RAMCO AVIATION SOLUTION

ENHANCEMENT NOTIFICATION

Version 5.8.4

Maintenance

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WHAT'S NEW IN AIRCRAFT MAINTENANCE EXECUTION?

Ability to retain Material Requests across Discrepancy Deferrals

Reference: AHBG-15422

Background

Typically in the Aviation maintenance scenario, a mechanic upon identifying a discrepancy in an aircraft records the discrepancy details in the system and then requests for material for resolving the discrepancy. Next, the material planner upon inquiry finds that the required material is not available in stock or in the designated warehouses or even a stock transfer from a nearby warehouse to the material request warehouse is not possible. The material planner then decides to procure the material from a vendor and raises a purchase request - purchase order for the material.

Meanwhile, the mechanic identifies that the reported discrepancy could be deferred on the basis of the MEL / CDL list. The mechanic now modifies the deferral limits so as to defer the discrepancy and releases the aircraft for operations. This results in the closure of the execution document to which the discrepancy was allocated. On closure of the execution document, the system automatically short closes the material request raised against the document. Since the material request is short closed, the goods received against purchase order raised for the material request could be allocated to other Open material requests. Later, when the same discrepancy is planned for execution in another package, the mechanic is forced to defer the discrepancy / ground the aircraft since the material is not available. This kind of scenario results in repeated material requests creation and delayed maintenance.

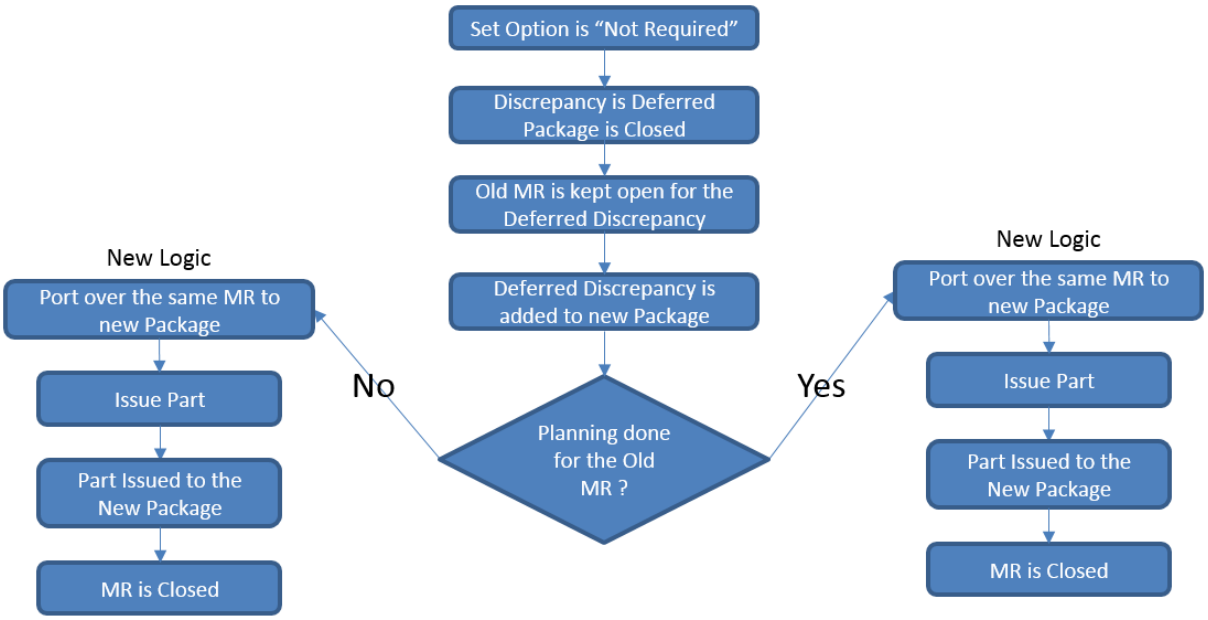
Change Details

As part of the enhancement, the system will now retain the same MR # (or at least have the Old MR # reference in a New MR, if the Old MR cannot be retained) across multiple discrepancy deferrals. This will ensure that any planning done against the MR # is retained. However, this enhancement will be dependent on the new process parameter "*Auto-Short Close Open Material Requests of Deferred Discrepancies on Package Closure?*" added under the Entity Type 'Package Type' and entity '--All Packages--' in the Define Process Entities page possessing the following behavior.

Process Parameter value	Impact in AME
0 (Not Required)	Authorized material requests are not short closed during package closure (New Behaviour)
1 (Required)	Authorized material requests are auto-short closed during package closure (Existing Behaviour)

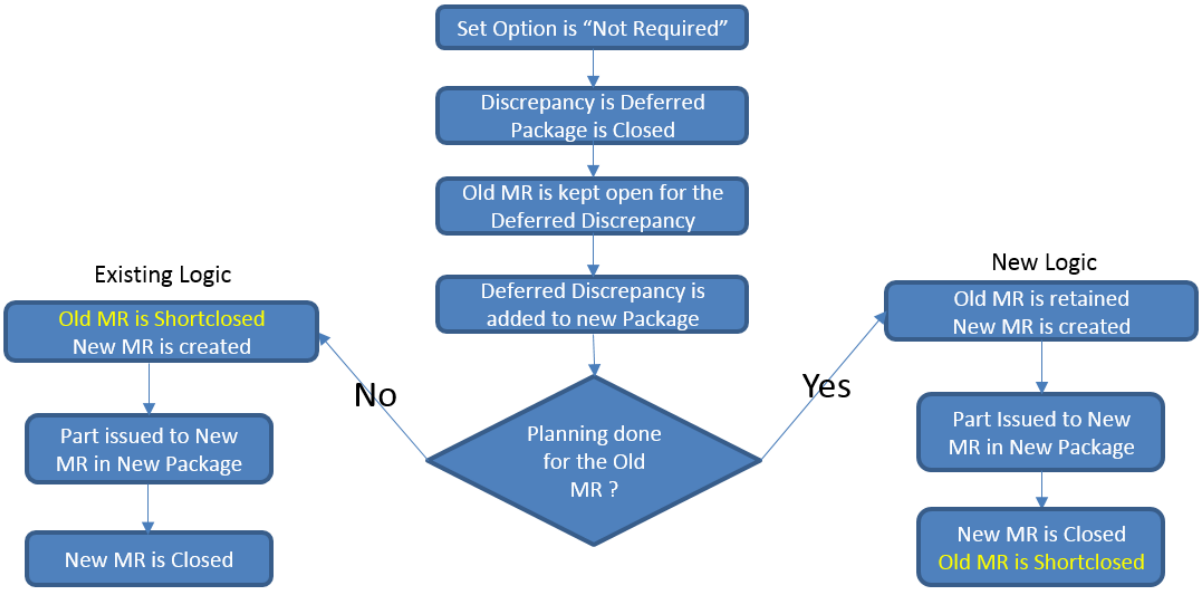
Two different behaviors could occur when the process parameter is set as "0" and a deferred discrepancy with Open material requests are added to the New package from a closed package.

One, the work center of the new package has the same Serviceable Request Warehouse as the work center of the Old package for the part type of the requested part. When the Serviceable Request Warehouse of the work center of the New package is the same one as the Old package, the following process happens:



Regardless of the planning done on the material request, the system will move over the material request to the new package.

Two, the Serviceable Request Warehouse of the work center of the New package is different from that of the Old package, the following process occurs:



If planning is available against the Old material request against the discrepancy added to a New package (whose Serviceable Request Warehouse is different from that of the Old package), the system keeps the Old material request pending and at the same creates a New material request for the same part and quantity and stamps the Old MR # in the **Remarks** field of the New material request (for the reference of the material planner to indicate that the New mterial request doesn't need planning as planning has already been done for the Old material request in the Old package). When the New material request is issued and closed, the system will automatically shortclose the Old material request.

Note: No issue document can be confirmed against an material request that is open, if the Old package to which it refers to is already closed. On the contrary, If no planning is found against the Old material request associated with the discrepancy that has been added to a New package (whose Servicable Request Warehouse is different), the system will auto-shortclose the Old material request and create a New Material request for the same part and quantity. It will not stamp the Old MR # in the Remarks field of the New MR # (as this reference is not needed as no planning is done against the old material request).

Ability to retain the same Material Request # for Tasks & Discrepancies when Exe. Work Center is changed

Reference: AHBG-15961

Background

Typically, an AME identifies a discrepancy in an aircraft and added to a package. Next, MR are raised against the discrepancy for required parts, if they are found to be unavailable in the designated warehouses. Commonly, discrepancies are deferred to enable mechanics to close the execution document (based on the MEL / CDL list) and release the aircraft. Such deferred discrepancies are added to another package to facilitate their resolution. The work center of the new package to which deferred discrepancy is added may not be the same as that of the previous package as a result the warehouse of the old and new packages may or may be the same. In such scenarios, a provision to retain or transfer the MR (if material issues have not happened against the deferred discrepancies) to the new package would simplify and speedup the material request process already initiated for the deferred discrepancies.

Change Details

Users have the option to change the work center of a package in the **Edit Package Additional Information** page. When such an event happens, the system processes the MR associated with the tasks in the package on the basis of the process parameter "Auto-Short Close Open Material Requests that have Planning Documents on Work Center Change of Tasks & Discrepancies?" under the entity type 'Package Type' and entity 'All Packages' is '0' in the **Define Process Entities** activity of **Common Master**.

Process Parameter Value	Impact on Open MR of task associated with deferred discrepancy when work center is changed
0	If Serviceable Request Warehouse of the new work center is the same as Serviceable Request Warehouse of the previous MR and if any Stock Transfer Order, Stock Transfer Issue, Purchase Request, and Purchase Order documents are available for the MR, the following happens: • The old MR is not short closed • The work center and the need date are updated in the MR
1	If Serviceable Request Warehouse of the new work center is different from Serviceable Request Warehouse of the previous MR, • New MR is generated

	• Old MR # is updated in the Remarks field of the new MR • Old MR is short closed • Stock Issues against the old MR are cancelled

Exhibit 1:

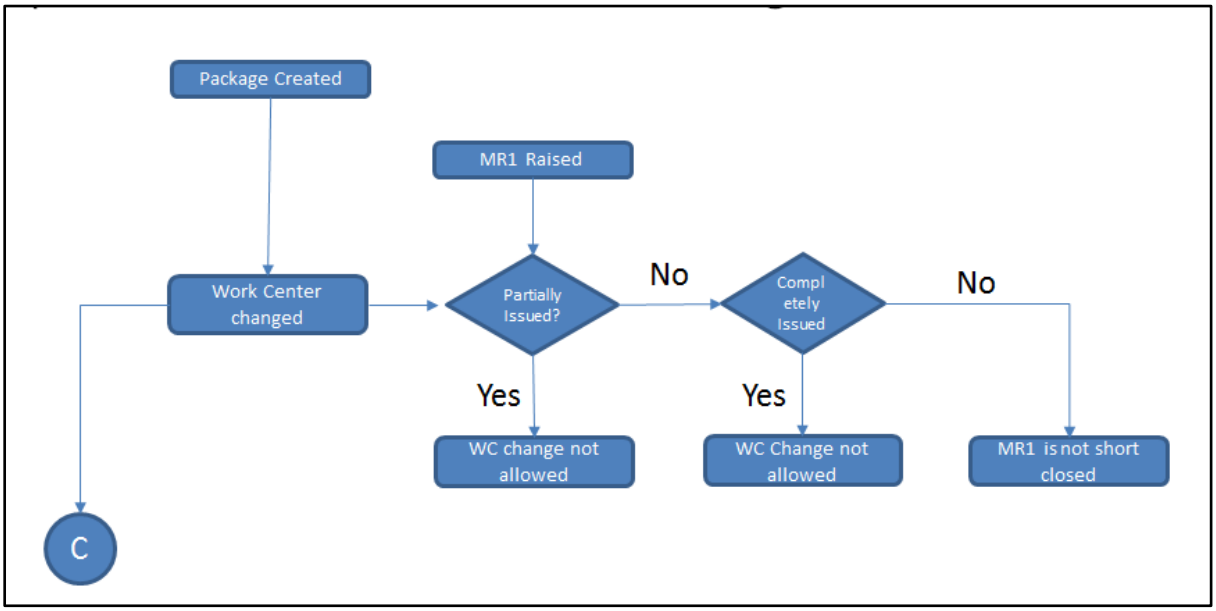
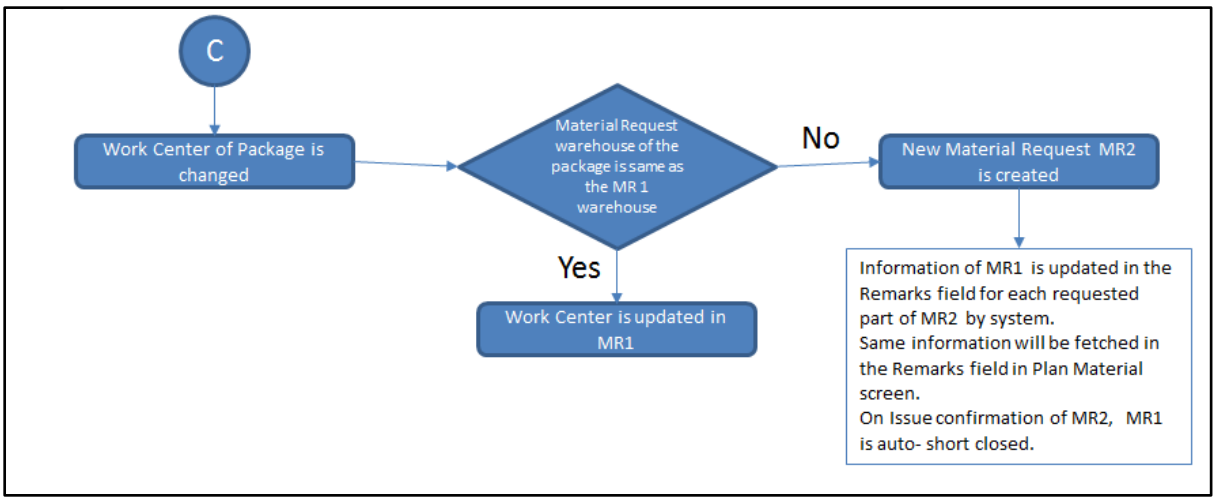


Exhibit 2:



WHAT'S NEW IN WORK CENTER?

Ability to capture Work Calendar and Holiday Master at the Work Center level for accurate Customer TAT calculations

Reference: AHBG-15891

Background

In a large Cabin Maintenance MRO scenario, maintenance and repair bases are spread across vast geographical locations. Each of these locations follow varied work and holiday calendars. Hence, TAT for parts received in the work centers must be computed in terms of business days taking into consideration location-wise work and holiday calendars.

