dashboard. In **Add Items to Watchlist** screen, the user can add a single record or even bulk upload. The records can be added by default with assessment information. A provision to upload record along with the Restriction information is also provided here. On click of **Add Items to Watchlist** button, the record gets added to the

watchlist and to the relevant tiles.

Exhibit 2: The Add Items to Watchlist screen

#	Part #	Part Description	Serial #	Assessment Type	NFF Level	Assessment Date	Restriction Code	Ref. Doc. #	Restriction Remarks	Restriction Eff. from	Reliability Remarks
1	337-001-503-0:F0301	STAGE 2 LPT DISK	BB698743	NFF	Level 2	01-23-2020	Goods Inward		restriction for NFF	01-23-2020	Testing
2											

Add Items to Watchlist

3. **Reliability Notes:** Reliability Notes has been provided for each assessment to be able to record / update certain repair or any other reliability-related instructions or notes for future reference. On click of the icon, the **Manage Reliability Notes** popup appears wherein the user can add comments. This can also be accessed by the users in the subsequent Repair Execution document for the component. Since, this is related to repair execution; each part/component might carry multiple comments tracked as history.



Note: This visibility of Reliability notes in respective execution documents will be done in subsequent releases.

Exhibit 3: The Manage Reliability Notes page

The screenshot displays the 'Manage Reliability Notes' interface. At the top, there's a header bar with the Ramco logo, navigation icons, and user information. Below the header, the main content area is divided into sections. The top section contains a form for adding a new reliability note, with fields for 'Part #/Desc.' (00703:59885/ FLAP POSITION T...), 'Serial #' (6), and 'Notes Last Updated on' (01-23-2020). A text area for 'Reliability Notes' contains 'Internal Verification', and an 'Add' button is present. Below this is the 'Instructions History' section, which includes a table with columns: #, Date, Reliability Notes, Addl. Remarks, and Status. The table shows two entries: one dated 01-23-2020 with 'Rust Clearance' and 'Open' status, and another with a blank status. A sidebar on the left contains navigation icons and a list of numbers 1 through 5.

4. **Remove from Watchlist:** Remove from Watchlist is one way of dispositioning a part/component from the watchlist, if it is found to be performing well. The intention is to reset the reliability attributes of part/component or in other words indicate that the part/component is no more LTR or NFF. In case of the **Overall Assessment** tile, a single record can be tagged to multiple assessments and there might be a chance that only few of the assessments need to be removed. In such conditions, the user will have an option to choose the assessment flags to be removed in a pop-up.

Exhibit 4: The Remove from Watchlist page

The screenshot displays the 'Remove from Watchlist' interface. At the top, there's a header bar with the Ramco logo, navigation icons, and user information. Below the header, the main content area is divided into sections. The top section contains a form for removing a part from the watchlist, with fields for 'Part #/Desc.' (622-5272-001:4V792/ HF TRAN...), 'Serial #' (351), and 'Removal Date' (01-24-2020). A text area for 'Removal Comments' contains 'IOR passed'. Below this is a table with columns: #, Watch List, and a checkbox. The table shows two entries: one with 'IOR' and a checked checkbox, and another with 'MOR' and an unchecked checkbox. A green 'Remove from Watchlist' button is present at the bottom.

5. **Restrictions:** Yet another way to disposition parts/components from watch list is to map them with a Restriction code and restrict the usage of part for further transactions. A part/component mapped with a restriction code will be updated to the **Manage Part Restrictions** framework, which currently validates the usage of part/component across transactions. For restrictions initiated from Reliability, the reference is taken as the removal instance i.e., Component Removal or Goods Inward on which the part/component was added to the watchlist.
6. **Search Tab:** The **Search** tab is similar to the **Overall Assessment** tile. The user can key in Part #, Part Description, Serial #, Ownership/Trading Partner in the **Global Search** field to view/modify records in the Watchlist previously tagged to an assessment.

Exhibit 5: The Search tab

Component Removal Dashboard

RAMCO OU-ramco role

170-70160-403:D9893

Search

#	Part #	Part Description	Serial #	In Stock?	Last Transaction	Ownership/Trading Partner	Component #	Rule Referred	LTR?	NFF?	NFF Level	Entity 1	Entity 2	Entity 4	Others	Reliability
1	170-70160-	LOWER STAY	PO-Y0QV7	No		Customer / Customer 8	00001G		✓							

Update Info.

