TAP Line Maintenance Procedures for Providers

Rev. 02 –16JAN2024

TAP MAINTENANCE & ENGINEERING

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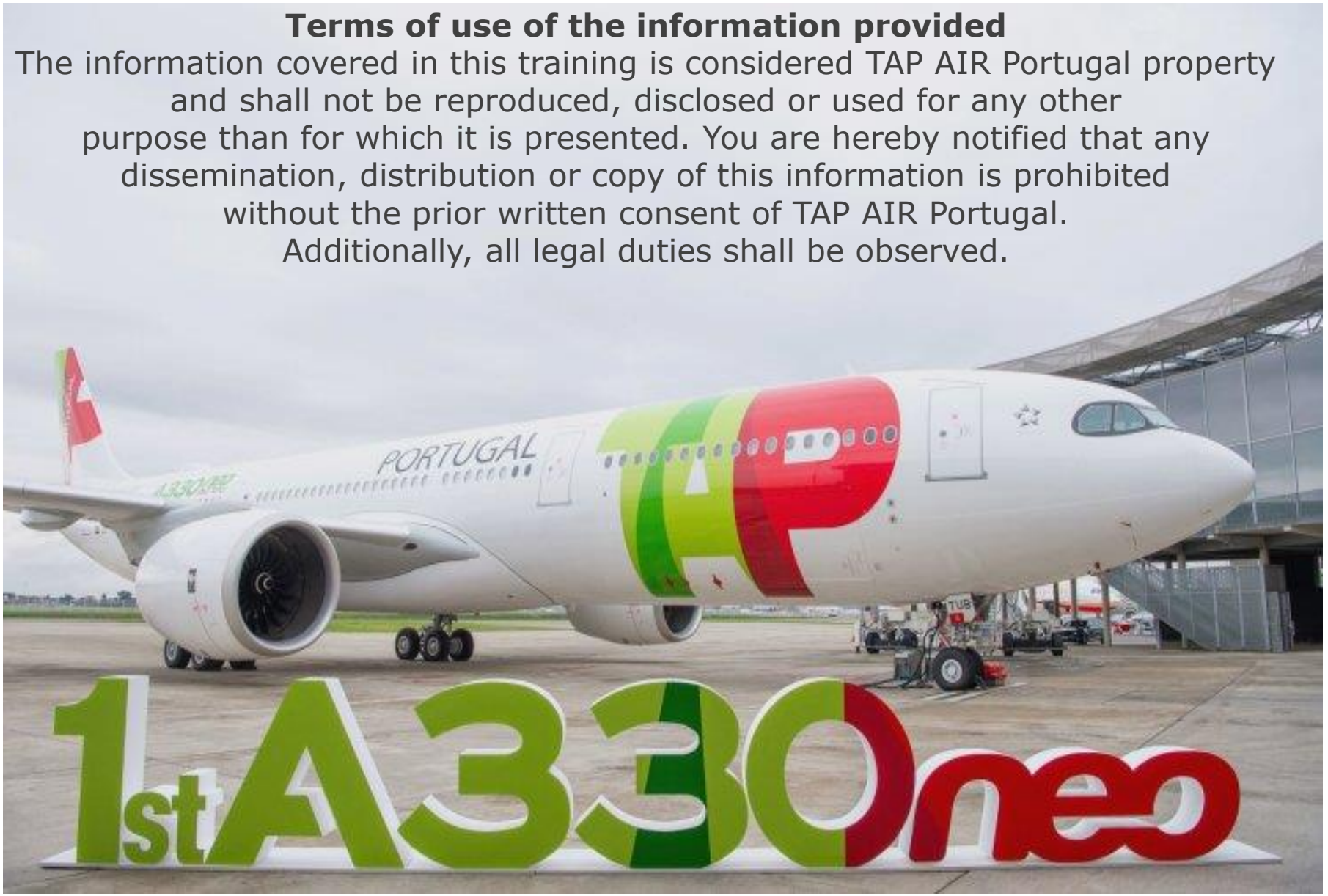


Introduction

Welcome to **TAP Line Maintenance Procedures Course.**

This course provides the knowledge about Line Maintenance Procedures by TAP Maintenance & Engineering and is divided into **6 chapters.**

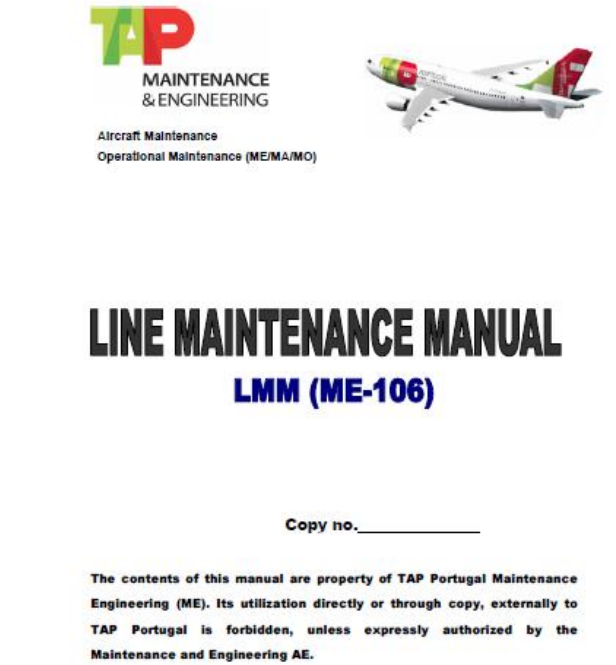
1. **General Information**
2. **Line Maintenance**
3. **Contacts/Notifications**
4. **Documentations**
5. **Material**
6. **Quiz**

1-GENERAL INFORMATION

Course Objectives

At the end of this course you must be able to:

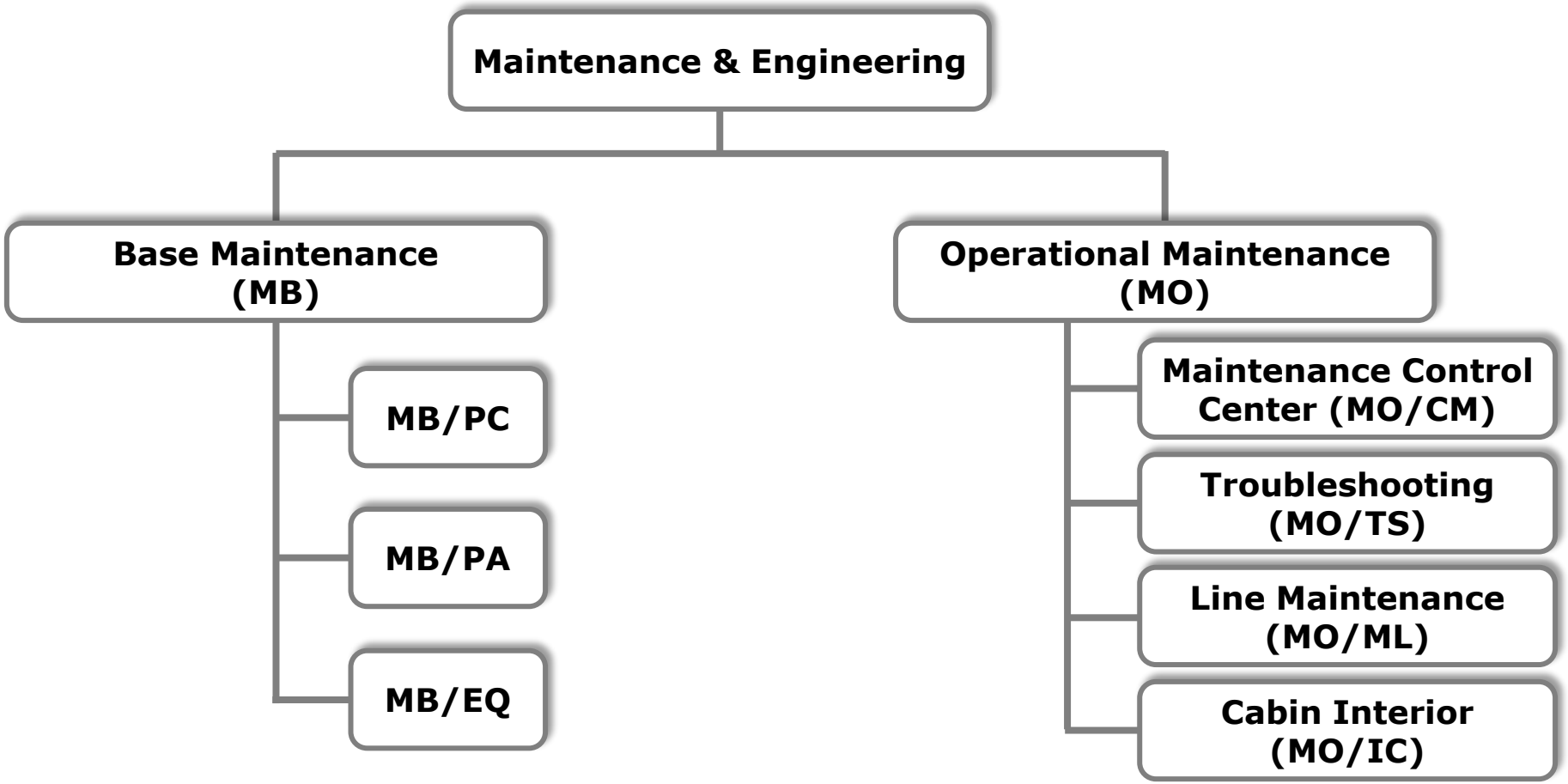
- Recognize the structure of TAP ME organization;
- Use of Electronic Technical Logbook (e-TLB);
- Use of Aircraft Technical Logbook (Paper TAP Mod. ME-2013);
- Use of the Cabin Trouble Report (TAP Mod. ME-2010);
- Identify the use of a Hold Item List (TAP Mod. ME-2030 and TAP Mod. ME-0338 / deferred);
- Remember the contacts to use to notify occurences such as accidents, incidentes and others;
- Use an Aircraft Release Report (TAP Mod. ME-0602) form, to communicate when an aircraft is grounded with Technical problems;
- Identify all Technical literature needed at line stations;
- Name the Required material.



1-GENERAL INFORMATION

LMM – Organization Chart

Structure of TAP-ME (MO & MB) organization:



Foreword

Dear Trainee,

Transportes Aereos Portugueses (TAP) has designed this Training Course for Line Maintenance Staff Training.

After completing this course, you are ready to use the eTechLog8 application. eTechLog8 is the core element of the Electronic Technical Logbook (e-TLB) system that Conduce provides and supports TAP. Paper Aircraft Technical Logbook and Cabin Trouble Report must only be used as backup.

Please consult TAP internal documentation for the dedicated procedures corresponding to your position as a maintenance provider.

Before starting, there are few things worth knowing.

Thank you and good luck!

TAP eTechLog8 Team

2.1 ETL Basics

By the end of this chapter, you will be able to:

1. Identify the ETL system hardware and software elements
2. Understand how to capture and transmit data from the eTechLog8 application to the dedicated cloud server
3. Charge the hardware items

ETL Basics: Hardware

1. Dell Latitude 7230 tablet computer with a stylus. Within this device, there is:

   a. SD card. This takes a simultaneous back-up of all entered data and can be used in the event of device failure.

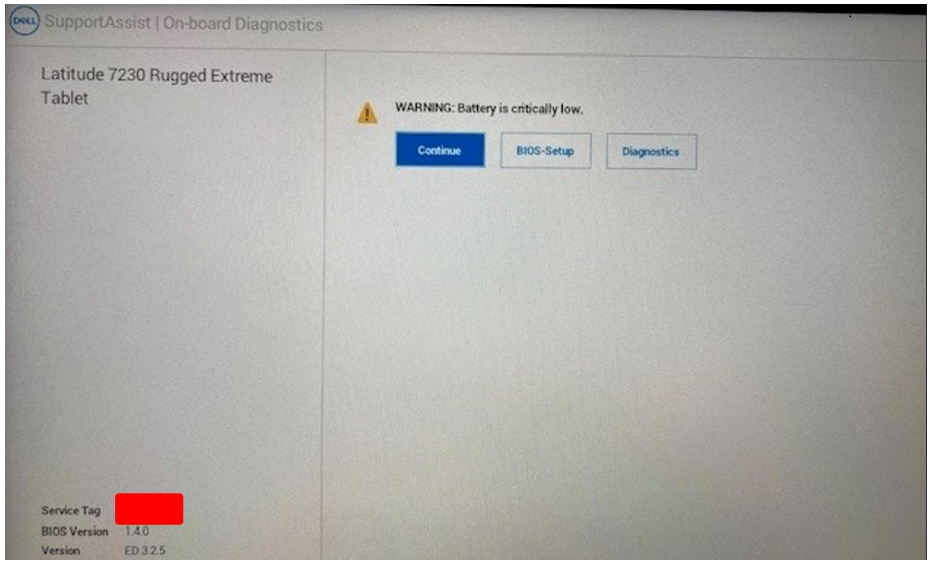
   b. SIM card to provide worldwide connectivity.

The Dell Latitude 7230 is stowed in the cockpit of each aircraft – behind the Captain's seat.

To charge the device, refer to the procedures on the next page.

What is the Latitude 7230's battery life?
A fully-charged 7230 device lasts on average for 2-3 days of normal use.

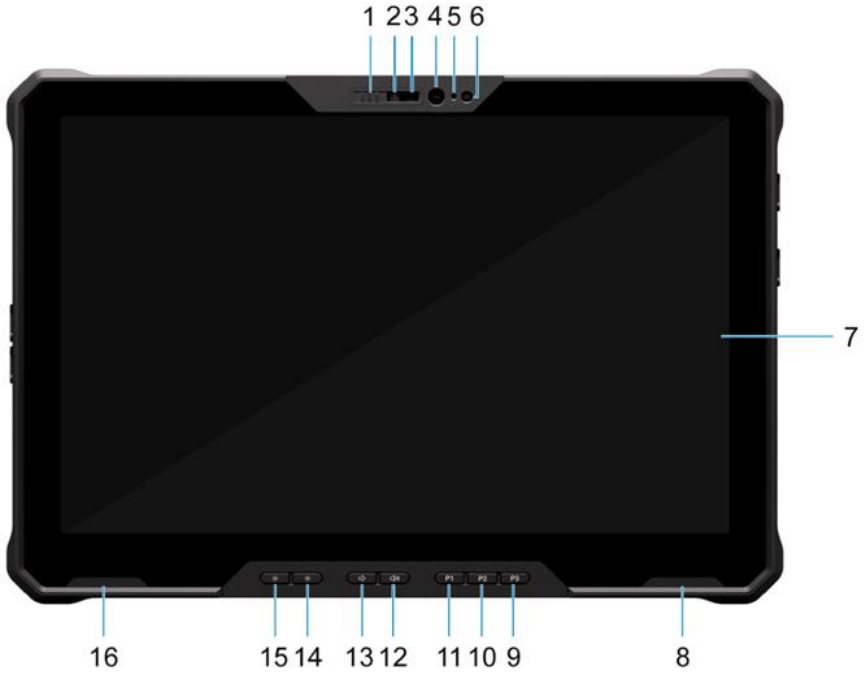
ETL Basics: Battery critically low – warning message



If the battery gets too low, you will receive a message like the screenshot. Please plug the device in as soon as possible and then select "Continue" for the device to boot into the eTL as normal.

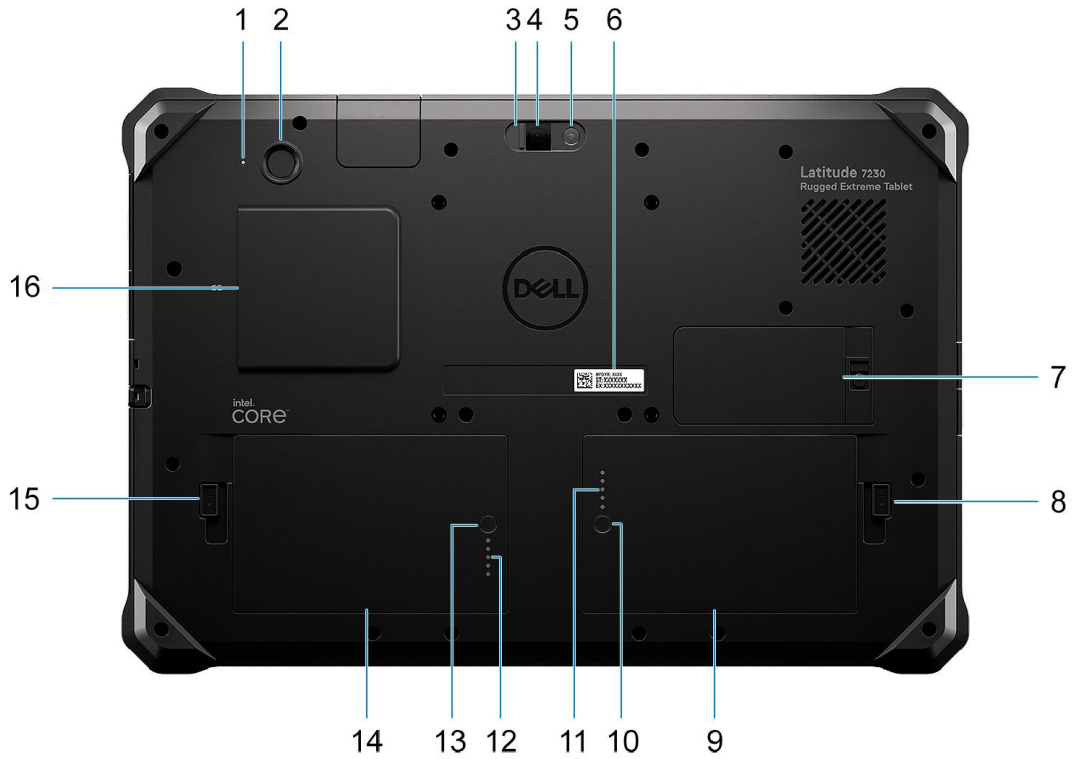
What is the Latitude 7230's battery life?
A fully-charged 7230 device lasts on average for 2-3 days of normal use.

ETL Basics: Hardware - Front



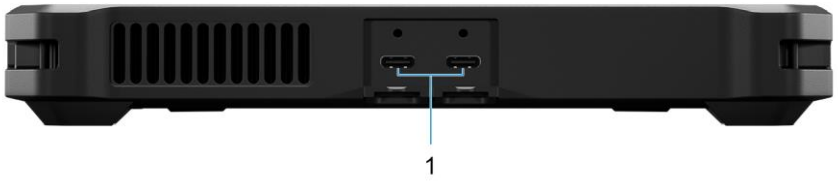
1	**Camera shutter door**
2	RGB camera
3	IR camera
4	IR emitter
5	Camera status light
6	Ambient Light Sensor (ALS)
7	Display
8	Speaker
9	P3—User programmable button 3 – Disabled
10	P2—User programmable button 2 – Disabled
11	P1—User programmable button 1 – Disabled
12	Volume increase button - Disabled
13	Volume decrease button – Disabled
14	Brightness increase button – Enabled
15	Brightness decrease button – Enabled
16	Speaker

ETL Basics: Hardware - Back



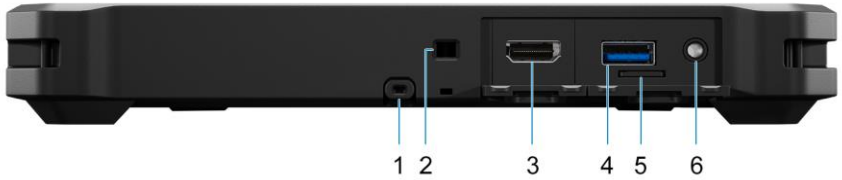
1	**Power button LED**
2	Power button with fingerprint
3	Camera shutter door
4	Camera Lens
5	LED flash
6	Service tag
7	Solid-state drive door – N/A in variant
8	Battery latch knob
9	Battery
10	Battery button
11	Battery status LED
12	Battery status LED
13	Battery button
14	Battery
15	Battery latch knob
16	Smart card reader slot – N/A in variant

ETL Basics: Hardware - Left



1	Two Thunderbolt 4 ports with DisplayPort Alt Mode/USB4/Power Delivery

ETL Basics: Hardware - Right



1	**Stylus slot**
2	Wedge-shaped lock slot
3	Optional I/O bay (Choose from: HDMI 2.0/USB 3.2 Gen 1 Type-A)
4	USB 3.2 Gen 1 port with PowerShare
5	microSD-card slot
6	Headset (headphone and microphone combo) port

ETL Basics: Hardware

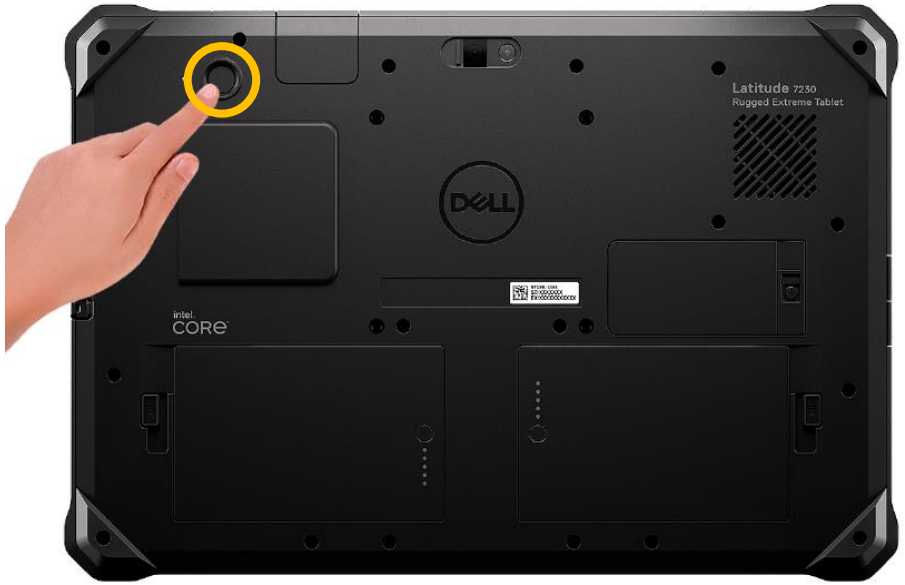
Devices are ensured to have sufficient charge to enable seamless operations. The following charging procedures must be followed in the corresponding stations:

- The engineers and pilots are responsible for device charging. The aircraft should be used to plug in the device for charging if necessary.

ETL Basics: Software

eTechLog8 is the mobile touch app installed on each device. This is where you will enter flight, defect and line check information.

ETL Basics: Getting Started



Turning on

To turn on the device, hold the Power Switch button (located at the back - LH side) for 5 seconds. Once on, the device boots up and launches the eTechLog8 application straight away.

No user credentials are required to login.

If in case the device boots up to the login screen, simply tap on the FWD arrow to go to the application.

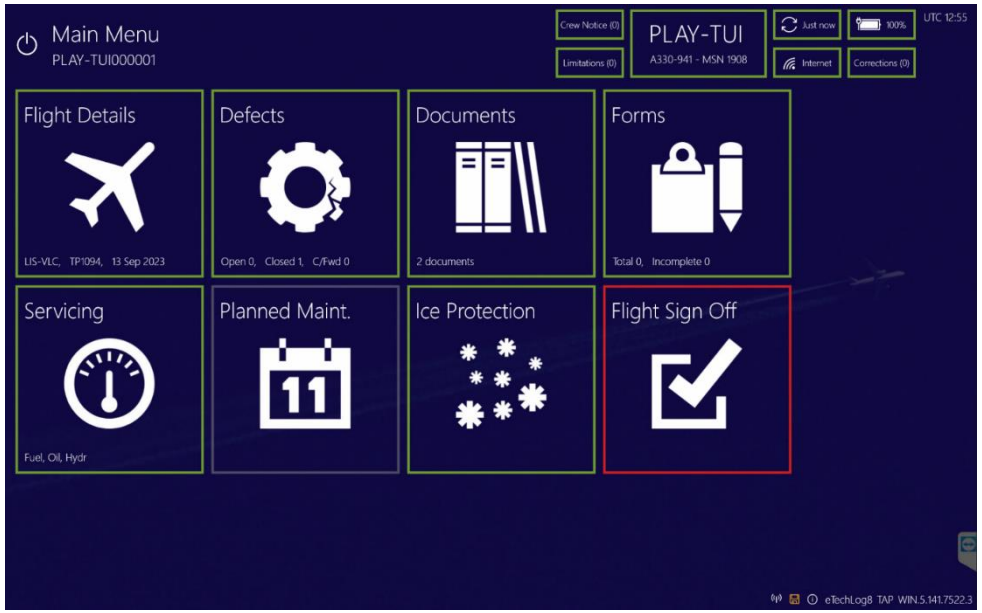
ETL Basics: Getting Started

Turning off

Tap the power icon on the top left-hand side of the screen and select Shut Down.

Please do **NOT** use the Power Switch button on the device for regular shut down.