Change Details

TAT for a part is defined in the **Maintain Maintenance Info. for Part** screen and also quoted in the contract with the customer. However, in reality, TAT could be spread over many more non-working days or holidays determined by the location of the work center. Hence, the system for computation of TAT must take into consideration the work and holiday calendars effective for the work center.

To ensure that TAT for a part sent to a work center is computed and conveyed to customers accurately, the following enhancements have been undertaken:

New activity **Maintain Standard Work Calendar for Work Center** in the **Work Center** business component has been developed to define work calendars specific to work centers. This screen allows users to record the following for a work center:

- Work start/end time
- Working hours in a day
- Working days in a week,
- Working days in a month

New tab **Holiday Definition** has been added in the **Associate Shift/Datewise Availability/Holiday Definition** screen to allow users to associate **Holiday Master** to work centers. In this tab, a holiday master code can be mapped to a work center for a specific period. (Holiday Masters can be created in the **Time Management Setup** business component.) A display-only version of the **Holiday Definition** tab is also available in the **View Shift/Datewise Availability/ Holiday Definition** screen for users to get to know the holiday master that has been mapped to the work center(s) and the effective period.

Based on work calendar and holiday definition for a work center and pre-set TAT for a part, the system will now be able to scientifically calculate the return date for the part.

Exhibit 1: The Maintain Standard Work Calendar for Work Center screen

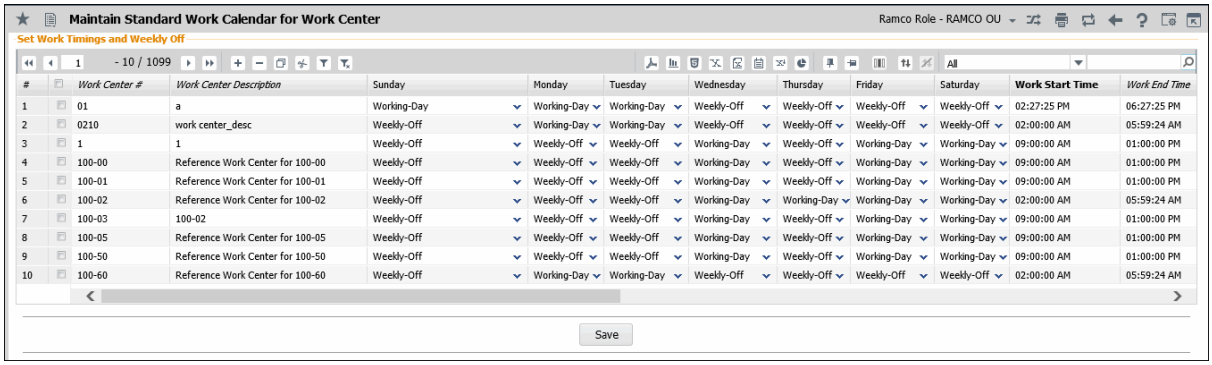
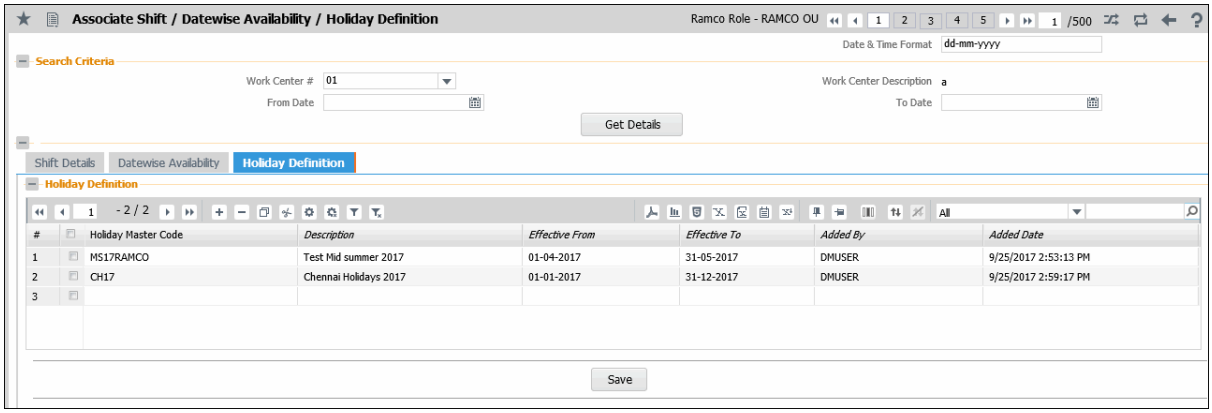


Exhibit 2: The Holiday Definition tab in the Associate Shift / Datewise Availability / Holiday Definition screen



WHAT'S NEW IN WORK MONITORING & CONTROL?

Ability to Display TAT Info & Material Availability for Work Orders and update Plan Dates & Priority in WMC

Reference: AHBG-17591

Background

In the process of Work Order Planning, the maintenance planners must be able to update the Planned Start date & time and Planned End date & time and Priority for shop work orders. Further, the TAT details and material request status related to work orders must also be available for the planners to enable precise maintenance planning and control.

Change Details

The users can now modify the **Planned Start/End Date & Time** and **Execution Priority** of shop work orders and AME packages in the **Manage Work Assignments and Reporting** screen in **Work Monitoring & Control**. The system intuitively derives TAT and Material status information for tasks/discrepancies and also at the document-level (work order) based on updated planed dates and priority. All this new information from the **Manage Work Assignments and Reporting** screen is incorporated in the concerned work orders and packages for execution.
To render comprehensive TAT information on work orders and material requirements in the **Manage Work Assignments and Reporting** screen, the following display columns have been added in Gantt for the maintenance object - Component # or Part #/Serial #.

- Planned Start Date & Time
- Planned End Date & Time
- Actual Start Date & Time
- Actual End Date & Time
- Total TAT Days
- TAT End Date
- Rem. TAT Days
- Customer Required Date
- Promised Delivery Date
- Excusable Delays
- Under Warranty?
- Warranty Type
- Doc. Class
- Priority

- Customer Order #
- Customer Name
- Material Status

> *Note: The Warranty columns in Gantt are not available currently; will show in the next updated release.*

Under the **Update Plan** group box, the following new input fields have been added to enable the users to update tasks.

- Planned Start Date & Time: The proposed date & time for commencement of the task.
- Planned End Date & Time: The proposed date & time by which the task must be complete.
- Priority: The priority for the execution of the task.

TAT Derivation for Internal Work Orders

The system automatically computes TAT for the work orders/packages on the basis of the process parameters that have been introduced in the Define Process Entities activity of Common Master as elaborated in the below table.

Process Parameter	Value	Computation of TAT Days
"Default TAT Days for Internal Work Orders?" under the entity type "Shop Work Order Type" and entity "All Work Order Types"	"0" / "Planned End Date - Planned Start Date"	Total TAT Days = Planned End Date/Time - Planned Start Date/Time
	Any Positive Integer.	Total TAT Days = Parameter value as defined in the Define Process Entities activity

Total TAT Days Logic for External Work Orders

The system computes TAT Days in the following way:

- Total TAT Days = Customer TAT Duration (in Contract) + Adjustment Days (as of today if available)

> *Note: If the TAT duration is not available in the customer contract, the system derives the TAT duration in the same way as it does for the internal work orders.*

Total End Date Logic for Work Orders

The system computes TAT End Date in the following way:

- TAT End Date = Receipt Date (from the latest Customer Goods Receipt of the Main Core) + Total TAT Days

> *If Receipt Date is not available in the Customer Goods Receipt of the Main Core, TAT End Date is set as Planned Start Date of the work order.*

Rem. TAT Days Logic for Work Orders

- Rem. TAT Days = TAT End Date – Date/Time of Today

Derivation of Document-level Material Status for task/discrepancy in shop work orders

Scenario	Material Status of task/discrepancy
No MR available for the task/discrepancy	Not Requested
Material Status of all MR for the task/discrepancy is "Available"	Available
Material Status of all MR for the task/discrepancy is "Not Available"	Not Available
Material Status of all MR for the task/discrepancy is “Not Requested”, “Available” and "Not Available”	Partially Available

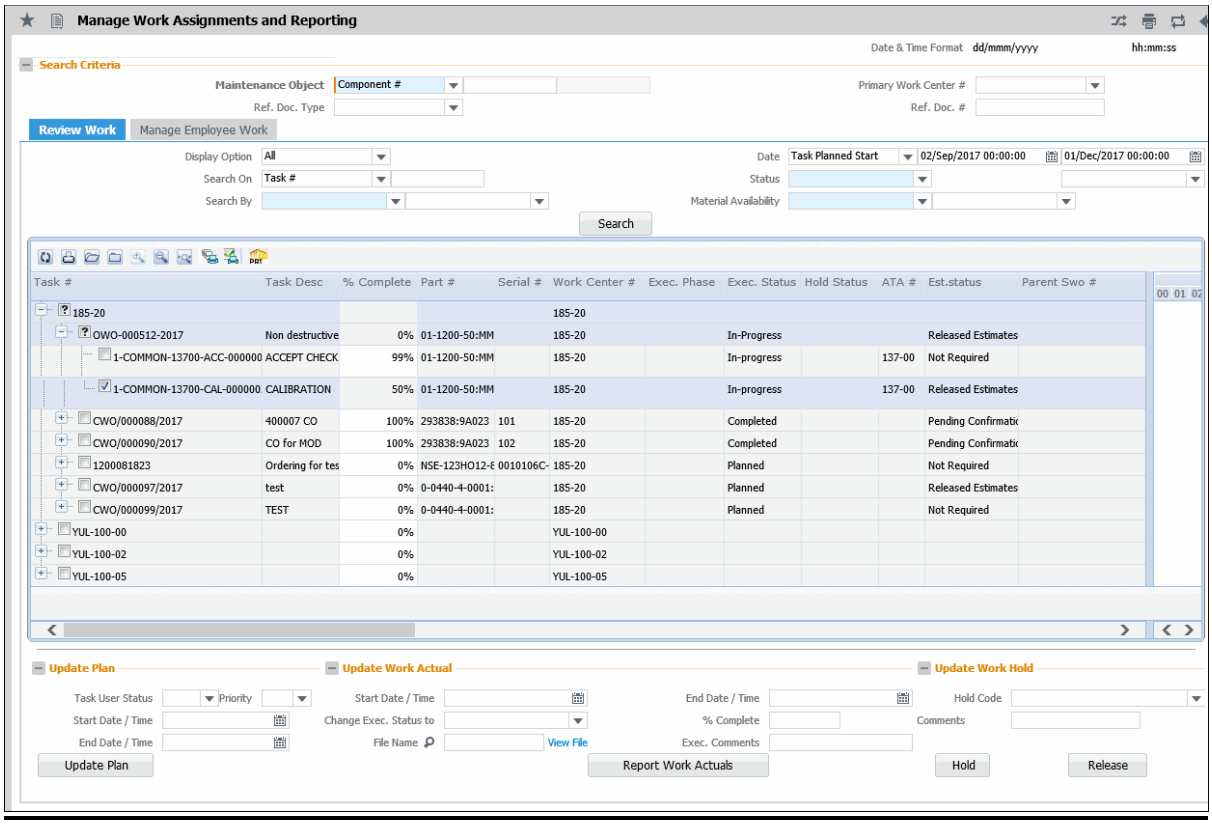
Derivation of Document-level Material Status for shop work orders

Scenario	Material Status of work order
Material Status of all tasks/discrepancies in the work order in Planned/In progress status is "Not Requested"	Not Requested
Material Status of all tasks/discrepancies in the work order in Planned/In progress status is "Available"	Available
Material Status of all tasks/discrepancies in the work order in Planned/In progress status is "Not Available"	Not Available
Work order comprises tasks/discrepancies in Planned/In progress status with Material Status as “Not Requested”, “Requested" and “Not Available”.	Partially Available

Search and retrieve shop work orders

The users can provide search criteria including Doc. Status, Task Status, Hold Status, Warranty coverage, Warranty Type, Doc. Class Doc. Priority, Task Exe. Priority, Doc. Material Status and Task Material Status to retrieve precise work orders and AME packages.

Exhibit 1: The **Manage Work Assignments and Reporting** screen



WHAT'S NEW IN MAINTENANCE TASK?

Ability to define Part Mod for Tasks

Reference: AHBG-17059

Background

The process of Part Modification entails altering a part so as to upgrade the part with superior qualities. This process is mandated by regulatory documents, such as Service Bulletins (SB) and CMM. Generally, customers approve of part modifications (called as Pre-Approved Mod) and send details including MOD # via E-mails to maintenance operators. This process is tracked using the Excel tool.

Currently, tracking of Part Modification using Mod # is not supported in Ramco Aviation. The MOD # change for each effective part as provided in the SB and CMM documents needs to be tracked against the maintenance tasks.

Change Details

The new **Maintain Task Part Mod Details** screen in **Maintenance Task** has been developed to record and view the **Part Mod** details against a Mod task.

The new screen captures the following vital part modification information; and defines **Mod #** to a task and part combination.

Task #: The task that is effective to the part to be modified as defined in the **Manage Task Effectivity** screen.

Part #: The part to be modified; must be effective for the task as defined in the **Edit Component Effectivity** screen.

Mod #: As stated in the regulatory document (SB or CMM); applicable to the part to be modified.

Conditional Effectivity: User defined conditions under which Mod # is effective for the part.

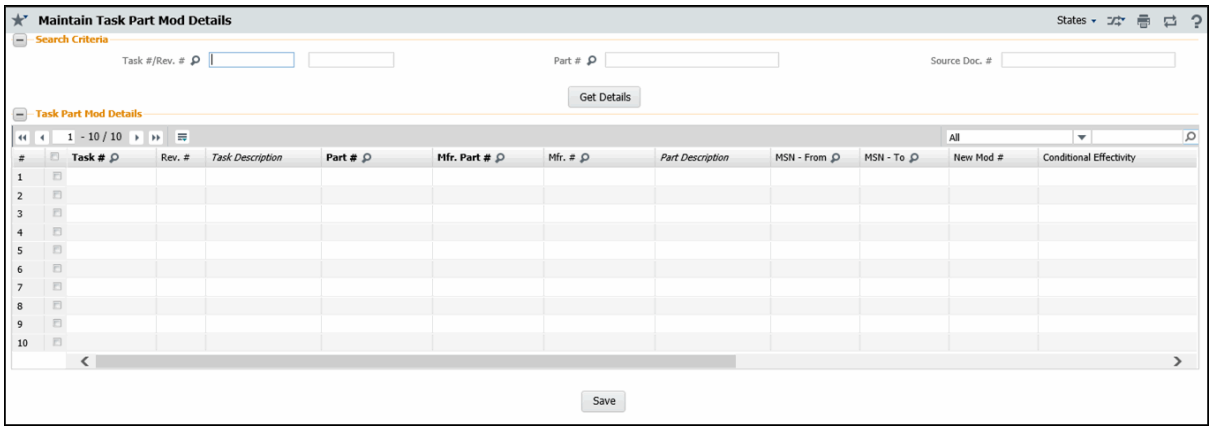
The **Maintain Task Part Mod Details** screen can be accessed via link from the following screens:

- Edit Component Effectivity
- Manage Task Effectivity

This screen in the View mode can be accessed via link from the following page:

- View Component Effectivity

Exhibit 1: The Maintain Task Part Mod Details page



WHAT'S NEW IN SHOP WORK ORDER?