Remove from Watchlist

Quick Links

Ability to generate PDF Reliability Reports in Excel using DW Framework- UI changes to select PDF or XL format on generation & tool changes

Reference: APRP-752

Background

Currently, the users can generate the Reliability reports in the PDF format only. However, some of these reports may be required to be generated in the Excel format. Hence, a provision is required that allows the users to select the report format in which they want to generate each of the reports.

Change Details

The users can now choose to generate reliability reports in the format that they prefer either Excel or PDF. The reports that were already published in PDF can be now be modified and then be regenerated in the Excel format. In cases of the reports in the PDF format being regenerated in the Excel format, the graphs in PDF format are shown as images in the Excel format. They can also set the format that appears by default in the **Report Format** drop-down of the Generate Reliability Report screen of the **Reliability Analysis** business component.

To facilitate the above features, the following developments have been incorporated in the **Reliability Analysis** business component.

- New Option **Report Generation Options** has been added in the **Category** drop-down list box in the **Set Options** screen to enable the users to define / default the report format in the **Generate Reliability Reports** screen.
- New field **Report Format**, a drop-down list box has been added in the **Generate Reliability Reports** screen to enables the users to choose the format for the reliability report. The drop-down list box displays the format options available for the generating reliability reports.
- New parameter **Reliability report generation option** has been added under the category **Report Generation Options** to define a report format at the organization level. This parameter decides which of the format options will be listed in the **Report Format** field in the **Generate Reliability Reports** screen.

Parameter: Reliability report generation option	
Parameter Value	Report Format drop-down list box options available
1	PDF
2	EXCEL
3	PDF& EXCEL

Another new parameter **Default report generation option** has been added under the category **Report Generation Options** to choose the option that must appear by default in the **Report Format** drop-down list.

Parameter: Default report generation option	
Parameter Value	Report Format drop-down list box options available
1	PDF
2	EXCEL

Exhibit 1: The Set Options screen in Reliability Analysis

Set Options

Date Format: mm-dd-yyyy

Search Criteria: Category: Report Generation Options

Option Setting Details: Initial Start Date for Reliability Analysis: 01-01-2017

Option Setting List

#	Category	Parameter	Permitted Value	Value	Status	Error Message
1	Report Generation Options	Reliability report generation option	Enter '1' for 'PDF', '2' for 'EXCEL', '3' for 'Both'		1 Defined	
2	Report Generation Options	Default report generation option	Enter '1' for 'PDF', '2' for 'EXCEL'		1 Defined	

New option under category

Set Options

Exhibit 2: The Generate Reliability Report screen in Reliability Analysis

Generate Reliability Report

Date Format: mm-dd-yyyy

Search Criteria: Report for: 2017 Mar Get Details

Search Results

#	Reliability Rep. Group	Reliability Fleet #	Fleet Description	Report Count	Status	User Status	Remarks
1	FF20	B767FL-01	B767-200 FLEET	28	Gener		
2	PG37	REFL-01	Reliability Fleet	6			
3			B767-200 FLEET				

New field to select report format

Report Format: PDF PDF EXCEL

Generate Re-Generate Update Publish

WHAT'S NEW IN FLIGHT OPERATIONS?

Ability to upload documents against a Journey Log

Reference: AHBG-31166

Background

Currently, the users can load documents associated with flight / journey under **Business Component Name - Aircraft Maintenance Exe. Ref.** and **Ref. Doc. Type - Aircraft Maintenance Exe. Ref. #**. However, an identifiable **Component Name** and **Ref. Doc. Type** combination is required to upload scanned journey log documents to the central repository of Ramco Aviation. However to feed this requirement, links to upload documents and view those attached documents are added in Create/Edit/Amend and View JL screens.

Change Details

In the **Flight Log** business component, the following changes have been incorporated in order to enable the users to upload scanned copies of journey log documents:

- **Upload Documents** link and **View Associated Doc. Attachments** link are added in **Create/Edit/Amend** and **View Journey Log** screens.
- Similarly, the **Select** screen of **Edit and View Journey Log** also have the above two links added to them.
- If user launches any of the above links from the respective screen after selecting a record it will default the Business Component Name as 'Flight Log' and the Ref. Doc. # as 'Journey Log' and the selected JL # will be displayed.
- User can upload and view the documents against the JL# in **Upload Documents** and **View Associated Doc. Attachments** screen respectively.