ETL Basics: Main Menu / Colour Code



The main menu has eight buttons covering the key areas of the ETL.

The workflow of the ETL starts at the top left corner of the screen and works to the bottom right corner.

For buttons, a simple Colour Code is used:

- Mandatory
- Deferred Items
- Complete
- Disabled
- Optional / Warning

Amber does not prevent users from proceeding.

ETL Basics: Tech Log Page Numbering

Every Tech Log Page is automatically assigned a number.

The structure of the TLP number is made up of the Reg + 6 Digits.

PLAY-TUI000001

A/C reg 6-digit

Each new electronic Tech Log Page will have the TLP number increased by +1.

Defects also automatically receive a number upon signature.

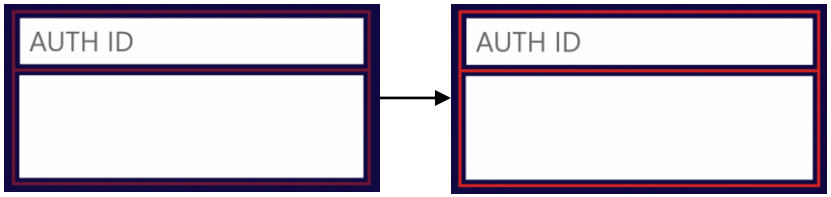
The first defect on a TLP consists of the TLP number with a -001.

The second defect receives -002 and so on.

Defect actions are also numbered. They add another three digits to the end. So, PLAY-TUI000001-001-001 is the first action on the first defect on the first TLP!

ETL Basics: Other Icons

Mandatory fields contain a red triangle. This prevents mandatory data being missed.



When all mandatory fields are complete the Signature Panel becomes active. This is indicated by the frame turning from a dark red to a bright red.

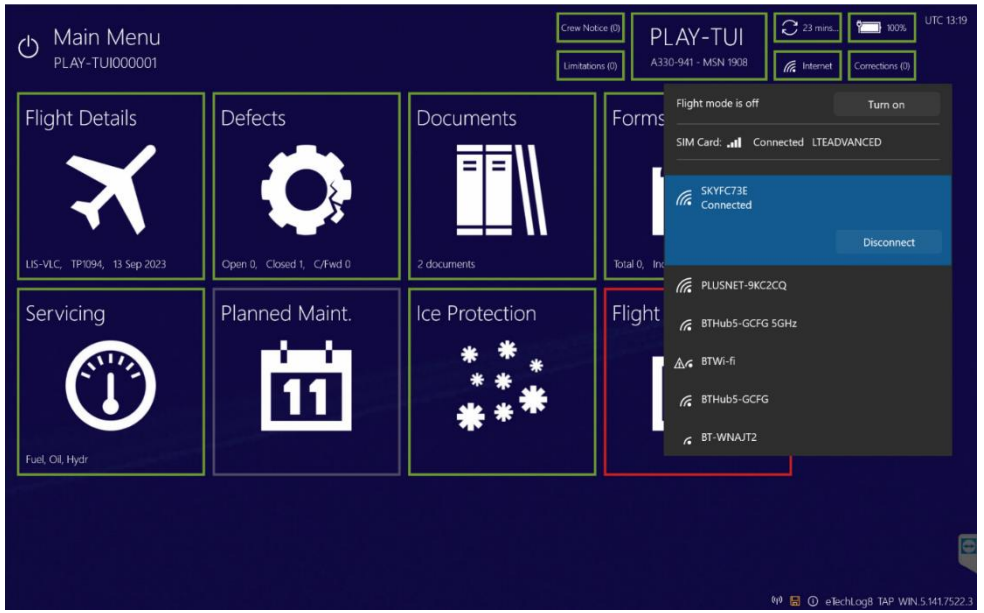
The *Home* icon in top left-hand corner takes the user to the main menu screen of eTechLog8.

The back arrow takes the user one step back.

A tick mark appears in the top right-hand side corner when all mandatory fields have been completed. Tapping this takes the user one step back.

ETL Basics: Network Connectivity

<u>The eTechLog8 does not need an internet connection, it works completely offline</u>. Any time data cannot be transmitted, it will simply be stacked until the next time a connection is available.



The user must ensure that a copy of the TLP is left on the ground!

Hence, in case the device SIM has no connectivity, users can use alternative solutions:

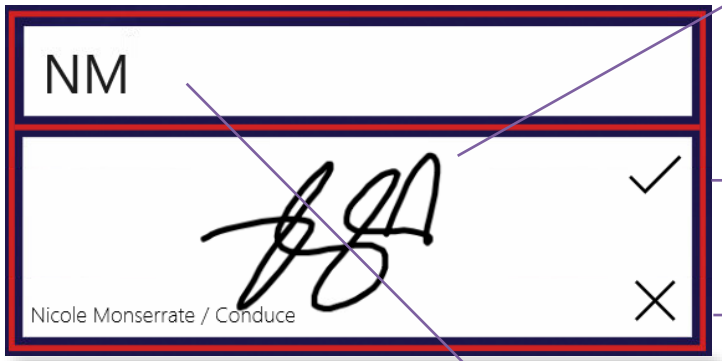
- Connect to a WiFi or mobile hotspot: Available networks are seen in the Network button
- Save to USB procedure: refer to slide 26-27
- Revert to paper techlog procedure

It is not possible to connect to Wi-Fi networks that require a browser login. Only Wi-Fi networks where a password can be directly entered are able to be used.

NOTE: The eTechLog8 device can be put in flight mode by tapping the *Network* button in the top banner *Turn On* Flight Mode button.

ETL Basics: Electronic Signatures

Each section of eTechLog8 must be signed by a pilot or a maintenance engineer to confirm that the data is correct and accurate.



eTechLog8 uses sign on glass technology. The users need to scribble their regular handwritten signature using the stylus attached to each device.

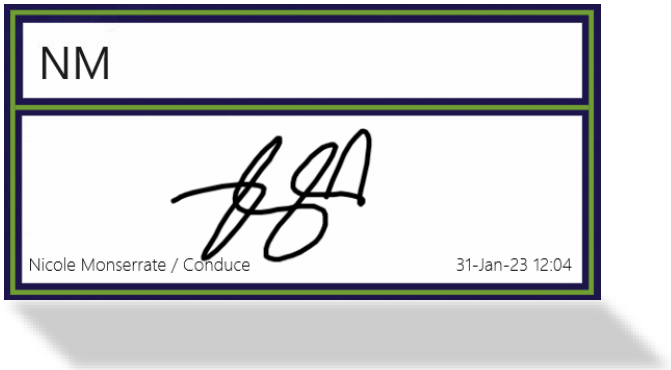
After signing, a tickmark appears in the signature box. Tapping it confirms the signature. Signing off any section turns the box green and initiates the transmission of the captured data to the eCentral8 server - if the internet connection is available. This is true throughout the eTechLog8 application.

The cross also appears after signing. If tap, the signature is deleted, and the box is emptied.

The signature box becomes red and active when the current screen is completed.

The top line of the signature box requires the user to enter an individual Auth ID. For TAP employees it will be the employee number. For providers it will be the number (can be an alphanumeric code) provided to TAP, after this training is completed.

Sign off initiates data transmission



If an internet connection is available, signing this section initiates the transmission of the data recorded within a specific section back to the eCentral8 server. This process enables such data to be available for other TAP ETL system users worldwide via eCentral8.

Data transmission to the server is true throughout the eTechLog8 application.

It is not necessary to wait for the transmission to succeed. The user can carry on completing other sections of eTechLog8. The eTechLog8 application can also be used in **offline mode**. Data is then sent to the server in the correct order when the connection is available again. This is as per system design

2.2 Flight Sign Off (Aircraft Acceptance)

By the end of this chapter, you will be able to:

1. Accept the aircraft for the next flight
2. Review the TLP data recorded before aircraft acceptance
3. Record times in eTechLog8
4. Turn over a TLP

Main Menu: Ready for Acceptance

The main menu shows all sections of the current TLP are completed and only *Flight Sign Off* section requires action.

This is the usual situation when an incoming flight crew arrives at an aircraft. The captain reviews the work that was carried out by the maintenance engineers and is now ready to accept the aircraft for the intended flight.

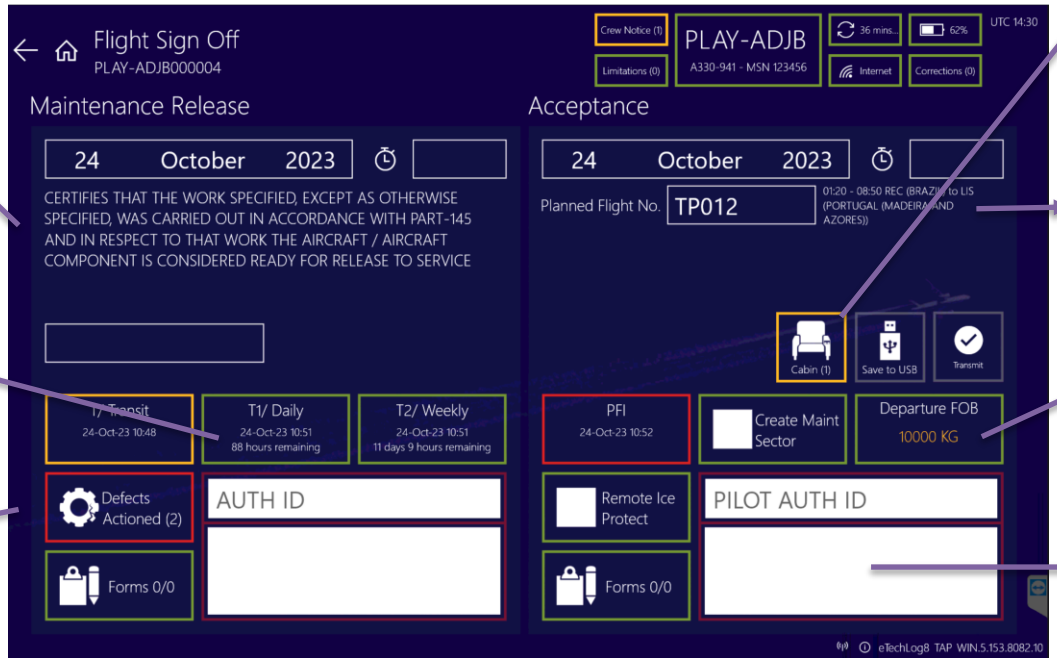
Select *Flight Sign Off* to continue

Flight Sign Off

The *Maint Release* side shows the aircraft has been released to service. CRS Text and Part145 authority is shown.

The current validity of the *Daily* and *Weekly Check* is displayed.

In addition, the Defects actioned on this turnaround can be quickly checked.



Any Cabin defects from this turnaround can be quickly checked.

The *Acceptance* side displays the planned flight number, Departure FOB and PFI.

The captain signs off to accept the aircraft.

Turning Over the TLP

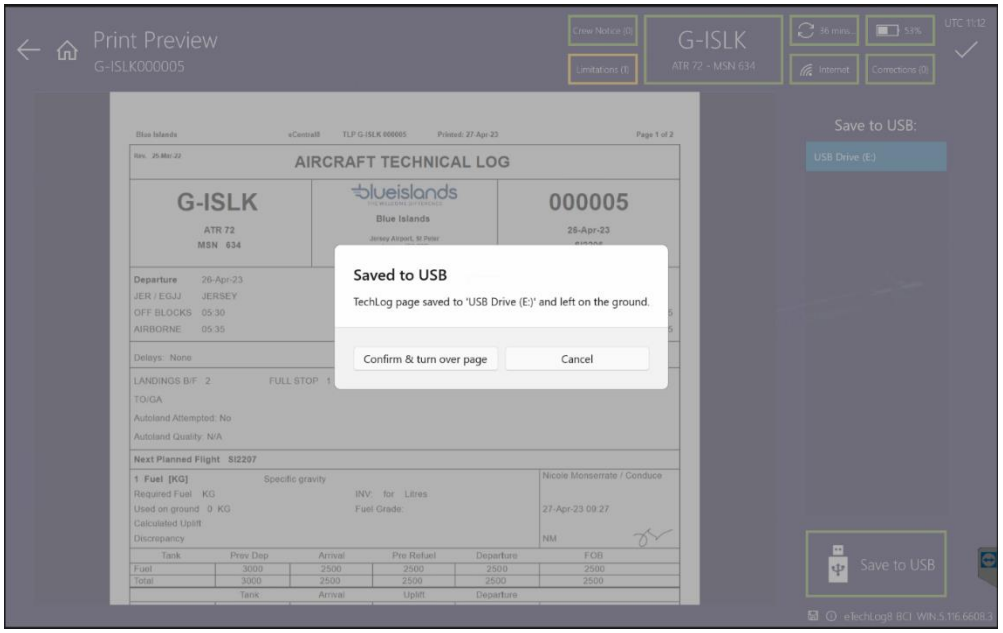
Once the Flight Acceptance is signed, two buttons become active. 99% of the time the device will have a connection so *Transmit* is flashing red:

When Transmit is used, the device receives a "handshake" from the server confirming the electronic copy has been saved on the ground.

If no network is available, the captain can use the USB kit to leave a USB copy on the ground.

How do I know I'm legal to fly?
Wait for the *Transmitted Successfully* popup before pushing back. If the transmission fails, you will Save to USB, or use WiFi.

Using Save to USB



The device receives a “handshake” back from the USB Stick indicating that the electronic copy has been effectively saved.

The USB can be placed in the envelope, filled out and left on the ground.

If the user confirms, the TLP is turned over on the eTechLog8 and the TLP number increments by +1.

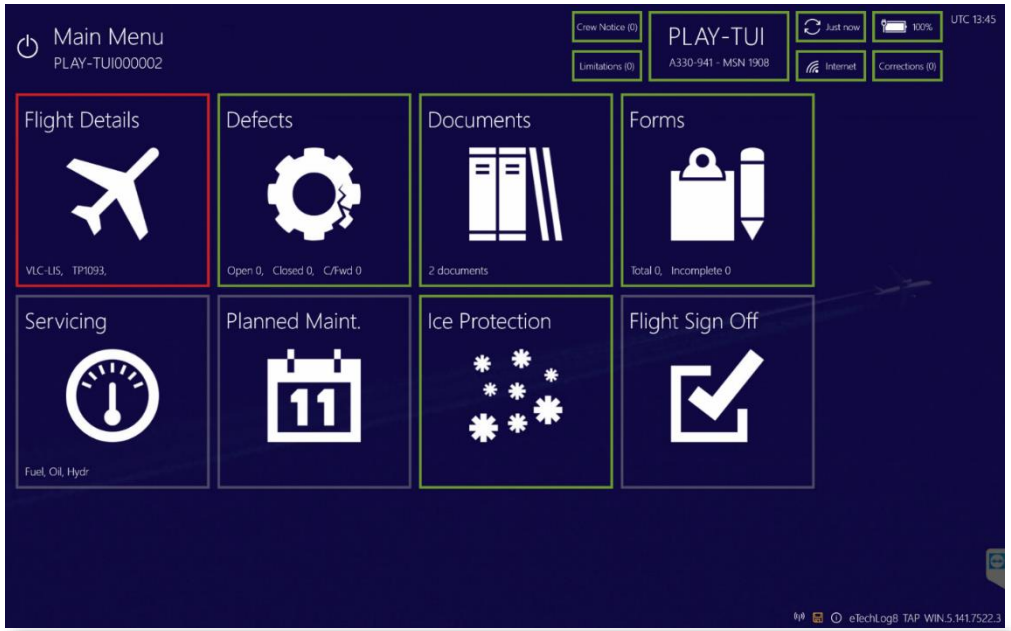
When to save to USB?
When there is poor connectivity, use save to USB. All data will be transmitted once connectivity is re-established.

2.3 Reviewing Flight Details

By the end of this chapter, you will be able to understand how the crew record:

1. Flight Details
2. Pilot Report defects
3. Nil further defects
4. Return to Stand scenarios

Main Menu: Recording a flight



When a new TLP is generated, the flight crew is ready to commence the next flight.

The details of this flight are recorded on the new TLP in the *Flight Details* section of eTechLog8.

Select *Flight Details* to continue

Flight Details

eTechLog8 has a controlled workflow. The user cannot progress without filling in all the mandatory fields in the right order. This ensures you cannot accidentally miss any data.

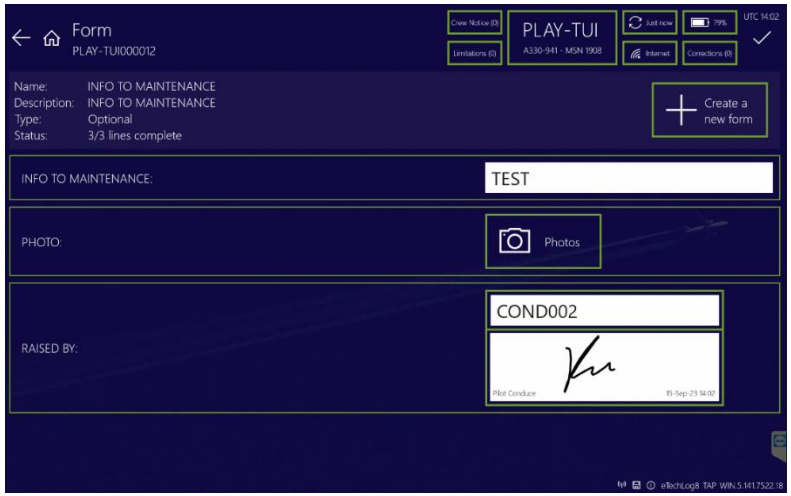
The Flight crew is responsible for completing all the mandatory fields and sections:

- Flight Number and Arrival airport
- OOOI times
- Take Off/Delays information
- Any *Extra Flight Info – INFO TO MAINTENANCE (*optional)
- Pilot reported defects, if any
- Landing and *Arrival Fluids*

Tap on any of these buttons to review the details recorded.

Reviewing Flight Details

Here are two examples of the different areas of flight details you might want to review. In any screen you can use the tick or the back arrow to return to the previous screen.



The *INFO TO MAINTENANCE* is an optional form in the *Extra Flight Info* area.

Total Fuel quantity is recorded on arrival. The usage is also calculated for you.

Pilot Report or Nil Further Defects

In the left-hand corner button of the *Flight Details* screen, there are two dedicated buttons for recording defects. Both buttons are active and with a red frame waiting for crew action. They are:

a) Defects button, where flight crew can report a defect. We'll look at this in more detail later in this course.

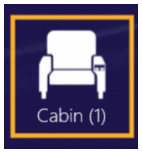
When Defects are reported, the Defects button turns amber and states the number of recorded defects

The Nil Further Defects tick box turns grey as it is now disabled

b) Nil Further Defects tick box if there were nil defects during the sector.

When nil defects in the sector, the Nil Further Defects tick box is checked and turns green

The Defects button is now disabled, with (0) recorded defects



Within the Flight Details screen there is a shortcut to Cabin defects (a separate training course is available on raising and reviewing cabin defects).

Return to Stand Procedures

If a pilot has accepted the aircraft into service, and then a defect is discovered, or there is a return to stand scenario for any reason, this should be recorded using a **NOT FLOWN** sector.

The captain should tick the Not Flown checkbox. This will automatically set the Arrival Airport as the same as the Departure airport, and only require On and Off Block times.

Arrival Fuel is still recorded, as some may have been used taxiing.

The pilot can then record any defects or sign and pass the ETL to the maintenance team.

What if they did not leave the gate?
If the aircraft never left blocks, simply fill the **same time** in the Off Blocks and On Blocks fields.

Flight Details Sign Off

Once all mandatory data is completed, all the fields are green, and the Signature Panel becomes active. Prior to signing you must ensure all cabin defects raised on the companion cabin log device have been transferred as required.

The pilot enters their Auth ID and signs off.

If the aircraft requires maintenance, or your shift is finished, once you sign Flight Details you can hand the ETL to the maintenance team.

Make sure you sign off the Flight Details and the signature panel is green before leaving the aircraft!

2.4 Aircraft Servicing

By the end of this chapter, you will be able to understand how to record:

1. Fuel Uplifts (and nil uplifts)
2. Oil Uplifts (and nil uplifts)

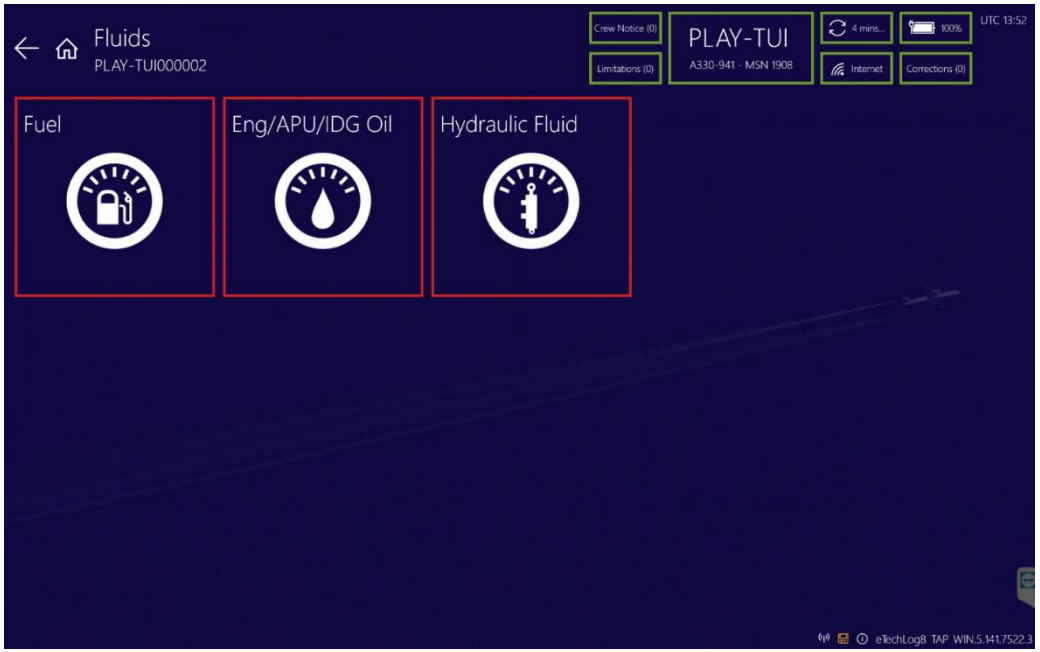
Main menu: Servicing

After *Flight Details* has been signed off, the *Servicing* button becomes active.

This must be completed on every flight - even nil uplifts of fluids must be recorded!

Select *Servicing* to continue

Servicing Menu



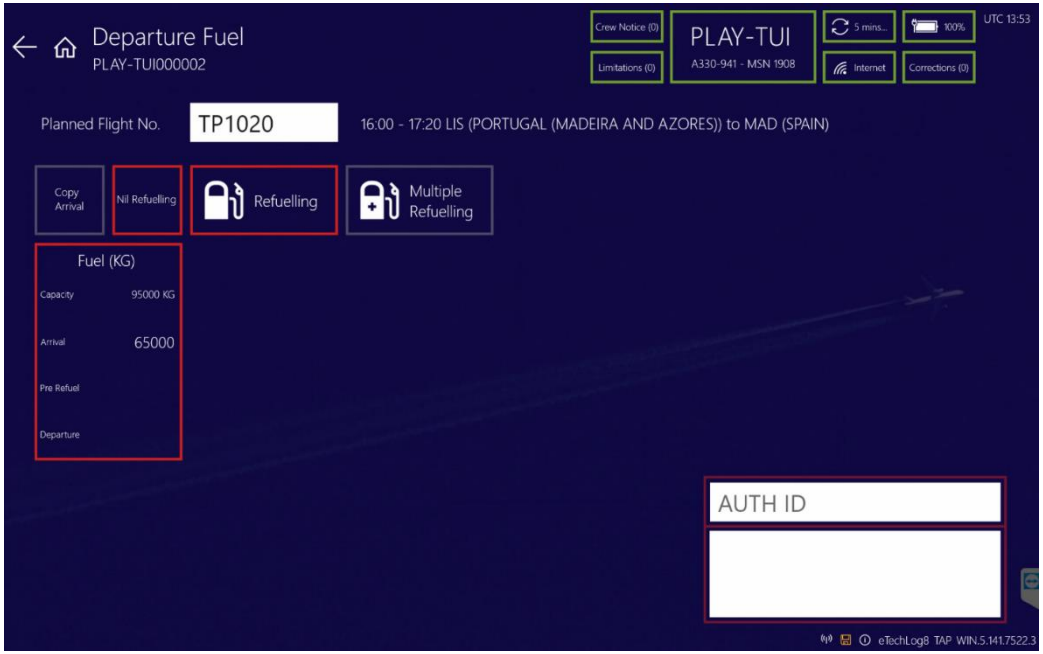
Servicing is split into three areas:

- Fuel Uplift
- Engine/APU/IDG Oil
- Hydraulic Fluid

Fuel is required to be filled out on every sector, even when there is no refueling performed/required.