Provision to display Part MOD Changes in Shop Work Order

Reference: AHBG-17221

Background

The process of Part Modification entails altering a part so as to upgrade the part with superior qualities. This process is mandated by regulatory documents, such as Service Bulletins (SB), CMM. After Part # - Serial # is altered / upgraded, it will be assigned a unique MOD # and compliance of that MOD # is carried out by tasks through a shop work order. Currently, Part Modification feature is not supported in Ramco Aviation and hence display of the MOD details for the Part # - Serial # is not possible in the associated shop work orders. A handy facility to view the status-wise breakup of modifications on the part – serial undertaken by tasks in the shop work order would be of immense help to the AME.

Change Details

A link **View MOD Details** link has been added in the following screens:

- **Plan Work Order**
- **Update Split/Main Core and Coverage Information**
- **Record Shop Execution Details**

This link opens the **View Part Serial Mod Details** pop-up window that provides vital information on the modifications undertaken on the part serial till date including.

On launching the View MOD Details pop-up window from the Plan Work Order Screen or Record Shop Execution Details screen, the following information will be displayed:

- Part # - Part # of Main Core
- Part Description - Part Description of Main Core
- Serial # - Serial # of Main Core
- MOD In - MOD # complied on Part #
- Approved MOD – MOD # approved by customer and applicable on Part #
- Applied MODs - Displays MOD #, if the task with task type MOD with MOD definition available for Main Core in the **Maintain Task Part MOD Details** screen is planned for execution on Part # in the shop work order.
- MOD Out – Displays concatenation of MOD # and Applied MOD separated by ","

On launching the View MOD Details pop-up from Update/Split Main Core screen after selecting as Associate Core, the following will be displayed:

- Part # - Part # of Associate Core
- Part Description - Part Description of Associate Core
- Serial # - Serial # of Associate Core
- MOD In - MOD # complied on Part #
- Approved MOD – MOD # approved by customer and applicable on Part #
- Applied MODs - Displays MOD #, if the task with task type MOD with MOD definition is available for Main Core in 'Maintain Task Part MOD Details' screen is planned for execution on Part # in the shop work order.
- MOD Out – Displays concatenation of MOD In and Applied MOD separated by ","

MOD Reversal: On completion of a MOD task, if the work order status changes to In-Progress, MOD # for the task gets removed from the MOD In list and gets added to the Applied MOD list.

MOD Addition and Cancellation: If a 'MOD' task effective to the part as defined in the **Maintain Task Part MOD Details** screen in **Maintain Task**, is added to the shop work order, MOD # for the part is added to both Applied MOD and Mod Out as displayed in the View popup. Conversely, if task type of 'MOD' is cancelled or pre-closed in the shop work order, the task is removed from Applied MOD and Mod Out lists.
The following activities are now provided with the **Manage Part Serial MOD Details** link to enable users to view / modify MOD # for the part # / serial # in the shop work order.

- **Record Shop Execution Details screen**
- **Review Work Execution screen**

Display of MOD # in CoM: The process parameter "Display MOD # while issuing Certificate of Maintenance?" has now been added under the entity type 'Shop Work Order' and entity 'Individual Work Order' in the Define Process Entities screen. This process parameter determines the display of MOD # in the Certificate of Maintenance tab of the Issue Certificates screen as illustrated in the table below.

Process Parameter Value	Impact in CoM
1 / Yes	The **Certifying Remarks** field in the **Certification of Maintenance** tab of **Issue CoM** screen displays MOD Out #' for the SWO by default. The multiple MOD Out # are displayed using the delimiter ',' Example: MOD Out # = 1,2,5,9
0 / No	No default value appears in the **Certifying Remarks** field in the **Certification of Maintenance** tab of **Issue CoM** screen.

Display of Task Description in CoM: The process parameter "Display Task Description while issuing Certificate of Maintenance?" has now been added under the entity type 'Shop Work Order' and entity 'Individual Work Order' in the **Define Process Entities** screen. This process parameter determines the contents displayed in the **Certifying Remarks** field # in the **Certificate of Maintenance** tab of the **Issue Certificates** screen as illustrated in the table below.

Process Parameter Value	Impact in CoM
1 / Yes	The **Certifying Remarks** field in the **Certification of Maintenance** tab of **Issue CoM** screen displays each of the tasks from the SWO and their description by default. Example: Task Description: Task 1; 2. Task 2; 3. Task 3 with all task descriptions in the same sequence as planned in the SWO and using the ';' delimiter. However, the descriptions of tasks in any status other than 'Cancelled' only are displayed.
0 / No	No default value appears in the **Certifying Remarks** field in the **Certification of Maintenance** tab of **Issue CoM** screen.

Exhibit 1: The **Part Serial Mod Details** pop-up

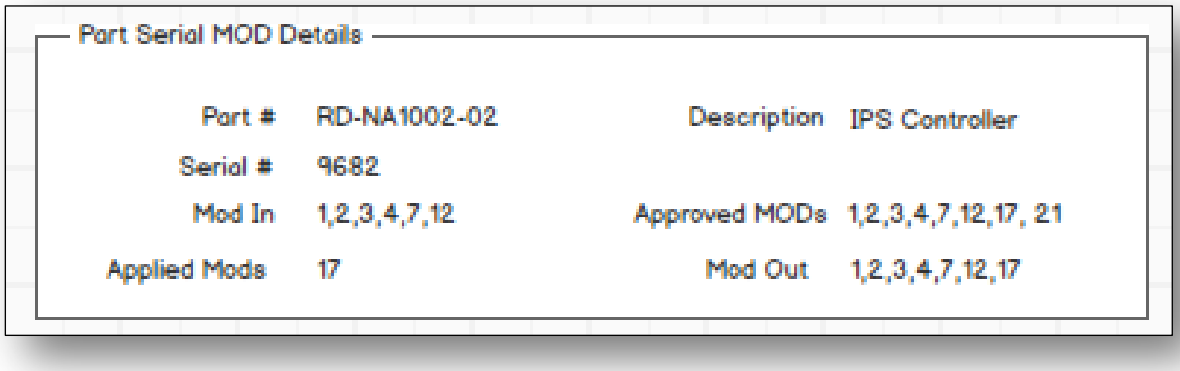
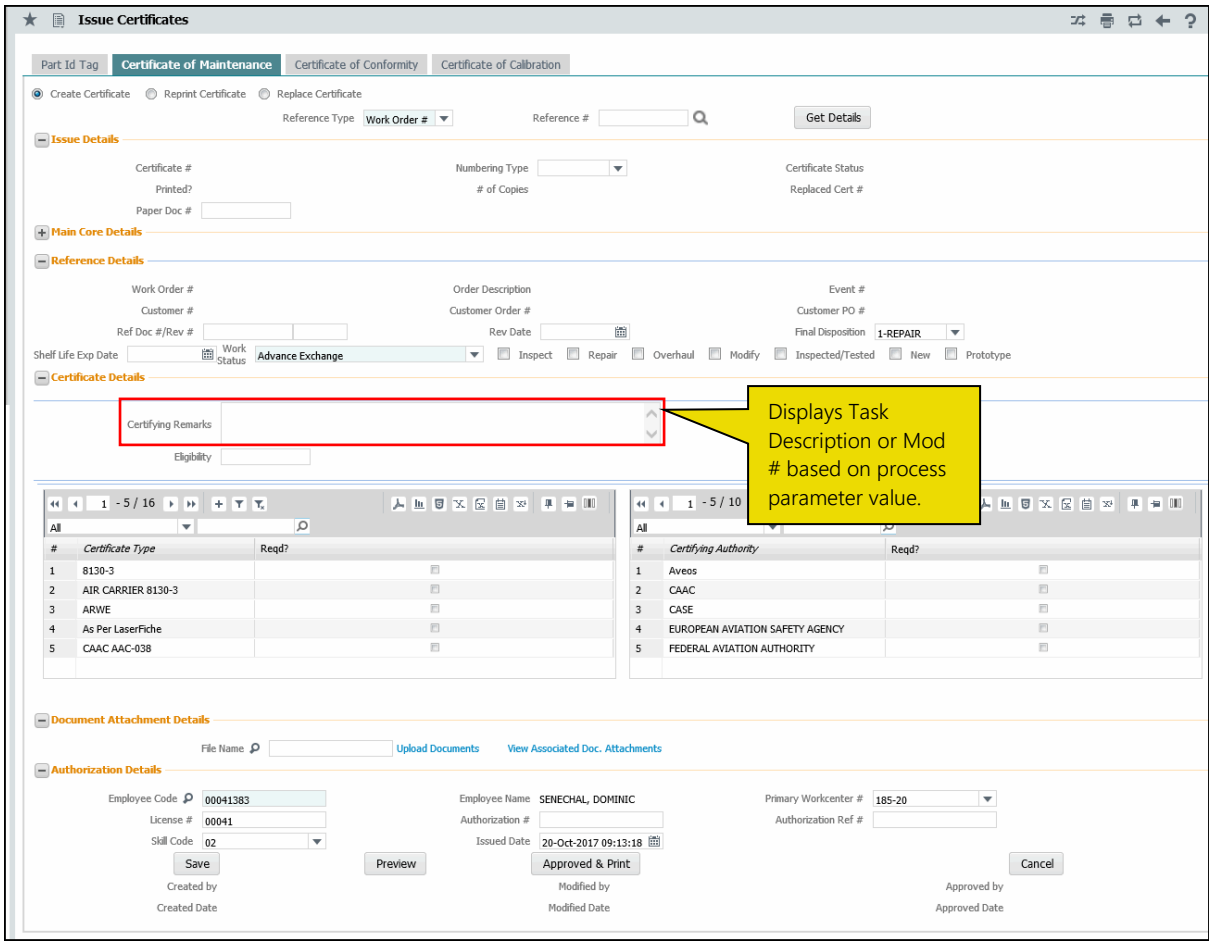


Exhibit 2: The **Certificate of Maintenance** tab in the **Issue of Certificates** screen



License validations in Shop based on HRMS attributes

Reference: AHBG-17469

Background

During sign-off, annulment or rejection of tasks in a shop, the system must have the capability to validate the license attributes of mechanics/inspectors. Further, the system must also verify the license definition of mechanics/inspectors at the time of issuing certificates and ensure that the mechanic/inspector is eligible to perform the task of issuing certificates for complying tasks in shop work order.

Change Details

The system will now ensure that only those mechanics/inspectors that have passed license validation can sign-off, void or reject tasks in the **Record Shop Work Order Details** screen.
However, this kind of validation is carried out on the concerned employee only if the new process parameter "Validate Employee Certificate/License availability during Sign-off/Reject/Void of Non-Routines?" under the entity type Shop Work Order Type and the entity User- Defined in the Define Process Parameters activity is 1.

The system validates the license validation attributes of the employee at the time of saving, approving and printing of certificates in the **Issue Certificates** screen, if the process parameter "Validate Employee Certificate/License availability during Sign-off/Reject/Void of Non-Routines?" is '1'.

In the same way, the system allows the employee to sign-off, void or reject a task or save, approve or print certificates (Part Id Tag, Certificate of Maintenance/Conformity/Calibration) only if the following attributes of the task/ Non-standard task and the License attributes of Employee # in HRMS business component (Record License Information screen) are identical:

1. Base Part # of Part # in Associated Cores of Work Order
2. Part Group of Part # in Associated cores of Work Order
3. Station of Task/ NST Work Center
4. Resource Group of Task/ NST