Exhibit 1: Identifies the Create Journey Log screen

The screenshot shows the 'Create Journey Log' screen. At the top, there are input fields for Journey Log #, Flight Date, Status, Aircraft Reg. #, Starting Station, Flight Ops. Type, and Log #. Below these is a 'Log Reference Details' section. The main part of the screen is a table titled 'Log Details' with columns for Line #, Dep. STN, Arr. STN, Dep. Date, Dep. Time, Take Off Date, Take Off Time, Landing Time, Arr. Date, Arr. Time, Hobbs-Out, and Hobbs-In. Below the table is an 'Other Details' section with fields for File Name, Remarks, Engine Bleed?, and Pilot Special Report. At the bottom, there are links for 'Edit Journey Log', 'Report Operational Interruption Details', 'Record Aircraft Maintenance Execution Details', 'Record Pilot Reported Discrepancies', 'Upload Documents', 'Report Inflight Shut Down Hours', and 'View Associated Doc. Attachments'. Two yellow callout boxes point to the 'Upload Documents' and 'View Associated Doc. Attachments' links, with the text 'Newly added link'.

Exhibit 2: Identifies the Edit Journey Log screen

Flight Operations > Flight Log > Edit Journey Log

Aircraft Reg. # 101 Starting Station JFK Flight Ops. Type Regular Log # Flight Status

Log Reference Details

Log Details Summary Parameter Details

#	Line #	Dep. STN	Arr. STN	Dep. Date	Dep. Time	Take Off Date	Take Off Time	Landing Time	Arr. Date	Arr. Time	Block Hours	Flight Hours
1	1	JFK	IAD	09-01-2013	06:01	09-01-2013	06:15	07:30	09-01-2013	07:30	1.29	

Other Details

File Name View File Remarks Engine Bleed? Pilot Spec

Computed Flight Parameters

Flight Hours 1.00 HRS Engine Hrs / Cycles 1.29 / 1 Block Hours 1.29

Parameter 1 Not Set Parameter 2 Not Set Parameter 3 Not Set Parameter 4 Not Set Parameter 5 Not Set Parameter 6 Not Set

Report Operational Interruption Details Record Aircraft Maintenance Execution Details

Record Pilot Reported Discrepancies Upload Documents Report Crew Details View Associated Doc. Attachments Report Inflight Shut Down Hours

Newly added link

Newly added link

Exhibit 3: Identifies the Amend Journey Log screen

Flight Operations > Flight Log > Amend Journey Log

Flight Category Amendment # 1 Log # Flight Status

Log Reference Details

Log Details Summary Parameter Details

#	Line #	Dep. STN	Arr. STN	Dep. Date	Dep. Time	Take Off Date	Take Off Time	Landing Time	Arr. Date	Arr. Time	Block Hours	Flight Hours
1	1	BKK	DEF	05-07-2019	01:30	05-07-2019	01:30	05:30	05-07-2019	05:30	4.00	

Other Details

File Name View File Amendment Remarks Engine Bleed? Pilot Special Report

Amend Journey Log Approve Amendment

Computed Flight Parameters

Flight Hours 4.00 HRS Engine Hrs / Cycles 4.00 / 1 Block Hours 4.00

Parameter 3 Not Set

Report Operational Interruption Details Record Aircraft Maintenance Execution Details

Record Pilot Reported Discrepancies Upload Documents Report Crew Details View Associated Doc. Attachments Report Inflight Shut Down Hours

Newly added link

Newly added link

Exhibit 4: Identifies the View Journey Log screen

View Journey Log

Configuration Class: AI-707 Total Flight Hours: 1.00 HRS: CVC FH Log Mode: Actual Flight Time Last Journey Log #: JL-00005920
 Manufacturer Serial #: 35-10101 Total Flying Cycles: 1 Hobbs Meter Reading: Hobbs Re-set? Last Journey Log Status: Approved
 Aircraft Model #: A320-211

Log Details | Summary Parameter Details

Log Details

#	Line #	Flight #	Leg #	Dep. STN	Arr. STN	Dep. Date	Dep. Time	Take Off Date	Take Off Time	Landing Time	Arr. Date	Arr. Time	Hobbs-Out	Hobbs-In
1	1			AIR	LAX	06-21-2019	10:00	06-21-2019	10:00	11:00	06-21-2019	11:00		

Operational Details

File Name	View File	Remarks
Computed Flight Flight Hours: 9.30 Engine Hrs / Cycles: 9.30 / 1 Flight Cycles: 1 Block Hours: 9.30 Landing Cycles: 1	Parameter 1: Not Set 0.00 Parameter 2: Not Set 0.00 Parameter 3: Not Set 0.00 Parameter 4: Not Set 0.00 Parameter 5: Not Set 0.00 Parameter 6: Not Set 0.00	Pilot Special Report