Select *Fuel* to continue

Servicing Menu



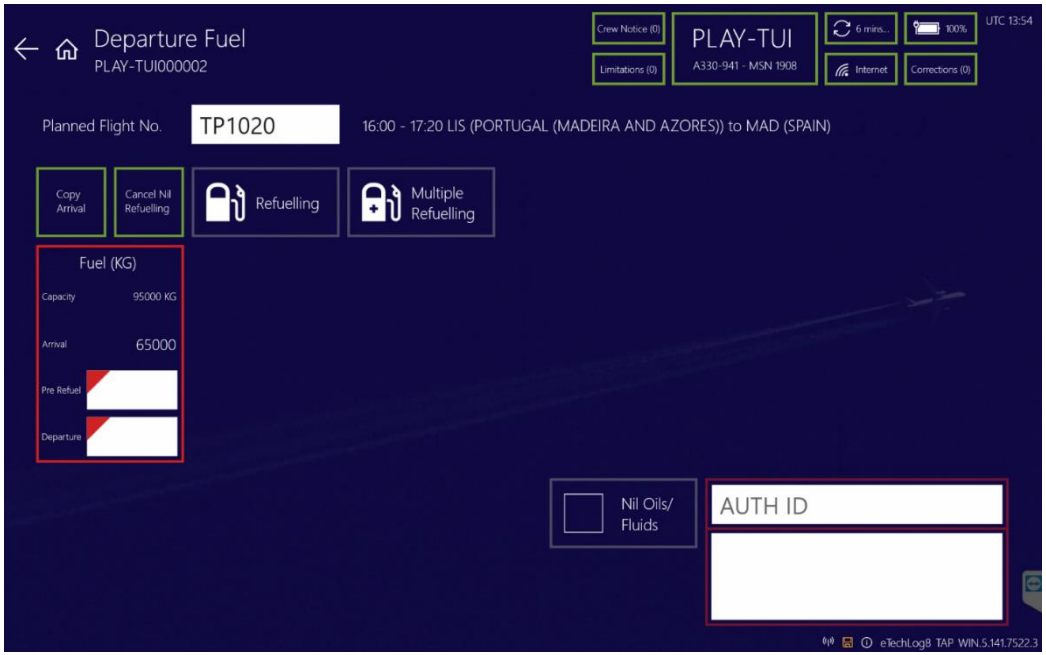
If no refuel or oil uplift is required, First select the *Nil Refuelling* option.

Then use the copy arrival to fill the values entered in the arrival fluids section in *Flight Details.*

Then use the nil oils/fluids shortcuts.

Select *Nil Refuelling* to continue

Servicing Menu



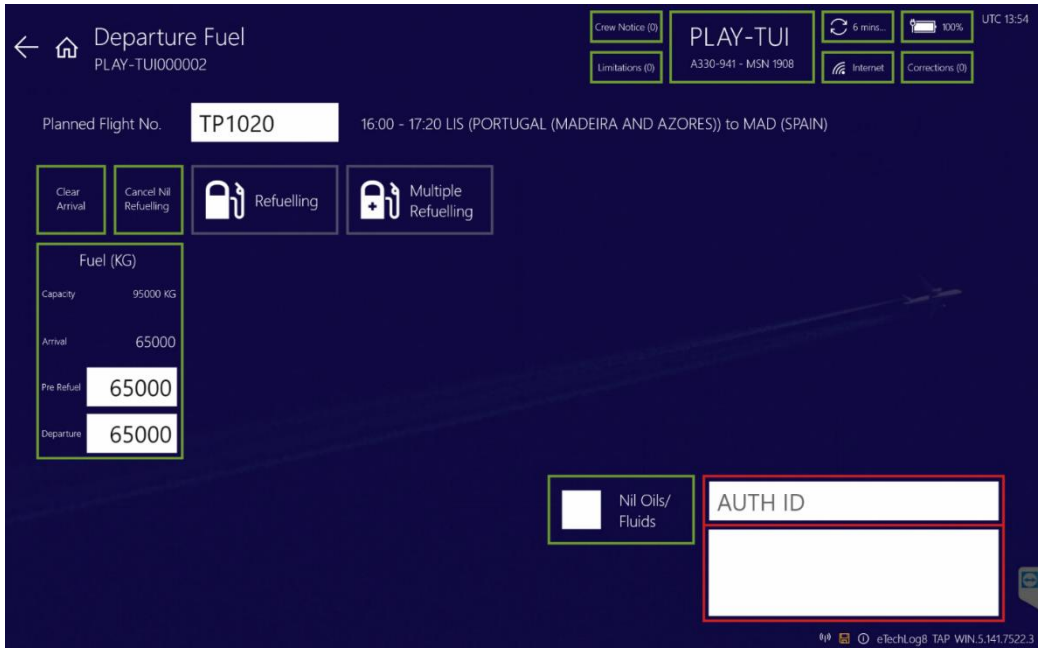
If no refuel or oil uplift is required, First select the *Nil Refuelling* option.

Then use the copy arrival to fill the values entered in the arrival fluids section in *Flight Details.*

Then use the nil oils/fluids shortcuts.

Select *Copy Arrival* to continue

Servicing Menu



If no refuel or oil uplift is required, First select the Nil Refuelling option.

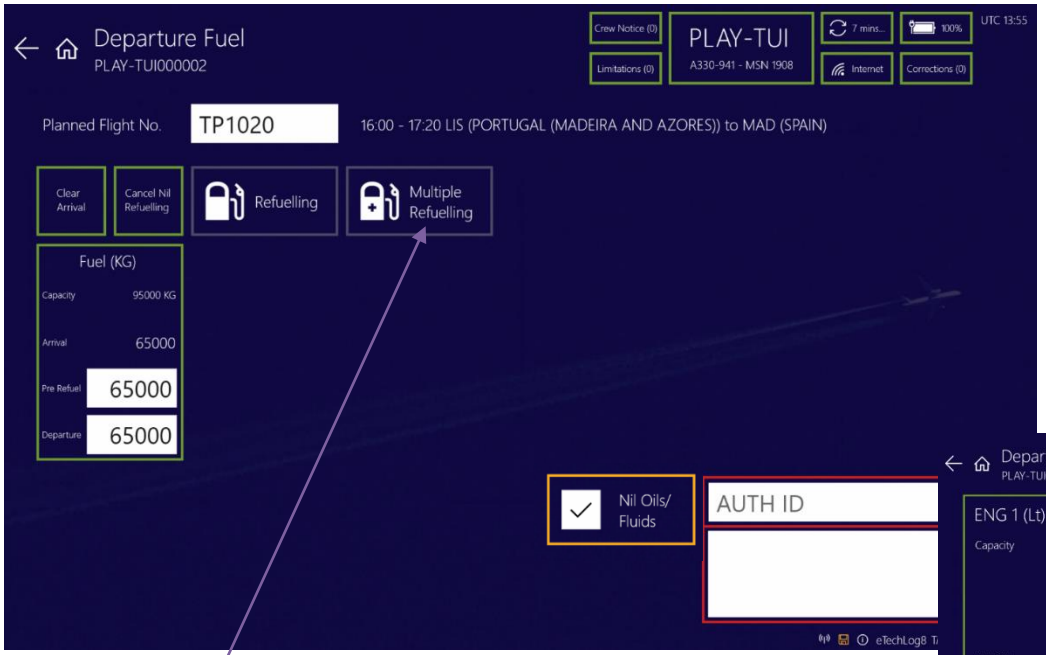
Then use the copy arrival to fill the values entered in the arrival fluids section in Flight Details.

Then use the nil oils/fluids shortcuts.

Select *Nil Oils/Fluids* to continue

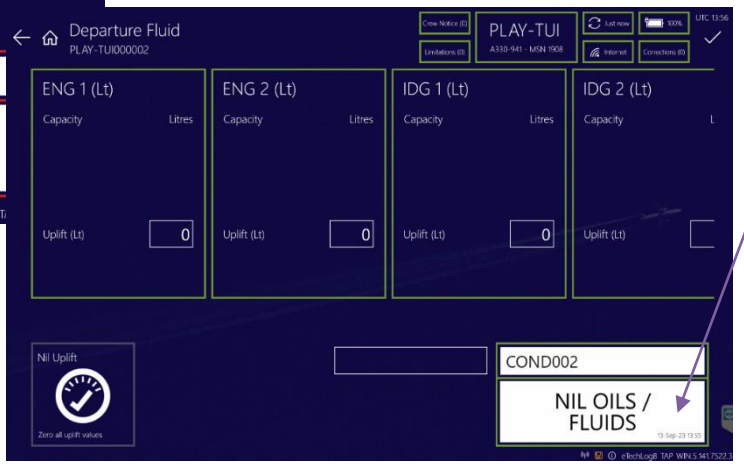
Servicing Menu

Once everything is complete, sign off the page.



If multiple refuelling is required, use the *Multiple Refuelling* button, and then the plus.

As we ticked *Nil Oils/Fluids*, these sections are automatically turned green, all uplifts filled with 0 and the signature is not required.

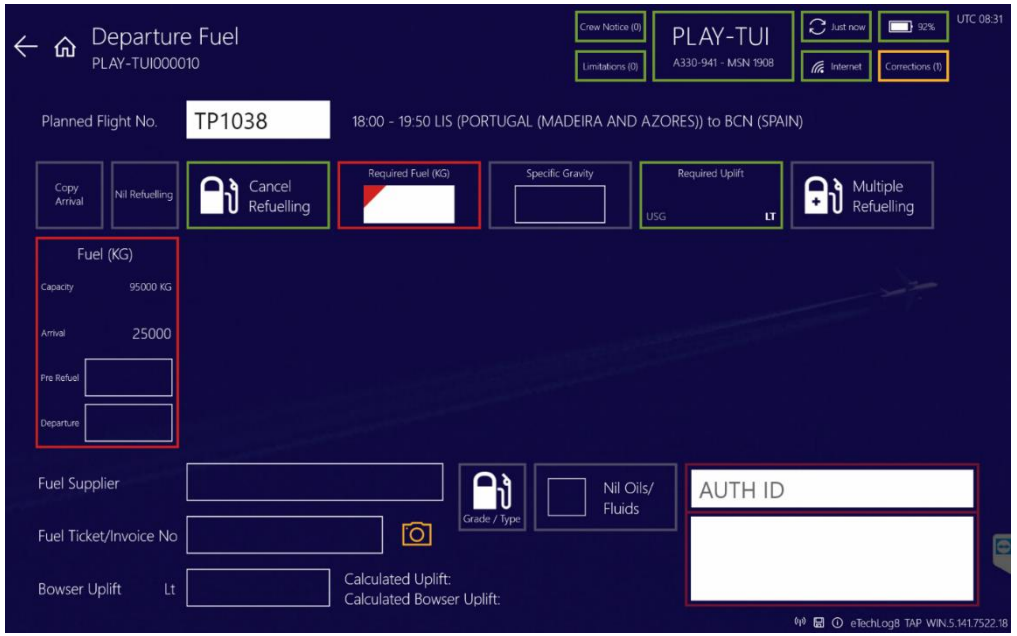


Servicing Menu

This time we're going to use the *Refuelling* option to record a fuel uplift.

Select *Refuelling* to continue

Servicing Menu

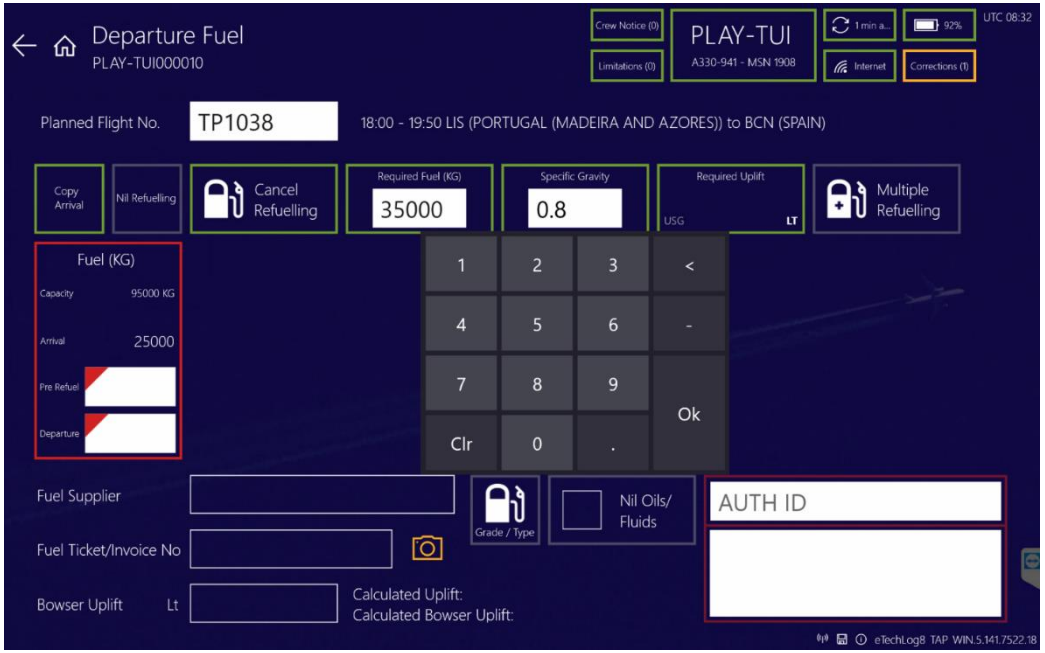


This time we're going to use the *Refuelling* option to record a fuel uplift.

Next, we need to enter the planned departure amount and the specific gravity.

Select *Required Fuel* to continue

Servicing Menu



This time we're going to use the *Refuelling* option to record a fuel uplift.

Next, we need to enter the planned departure amount and the *specific gravity*.

In addition, we need the pre-refuel amount, which can be quickly added using the *Copy Arrival* shortcut.

Select *Copy Arrival* to continue

Servicing Menu

Once we have those amounts, the *Required Uplift* is calculated for you in KG and converted to Lt.

Next, we enter our Actual Departure amount – what the gauge in the aircraft is now showing.

Servicing Menu

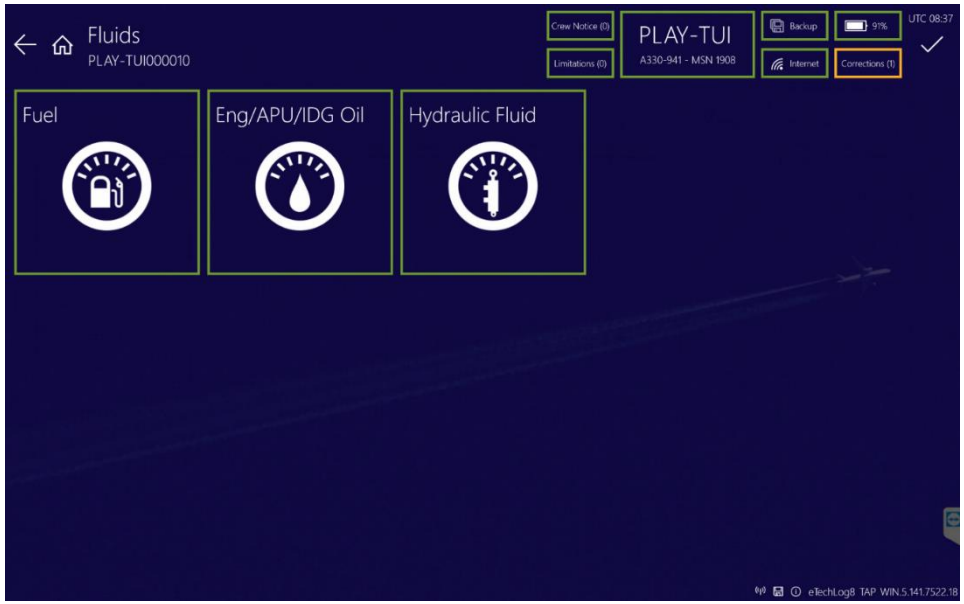
The final and most important field is the bowser uplift – fuel is money!

There's a 5% tolerance – so if the Actual Bowser Uplift is very different to the Calculated Uplift, the field will turn amber, and a warning will be displayed. However, this does **not** stop you from proceeding.

The fuel supplier and fuel grade/type information is mandatory information. If needed/available, you can also take a photo of the fuel invoice by tapping on the camera icon.

You can then use the Nil Oils/Fluids shortcut like when we did a nil refuelling.

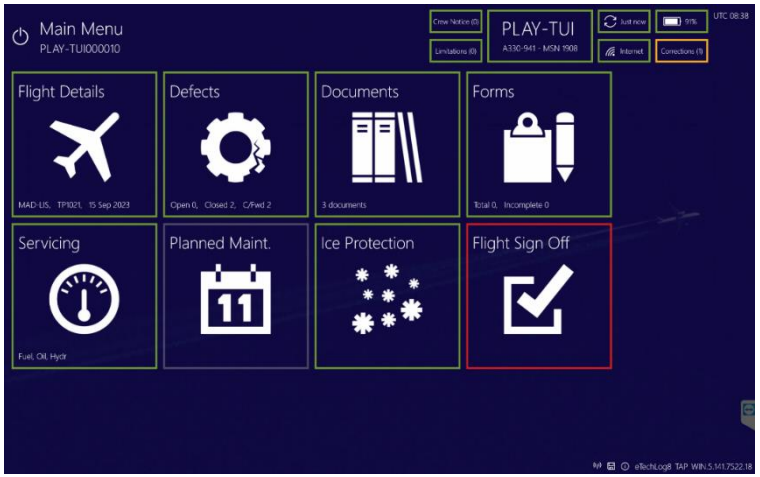
Oil Uplifts



Record *Engine/APU/IDG oil* and *Hydraulic fluid* uplifts. Simply enter the uplifted quantity in Qts and Lts and sign!
If Nil Uplift is required, there's a *Nil Uplift* shortcut in the bottom lefthand corner of each page.

Servicing Menu (2)

Once all the uplifts (or nil uplifts) have been recorded and signed for, all the buttons are green and the *Servicing* button on the Main Menu is green as well. You can either record a defect, or if nil defects are reported, you can progress to *Flight Sign Off*.



If Nil Oils/Fluids Uplift and Nil Defects are recorded, AND Daily check is still valid, you **do not need to sign** the Maintenance Release.

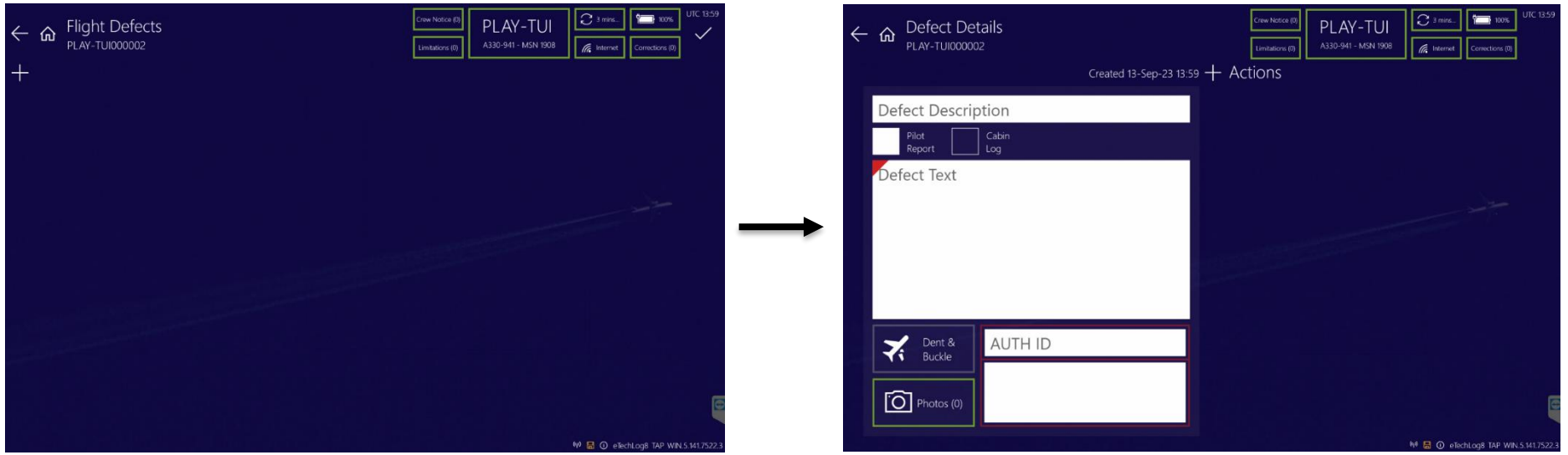
2.5 Defects

By the end of this chapter, you will be able to:

1. Raise defects and record defect entries
2. Use standard defect templates
3. Record optional extra information

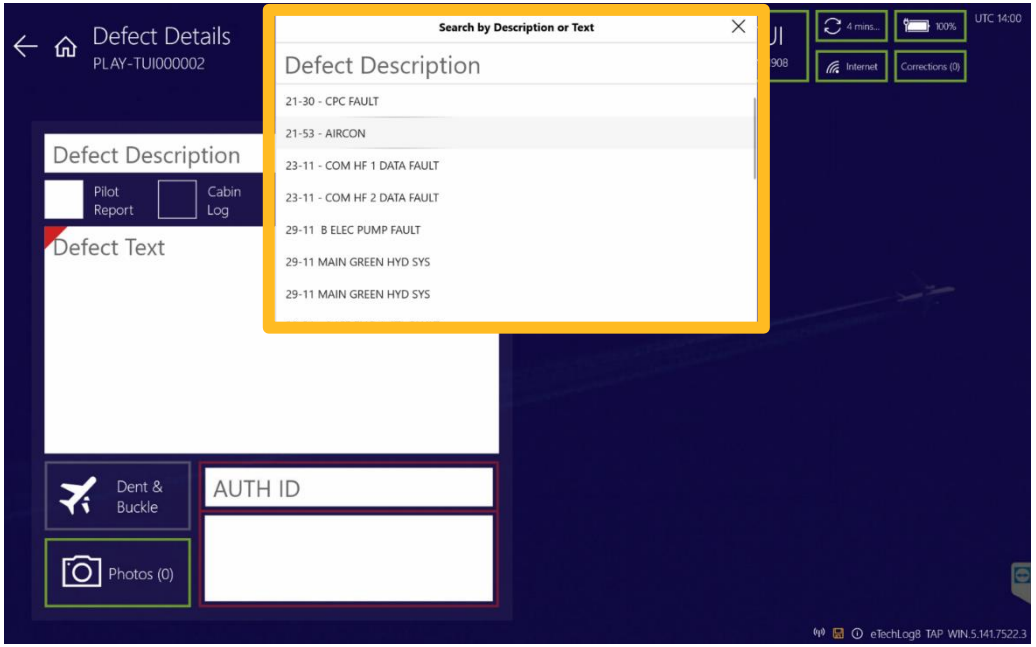
Recording a Defect

Use the + icon to record a new defect. The Pilot Report tick box is automatically unticked.



Defects can be added at any point but can only be actioned (closed or deferred) after the *Flight Details* page has been completed and signed off.

Recording a Defect (2)

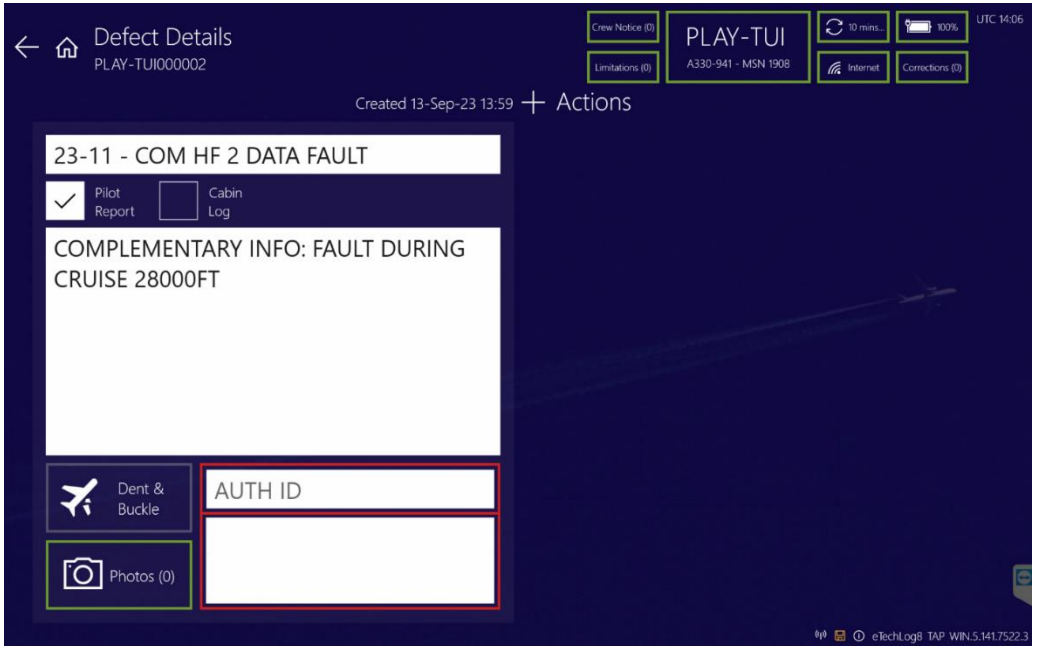


OPTIONAL
1: Using defect description templates
This box helps save you time when recording commonly-occurring defects. Tapping the optional *Defect Description* box brings a picklist of common defects. Selecting a defect fills in the defect text, but this can always be edited or changed.