Exhibit 1: The **Record Execution Details** screen

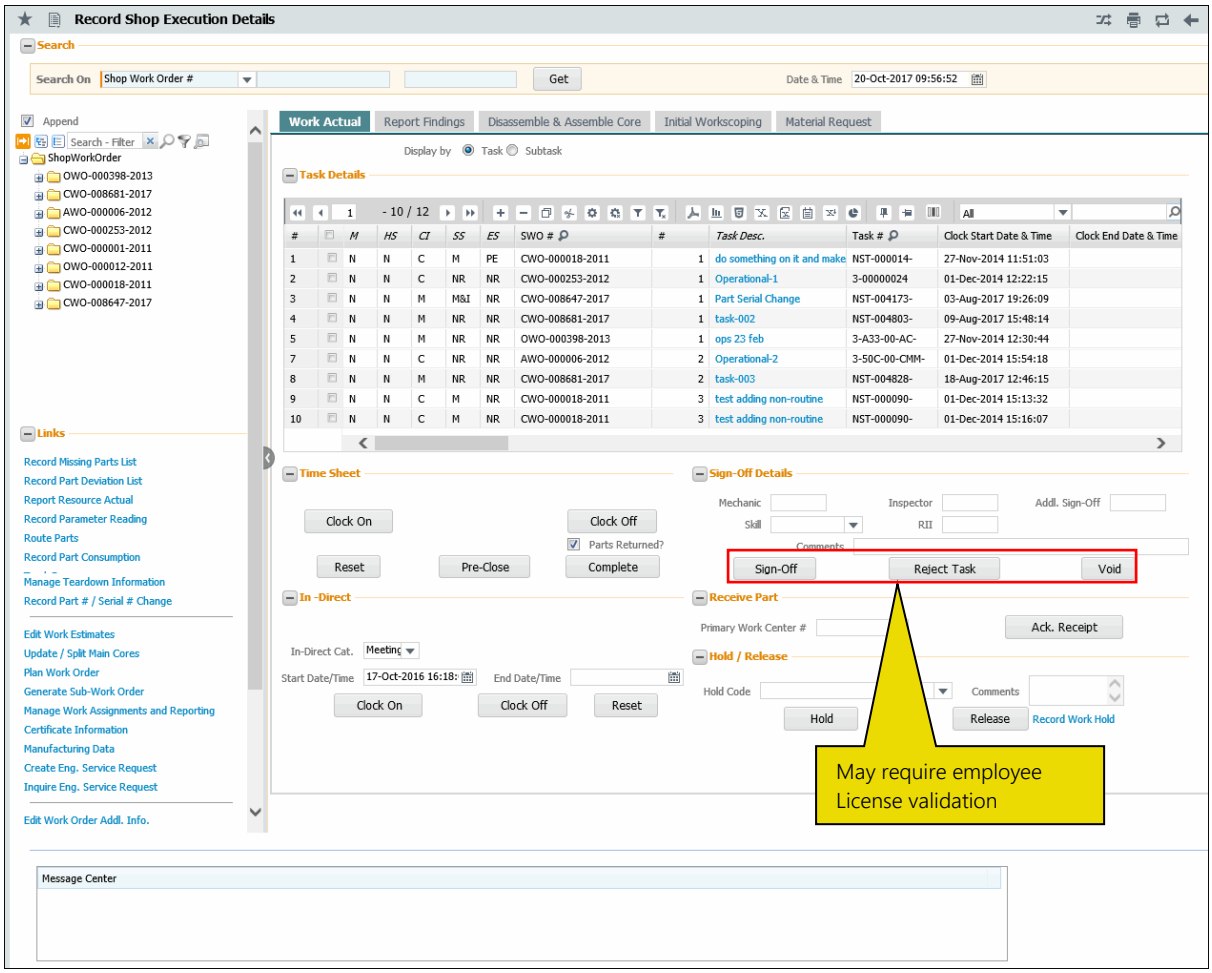
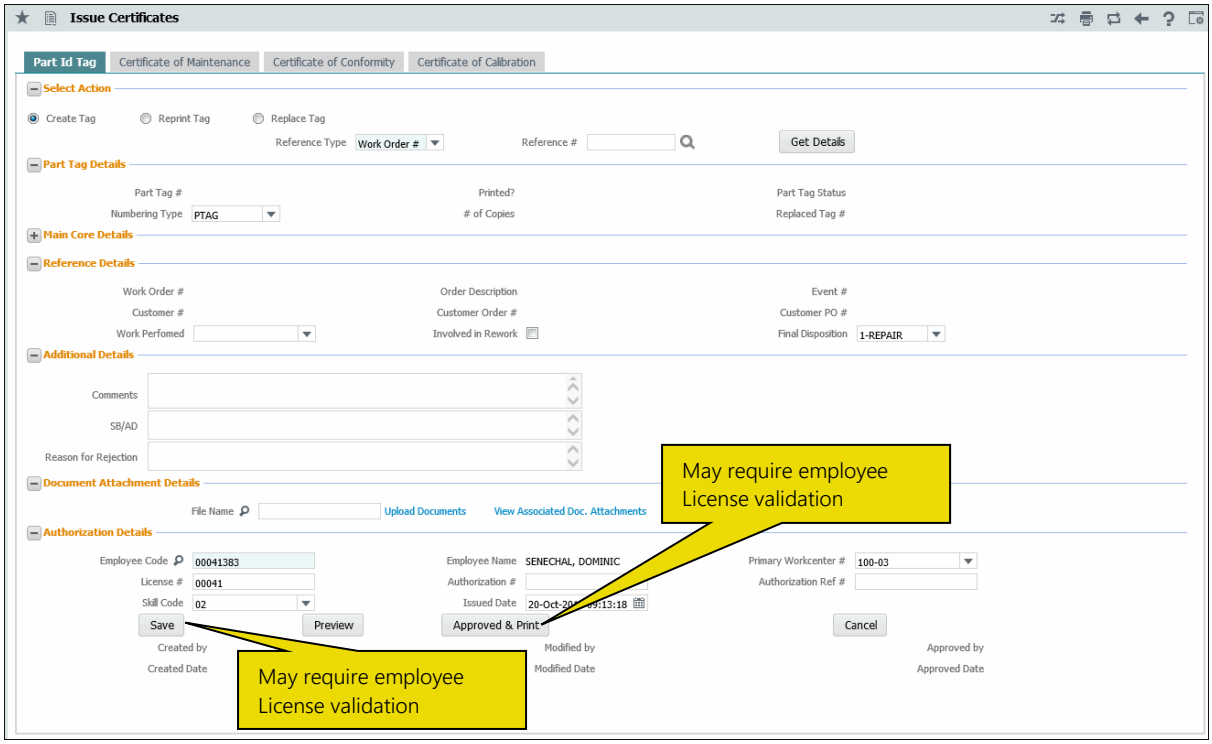


Exhibit 2: The **Issue Certificates** screen



WHAT'S NEW IN CONFIGURATION?

Ability to define Equip. Group, Equip. Category and Cabin Equipment

Reference: AHBG-15172

Background

To facilitate the development of LOPA (Layout of Passenger Accommodation) graphical interface in the **E-Logs** application, a provision was required to define equipment groups and then map equipment categories and cabin equipment to specific equipment groups. The setup of such master data was required to facilitate depiction of cabin equipment attached to specific cabin position codes in an aircraft.

Change Details

Equipment Group has been added as a quick code type in the **Create / Edit / View Quick Codes** activity of the **Aircraft** business component to facilitate users to map equipment categories and cabin equipment to a specific equipment group.

Example: Users can define In-Flight Entertainment (IFE) and Global Communication Satellite (GCS) as quick codes under the Equipment Group quick code type.

A new screen called **Maintain Cabin Equipment List** in the **Configuration** business component has been developed to map equipment categories and cabin equipment to an equipment group.

Examples:

- Equipment Categories could be eX1, eX2, eX3, eXline, etc. that indicate the version of the equipment
- Cabin Equipment could be Monitor, Harness Assembly, ADB, ADB Ports, WiFi, File Servers representing the gadgets or devices

In the **Equipment Category List** tab of the **Maintain Cabin Equipment List** screen, users can specify the equipment categories to be associated with the chosen equipment group. Similarly, in the **Cabin Equipment List** tab of the same screen, users can link the cabin equipment to the equipment group

Exhibit 1: The **Create Quick Code** screen

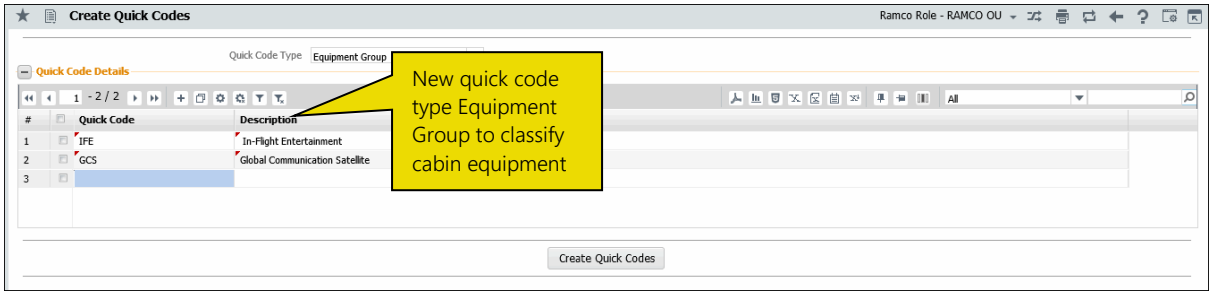


Exhibit 2: The **Maintain Cabin Equipment List** screen

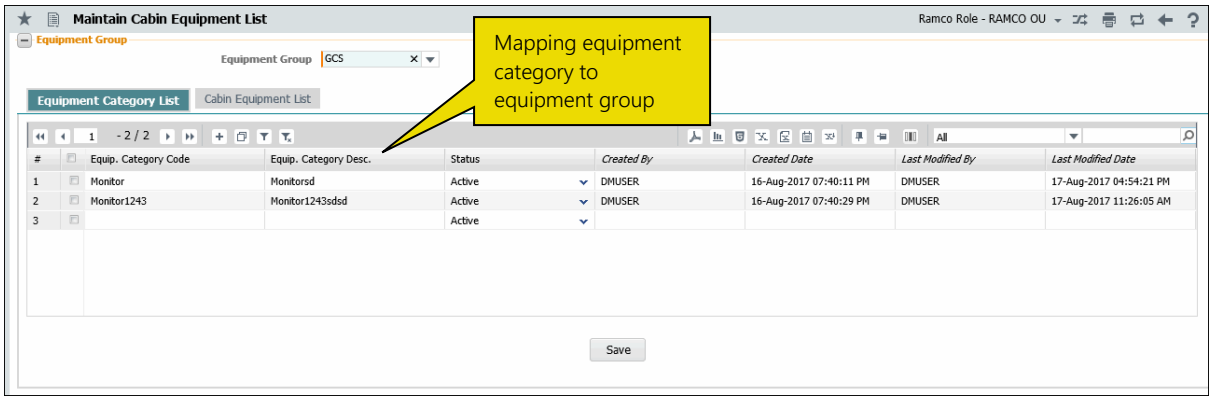
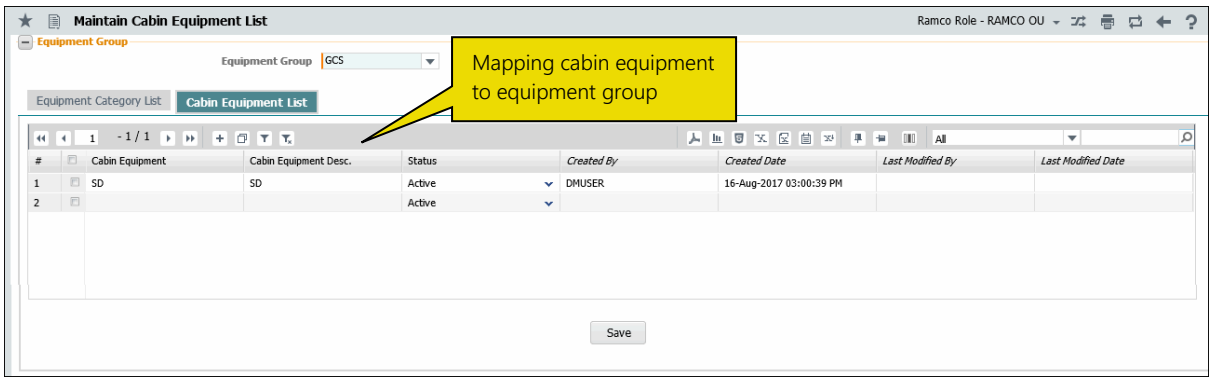


Exhibit 3: The **Equipment Category List tab** in **Maintain Cabin Equipment List** screen



Ability to associate Equipment Category to Position Codes

Reference: AHBG-15617

Background

In order to facilitate definition of LOPA specific to an aircraft, cabin items must be mapped to cabin position # in the cabin layout configuration of an aircraft. To ensure that only a specific category of equipment is attached to a position code, a provision to associate an equipment category to the position code is required in the aircraft and component configuration building screens.

Change Details

To enable users to map an equipment category to a position code, the following enhancements have been carried out:

- A drop-down list box **Equipment Category** that lists the Active equipment categories defined in the **Maintain Cabin Equipment List** screen for an equipment group has been introduced in the following screens of the **Configuration** business component:
    - **Build Model Configuration**
    - **Build Aircraft Configuration**
    - **Build Part Configuration**
    - **Build Component Configuration**
- A display field **Equipment Group** has also been added in the following screens to reveal the equipment group to which the equipment category belongs:
    - **Build Model Configuration**
    - **Build Aircraft Configuration**
    - **Build Part Configuration**
    - **Build Component Configuration**
- Consequently, two display fields **Equipment Category** and **Equipment Group** have been added in the following screens of the **Configuration** business component to display the equipment category and equipment group tagged to the position codes in the configuration:
    - **View Model Configuration**
    - **View Aircraft Configuration**
    - **View Part Configuration**
    - **View Component Configuration**