[View Operational Interruption Details](#) [View Pilot Reported Discrepancies](#) [View Regularized Operational Interruption Details](#) [View A/C Maint. Exec. Ref #](#)
[Upload Documents](#) [View Associated Doc. Attachments](#)

Newly added link (pointing to Upload Documents)

Newly added link (pointing to View Associated Doc. Attachments)

Configure and Validate Duty Limitations

Reference: APRP-162

Background

In order to prevent the daily and cumulative effects of flight fatigue, duty limitations have been developed by regulatory authorities around the world. Flight and duty limitations are established to limit the number of hours that the flight and cabin crew can work in a particular period before which rest must be taken. Apart from duty limitations, the regulatory authorities also release some currency requirements that pilots must meet in order to be eligible to fly. This requires that the certificate and experience details of the pilots are up to date to take up flying.

Change Details

Maintain Crew Duty Limitations

A new screen has been developed to configure the various duty limitations and experience-based currency requirements in one place. Rest-related rules, rest aggregate-related rules, flight hour based rules and experience based rules can be configured in the system. These rules will be validated at the time of clocking into CrewAnywhere.

Rest-related rules deal with the amount of rest a crew member is mandated between duties on a regular basis. Rest aggregate-related rules govern the overall rest periods that a crew member can avail in a specified period. The Flight hour based rules restrict the total flying hours that a crew member is allowed to clock in a given period. Finally, experience based rules relate to the duties and activities that a crew member must perform in a specific period to be eligible to fly.

Exhibit 1: Entry point screen to create duty limitations in the system

#	Rule ID	Rule Description	Rule Type	Status	Validation Type	Applicable Job Family	Rule Details	Output Parameter	Value	Alert Threshold
1	Rule 1	8 hours flight	Minimum Rest	Active	Alert	CREW, PILOT	Last Flight Duration	Rest Hours	8.00	8.00
2	Rule 4	more than 9 hours of	Minimum Rest	Active	Alert	CREW, PILOT	Last Flight Duration	Rest Hours	9.00	9.00
3	Rule 5	Rest Aggregate	Minimum Rest	Active	Alert	CO-PILOT, CREW,	Horizon : 1.00	No. of Rest Periods	1.00	1.00
4	Rule 6	Max FH in a quarter	Maximum Flight Hour	Active	Alert	CO-PILOT, CREW,	Horizon : 1.00	Flight Hours	800.00	780.00
5	Rule 11	Min day landings	Minimum Experience	Active	Alert	CO-PILOT, CREW,	Horizon : 2.00	Flight Hours	1,400.00	1,350.00
6	Rule 13	Min NVG Operations	Minimum Experience	Active	Alert	CO-PILOT, CREW,	Horizon : 1.00	Flight Hours	4.00	5.00
7	Rule 14	Min Instrument	Minimum Experience	Active	Alert	CO-PILOT, CREW,	Horizon : 1.00	NightTakeOff	4.00	15.00
8	Rule 15	Min Hold Approach	Minimum Experience	Active	Alert	CO-PILOT, CREW,	Horizon : 4.00 Days	DayLandings	6.00	8.00
9	test998	test 998	Minimum Rest	Active	Hard Stop	CO-PILOT,	Horizon : 3.00 Days	NVG Operations	6.00	8.00
10							Horizon : 6.00 Months	Inst. Appr	6.00	8.00
11							Horizon : 6.00 Months	Appr. Hold	1.00	3.00
12							Last Flight Duration	Rest Hours	1.00	2.00

Rule Configurator

Rules under the above described Rule Type can be configured in this screen. Rules can also be flagged against a specific job family which gives the ability to setup rules for pilots which are different from rules for co-pilot or other crew members. Rules can also be configured to either stop an employee from clocking into the system or provide an alert at the time of clock in, if any of the active rules are violated.

Each rule type has a set of input parameters and an output parameter. Input parameters are conditions under which the rule is evaluated and the output parameter is the final value computed under the given conditions. As a part of the rule definition a value is set for each output parameter. In the rule evaluation process, the system compares the computed output value with the output value mentioned in the rule. For minimum Rule Types, the system alerts or stops the user if the calculated output parameter value is below the set output parameter value. For maximum Rule Types, the system alerts or stops the user, if the calculated output parameter value is above the pre-set output parameter.