2: Record the defect text
Alternatively, use the mandatory *Defect Text* field to record free text about the defect.

This is the only mandatory field.

Recording a Defect (3)



OPTIONAL

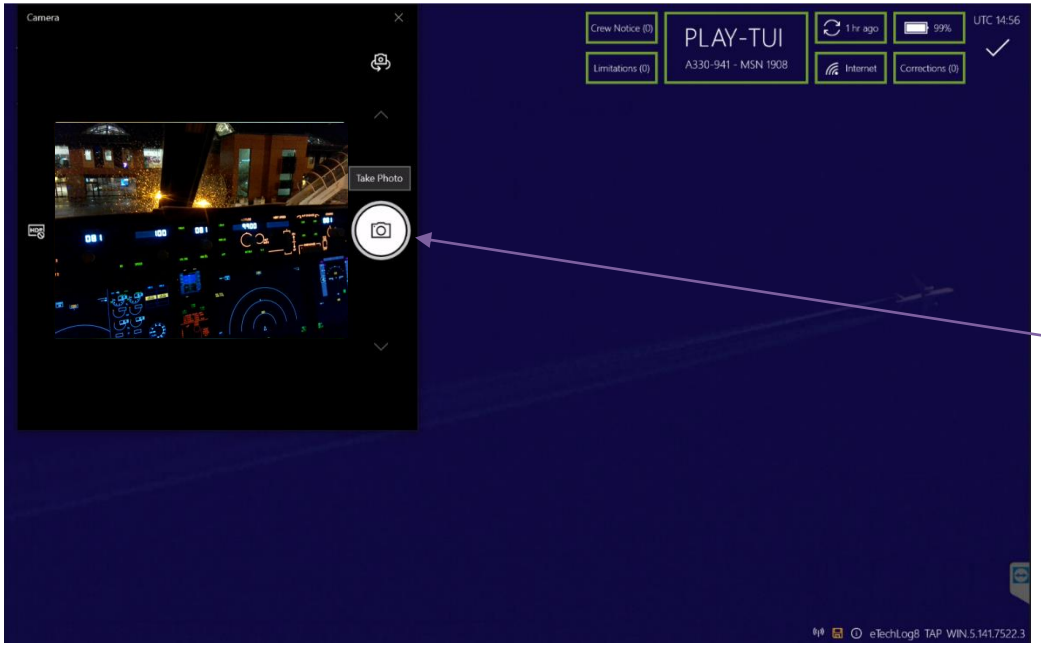
3: Attach a photo

To include a photo, tap the *Photos* button in the left-hand side of the Signature Panel

Then tap the + icon to add a new snapshot.

Select *Photos* to continue

Recording a Defect (4)



Taking a Photo

The camera is turned on as soon as you tap the +. There are two cameras, one on the front and one on the back of the device. You can flip the camera when the device is in landscape mode.

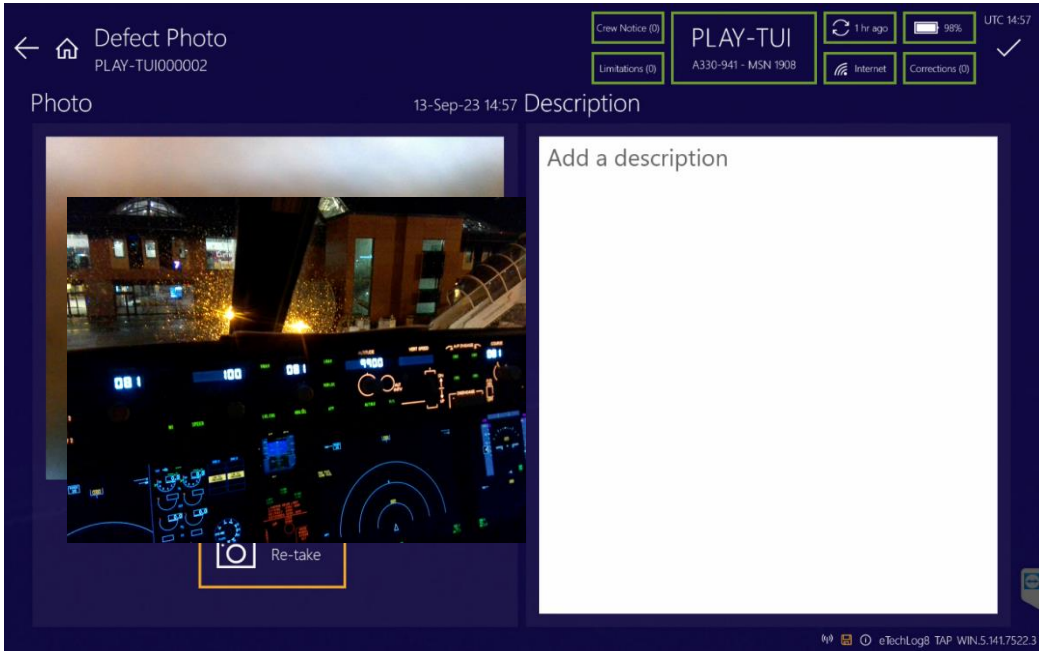
Use the camera button to take the photo, then tick to confirm, or x to take it again.

The number of photos will be reflected in the *Photos* button back in the *Defects Details* screen.

Add an optional description of the photo.

Are photos useful?
Users are encouraged to take photos as they may better describe defects, damage and malfunctions!

Recording a Defect (5)



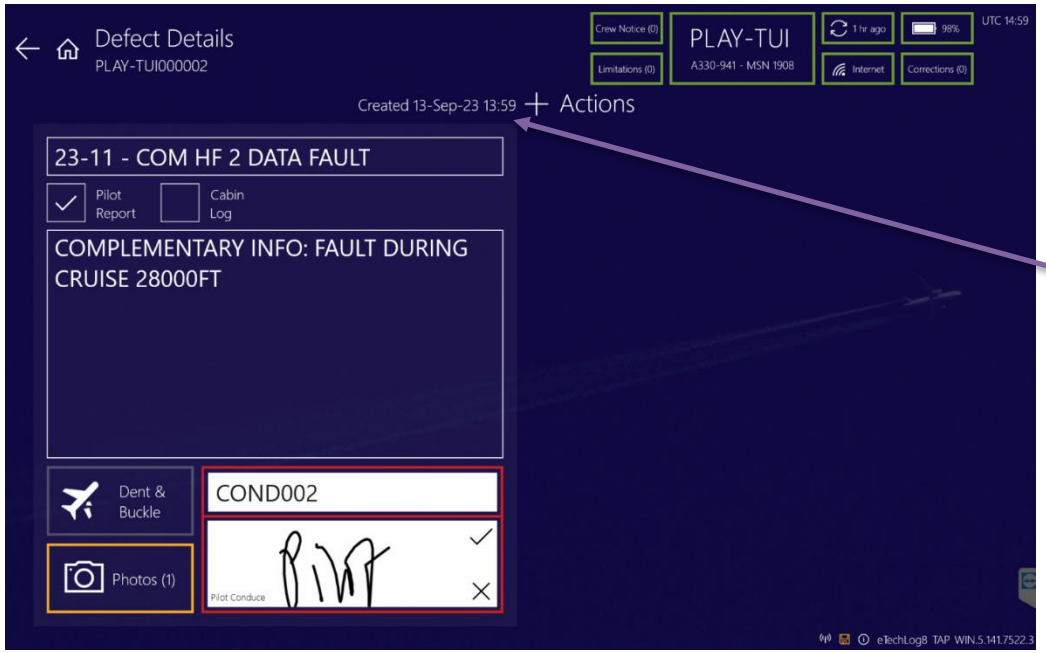
Taking a Photo

The number of photos will be reflected in the *Photos* button back in the *Defects Details* screen.

Add an optional description of the photo.

Use the tick or back arrow to navigate back once you're done.

Recording a Defect (6)

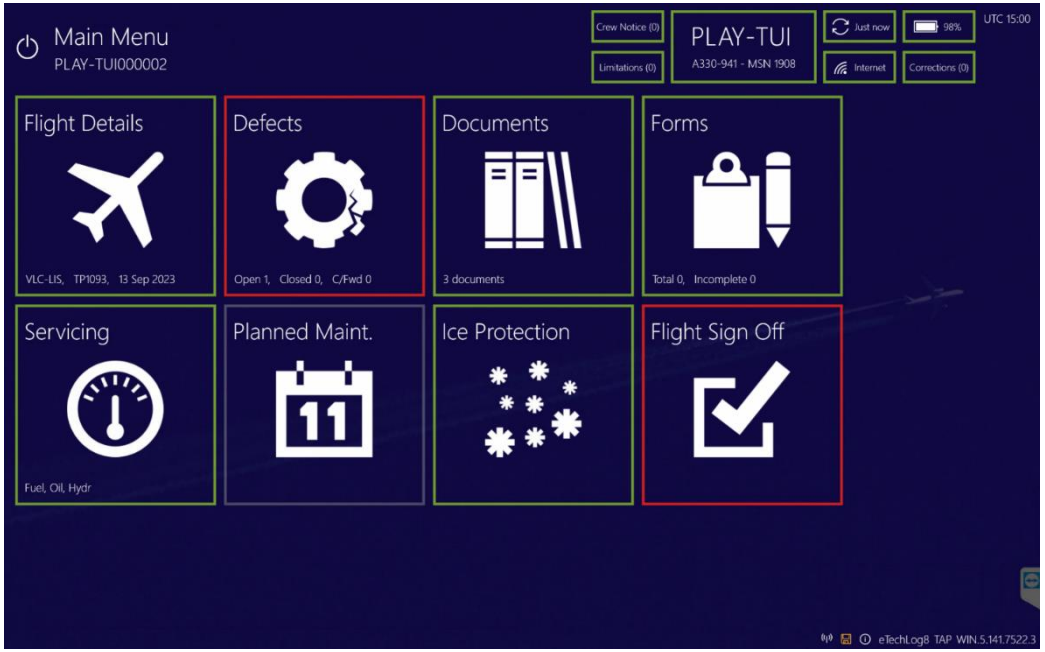


4: Sign off the defect entry
Each defect entry must be signed for using your *Auth ID* and signing in the Signature Panel.

Each defect entry is time stamped and numbered automatically.

NOTE: Once a defect is entered, it cannot be deleted from eTechLog8. If you create a defect record in error, record it as "Raised in Error" and then it must be closed also using "Raised in error".

Main menu: Defects

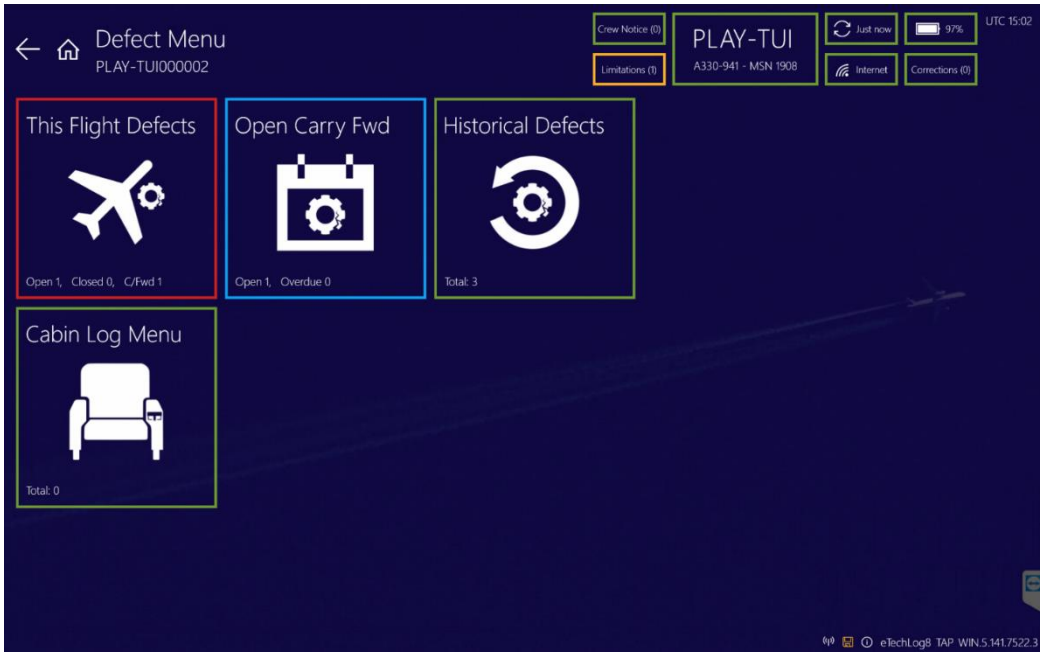


Once a defect is recorded, it must be rectified (deferred or closed) before the aircraft is serviceable again.

The *Defects* button becomes Red on the main menu, and the next crew will not be able to sign the aircraft acceptance!

You can always review the defects for this aircraft by navigating to the Defects Menu.

The Defects Menu



Under Defects there are three areas:

This Flight Defects
Here you can create and view defects on the current sector.

Open Carry Fwd
When it is blue, this means there is at least one deferred defect for this aircraft.

When it is amber, there is a deferred defect which will be overdue soon.

Historical Defects
View the last 75 legs defects on eTechLog8.

Cabin Log Menu
View all defects recorded for this aircraft on eCabinLog8.

Cabin Defects

Cockpit Device

Running eTechLog8 Mode

Cabin/Backup Device

Running eCabinLog8 Mode

A separate training course is issued to explain how to use the cabin log system.

At TAP every aircraft has two devices onboard:

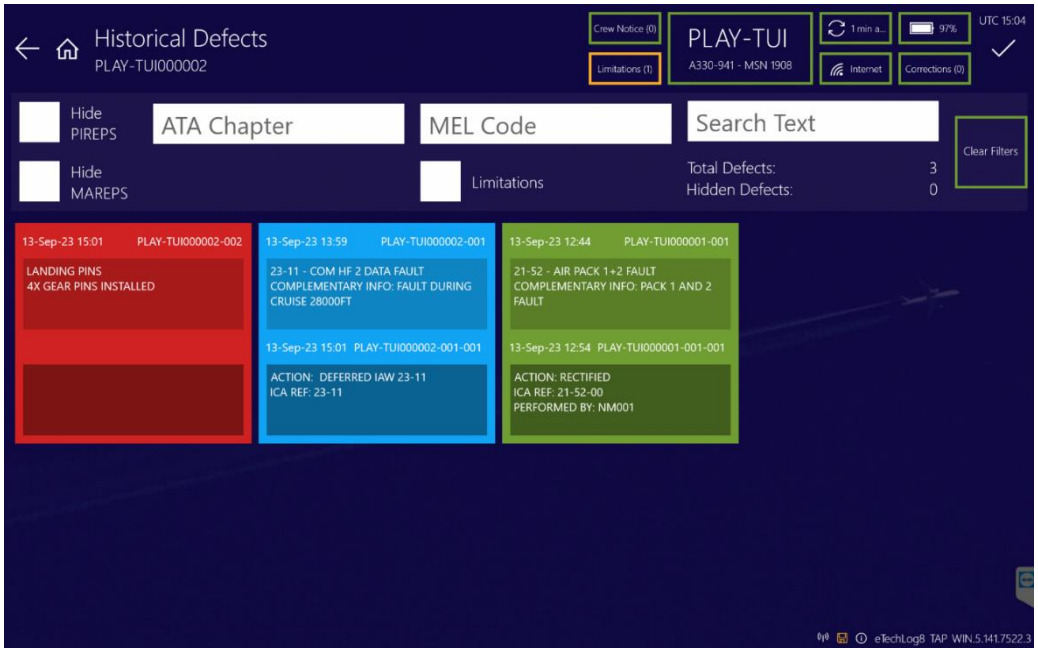
1) eTL device in the cockpit,

2) Companion cabin device for use as the cabin log.

In case of eTL device failure the cabin log will become the eTL device by simply removing the SD card from the eTL and placing into the cabin log.

It is the responsibility of the engineers to review and sync cabin defects from the companion device to the eTL during each turnaround.

Historical Defects



Tapping the *Historical Defects* button displays all the defects for the aircraft registration ever recorded in eTechLog8 and eCabinLog8.

The latest defects are displayed first (starting in the top left-hand corner).

For users' convenience, it is possible to search for defect number, defect text or MEL code or reference, filter by ATA chapter/section, or by years/months/day.

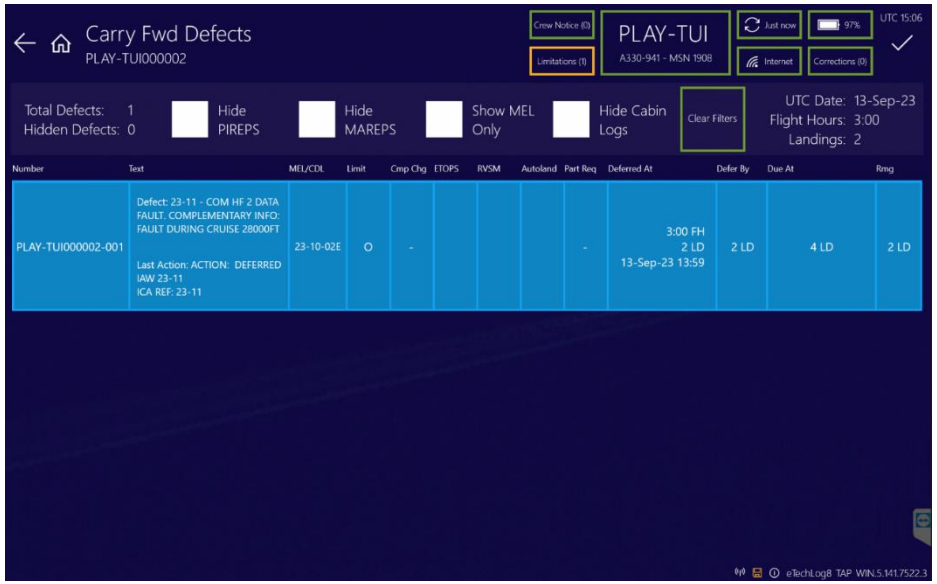
Carry Fwd Defects

You can always review the defects currently being carried by the aircraft using the Carry Fwd Defects page. This shows all deferred defects sorted by expiring soonest first.

Use the tick boxes to filter the defects for easier reviewing.

The tick boxes will always reset when you navigate in and out of this page.

Tap on a defect to see more information!



You can also view the current aircraft hours and cycles here.

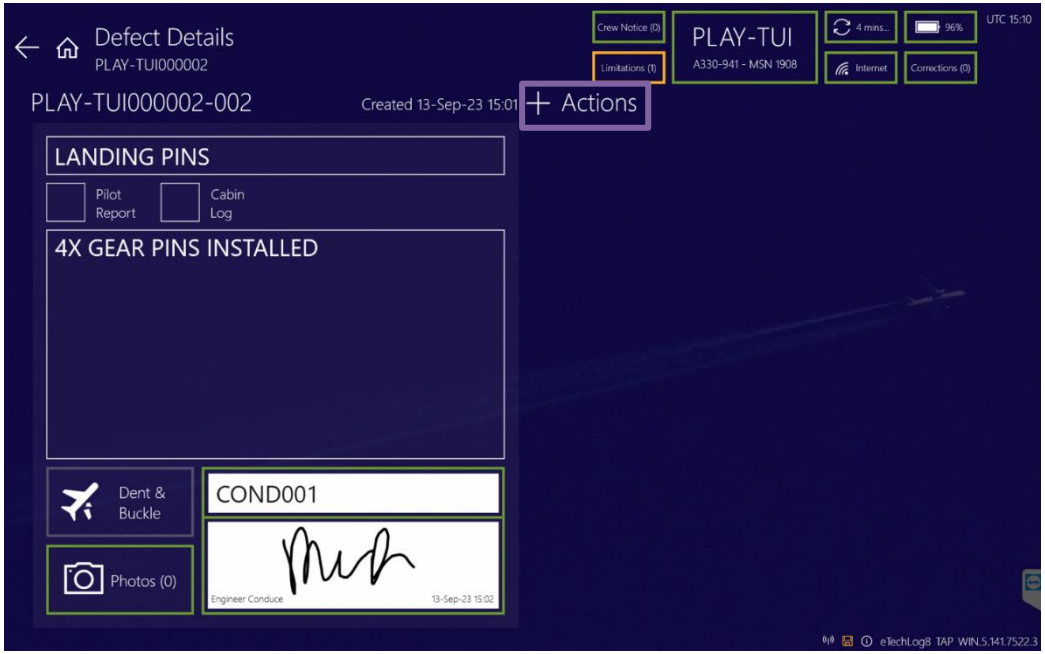
Deferred defects that are nearing their due dates (less than 10% of the remaining limit) will turn amber in this grid.

2.6 Actioning a defect

By the end of this chapter, you will be able to:

1. Identify when it is possible to action a defect
2. Close and defer a defect
3. Record ATA Chapters and ATA Sections linked to a defect
4. Understand the deferral categories
5. Carry out component changes
6. Record independent inspections
7. Sign the CRS for a defect
8. Manage Repetitive Inspections
9. Access and review Carry Fwd Defects list
10. Access and review the aircraft limitations list

How to action a defect



After a defect is created and signed for, the + *Actions* button in the right-hand panel is visible.

Selecting + *Actions* is the first step to record any type of action for a defect.

The + on the right side of the *Defect Details* screen is **ONLY** available **AFTER** Flight Details is completed (signed) on the current TLP. This logical workflow ensures that it is the responsibility of maintenance engineers to action defects.

Select + *Actions* to continue

Action side panel

There are four tabs to record defect action details. They are enabled and/or mandatory depending on the defect action status and defer categories selected. The colour-filled tab indicates the current tab.

Action

Irrespective of the type of defect action, this tab is always mandatory.

Key defect actions are recorded here (e.g., component change, photos, man hours, etc.)

Defer

This tab becomes mandatory when the Defect is Deferred. Defer categories, reasons and due limits are found here. When the tab is completed, it turns blue.

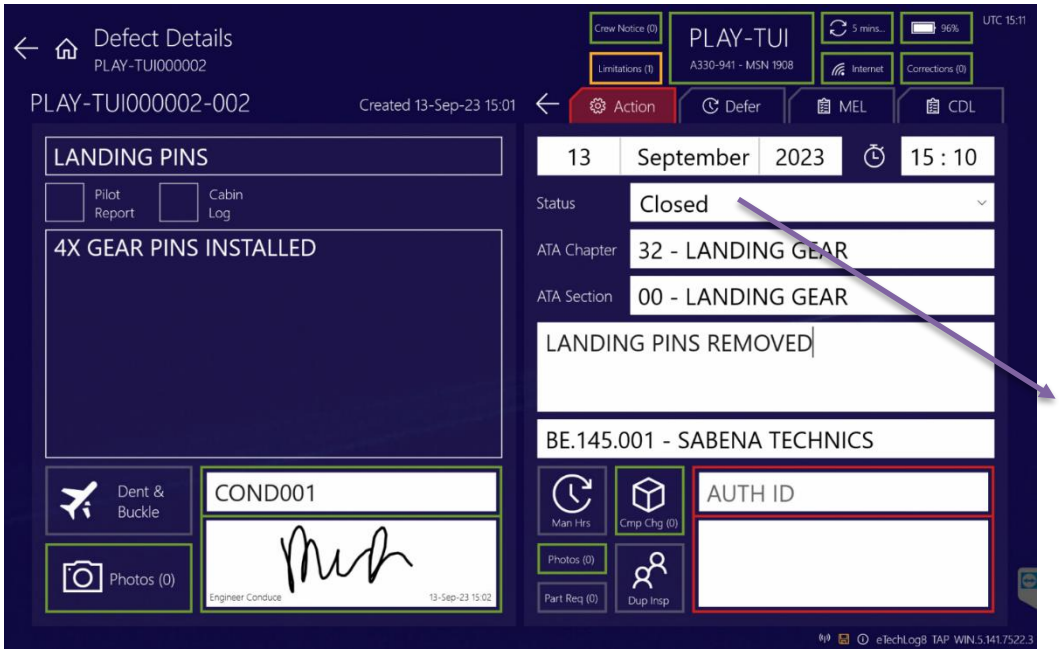
MEL

This tab becomes mandatory for MEL deferred defects. The user must include the MEL Code and any (O)/(M) limitations.

CDL

This tab becomes mandatory for CDL deferred defects.

Steps for closing a defect (1): Action tab



In the *Action* tab:

1: Set the time and date of rectification

This cannot be in future or before the defect creation date.

2: Choose the defect action *Status*

Tap on the *Status* drop down list and select Closed.