Exhibit 1: The **Build Model Configuration** screen

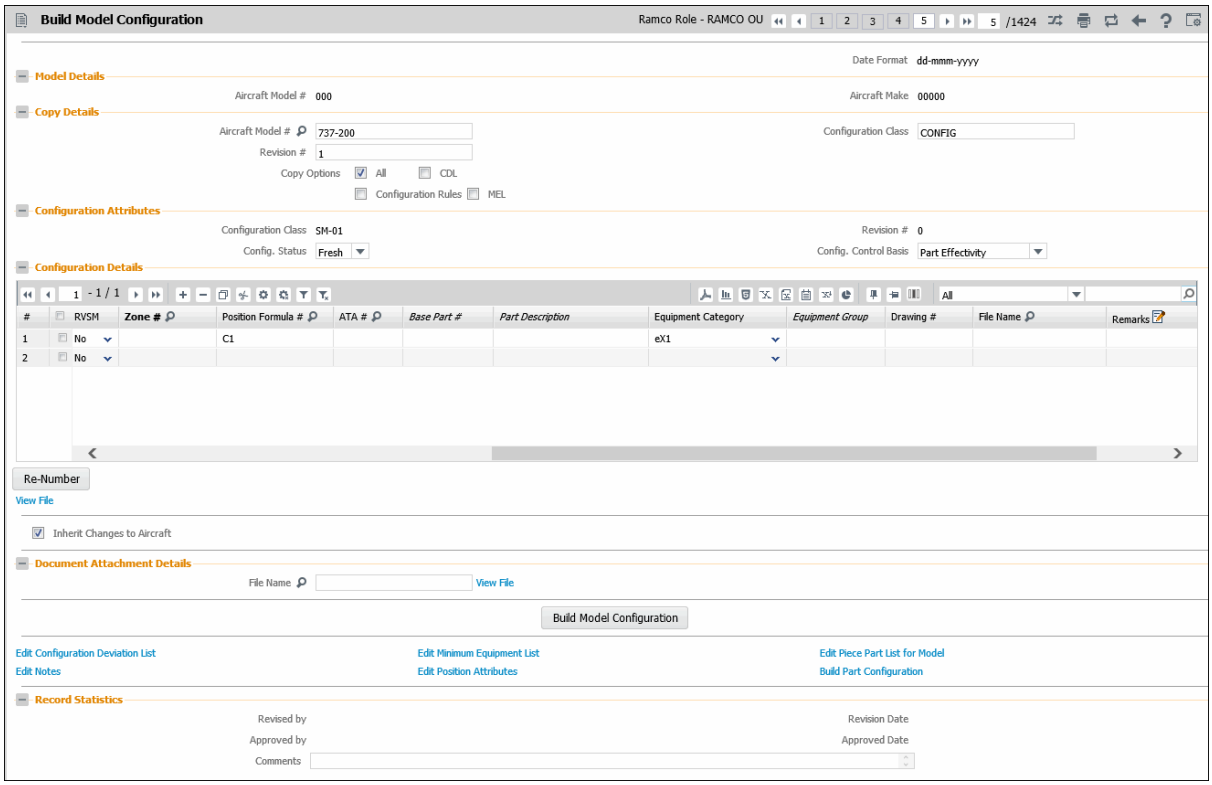
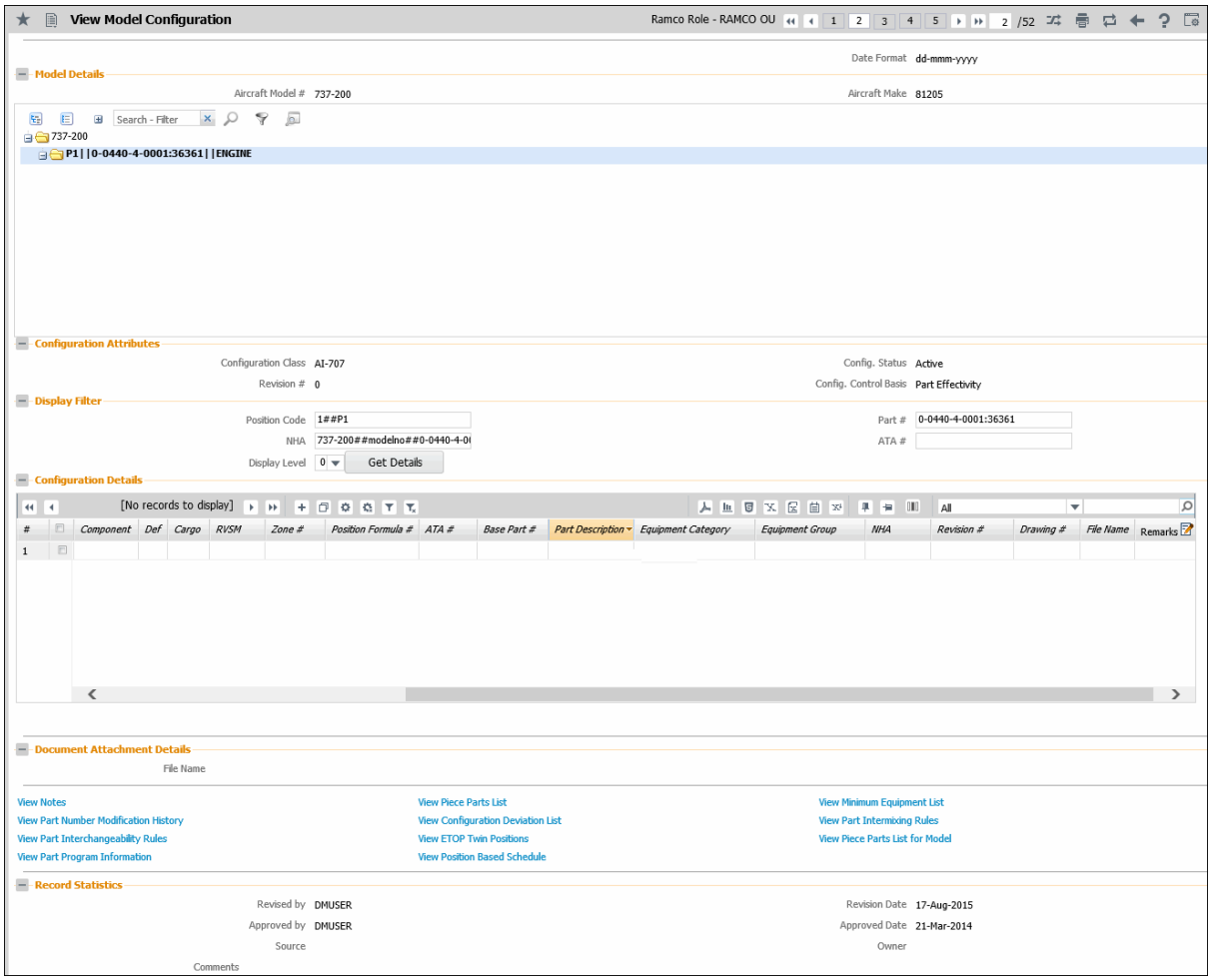


Exhibit 2: The **View Model Configuration** screen



Ability to manage LOPA specific to an Aircraft

Reference: AHBG-15514

Background

To develop LOPA framework for aircraft / model, a facility to record cabin layout in terms of decks, sections and seat and non-seat positions within sections of aircraft model / aircraft and then to map cabin equipment to positions was not available in the system. Further, ability to map non-seat positions to cabin equipment in sections of the cabin layout was also a vital prelude for the depiction of LOPA using a graphical interface.

Change Details

- In the **Aircraft** business component, quick code type of **Equipment Group** introduced in the **Create / Edit Quick Codes** screen to identify the type of equipment that can be attached to cabin position #.
- A new screen **Manage Cabin Equipment List** in the **Configuration** business component has been developed to map equipment categories and cabin equipment to an equipment group.
- Provision to map equipment categories to position codes is provided in the following activities of **Configuration** business component:
    - Build Model Configuration
    - Build Aircraft Configuration
    - Build Part Configuration
    - Build Component Configuration
- A new screen **Manage Cabin Layout** screen has been developed to define cabin layout at both aircraft model (aircraft model, configuration class and maintenance operator combination) and specific aircraft levels.
    - Cabin Layout details can be defined for single and double decks
    - Define different sections in the cabin layout and then tag the sections to section class, such as First Class, Business Class, Premium Economy Class, Economy Class and Others
    - Can define both Seat and Non-seat sections
    - For Seat sections, Cabin Position number will be auto generated based on Column Layout, Starting Row # and Ending Row #.
    - For Non Seat sections, users must provide non-seat count and unique identifier each non-seat position
    - A **Search** facility provided to find the models / aircraft for which the user wants to define cabin layout. Further, users can choose to include models / aircraft in the search for which layout has not been already defined.
        - When the user searches for Aircraft Models, the results will be grouped under the

Aircraft Model #

- When the user searches for Aircraft Reg. #, the results will be grouped based on 'Group By' option provided. Users can group by Aircraft Model #, Maint. Operator # & Customer # also.

- The **Cabin Layout Status** field indicates if the cabin layout has been defined for specific aircraft. The cabin layout status becomes 'Fresh' on saving of the cabin layout details.
- On confirming the cabin layout details, the layout status becomes 'Active'.
- Additionally, the cabin layout will be inherited to the Aircraft from the Aircraft Model on activation of the Aircraft.

- Another new link screen **Map Cabin Configuration** accessible from the Manage Cabin Layout screen is developed to tag Cabin Position # to Cabin Equipment and Equipment Category.
  - If a section is removed from the cabin layout, mapping of Cabin Position # to Equipment Category and Cabin Equipment are automatically deleted for the model / aircraft.
  - Layout Status becomes 'Fresh' on saving the mapping details for specific aircraft.
  - On confirmation of mapping details, the status of the layout of an aircraft becomes Active. However, this is not applicable to aircraft models.

Exhibit 1: The **Manage Cabin Layout** (for Aircraft Model, Configuration Class and Maint. Operator combination) screen

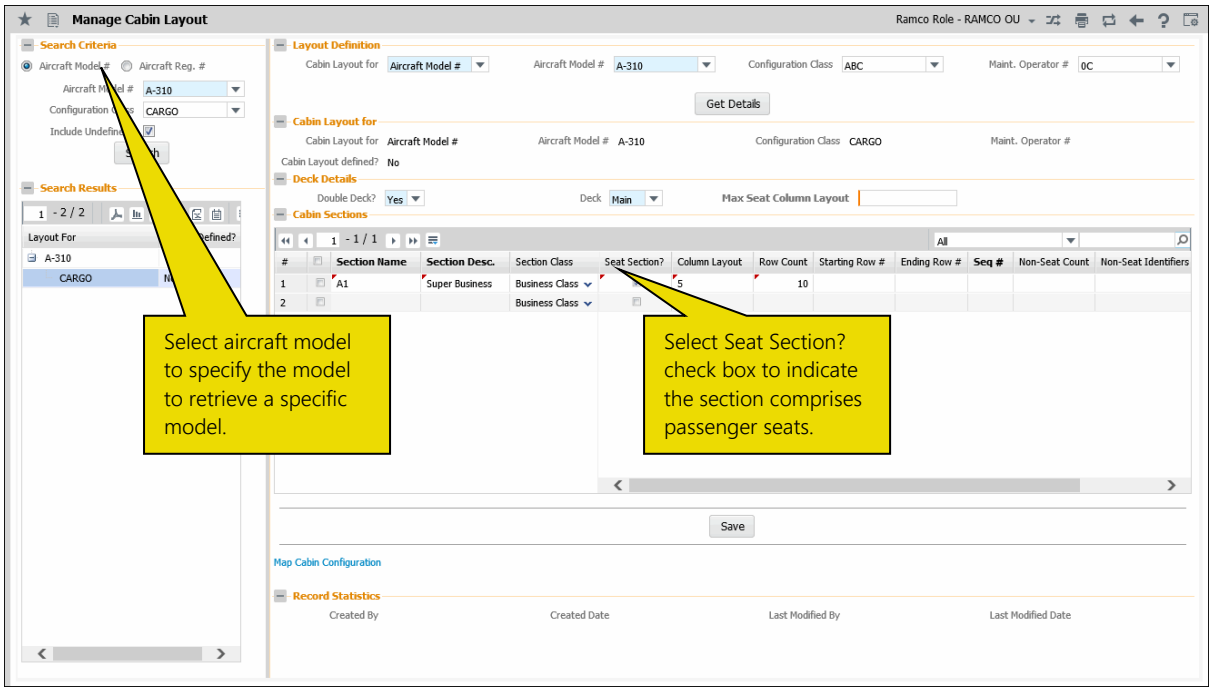


Exhibit 2: The **Map Cabin Configuration** (for Aircraft Model, Configuration Class and Maint. Operator combination) screen

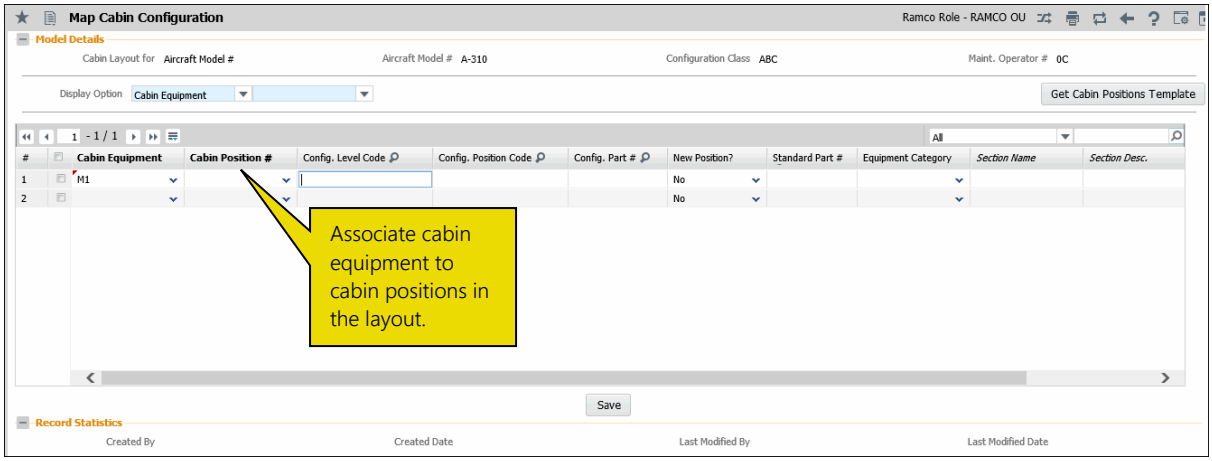


Exhibit 3: The **Manage Cabin Layout** (for specific aircraft) screen

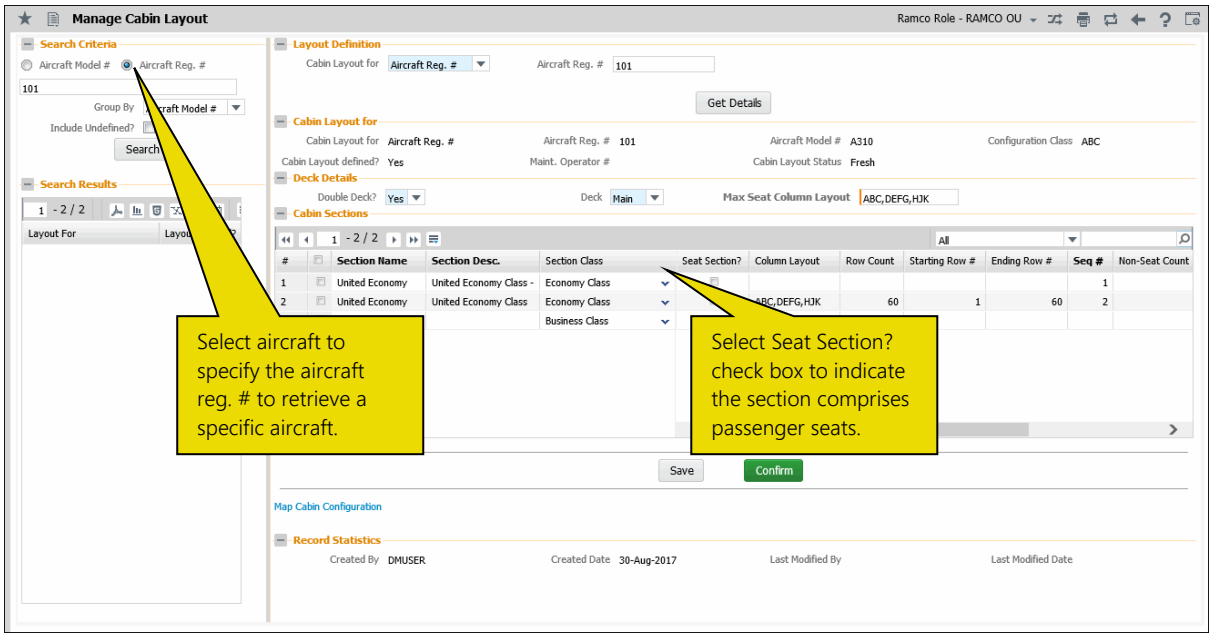
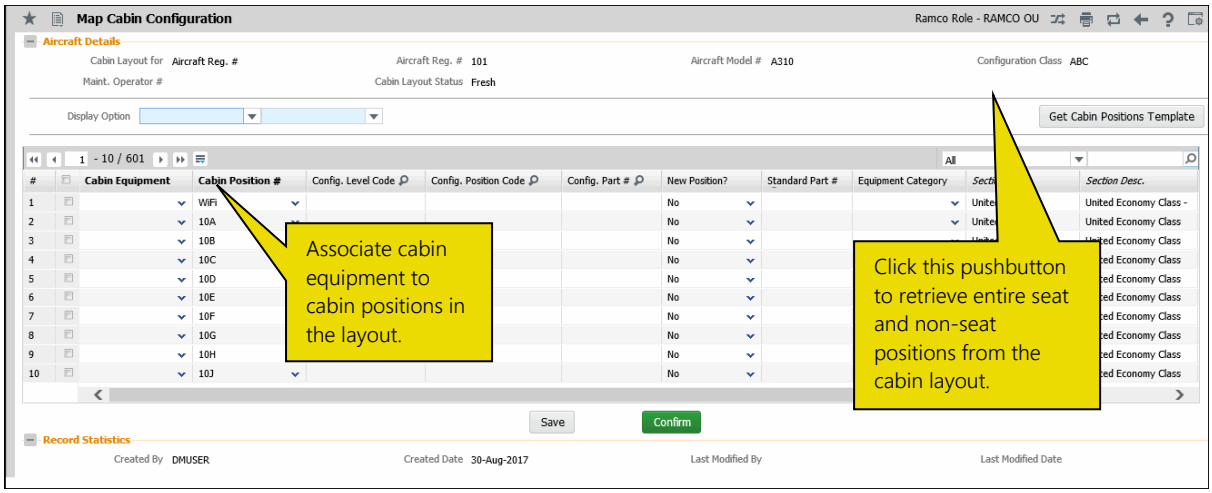


Exhibit 4: The **Map Cabin Configuration** (for specific aircraft) screen



WHAT'S NEW IN ENGINEERING DOCUMENT?