Exhibit 2: Duty Limitations rule configurator

The screenshot shows the 'Duty Limitation Rule Configurator' window. Annotations highlight the following features:

- Job Families applicable to Rule:** Points to the 'Applicable Job Family' dropdown menu.
- Rule type to decide Input and Output Parameters:** Points to the 'Rule Type' dropdown menu.
- Input Parameters multiline:** Points to the 'Input Parameters' table header.
- Input Parameters details:** Points to the 'Parameter' column in the 'Input Parameters' table.

The interface includes fields for Rule ID, Rule Description, Validation Type (Alert), Status (Active), and a 'Save' button. The 'Input Parameters' table is currently empty, displaying 'Found no rows to display!!!'.

In case of rest related rules, the system looks at the total flight duration during last login and calculates the time between previous clock out and current clock in as rest hours. A range for total flight duration can be entered as input parameters in this case and the output parameter is the rest hours. In this rule evaluation system will calculate the total rest when the total flight hours falls between the given flight hour range.

Exhibit 3: Input and Output Parameters for Rule Type: Minimum Rest

Duty Limitation Rule Configurator

Rule ID: Rule Description: Rule Type:

Applicable Job Family: Validation Type: Status:

Input Parameters

#	Parameter	Value	UoM
1	Last Flight Duration From	0.00	Hours
2	Last Flight Duration To	8.00	Hours

Output Parameter: Value: Alert Threshold: UoM:

Created By: DMUSER Created Date: 29-08-2019 Last Modified By: DMUSER Last Modified Date: 03-02-2020

For rest aggregate related rules one input parameter is a time horizon in which the rest periods need to be evaluated and the other parameter is the definition of the rest period. The output parameter for this rule is the number of such rest periods that exist in the given horizon. The horizon and definition of the rest period can be in days or months or calendar quarter or years. In this rule evaluation system will aggregate the number of rest periods in the rule horizon.

Exhibit 4: Input and Output Parameters for Rule Type: Minimum Rest Aggregate

Duty Limitation Rule Configurator

Rule ID: Rule Description: Rule Type:

Applicable Job Family: Validation Type: Status:

Input Parameters

#	Parameter	Value	UoM
1	Horizon	1.00	Calendar Quarter
2	Rest Period	1.00	Days

Output Parameter: Value: Alert Threshold: UoM:

Created By: DMUSER Created Date: 29-08-2019 Last Modified By: DMUSER Last Modified Date: 14-02-2020

In case of flight hour related rules the input parameter is the horizon in which flight hours need to be aggregated. The output parameter is the total flight hours. Horizon for this rule can be defined in days or months or calendar quarter or years. In this rule evaluation system will aggregate the total flight hours in the rule horizon.

Exhibit 5: Input and Output Parameters for Rule Type: Maximum Flight Hour Limit Aggregate

Duty Limitation Rule Configurator

Rule ID: Rule Description: Rule Type: Validation Type: Status:

Applicable Job Family: ☒

Input Parameters

#	Parameter	Value	UoM
1	Horizon	1.00	Calendar Quarter

Output Parameter: Value: Alert Threshold: UoM:

Created By: DMUSER Created Date: 29-08-2019 Last Modified By: DELLIS Last Modified Date: 17-09-2019

Finally for experience based rules the input parameter is the horizon in which the rule needs to be evaluated. The Output parameter can be any duty or activity defined in the system. Horizon for this rule can be defined in days or months or calendar quarter or years. In this rule evaluation system will aggregate the specified duty or activity in the rule horizon.

Exhibit 6: Input and Output Parameters for Rule Type: Minimum Rest Aggregate

Duty Limitation Rule Configurator

Rule ID: Rule Description: Rule Type: Validation Type: Status:

Applicable Job Family: ☒

Input Parameters

#	Parameter	Value	UoM
1	Horizon	6.00	Months

Output Parameter: Value: Alert Threshold: UoM:

Created By: DMUSER Created Date: 29-08-2019 Last Modified By: DMUSER Last Modified Date: 14-10-2019

All rules have an alert threshold that controls when these limitations are alerted to the user in "Review Pilot Crew Log" screen. All rules are evaluated at the time of clock in to Crew Anywhere.

Process Parameters

A new process parameter "Status of attendance records to be considered for Duty Limitation computation" has been added under the Entity Type 'Crew Information' and Entity 'Duty Limitations' in the **Set Process Parameters** screen of the **Define Process Entities** activity of the **Common Master** business component.