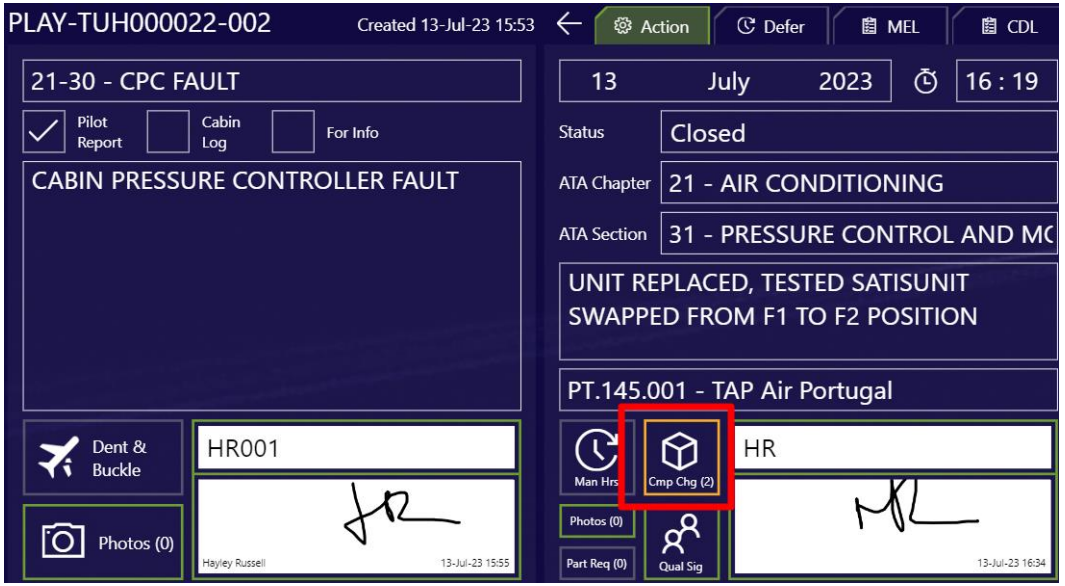
3: Enter the ATA Chapter and Section

This may be prepopulated if a Defect template is used.

4: Enter defect action text

Include any relevant details.

Recording component changes



"Cmp Chg" button

On the defect action side of the screen there is a "Cmp Chg" button, pressing this takes you to the component changes screen where you can remove a component, fit a component or remove and fit a component. You can create multiple records from this screen

Recording component changes cont...

Fitted component side

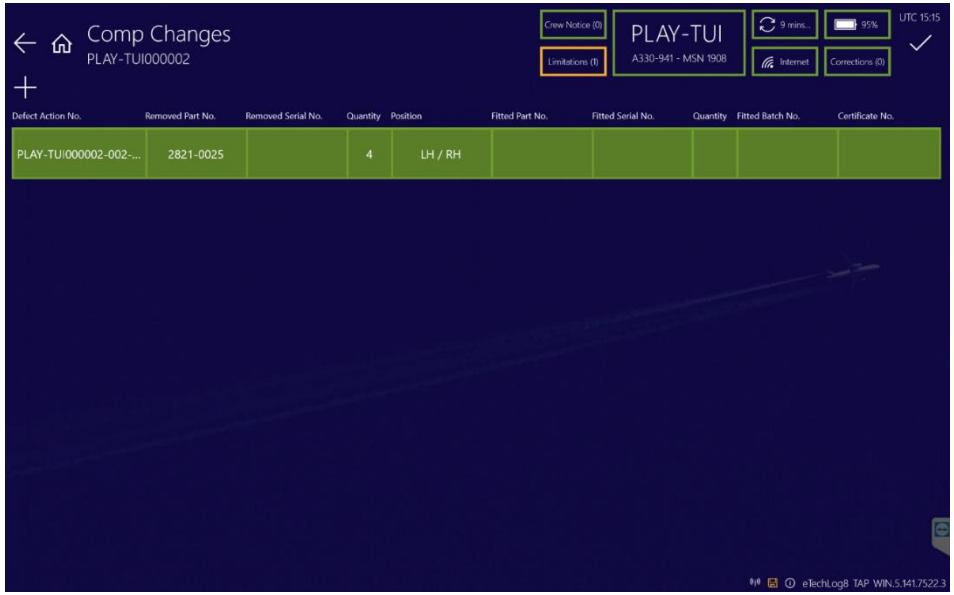
If a component has been fitted tick the "Component Fitted" box. Select the "Part Number" from the drop-down list (if not in the list there is the option to add a new part number). If the component is serialised, then tick the "Is Serialised" tick box. If this box is ticked, then enter the Serial Number. . NB if the item is not serialised the Serial Number field renames to "Quantity" for you to record the quantity of non-serialised items fitted.

N.B. in the Certificate number please enter the appropriate component certified number e.g. EASA Form 1.

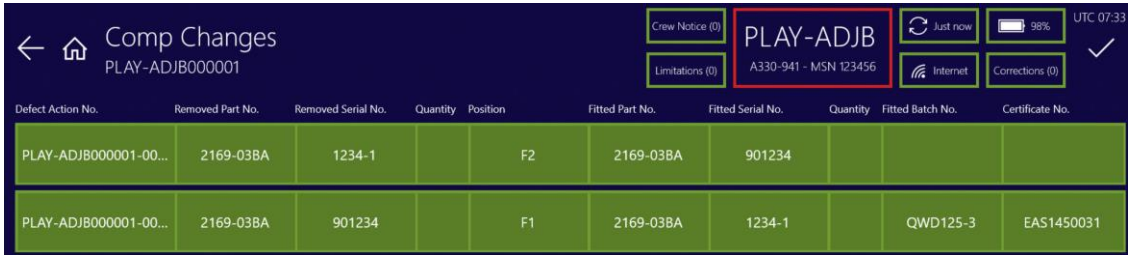
Also please attach a Photo of the certificate

Component Change records

Once a component change is completed, its corresponding record will appear in the *Comp Change* screen, where all the corresponding entries for the defect under action are shown. Multiple component change records can be added to the defect action. The *Cmp Chg* button back in the *Action* tab has an amber frame to attract the user's attention.



Component swapping process

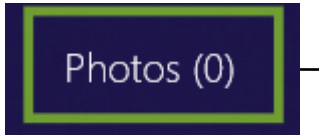


Component swapping process
If you need to swap a component from position two to position one as the aircraft has redundancy but the primary item needs to be working to avoid an AOG, a swapping process may be required. For example, swapping an item from Position F2 to F1.

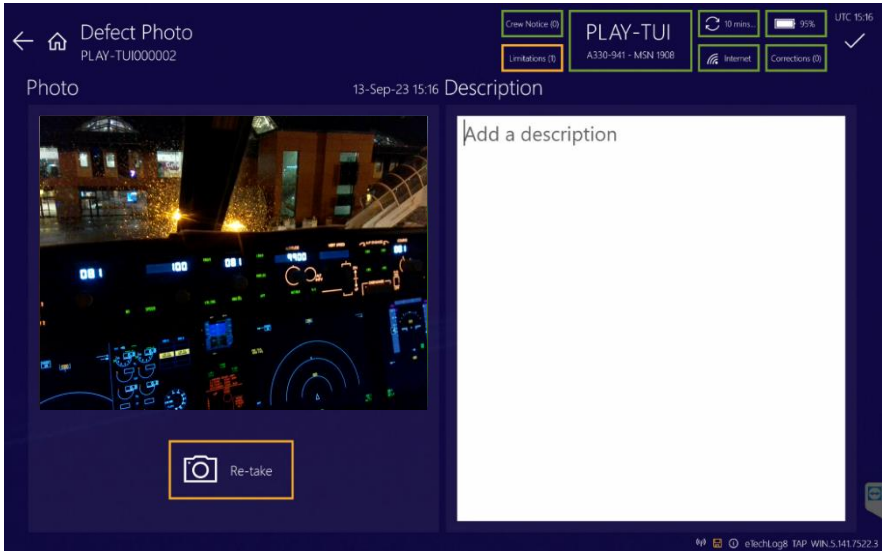
This would result in two records in the Comp Changes grid, with details as per the screenshot

Defect action photos

Like raising a defect, users can include photos when actioning a defect. Photos can be attached whilst actioning the defect or at a later stage using the same *Photos* button. Once photos are recorded, the *Photos* button in the *Defect Details* screen will have an amber frame to attract the user's attention.



In the *Action* tab, tap the *Photo* button to take any photos as required.



Steps for closing a defect (2): Action tab

Back in the *Action* tab

5: Choose the Part 145 organisation

Select from the picklist

Defects can only be closed (rectified) by appropriately qualified Part145 staff, as CRS is signed when closing a defect.

Steps for closing a defect (3): Action tab

6: Sign off the defect action
When all the mandatory fields are completed, the Signature Panel becomes active.

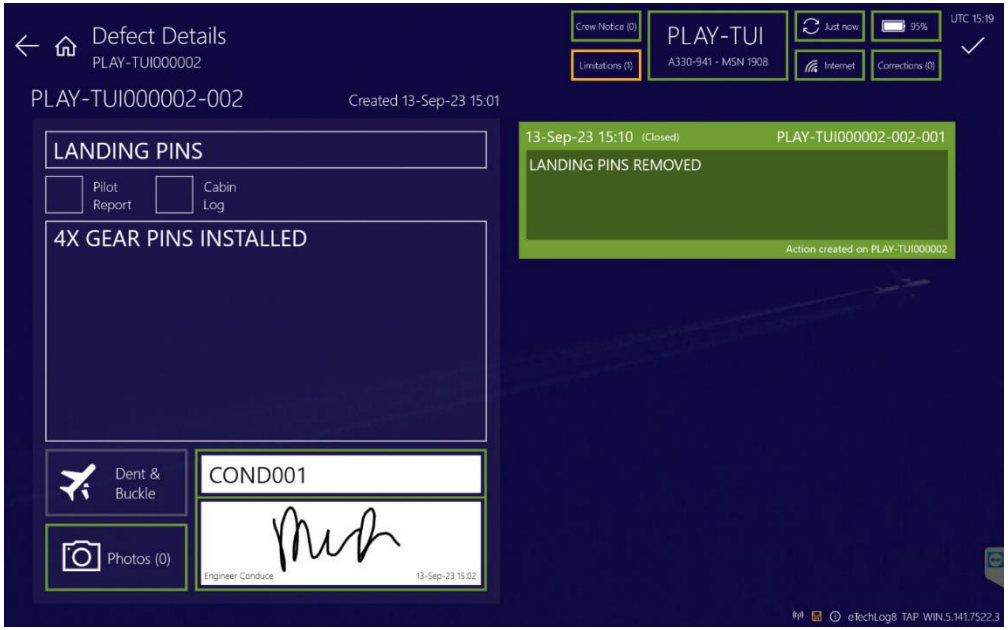
The CRS Text is displayed.

The signature triggers the transmission of the defect action data to eCentral8.

TAP maintenance personnel must use their six-digit employee number to sign.

Record of closing an action for a defect

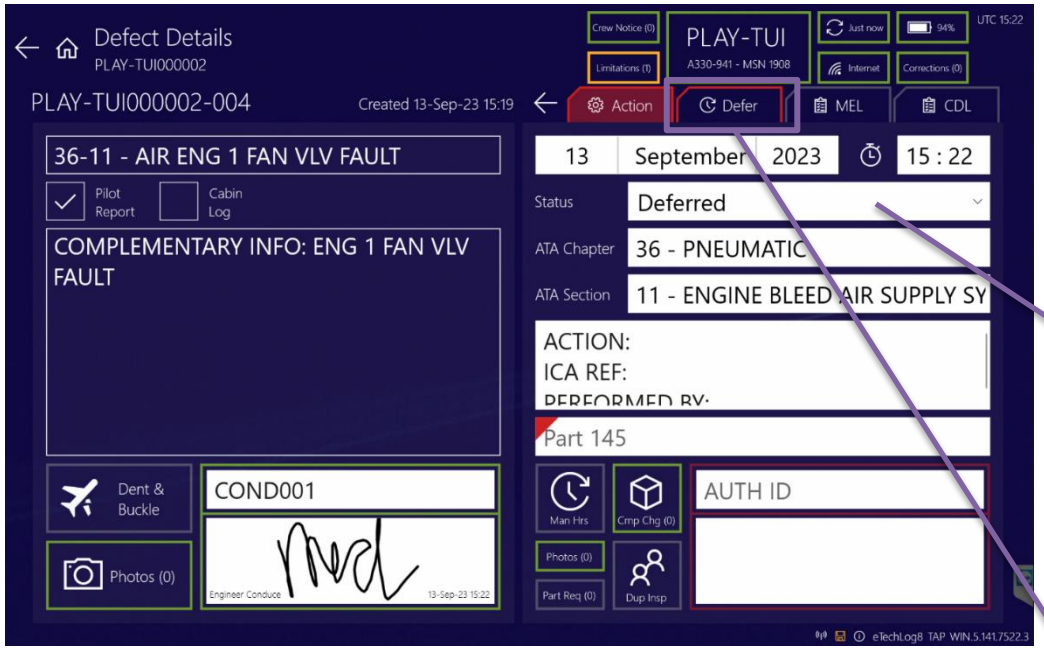
The defect is now closed. In the *Action* panel, a green box appears indicating the defect was rectified. Tapping on it opens the details of the recorded action.



How to defer a defect?

In situations where a defect cannot be closed, it must be deferred in accordance with the MEL or any other relevant document.

Steps for deferring a defect (1): Action tab



Select *Defer* tab to continue

1: Set the time and date of the deferral

Include the data in the corresponding fields

2: Choose the defect action *Status*

Tap on the *Status* drop down list and select *Deferred*.

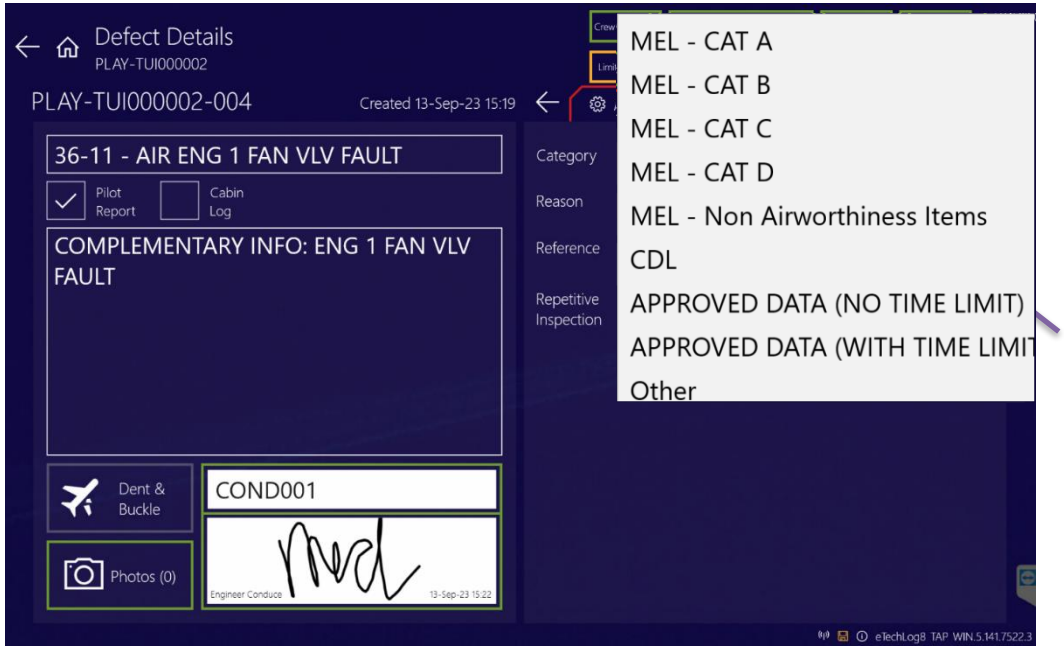
3: Enter the ATA Chapter and Section and Action text

Include any relevant details.

4: Tap on the *Defer* tab

Once the user has selected Deferred as the status, the *Defer* tab is mandatory.

Steps for deferring a defect (2): Defer tab

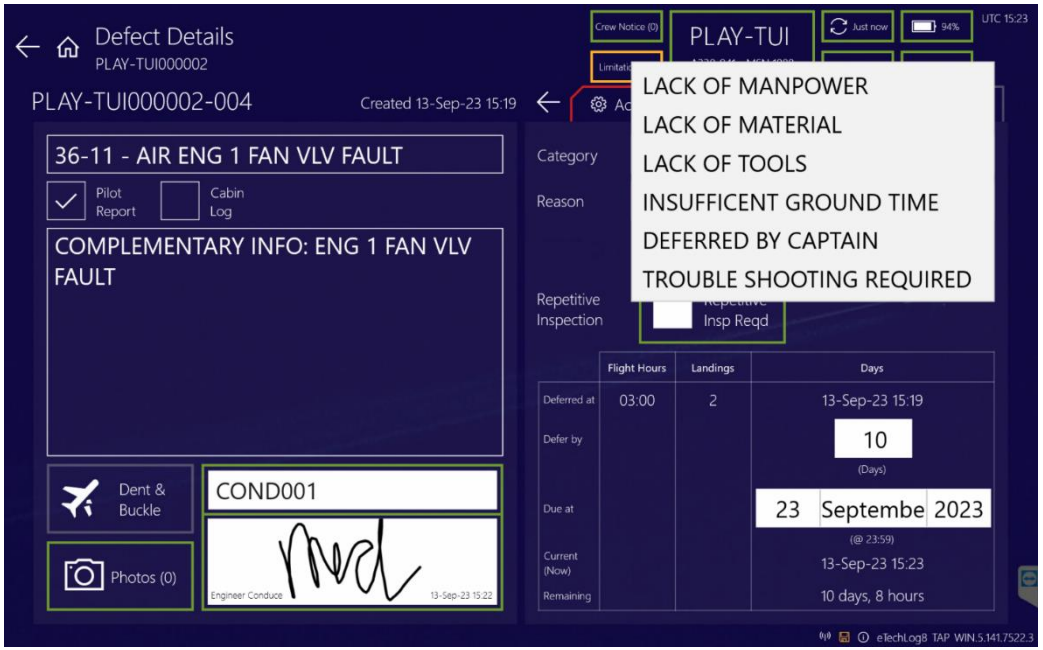


5: Select the *Category*

Category is mandatory for deferring a defect. Select the relevant category from the drop-down picklist. The available categories are:

- *MEL – CAT A , CAT B, CAT C, CAT D*
- *MEL – Non-Airworthiness Items*
- *CDL*
- *Approved Data (No Time Limit)*
- *Approved Data (With Time Limit)*
- *Other*

Steps for deferring a defect (3): Defer tab



6: Select a *Reason* for the deferral

Choose the *Reason* for deferral from the ones provided in the pre-set picklist. Once selected, the reason is associated with the deferred defect.

The available reasons are:

- LACK OF MANPOWER
- LACK OF MATERIAL
- LACK OF TOOLS
- INSUFFICIENT GROUND TIME
- DEFERRED BY CAPTAIN
- TROUBLE SHOOTING REQUIRED

Steps for deferring a defect (4): Defer tab

7: Review or establish the due limit
Determine the due limit for this defect (see next slide).

Once steps 5 to 7 are completed, the defect action has an associated category and defer reason.

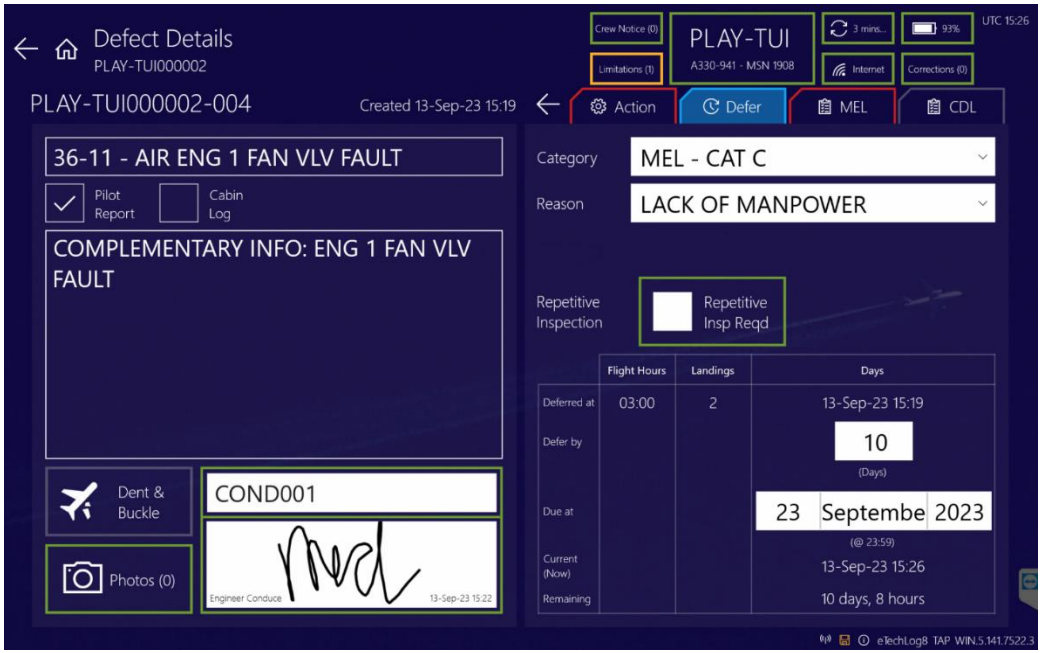
Calculation of due dates per category

Some deferral categories allow deferring by (one or combination of):

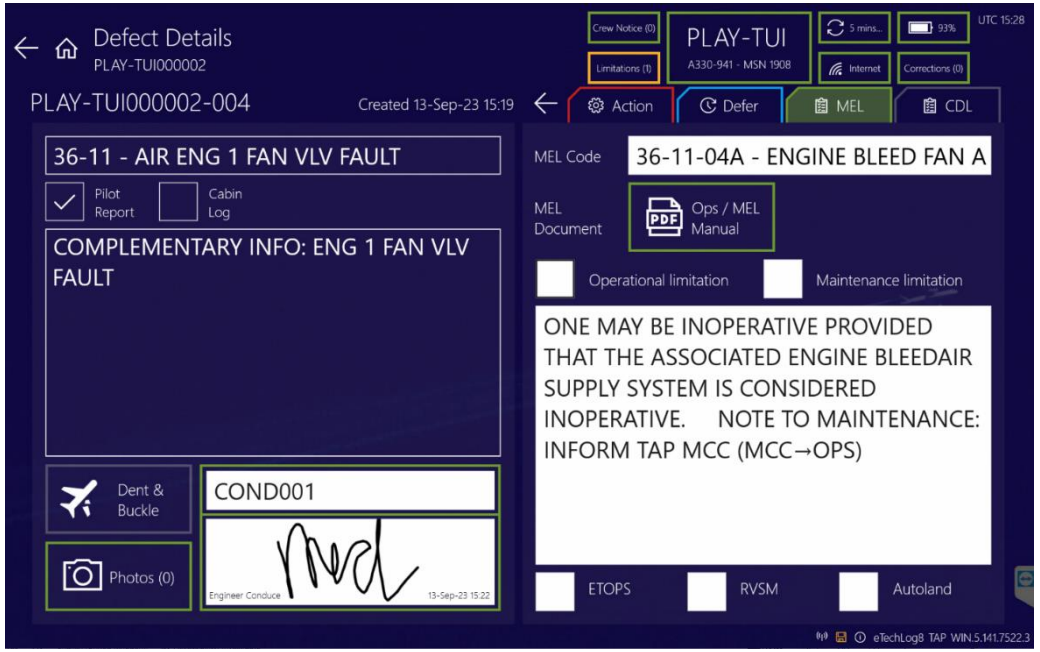
- Number of calendar days
- Flight hours
- Number of landings

The due date for MEL Cat B, C and D items is calculated automatically.

Selecting a MEL Category enables the MEL tab, where MEL codes and limitations can be recorded.