Provision to display information of revoked EO

Reference: AHBG-13737

Background

The regulatory agencies may revoke an engineering document making the engineering tasks ineffective for the maintenance objects. The revoked status of the engineering document must be displayed explicitly for the benefit of the maintenance planners.

Change Details

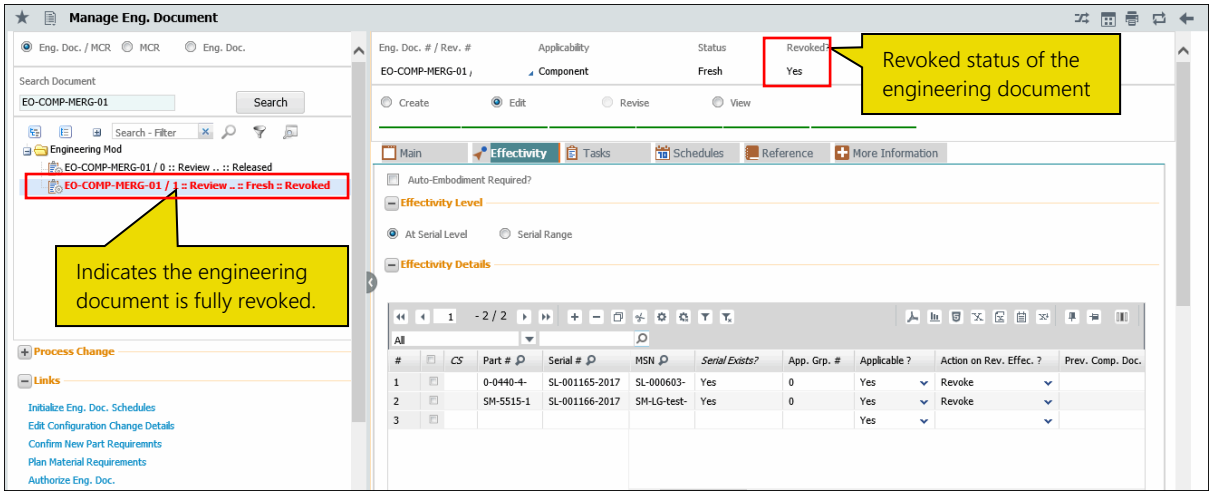
In the **Manage Engineering Document** screen, new display field in the header **Revoked?** indicates whether the engineering document has been fully or partially revoked.

The tree in the **Manage Engineering Document** screen also displays the status of the engineering document as 'Revoked' and highlights the node in RED, if the revoked status of the document is 'Yes'.

The system derives the revoked status of the engineering document as elaborated in the below table.

Condition	Revoked? field displays	Color indicators
All the rows in the **Effectivity** tab with 'Applicable' as 'Yes' and "Action on Rev. Effec.?" not 'Revoked'	No	Indicates the engineering document is valid. The node text is displayed in Black.
All the rows in the **Effectivity** tab of the Eng. Doc. with 'Applicable' as 'Yes' and "Action on Rev. Effec.?" as 'Revoked'	Yes	Indicates the engineering document is not valid. The node text is displayed in Red.
All the rows in the **Effectivity** tab with 'Applicable' as 'Yes' though "Action on Rev. Effec.?" in some of the applicable rows set as 'Revoked'	Partial	Indicates the engineering document is partially valid. The node text is displayed in Black.

Exhibit 1: The **Manage Engineering Document** screen



Ability to preview EO schedules

Reference: AHBG-13554

Background

Based on Service Bulletins from OEM (Original Equipment Manufacturers), modifications are incorporated in the schedules of existing tasks or new tasks are added in the engineering document (EO). On revision and release of such EO, it is possible that some of the tasks in the maintenance program could become overdue because of EO schedule change. Hence, a provision to preview the task level impact i.e., Last Performed Date/Value, Current Program Next Scheduled Date/Value, EO Next Scheduled Date/Value (New) along with the basis of EO Next Scheduled Date/Value calculation prior to release of EO would benefit the maintenance planners.

Change Details

New **Exception Summary** section in the **Initialize Eng. Doc. Schedules** screen comprises the following tiles:

- All: Shows the total count of schedules in the engineering document.
- Overdue: Shows count of overdue schedules in the engineering document
- Alert: Shows the count of schedules that have crossed the alert value/date.

On click of a tile, the schedule records pertaining to the tile are displayed in the multiline.

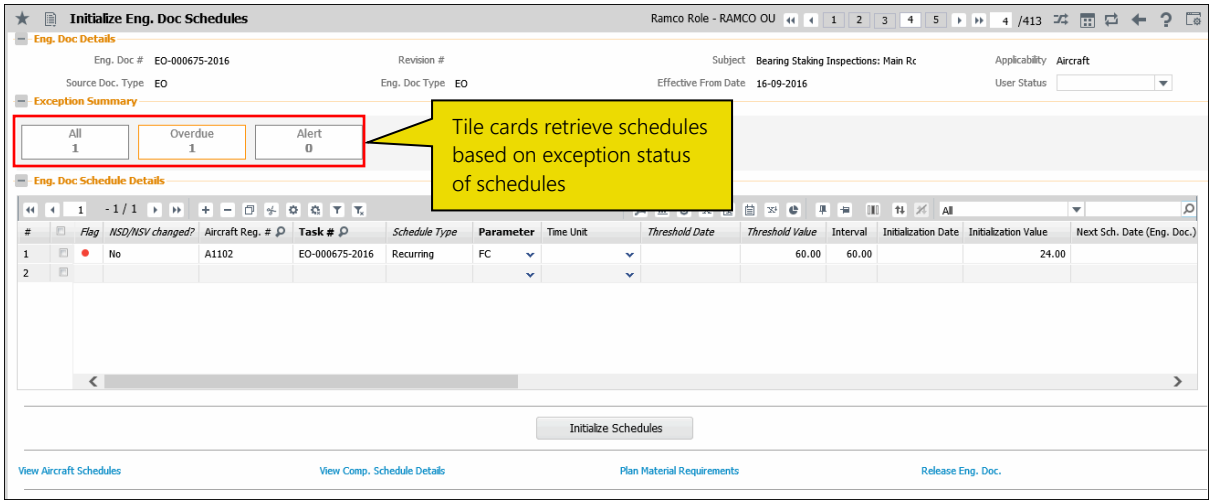
New display fields have now been added in the multiline of the **Initialize Eng. Doc. Schedules** screen of **Engineering Document** to highlight the impact of engineering document on tasks.

- Flag (Displays Red, if the parameter value of the task has crossed Alert Date/Value; Displays Yellow, if the task is overdue)
- NSD/NSV Changed? (Indicates whether EO NSD/NSV and Program NSD/NSV are the same or different)
- Rem. Value (Eng. Doc.)
- Next Due Calc. On (Eng. Doc.)
- Calc. Ref. Date/Value (Eng. Doc.)
- Alert Date (Eng. Doc.)
- Alert Value (Eng. Doc.)
- Aircraft Model #

The following fields in the multiline have also been renamed to reflect the impact on task.

- Next Sch. Date changed to Next Sch. Date (Eng. Doc.)
- Next Sch. Value as -> Next Sch. Value (Eng. Doc.)

Exhibit 1: The **Initialize Eng. Doc. Schedules** screen



Ability to add EO task to program in Inactive Status for Inactive Aircraft

Reference: AHBG-14980

Background

Currently, on release of an engineering document, the engineering tasks get added to the maintenance programs of effective aircraft, existing in both Active and Inactive status. Also, Schedule Status of these engineering tasks is set as 'Active' in the maintenance programs. As a result of this, the yet-to-be complied tasks retrieved in the **Initialize Maint. Prog. & Update Compliance** (**IMPUC**) screen of **Compliance Tacking & Control** includes the engineering tasks pertaining to Inactive aircraft also increasing the count of not-complied tasks. Maintenance Planners and regulatory agencies could misread such data, since engineering tasks pertaining to Inactive aircraft do not become due for compliance till the aircraft becomes 'Active' leading to critical observations. To prevent these misconceptions, it would be appropriate to retrieve only those engineering tasks yet-to-be complied against Active aircraft in the **IMPUC** screen.

Change Details

To facilitate retrieval of engineering tasks pending compliance only against Active aircraft based on user discretion, a new process parameter has been created under the entity type "Eng. Doc. Type" and entity '--All Eng. Doc--' combination in the **Define Process Parameters** activity of **Common Master**. The process parameter "Update Eng.Task's schedule status as Inactive in maintenance program for inactive Aircrafts on release of Eng.Doc.?" determines the schedule status of the engineering tasks in maintenance programs of Inactive aircraft.

If the process parameter 'Engineering Document Revision Policy' is set as 'Revision Mandatory', upon release of the engineering document in the **Release Engineering Document** screen by clicking on the **Release Eng. Doc.** button, the schedule status of the tasks gets updated in the maintenance program of the Inactive aircraft based on the newly added process parameter "Update Eng.Task's schedule status as Inactive in maintenance program for inactive Aircrafts on release of Eng.Doc.?" as explained in the below table.

Process Parameter Value	Impact on maintenance programs of Inactive aircraft on release of engineering document
0/No	The schedule status of the engineering tasks in the maintenance programs of Inactive aircraft is set as 'Active'.
1/Yes	The schedule status of the engineering tasks in the maintenance programs of Inactive aircraft is set as 'Inactive'.

Similarly, if the process parameter 'Engineering Document Revision Policy' is set as 'As per Revision Rules' and 'Mandate Revision on Addition of Effectivity?' is set as 'No' and if the user adds a new Inactive aircraft in the **Effectivity** tab of the **Manage Engineering Document** screen by clicking on the **Save** button, the schedule status of the tasks gets updated into the maintenance program of the Inactive aircraft based on the newly added process parameter "Update Eng.Task's schedule status as Inactive in maintenance program for inactive Aircrafts on release of Eng.Doc.?".

Exhibit 1: The **Set Process Parameters** screen of the **Define Process Parameters** activity in **Common Master**

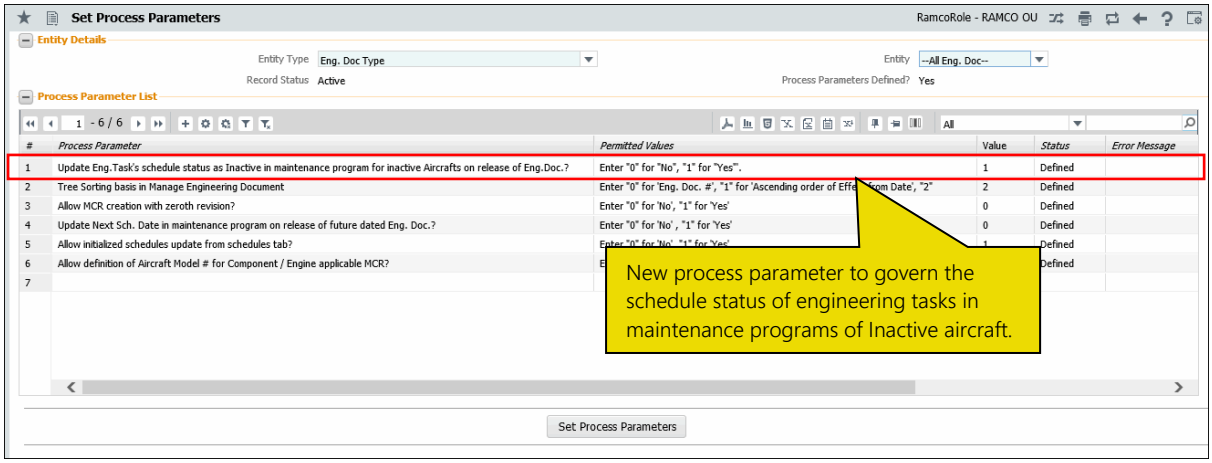


Exhibit 2: The **Effectivity** tab of **Manage Engineering Document** screen of **Engineering Document**