- If the set option is set as '1' (Fresh), then only records in the Fresh status will be considered for minimum rest and minimum rest aggregate related rules.

- If the set option is set as '2' (Authorized), then only records in the Authorized status will be considered for minimum rest and minimum rest aggregate related rules.

A new process parameter "Choose the day rest periods must be associated to" has been added under the Entity Type 'Crew Information' and Entity 'Duty Limitations' in the **Set Process Parameters** screen of the **Define Process Entities** activity of the **Common Master** business component.

- If the set option is set as '1' (First Day), when rest period spans across two horizons during Rest Aggregate related rule evaluation then the rest hours will be considered against the starting day of the rest period.
- If the set option is set as '2' (Last Day), when rest period spans across two horizons during Rest Aggregate related rule evaluation then the rest hours will be considered against the ending day of the rest period.

A new process parameter "Should discrete rest periods or continuous rest periods be considered for rules of rule type "minimum rest aggregate" ?" is added under the Entity Type 'Crew Information' and Entity 'Duty Limitations' in the **Set Process Parameters** screen of the **Define Process Entities** activity of the **Common Master** business component.

- If the set option is set as '1' (Discrete), then during rest aggregate rule evaluation system will consider any rest period that is a multiple of rest period defined in the rule as multiple rest periods
- If the set option is set as '2' (Continuous), then during rest aggregate rule evaluation system will consider any rest period that is a multiple of rest period defined in the rule as one rest period.

WHAT'S NEW IN ROSTER MANAGEMENT?

Ability to view qualification details of employees at any particular work center

Reference: AHBG-30933

Background

In the Aviation industry, the Crew Scheduler / Shift planners prepare rosters for a period of a month that contain the flight schedules and duty details of pilots / mechanics. Rostering enables key information including employees' assignment to shifts / re-assignment of employees' to shifts based on employee availability /leave etc. This information is recorded and disseminated across the board to aid in the assignment / re-assignment of employees to aircraft. However, additional criteria to be considered during rostering are the qualifications of employee. Certain jobs require an employee with specific qualification and hence a report to display all employee qualifications is required. The Qualification report of employees at any particular work center can be launched from the Generate Qualification Report screen.

Change Details

Generate Qualification Report

The **Generate Qualification Report** screen under the **Manage Employee Roster** business component facilitates Qualification Report generation for employees at any particular work center.

Further the report can be generated for,

- All employees / a particular employee
- All Qualification codes / a particular qualification code
- Multiple days/ a particular date

The Search Criteria section helps to generate report in two categories, i.e., Flight Operations and Maintenance. If Flight Operations is selected as report generation option then all employees with job family that is mapped to the role "Pilot", "Co-Pilot", "Instructor", "Crew" defined in the Set Sales Process Parameters activity will be considered. If Maintenance is selected as report generation option, then all employees not under Flight Operations will be considered.

A new process parameter, "Qualification Type to be considered for Qualification Report" with permitted values will be added inside Entity type: 'Roster Management' and Entity- 'Roster Reports' under the Common Master business component in the **Define Process Entities** activity to feed the Qualification Type. The system will only consider qualification under the mentioned qualification type for the report. If no qualification type is mentioned then the system considers all qualification types for the report.

Exhibit 1: Identifies the **Generate Qualification Report** screen

★ Generate Qualification Report

Search Criteria

Valid Between Date: 02-14-2020 02-14-2020

Employee #:

Qualification Code:

Organizational Unit: RAMCOOU

Work Center:

Report Generation Option: Flight Operations

Generate Qualification Report

Exhibit 2: Identifies the **Sample Qualification Report**

ramco

Qualification Report
18 Jul 2019 to 18 Jul 2019

RAMCO SYSTEMS LIMITED 1,
64 SARDAR PATEL ROAD,
TARMANIL,
CHENNAI TAMILNADU
INDIA 60011SMO

18 Jul 2019

Name	Q1	Q2	Q3
Granados, Jennie (00001120)		YES	
Mira, Xiomara (00001119)	YES		YES

Ability to view certificate details of employees based on report filters

Reference: AHBG-30934

Background

In the Aviation industry, the Crew Scheduler / Shift Planners prepare rosters for a period of a month that contain the flight schedules and duty details of pilots / mechanics. Certificates are key criteria considered before a mechanic is assigned any maintenance task. Certificates like medical certificates are also mandatory for pilots and flight crew to be eligible to fly. This report will provide the expiry date of all certificates of employees for a specific period. The Certificate Expiry report of employees can be launched from the Generate Qualification Report screen.