Steps for deferring a defect (5): MEL tab



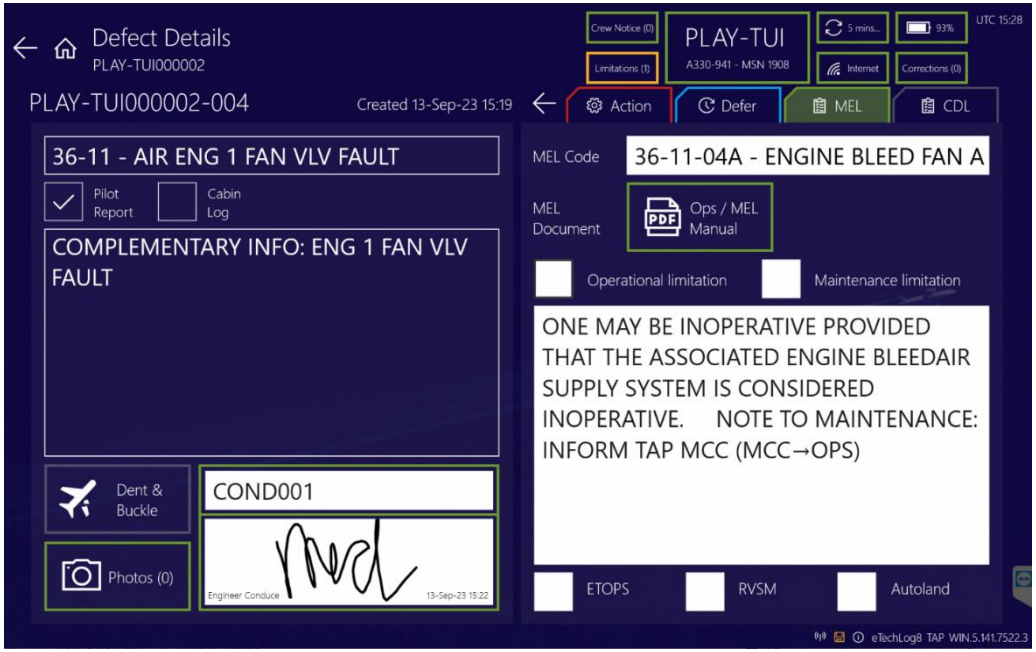
In cases of a MEL-defect action, the user must head to the *MEL* tab, which turns enable and red. User can:

9: Set the MEL Code
Select the applicable MEL code from the picklist.

NOTE: After selecting the *MEL Code* the MEL tab filling turns from red to green, as the *MEL Code* is the only mandatory field.

10: Consult the Ops/MEL Manual
If necessary, the user can consult a PDF version of the MEL document under the *OPS/MEL Manual* button.

Steps for deferring a defect (6): MEL tab

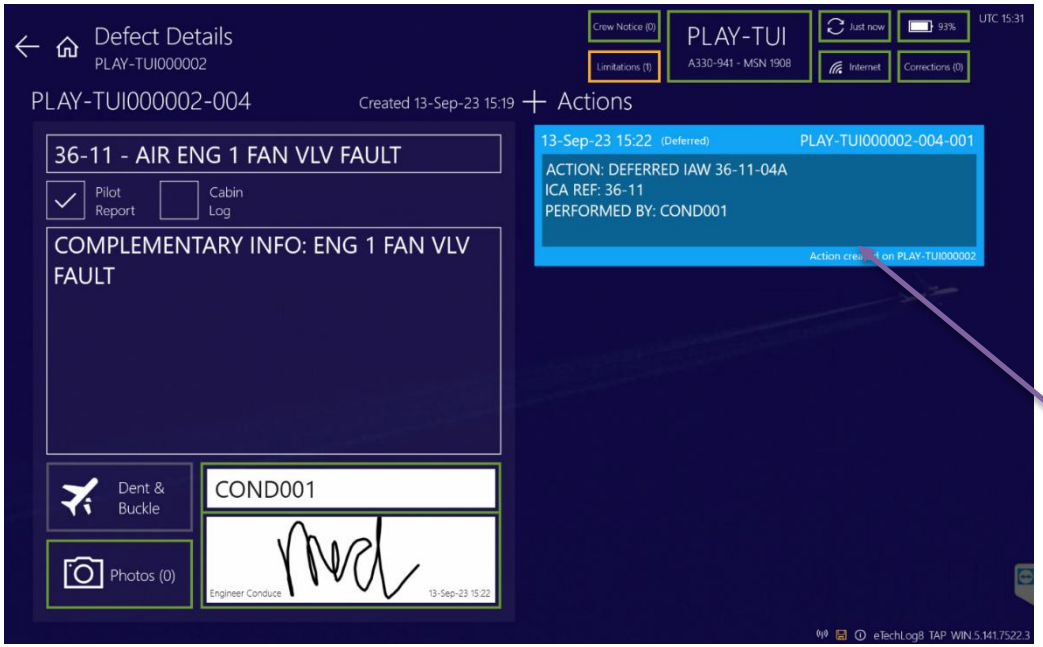


11: Review (O)/(M) limitations

The Operational / Maintenance Limitation boxes are automatically ticked depending on the setup of the MEL references imported in eCentral8. You can also copy and paste any text into the box for ease of future reference.

Ensure that MEL category and time limits are correct before saving deferral.

Steps for deferring a defect (3): Action tab



12: Choose the Part 145 organisation

Select the organisation from the dropdown list in the Defect Action screen.

13: Sign off the defect action

Once all the fields are completed, enter your *Auth ID* and sign.

These lasts steps are completed in the same way as closing a defect.

NOTE: After the deferred defect is signed off, the defect action turns blue to indicate that it is a carry forward defect.

How to record a Repetitive Defect Inspection?

The *Repetitive Insp Read button* records a separate Repetitive Inspection defect for a deferred defect. This ensures that the repetitive maintenance action is associated with the primary defect and the interval can be adjusted separately to the primary defect deferral.

Steps for Repetitive Inspection (1)

In the Defer tab there is a *Rep Insp* Reqd checkbox.

This can be ticked as part of any Defer or Extension action.

This creates a second defect for the inspection, that can have a different deferral interval to the original defect.

The Inspection is linked to the original defect, so you will be prompted to close both defects

Steps for Repetitive Inspection (2)

When you then sign off the defect with Repetitive Inspection ticked, upon signing, a pop up informs the user that a Repetitive Inspection Defect entry has been created.

Tapping on the review and sign button takes the user to the automatically created Repetitive Inspection entry (the secondary defect). Ignore can be used to clear the pop up and the automatically created defect entry can be filled out later.

Steps for Repetitive Inspection (3)

Once a *Repetitive Insp* is created, a new defect entry is created automatically with the details prepopulated from the original defect. The *This Flight Defects* screen displays the following:

Primary Defect

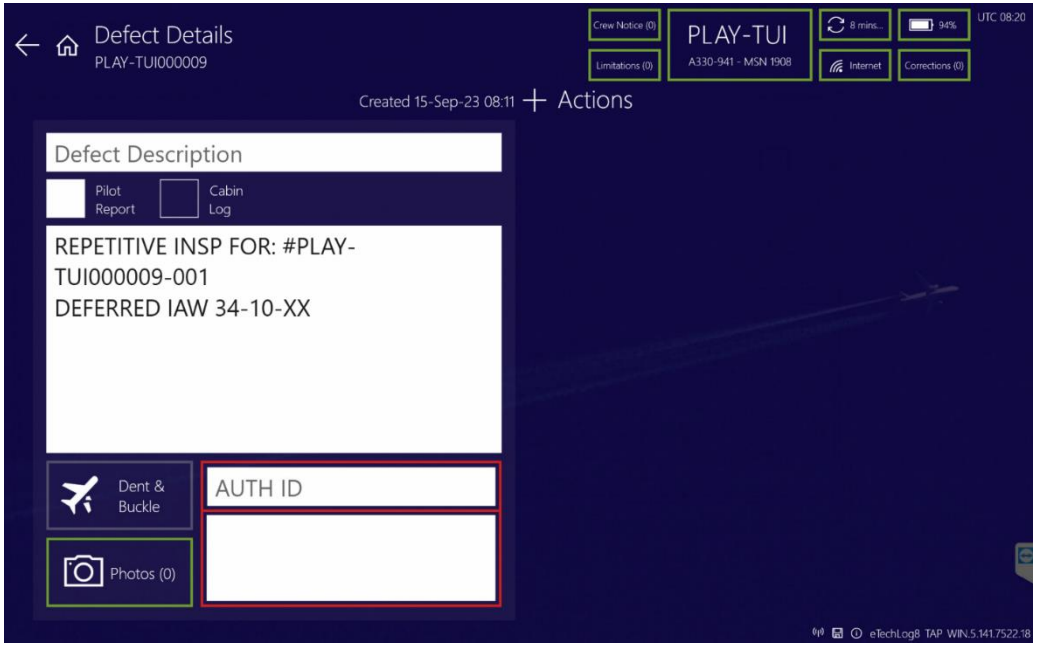
The defect entry in which the Repetitive Inspection tick box was ticked whilst actioning the defect.

Automatically created defect (Secondary Defect)

This defect is mandatory to ensure the Repetitive Inspection information is captured. The defect description comes from the initial defect and is prefaced with Repetitive Insp for #REG-XXXXXX-XXX.

Select the *Automatically created defect* (red) to continue

Steps for Repetitive Inspection (4)



The system automatically created the Secondary Defect, but the user still needs to review the information and sign off the record.

8: Sign off the Secondary Defect
User must review, add more details if required, and sign off this entry.

Select the *Signature Panel* to continue

Steps for Repetitive Inspection (5)

NOTE: By default, the *Defer* tab is red and mandatory

Select the *Defer* tab to continue

9: Add a defect action

Tap on the + *Action* label .

10: Review the defect action status, ATA chapter and section

These fields are pre-populated from the action that initiated the repetitive defect inspection, but this data can be edited. In this screen, there are two defect action statuses available:

- Initial Repetitive Inspection, or
- Closed

11: Enter defect action text

Include any relevant details.

Steps for Repetitive Inspection (6)

In the *Defer* tab, the user shall set the interval for the Repetitive Inspection:

12: Select defer *Category* and *Reason*

Other is the only category available. User must include the corresponding *Reason* (usually same as the primary defect).

13: Determine inspection interval

Record the deferral interval for the inspection. In this case, it was for 1 landing (flight cycle).

Due limit for the Repetitive Inspection vs Primary?

The deferral interval for the Rep Insp must be within the deferral limit of the primary defect. In this case it must be less than 10 days, as this was a Cat C MEL deferred primary defect.

Steps for Repetitive Inspection (7)

Back in the *Action* tab, the user shall:

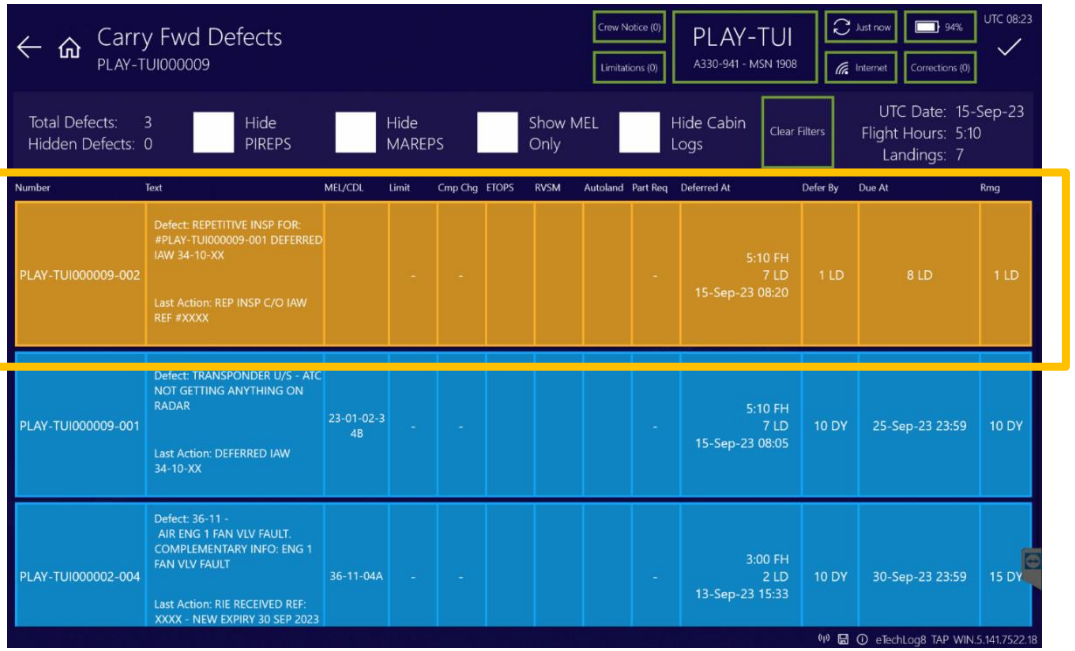
14: Sign off the defect action
Now, the automatically created defect (Secondary Defect) has been actioned as an Initial Repetitive Inspection.

Subsequent Repetitive Inspections are recorded in the same way as additional actions on a deferred defect.

When the primary defect is closed, the user is prompted to also close the associated repetitive inspection!

Steps for Repetitive Inspection (8)

The *Carry Fwd Defects* button shows two defects; Primary and Secondary, with their respective due limits. As we only deferred our Repetitive Inspection for a very short time (1 Landing), the Secondary Defect record is highlighted in amber to indicate that will soon be due.



Corrections (1)

Sometimes mistakes are made! However due to the automated and connected nature of an ETL, Corrections can **ONLY** be applied on the current TLP.

If you need to make a correction **AFTER** the Flight Acceptance is signed please contact your ETL Administrator.

To make a correction:

1. Tap on the relevant Signature Panel
2. Provide your auth ID (this is the same code you use to sign any Signature Panel in the ETL!)
3. Record the reason for the cancellation
4. Select Enter PIN

Am I allowed to make a correction?
Yes! This is an equivalent of striking through on a paper form.

Corrections (2)

5. Enter the PIN
6. The Signature Panel is cleared, and the screen is unlocked – signature has been "cancelled"
7. Make the relevant changes
8. Sign off the page again

Any time a signature is cancelled the Corrections button on the top banner turns amber, indicating that there are corrections on the current TLP.

What's the PIN? TAP have a default PIN of 1234.

Corrections (3)

All corrections are recorded for traceability and accountability.

Tapping *Corrections* displays a snapshot of the page before it was corrected.

Corrections are only available for the current TLP. Once the TLP is turned over, the *Corrections* button goes green again.

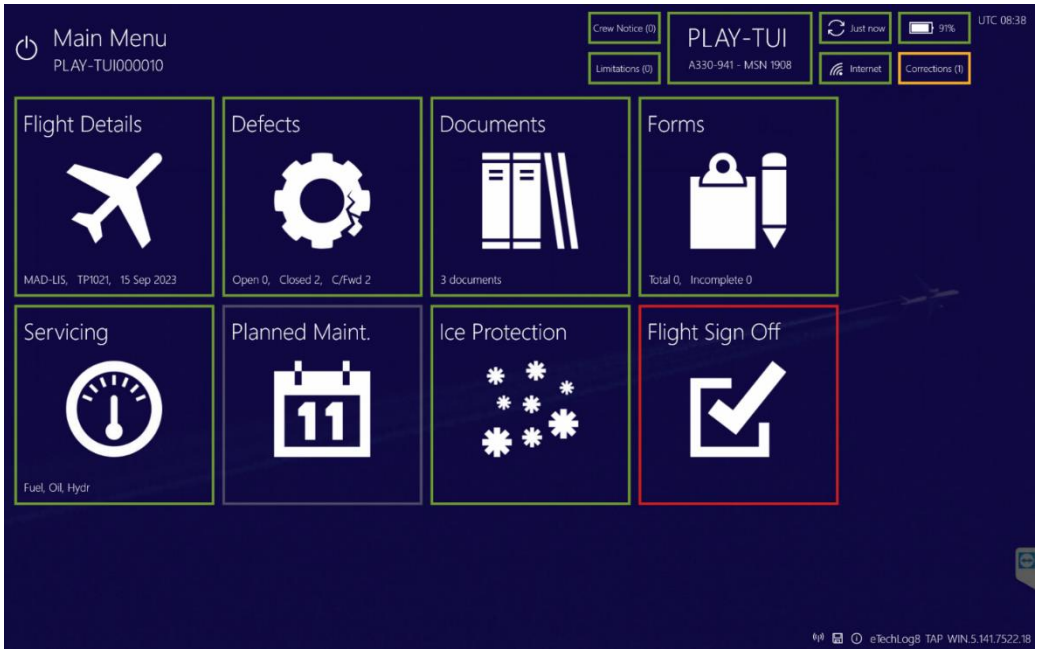
Remember to correct historical data contact your ETL Administrator.

2.7 Other ETL Areas

By the end of this chapter, you will be able to:

1. Use the Document Viewer
2. Complete custom forms

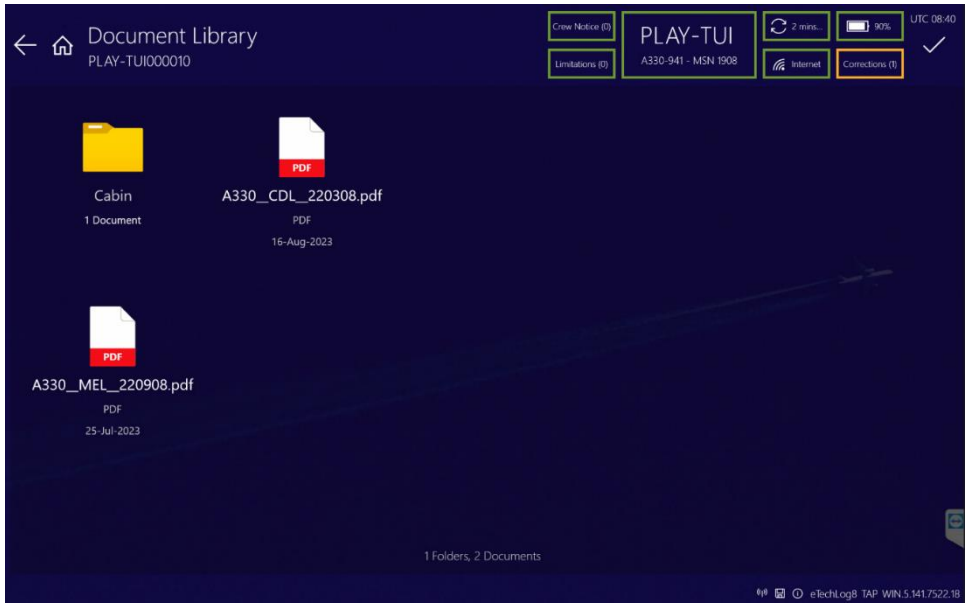
Main Menu: Other Areas

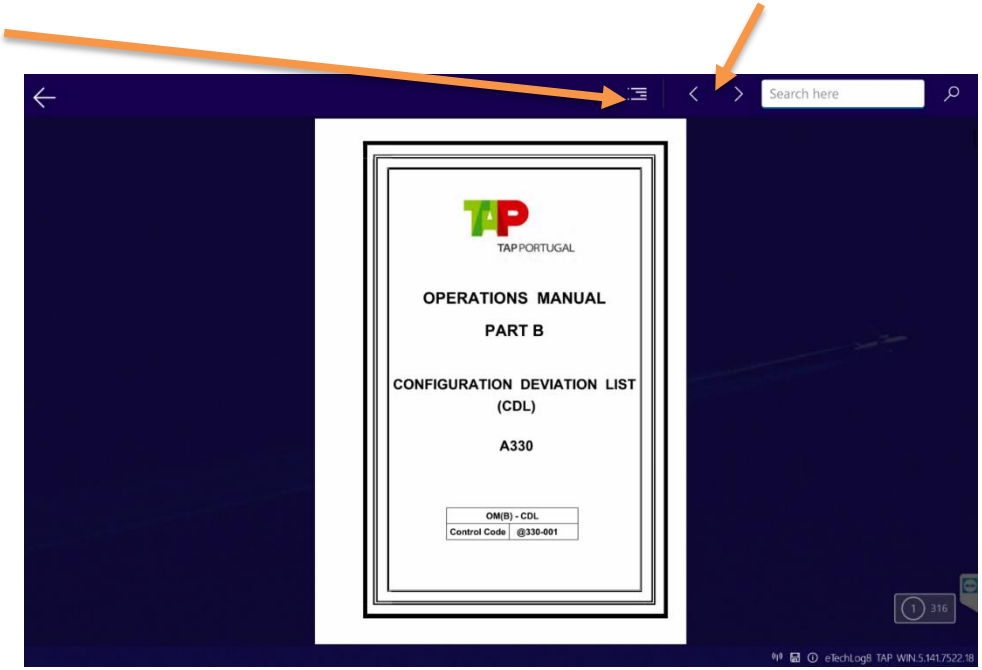


On the main menu there is also an area for *Documents* viewer area, *Forms*, *Planned Maintenance* (greyed out and not yet in use) and *Ice Protection*.

Documents

Select a document. You can search the document and cycle through the search results using the arrows. Select the Bookmarks Icon to navigate using the bookmarks.





2.8 Historical TLP records

By the end of this chapter, you will be able to:

1. Access and peruse historical flights records
2. Check current aircraft flight hours (FH) and flight cycles (FC)

Accessing the historical TLP records

All historical TLPs can be accessed and saved to USB from the eTechLog8 device. However, under no circumstance can historic TLPs be modified or corrected. To view the history, tap on the *A/C Reg* button in the header:

TAP's logo is displayed and its contact details.

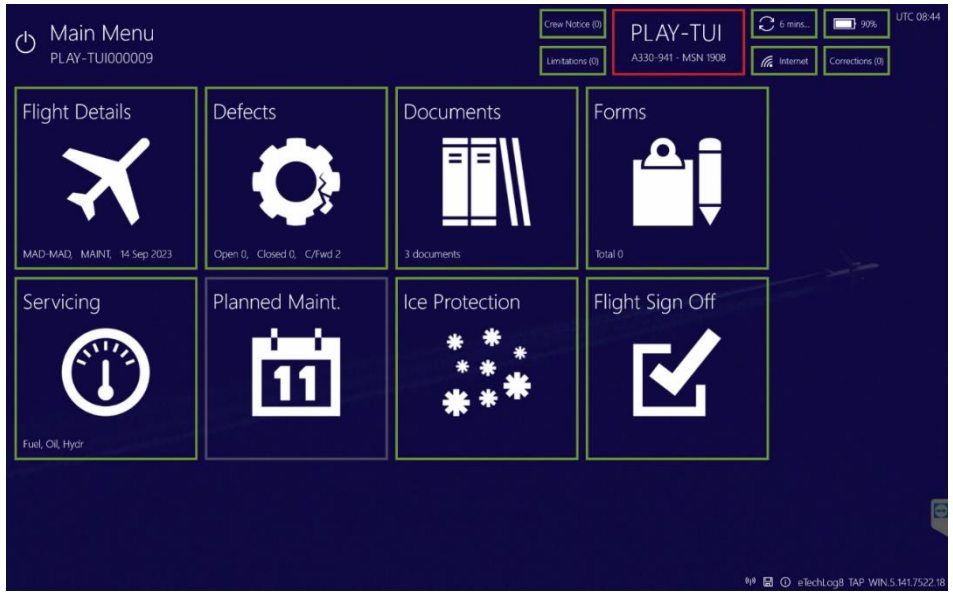
QR Code generator

Top-amber line indicates the current TLP is not yet fully completed.

Each green line is a completed and transmitted TLP.

Viewing a historical TLP

When the user selects any historic TLP from the list, that TLP appears on the eTechLog8 device.



When any flight is viewed in Historical Flights mode, the A/C Reg button is red to alert the user that this TLP is not the current one

The current TLP has a green frame around the A/C Reg button

Viewing a historical TLP

TLP	Departure	Flight	From	To	Block Time	Flight Time	Airframe Hrs	Ldg	Airframe Ldg	Defects	Corrections	Xmit
PLAY-TUI000010	15-Sep-23 07:20	TP1021	MAD - MADRID/ADOLFO SUAREZ MADRID-BARAJAS	LIS - LISBOA	01:07	00:55	06:05	1	8	1	1	
PLAY-TUI000009	14-Sep-23 16:17	MAINT	MAD - MADRID/ADOLFO SUAREZ MADRID-BARAJAS	MAD - MADRID/ADOLFO SUAREZ MADRID-BARAJAS	00:00	00:00	05:10	0	7	2	0	✓
PLAY-TUI000008	14-Sep-23 15:56	TP1018	LIS - LISBOA	MAD - MADRID/ADOLFO SUAREZ MADRID-BARAJAS	00:00	00:00	05:10	1	7	0	0	✓
PLAY-TUI000007	14-Sep-23 13:12	MAINT	LIS - LISBOA	LIS - LISBOA	00:00	00:00	05:10	0	6	0	0	✓
PLAY-TUI000006	14-Sep-23 12:16	TP1029	MAD - MADRID/ADOLFO SUAREZ MADRID-BARAJAS	LIS - LISBOA	00:00	00:00	05:10	1	6	2	1	✓
PLAY-TUI000005	14-Sep-23 12:07	TP1014	LIS - LISBOA	MAD - MADRID/ADOLFO SUAREZ MADRID-BARAJAS	00:00	00:00	05:10	1	5	0	1	✓

eTechLog® TAP WIN.5.141.7522.18

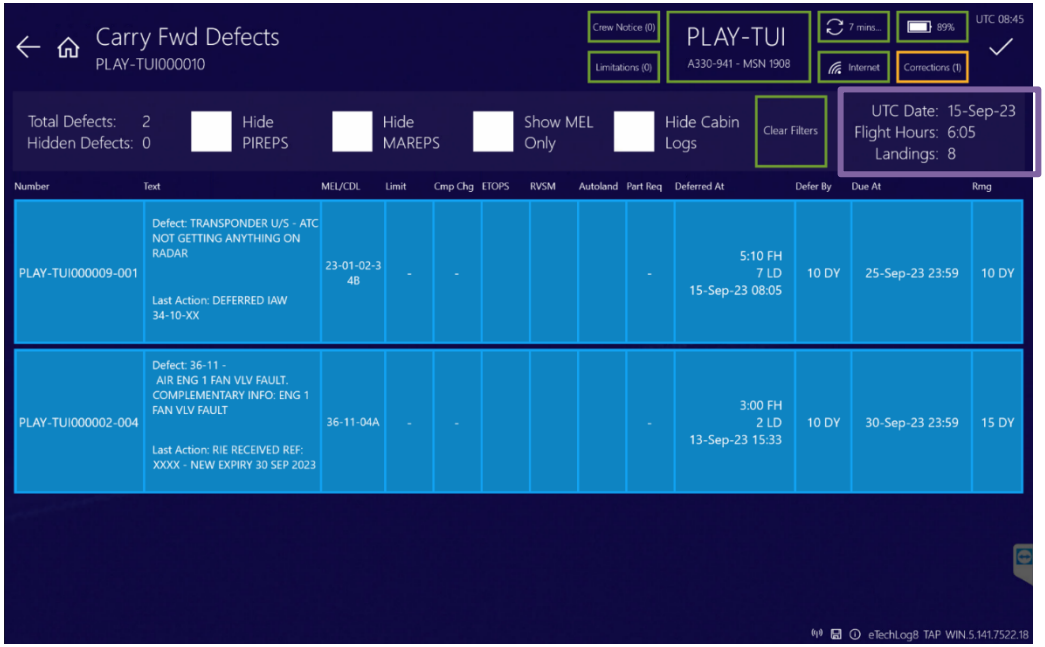
History is also a great place to check the current Flight Hours and Flight Cycles.