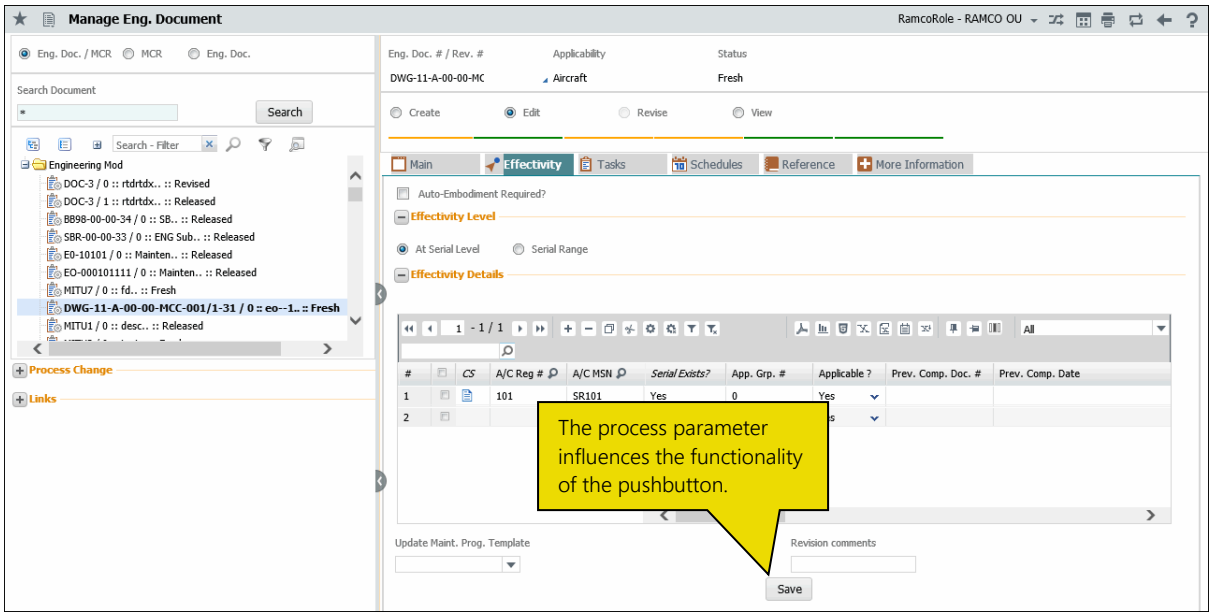
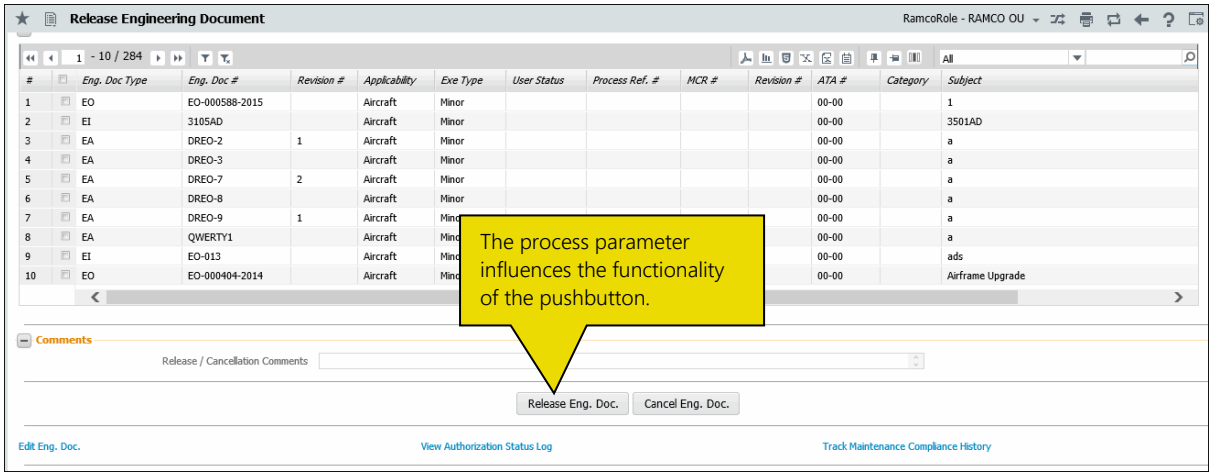


Exhibit 3: The **Release Engineering Document** screen of **Engineering Document**



WHAT'S NEW IN AIRCRAFT MAINTENANCE PLANNING?

Pre-planning and Associate NST

Reference: AHBG-17338

Background

During aircraft maintenance planning, non-routine/non-standard tasks may be required to be added to the aircraft based on customer priorities. Details including Plan Start Date, Priority & Comments need to be recorded for such tasks, generally called as Adhoc tasks. Further, these Adhoc tasks need to be associated with multiple aircraft. They may also have to be deleted, if not required by the aircraft.

Change Details

An **Aircraft** icon will be provided on the click of which the Flight routing details for the aircraft on the basis of the given search criteria is displayed to the users.

The users will be provided with the **Add Task** icon to create and add Adhoc / non-routine tasks to an aircraft. The selected aircraft from the **Review Fleet Maintenance Plan** screen will be listed in the **Add Task** pop-up to facilitate bulk addition of tasks. The users can record **Plan Start/End Date-Time**, **Priority** and **Planning Comments** for the tasks. These Adhoc tasks associated with the aircraft can later be retrieved, and scheduled for execution.

A history of **Planning comments** will be maintained using the **Notes f**eature.

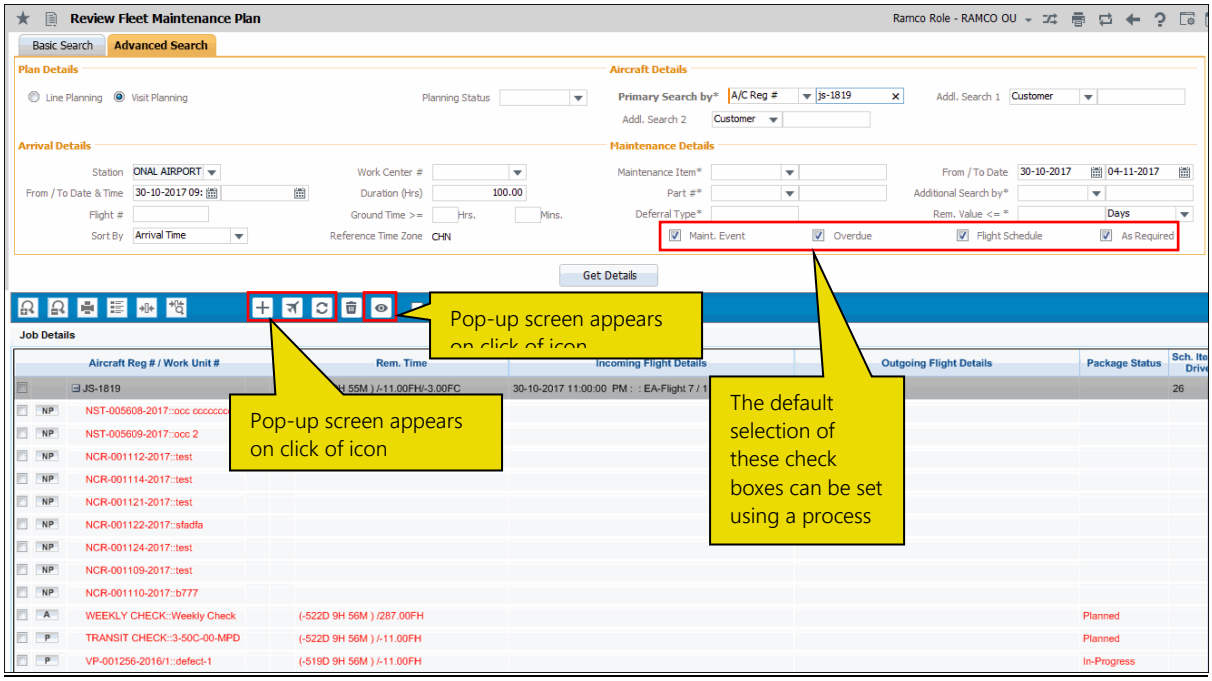
The following process parameters have been added under the entity type "Maintenance Planning" and entity "Aircraft Maintenance Planning" in the **Define Process Entities** activity in Common Master to leverage the behavior and functioning of the **Review Fleet Maintenance Plan** screen and influence task creation.

However, the users will be allowed to create a non-standard task only if "Generate Non-Standard Tasks" is enabled in the Set Options activity of Maintenance Task. These can also be deleted, if need be.

Process Parameter	Value	Impact in the Review Aircraft Maintenance Plan screen
Default Search tab on launch of Review Fleet Maintenance Plan screen	1 (Default)	The Basic Search tab will be defaulted on launch of the screen
	2	The Advanced Search tab will be defaulted on launch of the screen
Process Parameter	Value	Impact in the Review Aircraft Maintenance Plan screen
Aircraft Maintenance Planning?	1 (Default)	Pre-planning and Planning: All Gantts and toolbars

		will be available to users
	2	Only Pre-planning: The Job Details Gantt will be available to users
Display Flight routing information in Visit Planning?	0 (Default)	Search By filter is mandatory • Duration for the Routing search will not be defaulted from Define Process Entities in Common Master. • Aircraft icon will not be displayed
	1	Station or Search By is mandatory • Duration for Routing search will be defaulted from Define Process Entities in Common Master. • Aircraft icon to be displayed and on clicking the icon, the pop-up for Flight Routing Details will appear
Default ATA # for NST created from the Review Fleet Maintenance Plan screen	Enter valid ATA # defined in Aircraft	
Mandate Task Category for NST created from the Review Fleet Maintenance Plan screen	0	Task Category mandatory for the NST created from Review Fleet Maintenance Plan screen
	1	Task Category not mandatory for the NST created from Review Fleet Maintenance Plan screen
Default state for the checkboxes "Maint. Event, Overdue, Flight Schedule, As Required	0	Check boxes will be unselected on launch of the Review Fleet Maintenance Plan screen
	1	Check boxes will be selected on launch of the Review Fleet Maintenance Plan screen

Exhibit 1: The **Review Fleet Maintenance Plan** screen



Aircraft Tail to Employee Assignment during shift planning

Reference: AHBG-15820

Background

Certain Aircraft Maintenance scenarios require MSR/AME to be mapped to Aircraft Reg. # based on flight arrival time to facilitate maintenance subsequent to arrival/prior to the next flight. To ensure that the maintenance of aircraft is seamlessly executed, the arrival and departure times of the aircraft from Flight Schedule and the employee details from the work center-shift-employee mapping are taken into consideration to assign jobs to MSR/AME. Additional technicians and equipment, such as vehicles and phones may be necessary and hence assigned for an MSR. The employee certificate/license of the MSR/AME are also validated at the time of the commencement of assigned aircraft/package.

Typically, the Shift lead inquires Aircraft Routing details and shift times for a work center and then assigns packages or aircraft to the MSR available at the work center. The Shift lead may also assign more employees and equipment to the MSR required for execution of the job.

Change Details

The **Manage Aircraft - Employee Assignment** activity under the **Aircraft Maintenance Planning** business component has been introduced to assign packages or flights to employees (identified as Primary Employee). The system also ensures that the employee # of the MSR/AME is valid and Active and the employee primary assignment status is 'Authorized' in the HRMS business component.

The users can search for the Scheduled Flight details (fetched from Aircraft Routing information) / Planned package and assignment details (fetched from Aircraft Maintenance Execution) based on search criteria.

Additional references, such as technical equipment and car can also be assigned to a Primary employee.

Additional employees can also be assigned to a flight /package in the new link page (Assign Additional Employees).

The employees available in a specific work center, shift and time can be retrieved and then assigned to a flight or package based on the arrival/departure of aircraft.

All dates and time including shift start and end dates & time, flight arrival and departure dates and time will be compliant with the local time zone of the concerned station/work center.

Exhibit 1: The **Manage Aircraft – Employee Assignment** screen

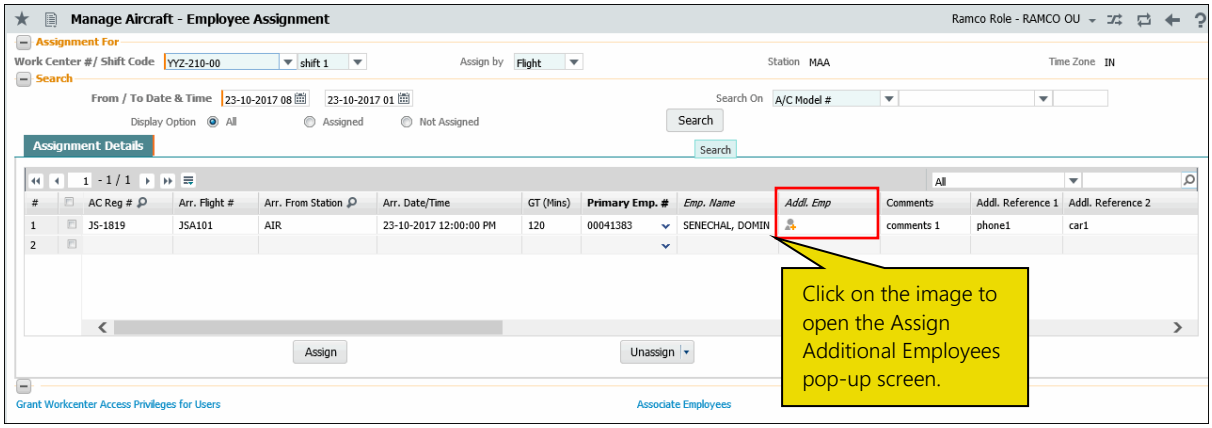
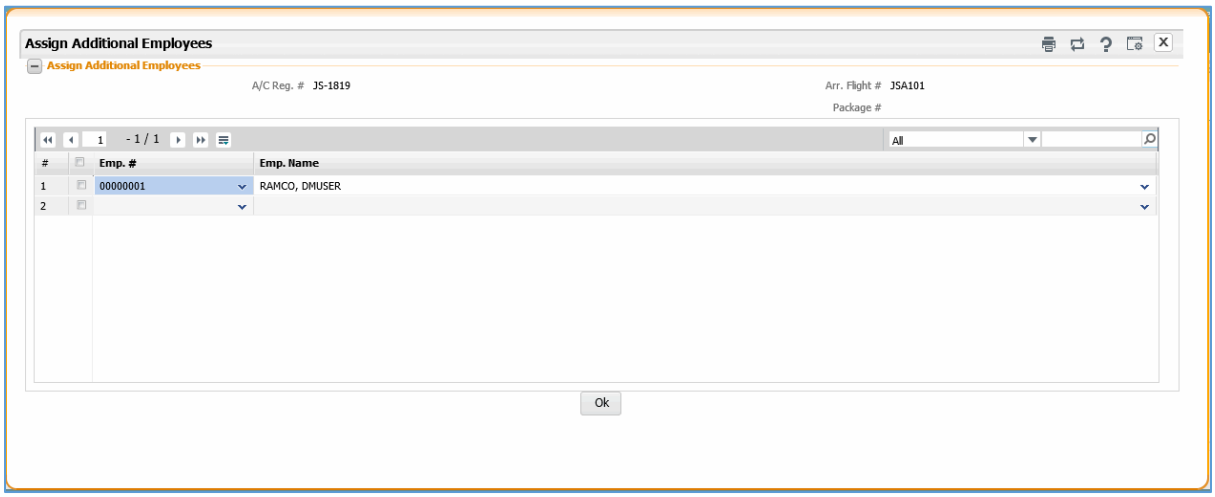


Exhibit 2: The **Assign Additional Employees** screen



Packaging multiple instances of Task

Reference: AHBG-15055

Background

Currently, the users can create multiple packages with an instance of the same task in **Aircraft Maintenance Planning**. However, the system allows for the release of a package with an instance of a task only if the previous instances of the same task have already been complied. However, in certain scenarios, (elaborated later in the document) it may become inevitable to package and release a task even when the previous instances of the task are due or not complied yet.

Change Details

In order to facilitate the release of a package with a task ahead of packages comprising previous instances of the same task based on user discretion, a new process parameter 'Allow release of Package with a task whose previous instance(s) is not complied?' has been created under the entity type "Maintenance Planning" and entity "Aircraft Maint. Planning" combination in the **Define Process Parameters** activity of **Common Master**. The process parameter decides whether a package with a task whose previous instances have not been complied yet can be released.