Change Details

Generate Certificate Expiry Report

The **Generate Certificate Expiry Report** screen under the **Manage Employee Roster** business component facilitates the Certificate Report generation of employees.

Further the report can be generated for:

- All employees / a particular employee
- All certificates under a certification category
- Multiple days / a particular date

The Search Criteria section helps to generate the report in two categories, i.e., Flight Operations and Maintenance. If Flight Operations is selected as report generation option then all employees with job family that is mapped to the role "Pilot", "Co-Pilot", "Instructor", "Crew" defined in the **Set Sales Process Parameters** activity will be considered. If Maintenance is selected as report generation option, then all employees not under Flight Operations will be considered. On click of the **Generate Certificate Expiry Report** link, the report is launched with the below color coding logic.

- Green - If the report is being generated before "Currency Date"
- Amber- If the report is being generated between the "Currency Date" and "Valid Till Date".
- Red- If the report is being generated after "Valid Till Date".



Note:

- If early grace period is not mentioned against a certificate, the currency period is the same as validity period*
- If late grace period is not mentioned against a certificate, the re-certification period is the same as validity period*

Exhibit 1: Identifies the Generate Certificate Expiry Report screen

Home > Roster Management > Manage Employee Roster > Generate Certificate Expiry Report

★ Generate Certificate Expiry Report RAMCO OU-ramco role

Search Criteria

Expires From/To Date: 02-01-2020 03-31-2020 Employee #:


Certification Category: Work Center:

Organizational Unit: RAMCOOU Report Generation Option: Flight Operations

Report Options

Generate Certificate Expiry Report

Exhibit 2: Identifies the Sample Certificate Expiry Report



Certificate Expiry Report

RAMCO SYSTEMS LIMITED,
64 SARDAR PATEL ROAD,
TARMANI.,
CHENNAI TAMILNADU
India 60011SMO

Jun 1 2019 to Mar 31 2020

Employee	Certificate #	Certificate Description	Certificate Category	Expiry Date
AARON KUMAR (00047711)	AIRFRAME-ENGINE	OS ACFT AND PPLANT WORK	OCCUPATIONAL STANDARD	2020-03-10
ABDELHAKIM HAOUZANE (00039664)	EMC-BASIC-SCA	RELEASE PARTS AND MODULES	SHOP CERTIFY AUTHORITY	2019-09-24
ABDELHAKIM HAOUZANE (00039664)	EMC-PART-INSP	ENGINE_APU INSP OF PARTS	WORK	2019-12-08
ABDELHAKIM HAOUZANE (00039664)	INSP-AUTH-PP	INSP AUTHORITY_EMC	INSPECTION	2019-09-02
ABDELMOUTTALIB LACHEHAB EL IDRISSI (00030817)	MPM-AVEOS	POLICY MANUAL AIRFRAME	REGULATORY PRE-REQ	2019-11-07
ABDERRAHIM ELBERHOUMI (00027016)	MPM-AVEOS	POLICY MANUAL AIRFRAME	REGULATORY PRE-REQ	2020-03-25
ABDERRAHMAN MAZOUZ (00019129)	M-777-2XX-GE90	B777_200_300 GE90_100 ENG	AIRCRAFT CERTIFY AUTH.	2019-10-09
ABDESSAMAD ENNAJI (00037428)	INSP-AUTH	INSP AUTHORITY_GENERAL	INSPECTION	2019-10-30

Ability to view Roster details of employees at any particular Roster Level

Reference: AHBG-32249

Background

In the Aviation industry, the Crew Scheduler / shift Planners prepare rosters for a period of a month that contain the flight schedules and duty details of pilots / mechanics. Rostering enables key information including employees' assignment to shifts / re-assignment of employees' to shifts based on employee availability /leave etc. to be recorded and disseminated across the board. It also aids in the assignment / re-assignment of employees to aircraft. However, the planners require a provision to view the roster schedule of employees in a report format.

Change Details

Generate Roster Report

A new component **Manage Employee Roster** has been introduced under **Roster Management** business process. The **Generate Roster Report** screen under the **Manage Employee Roster** business component facilitates **Roster Report** generation for different levels.

Now, the Roster report for any Roster Level in an organisation can be launched from **Generate Roster Report** screen or from **Review/Publish Roster** screen. Further, the report can be generated for different Roster Level, Roster Group or Work Center or Span of Control.