1. Total FH – shown with the take-off and landing times in *Flight Details.*

2. Total FC – shown in the *Landing data* section in *Flight Details.*

3. The Total FH and FC are always available in *Historical Flights* in the summary grid (see *Airframe Hours* and *Airframe Ldg.)*

Other Places to check FH/FC



4. Total FH and FC can also be checked in the *Carry Fwd Defects* section in the header of the deferred defect summary grid.

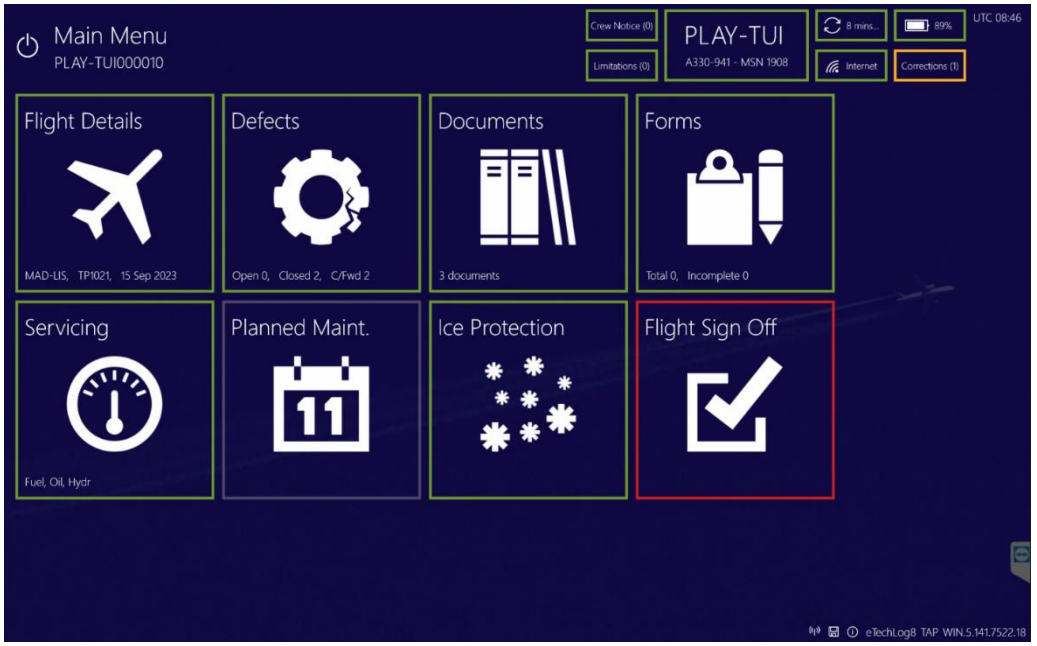
NOTE: The number of total flight hours and landings is calculated automatically based on the sector data entered by the user – see *B/F (Brought Forward)* and *C/F (Carry Forward)* labels within the *Flight Details* section.

2.9 Maintenance Release

By the end of this chapter, you will be able to:

1. Record Daily checks in eTechLog8
2. Release the Aircraft Service when Defect Action or Oils/Fluids uplifts have been carried out

Main menu: Flight Sign Off



Now most of the TLP is complete and the last section, *Flight Sign Off*, is the only one that is red.

You do not need to complete refuelling prior to signing off the Maintenance Release in the Flight Sign Off.

Select *Flight Sign Off* to continue

Maintenance Release (1)

In the *Maintenance Release* authorised staff shall:

1. Complete any required inspection:
   - *T/Transit*
   - *T1/Daily*
   - *T2/Weekly*

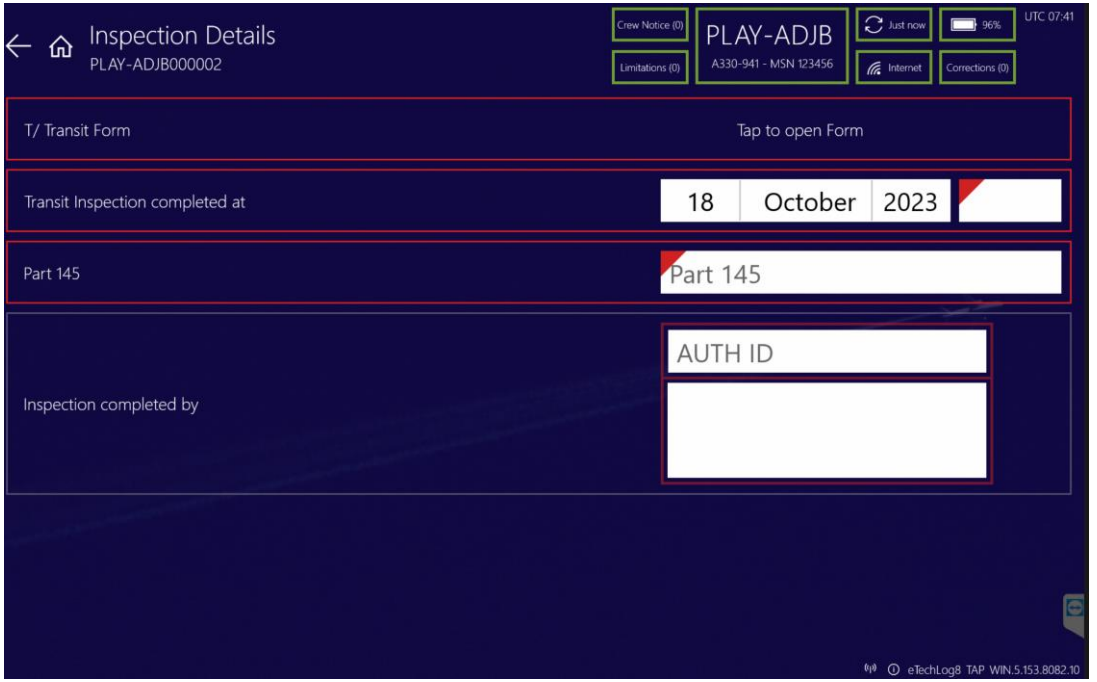
This is the date/time of the last check

Hours remaining until the check is due

The Checks are green when valid, turn amber 12 hours/1 day before the expiration and turns red when overdue. Thus, the user can easily understand if the inspection is valid!

Select *T1/Daily* to continue

Completing the T/Transit check



To record the *T/Transit* check, complete the T/Transit form, enter the date/time the Transit Inspection was completed at, choose the Part145 from the picklist and sign! The countdown on the button will reset as well!

TLP ready for Acceptance

After completing the *Checks,* the Date/Time and Part145 can be completed to release the aircraft to service. Prior to signing you must ensure all cabin defects raised on the companion cabin log device have been transferred as required.

Please note this is only required when CRS work has been carried out on the current turnaround.

The crew will then sign the aircraft *Acceptance* and transmit the completed TLP to the eCentral8 server.

If there is no flight and any checks or defects expire, or if a new item is found after signing the release, then use the *Create Maint Sector* button to turn over to the next TLP without requiring any flight information.

2.10 SD card swap procedure

By the end of this chapter, you will be able to:

1. Swap SD card from e-TLB to e-CLB

SD card swap procedure

In the event of an eTechLog8 device (Dell 7230 Rugged Tablet) failure or for other operational needs, it may be advised by Conduce Support to swap the SD card between 2 Rugged Tablets. Swapping the SD card is necessary as the SD card contains the eTechLog8 database and backup files for the aircraft registration in question. This procedure documents how to carry out an SD card swap once required.

SD card swap procedure – cont…

If an eTechLog8 device (7230 Rugged Tablet) failure occurs, the following steps are to be carried out:

1) The user carrying out the procedure must request the team managing the stock of eTechLog8 devices (7230 Rugged Tablet) to provide a stock/spare device, which is equipped with an activated SIM card for network connectivity.

NOTE: It is advised to ensure the stock/spare device is charged sufficiently (at least 50% battery charge is recommended). Typically, a 7230 device charges from 0 to 100% in 90 minutes . The stock/spare device not being charged will delay the restoration of aircraft status in eTechLog8, which may be crucial for aircraft operations.

2) The user must head to the main menu of the device that is about to be swapped and tap on the sync button. The user must wait until the *Backup* label disappears.

3) The user must tap on the backup (disc) icon located on the R/H bottom side of the screen, next to the version number, and check that the latest successful backup is as of that moment. If the label states that the successful backup was not completed as of that moment, the user must contact Conduce Support immediately at +44 (0) 333 888 4044.

4) Now, once the user has received the stock/spare device, it must be ensured that the device is switched off until the user is instructed to switch it on

5) Then, the user must go to switch off the 7230 device that needs to be replaced – the failed device.

SD card swap procedure – cont…

6) The user must take the SD card out of the failed device. To eject the SD card, follow these instructions:

a) Locate the SD card slot at the RH side of the device. It is labelled “SD”

b) Open the SD card slot by gently pulling the “SD” plate. The SD card will be visible

c) Slightly push on the SD card for it to pop out

SD card swap procedure – cont…

7) The user must remove the SD card from the device, and the physical registration label – this device can now be put aside

8) Repeat the procedure to open the SD card slot and insert the SD card in the dedicated slot of the stock/spare device, then close the SD card slot once the SD card is inserted

9) Switch on the device that contains the SD card by pressing the On/Off button of the stock/spare device for 2 seconds

10) After switching on the device, the Conduce logo will appear on the screen. It takes 1-2 minutes for the device to boot up and load eTechLog8 and the registration details — no further action is required from the user in this step. Once eTechLog8 is loaded, the eTechLog8 main menu will be displayed.

11) Attach the aircraft registration label to the device that is booting up

12) The user must synchronise from the main menu by tapping the *Sync* button on the top banner

SD card swap procedure – cont…

7) When the synchronisation is successful, the device is operationally ready. The user can resume normal activities. With this final step, the SD Card Swap procedure is completed.

8) The user must hand over the replaced device (without the SD card and registration label) to the team managing the stock of eTechLog8 devices (7230 Rugged Tablet). This team must make arrangements with Conduce Support to ship the failed device to the Conduce workshop located at:

Conduce Group Ltd.
19-21 Silvermills Court (GF)
Edinburgh
EH3 5DG

2.11 Locations

By the end of this chapter, you will be able to:

1. Locate the e-TLB, e-CLB and USB kits stowage.

Locations onboard the aircraft – A330

A330 Cockpit
e-TLB stowage

A330 USB KIT stowage

Locations onboard the aircraft – A330

A330 e-TLB Charging

A330 e-CLB Charger stowage

Locations onboard the aircraft – A330

A330 e-CLB Charging

eTechLog8 Support Line

TAP MOC should be contacted on the **24*7*365 Support Line** to help any users if they are stuck or unsure on how to proceed with the eTechLog8, or in the event of hardware and software failures.

Conduce also has a 24*7*365 Support Line which can be reached on: +44 333 888 40 44

Please don’t hesitate to call us!

+351 217656800

TAP MOC

2-LINE MAINTENANCE

Aircraft Technical Log Book (TAP Mod. ME-2013) l Introduction

The Aircraft Technical Logbook (ATLB) is a document used to record the defects and malfunctions detected during operation related with flight safety (except defects/malfunctions referred in item B - CABIN TROUBLE REPORT, which are more related with passenger comfort and services) and to record all maintenance actions accomplished during operation until new scheduled maintenance action. The ATLB is also used to record maintenance and flight safety information, to be known by the flight crew.

All defects/malfunctions detected in the cabin related with the following topics, must be recorded in the ATLB, without having to be first registered in the CTR:

- emergency equipment, including oxygen masks compartments;
- electrical equipment malfunction, including IFE system which has caused a short circuit and/or CB disarm;
- Replacement of rotable components with P/N and S/N;
- smoke;
- abnormal smell;
- any sign of fire;
- water leaks;
- seats electrical operation;
- backrest operation and seats armrest, including structural damage;
- luggage restriction bar (seats);
- crew and passenger safety.

AIR PORTUGAL

CAMO: TRANSPORTES AÉREOS PORTUGUESES, S.A.

APPROVAL No. PT.CAMO.003

CADERNETA TÉCNICA DE AVIÃO
(Aircraft Technical Logbook)

CS - _____

Declaração de aptidão para serviço	Release to service statement
"Certifica-se que o trabalho mencionado, exceto se especificado de outra forma, foi executado de acordo com a Parte-145 e, no que respeita àquele trabalho, a aeronave/componente é considerada/o apta/o para serviço".	"Certifies that the work specified, except as otherwise specified, was carried out in accordance with Part-145 and in respect to that work the aircraft/aircraft component is considered ready for release to service".

Address: TAP – Transportes Aéreos Portugueses, S.A.
Aeroporto de Lisboa
Apartado 50184
1704-801 Lisboa, Portugal

Tel. No.: 00351 218 416 204
Fax no.: 00351 218 415 678
E-mail: qs.me@tap.pt
Website: www.tapme.pt

ATENÇÃO: Esta caderneta dá original e 3 cópias, pelo que deverá ser escrita com a pressão adequada.

N.º _____

TAP Mod. ME-2013 DEZ2020 – S. I. 1983472

2-LINE MAINTENANCE

Aircraft Technical Log Book (TAP Mod. ME-2013) I Composition

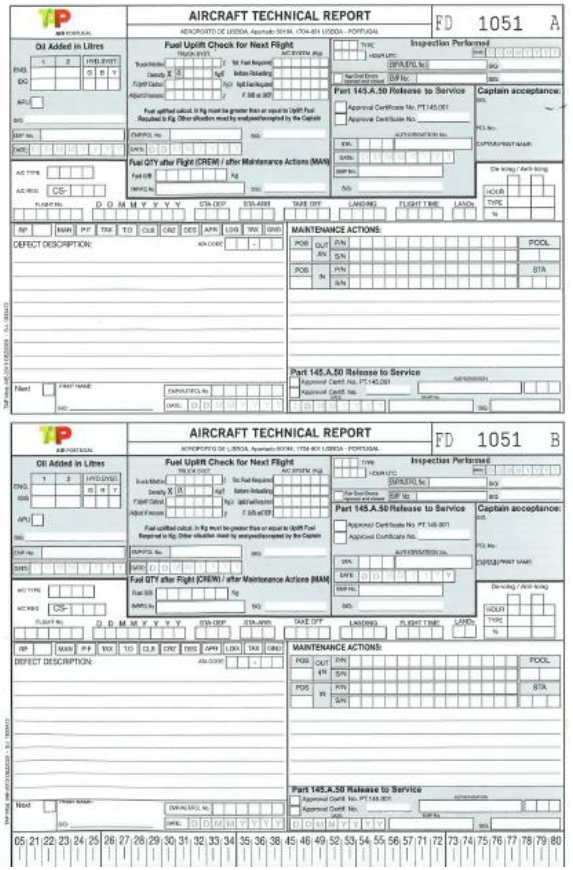
Each half of the A4 sheet consists in one ATLB slip.

The ATLB sheets are presented in the shape of a book composed by 25 sets (50 slips) and a cover.

Each flight will use one or more ATLB slips (original and 4 copies set). Each ATLB slip is composed by a header and a main structure, being the main structure for the description of the defect/information and the header for the description of the maintenance actions accomplished before flight. The page also contains a footer with ATA codes to be used by ME/MO/TS.

The composition and the distribution of each set, is done according to the following:

- a white original for ME/MO/TS.
- a blue copy that remains on board for further reference.



Example of a TAP ATLB sheet

- a yellow copy intended to go along with the removed component to be sent to the shop.
- a green copy to be removed at the base or at any outstation, before each flight.

Remove all existing ATLB green copies. This info must available until the following flight completion.

2-LINE MAINTENANCE

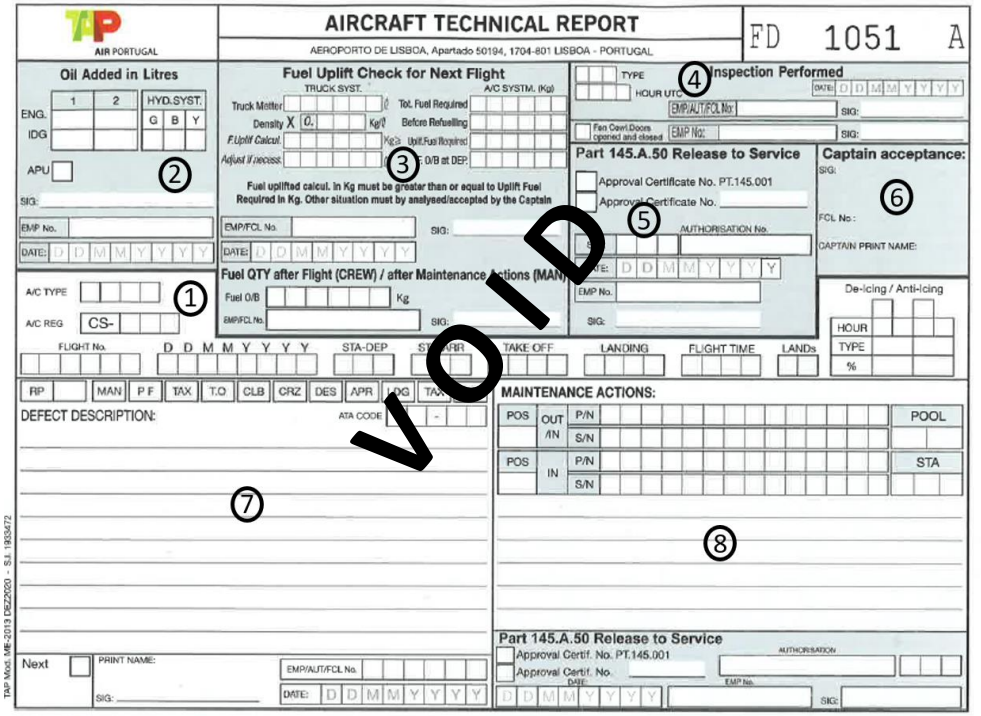
Aircraft Technical Log Book (TAP Mod. ME-2013) I Filling procedures

The instructions for filling of the ATLB are divided into eight items:

The ATLB must be filled with a hard tip dark in pen, with press block letters and in the English language, in a way that may be visible the inserted information in all copies.

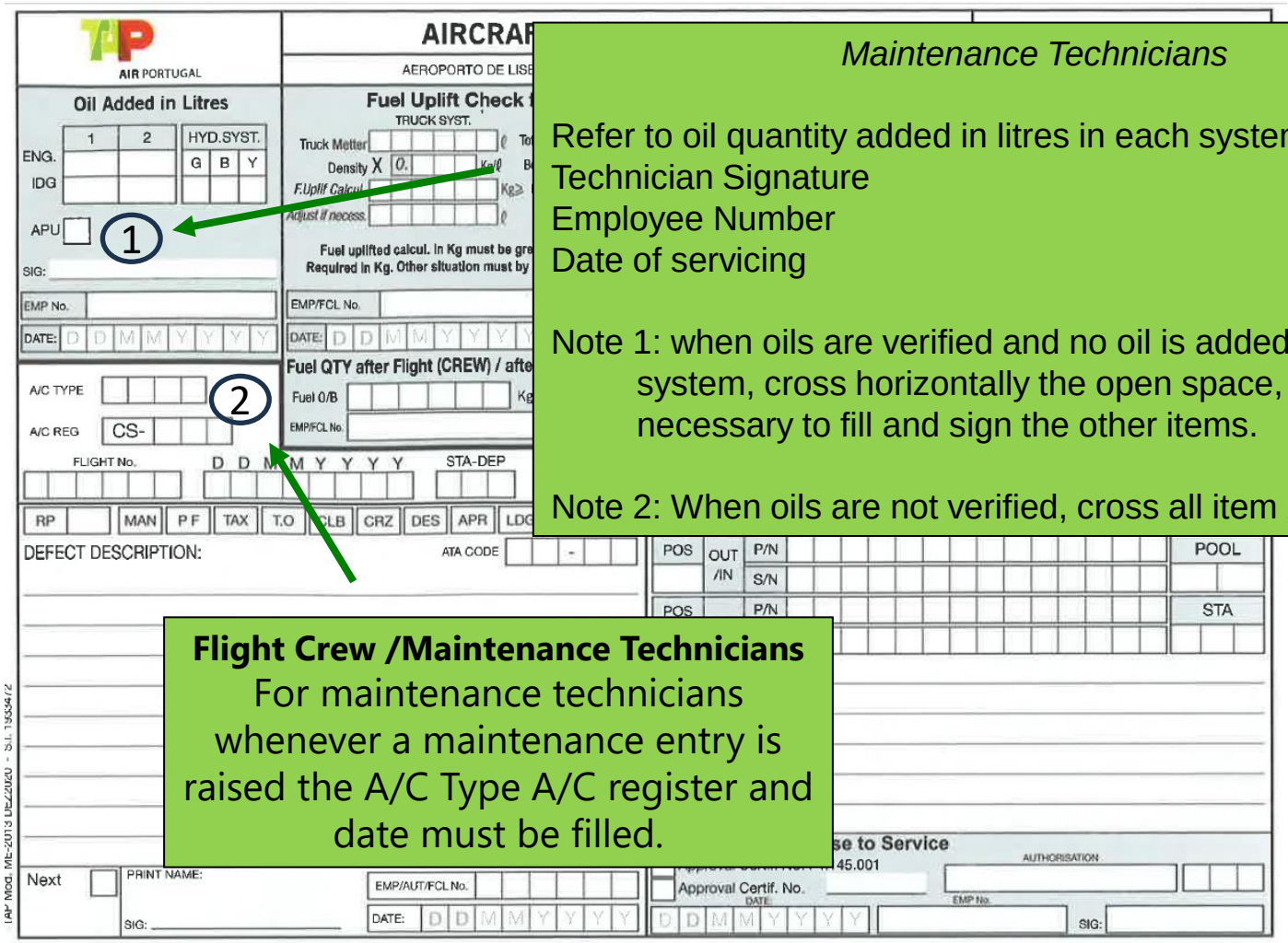
Any Information already written in the ATLB cannot be erased. So, if the technician who wrote it finds it necessary to correct the information and in order to maintain it readable, he shall cross the wrong text and place his employee number and signature close to it.

If it is necessary to cancel an ATLB, the word "VOID" shall be written diagonally over the respective ATLB. The technician who made the cancellation signs, place his employee number and date together with "VOID" word, in a readable manner.