Process Parameter Value	Impact on release of the package
1/Yes	Any instance of the packaged task can be released for execution regardless of the chronological order of the planned execution in 'Planned' status.
0/No	The user has to release the package for execution containing the earlier instance of the task first. Instances of the task must be complied with in the chronological order of planned execution.

Scenario:

- Service Check is due once every seven days: 1st, 8th, 15th, 22nd and 29th of each month on an aircraft.
- Major packages are planned in advance and one such major package comprises the 5th instance of Service Check that is due for compliance on 29th of the month.
- In such a situation, the major package cannot be released, if the compliance of the previous Service Check scheduled on 22nd or even earlier has not been complied. To ensure that such major checks well-planned in advance are released even when the earlier instances of the tasks are not yet complied, it was necessary that the condition on the compliance of the earlier instances of a task to release a package

with a later instance of the task be relaxed.

Exhibit 1: The **Set Process Parameters** screen of the **Define Process Parameters** activity in **Common Master**

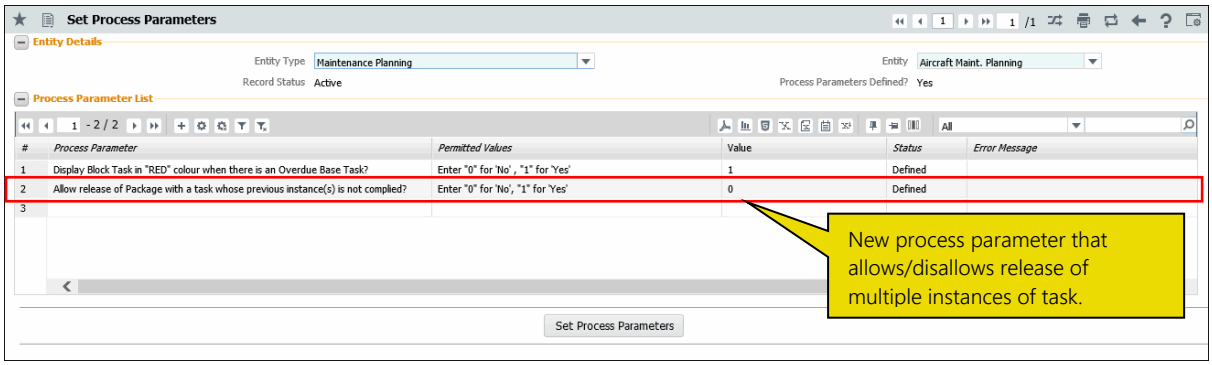
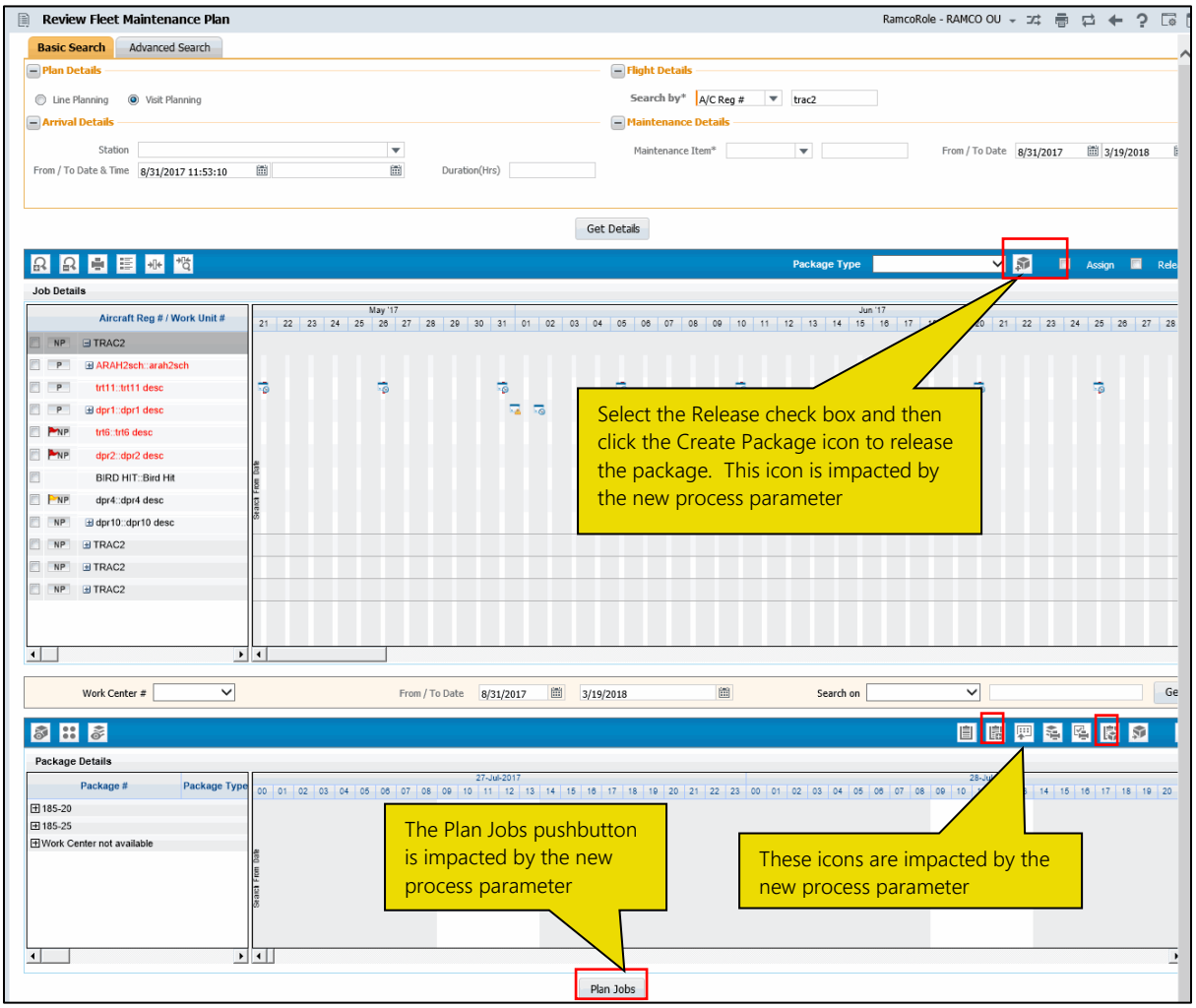


Exhibit 2: The **Review Fleet Maintenance Plan** screen of **Maintenance Planning**



WHAT'S NEW IN MECHANIC ANYWHERE?

Ability to add Open discrepancies in MechanicAnywhere

Reference: AHBG-16937

Background

The **Aircraft Maintenance Execution** business component in the **Ramco Aviation** desktop application allows user to add the Open (Under resolution) discrepancies to another package. This enables mechanics to work on the discrepancies, if they find the opportunity to work on them earlier than the scheduled date for the aircraft. Similar feature is required in the **Maint./Pilot Discrepancy** tab of the **E-Log** screen of **MechanicAnywhere** application as currently, the Open discrepancies cannot be added to another package.

Change Details

The **Add Deferred Discrepancies** popup in the **Maint. /Pilot Discrepancy** tab of the **E-Log** screen has been renamed as **Add Discrepancies.**

Now, the users can retrieve all the unresolved discrepancies of their choice and then allocate them to a package for execution.

The **Filter By** (first) drop-down list box has been added in the **Add Discrepancies** popup with the following values:

- Deferred
- Open

However, on launch of the **Add Discrepancies** pop up, the **Filter By** drop-down list box will display **Deferred** and the second drop-down list box (**Advanced Filter 1**) will display the following values:

- Due By Days
- Overdue By Days
- Remaining FH
- Remaining FC
- Discrepancy #
- Description
- ATA #
- Discrepancy Type
- Discrepancy Category
- Deferral Type

On selection of **Open** in the **Filter By** drop-down list box, **Advanced Filter 1** will load the following values:

- Discrepancy #
- Exe. Doc #

- Discrepancy Type
- Discrepancy Description
- Discrepancy Category
- ATA #

The users can use the third drop-down list box (**Advanced Filter 2**) to select the value for the attribute selected in **Advanced Filter 1**

Discrepancy Retrieval

To retrieve discrepancies from **Due List**, the users can select 'Deferred' from the **Filter By** drop-down list box. Alternatively, discrepancies in the following statuses from packages created against the aircraft are retrieved, if Open is selected in the first drop-down list box.

- Fresh
- Pending
- Under Resolution
- Pending Deferral
- Deferred

The users can select the check box for the discrepancies and then click the **Add** button to allocate the discrepancies to a package. These discrepancies assume the status of "Under Resolution" in the allocated package.

Exhibit 1: The **Maint./Pilot Discrepancy** tab of the **E-Log** screen

Exhibit 2: The rechristened **Add Discrepancies** pop-up with **Filter By** as **Deferred**

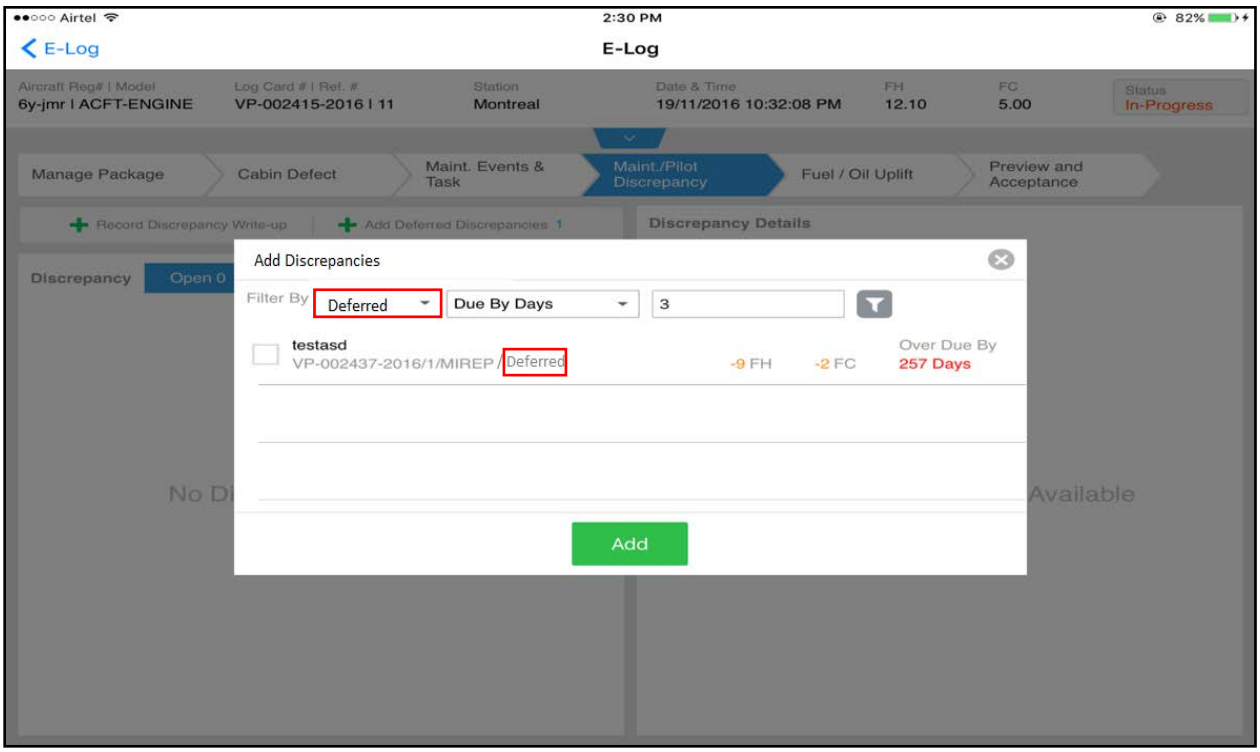
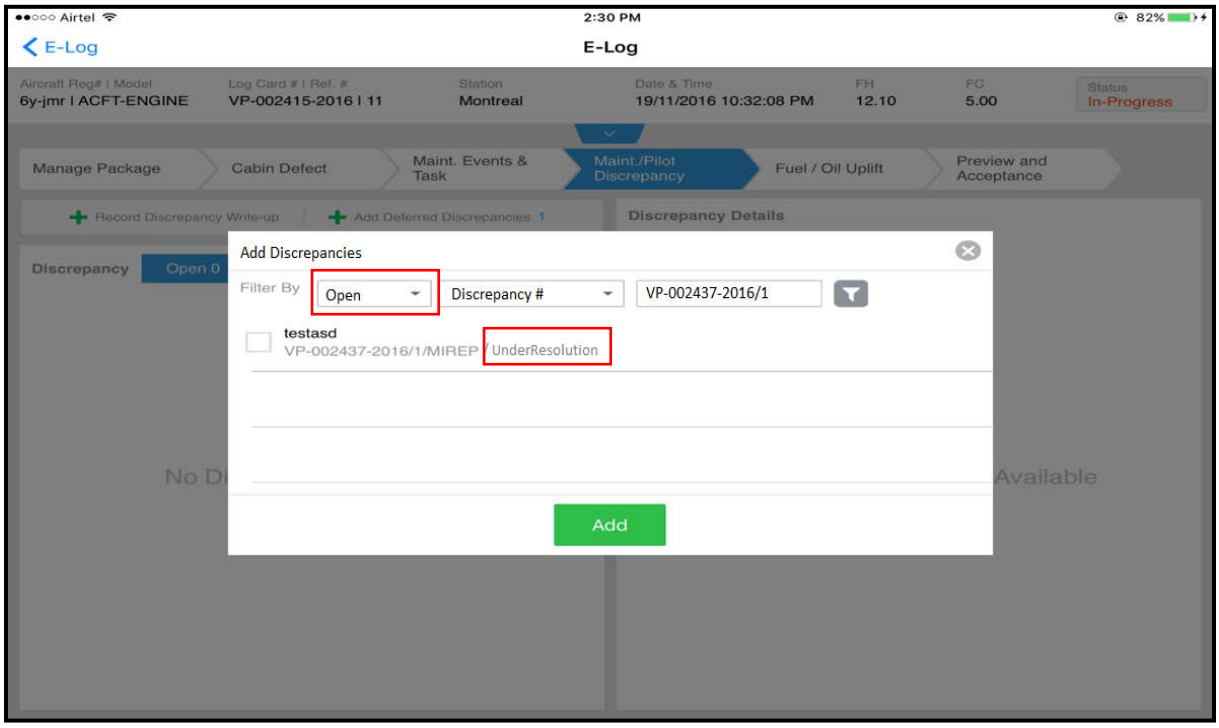


Exhibit 3: The rechristened **Add Discrepancies** pop-up with **Filter By** as **Open**



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