The Search Criteria section helps to search for roster number at different roster levels. Roster level i.e., Roster Group, Work Center and Span of Control. Based on the filter criteria provided in Roster #, Roster Level, Description, Effective From, Effective To and Status, the system retrieves information. By selecting Roster # and clicking of **Generate Roster Report**, the report with employee and their shift/duty details appears.

[Home](#) > [Roster Management](#) > [Manage Employee Roster](#) > [Generate Roster Report](#)

★ Generate Roster Report

RAMCO OU-ramco role

Search Criteria

Roster #	<input type="text"/>	Roster Level	<input type="text"/>	Description	<input type="text"/>
Effective From	<input type="text"/>	Effective To	<input type="text"/>	Status	<input type="text"/>

Search Results

#	Roster #	Revision #	Roster Level	RG/WC/SpC	Description	Status	Effective From	Effective To
1								

[Generate Roster Report](#)

[illegible]

WHAT'S NEW IN AIRCRAFT MAINTENANCE EXECUTION AND SHOP WORK ORDER?

Ability to capture and view Sign Off Date & Time for AME and SWO

Reference: APRP-205

Background

This enhancement provides the ability to capture the Sign Off time along with Sign Off date and the user can see the Sign Off date and time in both AME and SWO.

Change Details

- Whenever the mechanic or inspector has signed off a task, the system will capture the current date and time in the time zone of the station of the work center for sign off.
- For displaying the Sign Off date and time, new display-only column **Sign Off Date & Time** has been added in the **View Work & Sign Off Information** screen for AME and in the **View Work Order Details** screen for SWO. These columns will display the Sign Off date and time of the last sign off for the resource group.

Exhibit 1: Identifies the changes in the **View Work & Sign-off Information** screen of **Aircraft Maintenance Execution**

The screenshot displays the 'View Work & Sign-off Information' screen. At the top, there are navigation tabs: 'View Sign Off History', 'View Comments Information', 'View Associated Doc. Attachments', and 'Print Task/Discrepancy Card'. Below these, there's a section for 'Work Unit Sign-off Information' with fields for 'Line #' (set to 1) and 'Resource Group'. A 'Get Details' button is present. The main section is 'Sub Task Information', which contains a table with the following columns: #, Seq #, Task #, Sub Task Description, Skill #, Resource Group, Sign-Off Comments, Sign-off Status, Employee #, Sign Off Date & Time, Last Modified by, and Last M. The table has two rows of data. The 'Sign Off Date & Time' column is highlighted with a red box, and a yellow callout bubble points to it with the text 'New field- Sign Off Date & Time'.

#	Seq #	Task #	Sub Task Description	Skill #	Resource Group	Sign-Off Comments	Sign-off Status	Employee #	Sign Off Date & Time	Last Modified by	Last M
1	1.2	EOT2235	Special inspection		Mechanic		Pending Mechanic				
2	1.1	EOT2235	Special inspection		Inspector	Sign off requirements	Pending Inspector			dmuser	01-09-2

Exhibit 2: Identifies the changes in the View Sign-Off Details popup of Shop Work Order

View Work Order Details

Part # 014963:P3625 Serial # 842-101 Component # C002629-2016
Qty. 1.00 Lot # Multiple Cores No
Main Core Status Returned Stock Status Accepted Part Description ENGINE
Mfg. Part # Mfg. Serial # Mfg. Plant # Mfg. Lot #

View Sign-Off Details

#	Addl. Sign-Off	Resource Group	Skill Code	Sign Off Date & Time
1		Not Required		
2		Not Required		

Important Dates

Date	Event
04-03-2019 13:48:00	Planned Start Date
04-03-2019 13:48:00	Actual Start Date
04-03-2019 14:48:30	Proj. Completion Date
04-03-2019 14:48:30	Plan End Date
03-04-2017 21:35:15	Actual End Date
04-03-2019 14:48:30	Target Date

View Order Details

- View Employee Timesheet Records
- View Sign Off History
- View Parameters Recorded
- Upload Documents

View Part Estimates vs Actuals

- View Shop Findings
- View Status Log
- View Addl. Main Cores
- View Associated Doc. Attachments

View Resource Estimates vs Actuals

- View Comments
- View Replacements
- View Work Holds
- Print Tag for Removed Object

View Removed Part Status

- View Sign-Off Details
- View Work Exec. Certificates
- View Associated Service Purchase Orders

New field- Sign Off Date & Time

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