2-LINE MAINTENANCE

Aircraft Technical Log Book (TAP Mod. ME-2013) I Filling instructions



Maintenance Technicians

Refer to oil quantity added in litres in each system
Technician Signature
Employee Number
Date of servicing

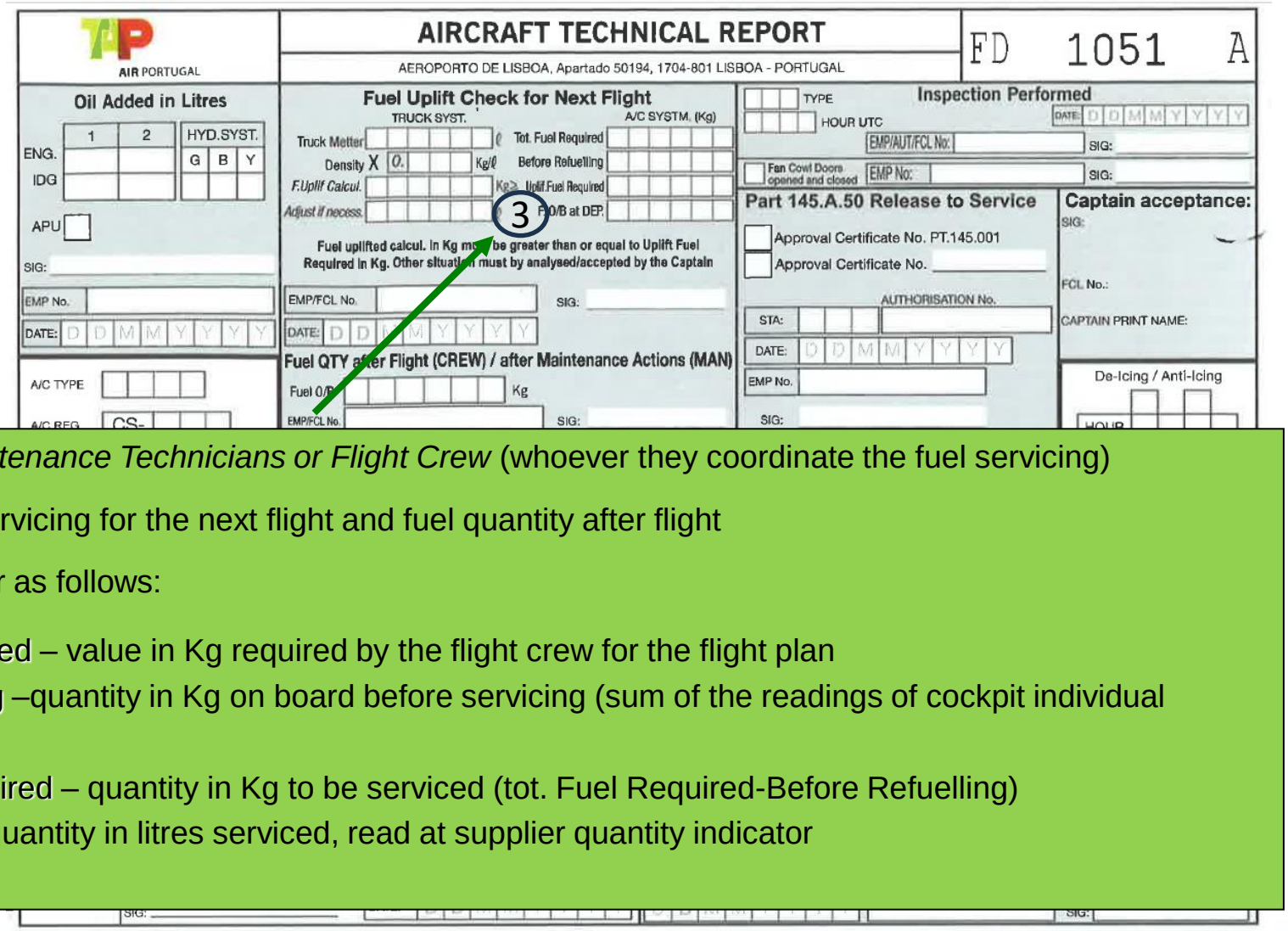
Note 1: when oils are verified and no oil is added to any system, cross horizontally the open space, however is necessary to fill and sign the other items.

Note 2: When oils are not verified, cross all item 2

Flight Crew /Maintenance Technicians
For maintenance technicians whenever a maintenance entry is raised the A/C Type A/C register and date must be filled.

2-LINE MAINTENANCE

Aircraft Technical Log Book (TAP Mod. ME-2013) l Filling instructions



Maintenance Technicians or Flight Crew (whoever they coordinate the fuel servicing)

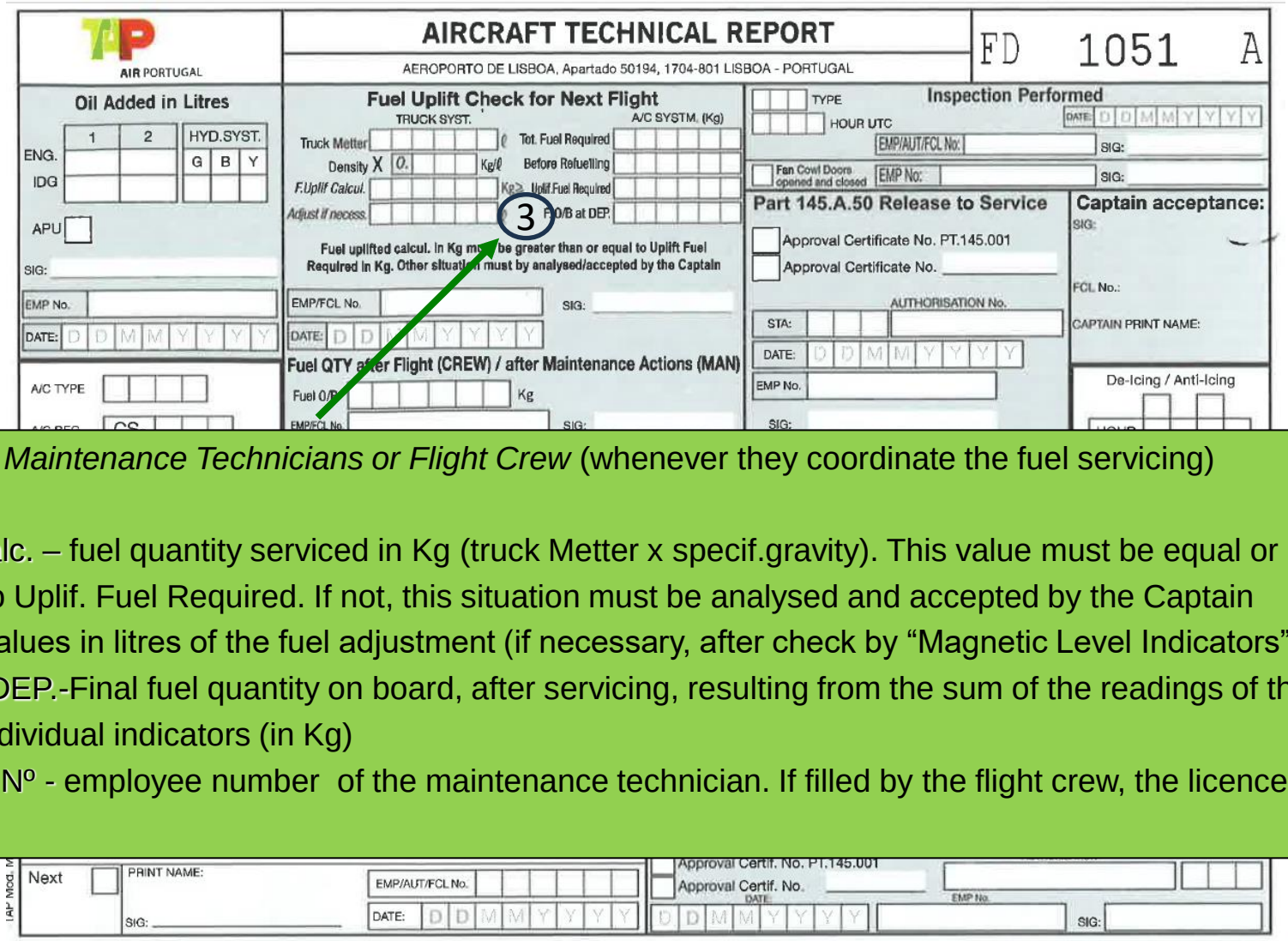
Check of fuel servicing for the next flight and fuel quantity after flight

Sequential order as follows:

Tot. Fuel Required – value in Kg required by the flight crew for the flight plan
Before refuelling –quantity in Kg on board before servicing (sum of the readings of cockpit individual indicators)
Uplif. Fuel Required – quantity in Kg to be serviced (tot. Fuel Required-Before Refuelling)
Truck Metter – quantity in litres serviced, read at supplier quantity indicator
Specif. Gravity -

2-LINE MAINTENANCE

Aircraft Technical Log Book (TAP Mod. ME-2013) l Filling instructions



Maintenance Technicians or Flight Crew (whenever they coordinate the fuel servicing)

F. Uplif.Calc. – fuel quantity serviced in Kg (truck Metter x specif.gravity). This value must be equal or superior to Uplif. Fuel Required. If not, this situation must be analysed and accepted by the Captain

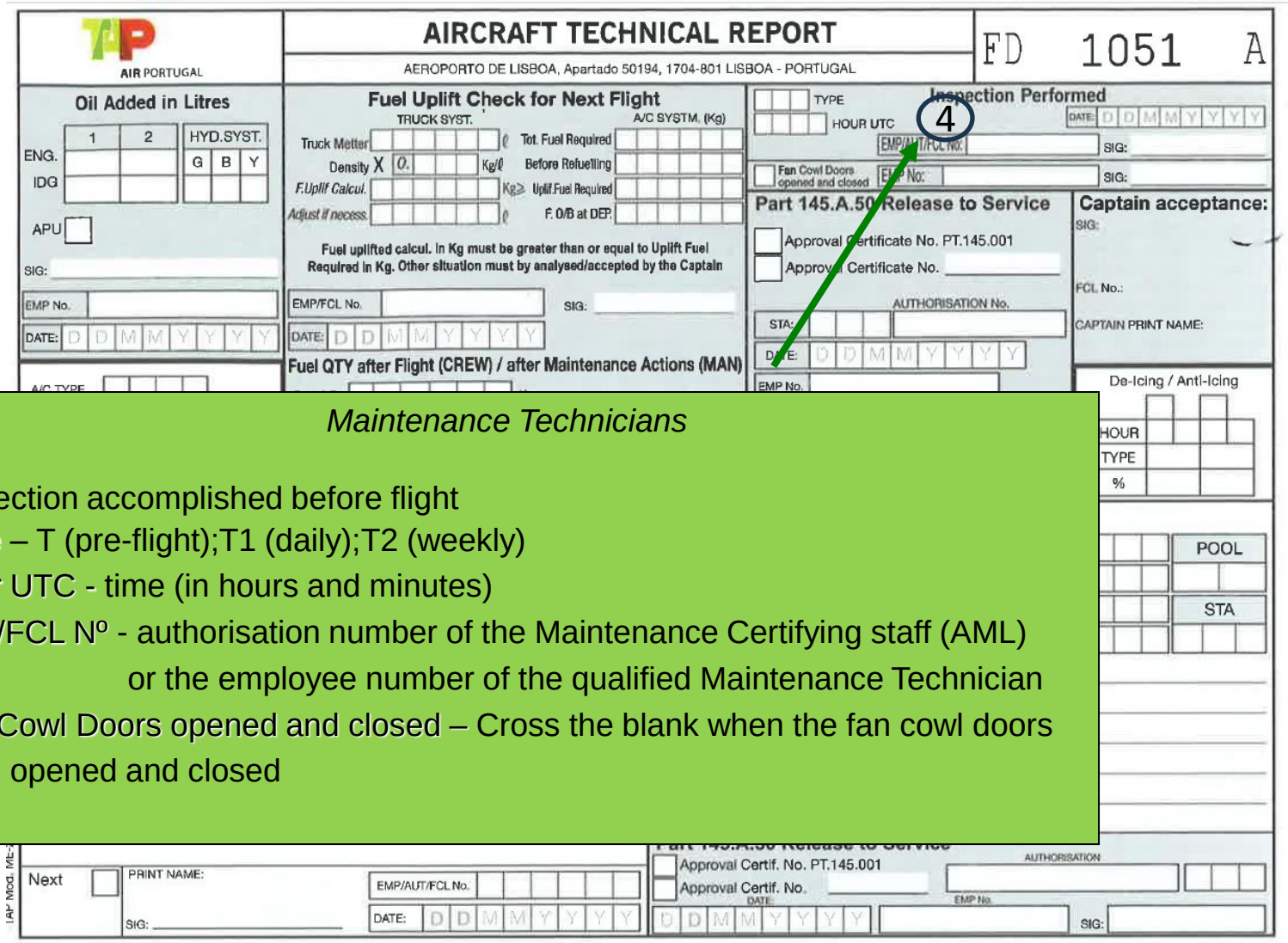
Adjust – values in litres of the fuel adjustment (if necessary, after check by “Magnetic Level Indicators”)

F. O/B at DEP.-Final fuel quantity on board, after servicing, resulting from the sum of the readings of the cockpit individual indicators (in Kg)

EMP/FCL Nº - employee number of the maintenance technician. If filled by the flight crew, the licence number.

2-LINE MAINTENANCE

Aircraft Technical Log Book (TAP Mod. ME-2013) l Filling instructions



Maintenance Technicians

Inspection accomplished before flight

Type – T (pre-flight);T1 (daily);T2 (weekly)

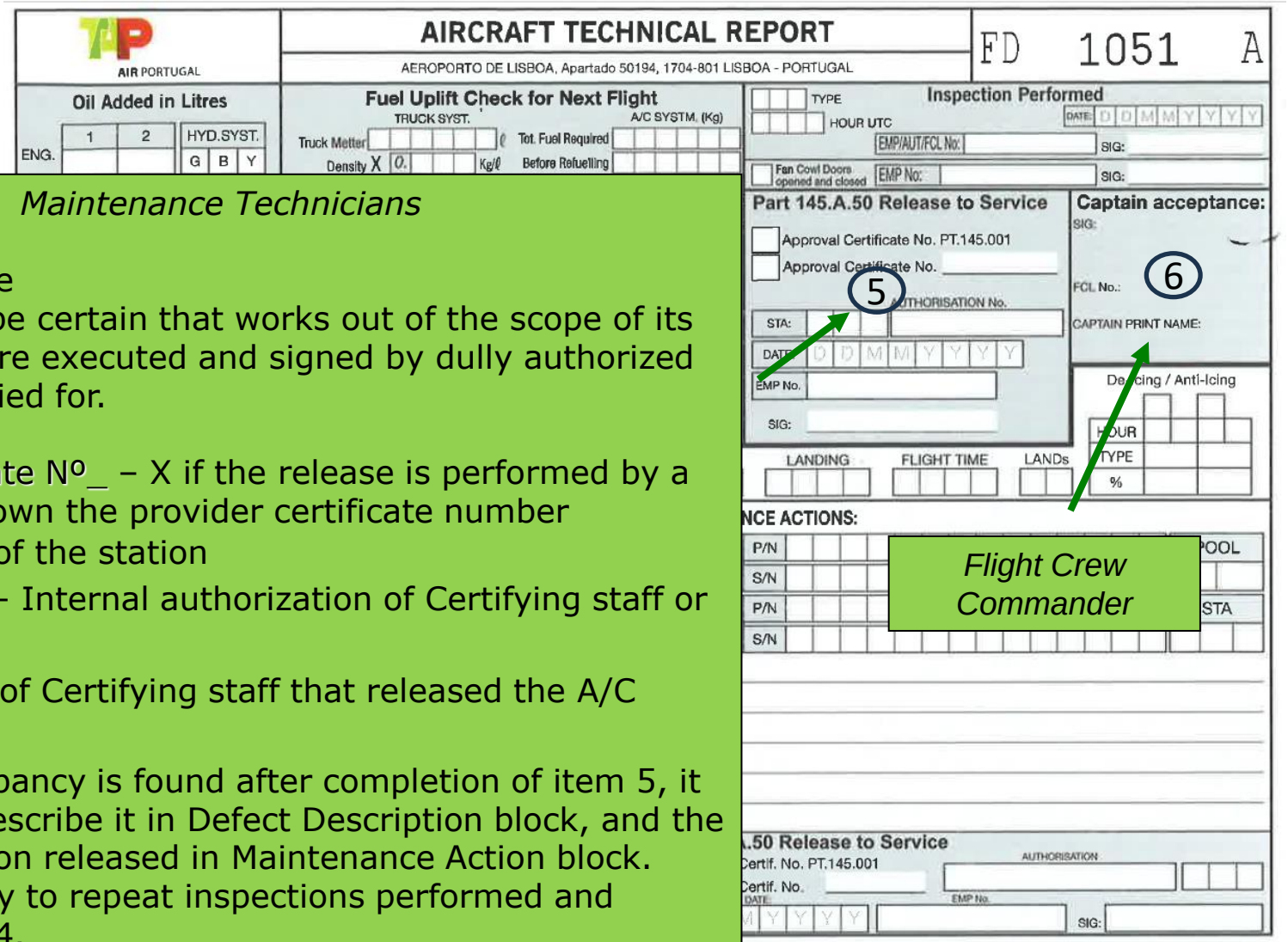
Hour UTC - time (in hours and minutes)

AUT/FCL Nº - authorisation number of the Maintenance Certifying staff (AML)
or the employee number of the qualified Maintenance Technician

Fan Cowl Doors opened and closed – Cross the blank when the fan cowl doors were opened and closed

2-LINE MAINTENANCE

Aircraft Technical Log Book (TAP Mod. ME-2013) l Filling instructions



Maintenance Technicians

Release to Service
Technician must be certain that works out of the scope of its authorization, were executed and signed by dully authorized technicians qualified for.

Approval Certificate Nº_ – X if the release is performed by a provider; write down the provider certificate number
STA – IATA code of the station
Authorization Nº - Internal authorization of Certifying staff or AML
SIG. – Signature of Certifying staff that released the A/C

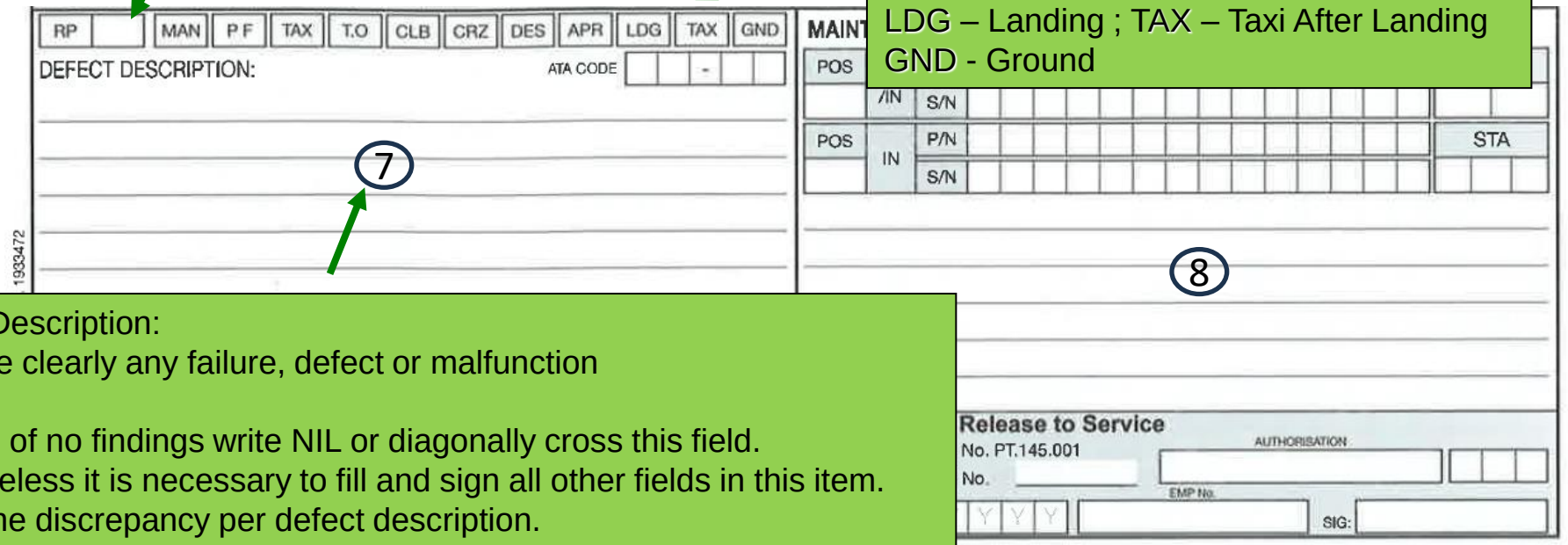
Note : If a discrepancy is found after completion of item 5, it is necessary to describe it in Defect Description block, and the maintenance action released in Maintenance Action block.
It is not necessary to repeat inspections performed and recorded in item 4.

2-LINE MAINTENANCE

Aircraft Technical Log Book (TAP Mod. ME-2013) I Filling instructions

Place an X If two or more defect description block are necessary to describe the discrepancy. Including the first.

Place an X according to the phase where the discrepancy was detected
MAN – Maintenance ; PF – Pre-flight
TAX – Taxi to take off; T.O. Take off
CLB – Climb; CRZ – Cruise
DES – Descended ; APR – Approach
LDG – Landing ; TAX – Taxi After Landing
GND - Ground



Defect Description:
Describe clearly any failure, defect or malfunction

•In case of no findings write NIL or diagonally cross this field. Nevertheless it is necessary to fill and sign all other fields in this item.
•Only one discrepancy per defect description.
•This item is also used to describe any subject which does not require any action; it must start with INFORMATION.

2-LINE MAINTENANCE

Aircraft Technical Log Book (TAP Mod. ME-2013) l Filling instructions

Defect description:

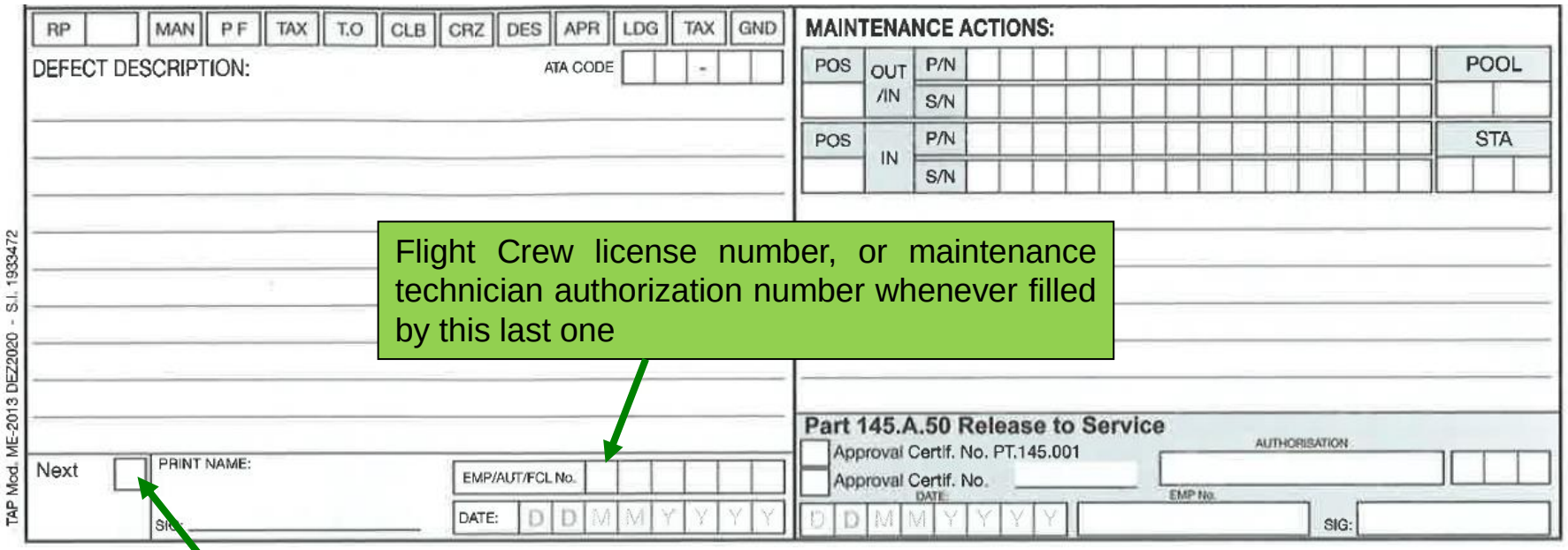
1. Start the description mentioning **first the system where the failure, defect or mal function occurred**. Identify (whenever possible) the components (selector boxes, indicators, etc.) according to the maintenance approved data.
2. Fill with block letters and **describe clearly and briefly the failure, defect or malfunction.**
3. Record only **one failure**, defect or malfunction on each ATLB slip.
4. If the failure, defect or malfunction has resulted or may result in an unsafe condition that hazard seriously the flight safety and whose description is listed in Annex I of P1.04, please report it to: mcc@tap.pt and safetyoffice.me@tap.pt.
5. If no failures, defects or malfunctions are reported, **write the word "NIL" or diagonally cross this block. It is however necessary, to fill and sign all the remaining blocks in this item.**
6. Any **failure, defect or malfunction repeated after the corrective action accomplished** by maintenance technicians, **must be handled as a new defect.**
7. Whenever an aircraft begins an event in base maintenance which requires a maintenance release to service by a category C certifying staff (A, C inspections or VT), include the following inscription:

   Aircraft removed from service to perform "X" check

   In which "X" is the inspection designation.

2-LINE MAINTENANCE

Aircraft Technical Log Book (TAP Mod. ME-2013) l Filling instructions

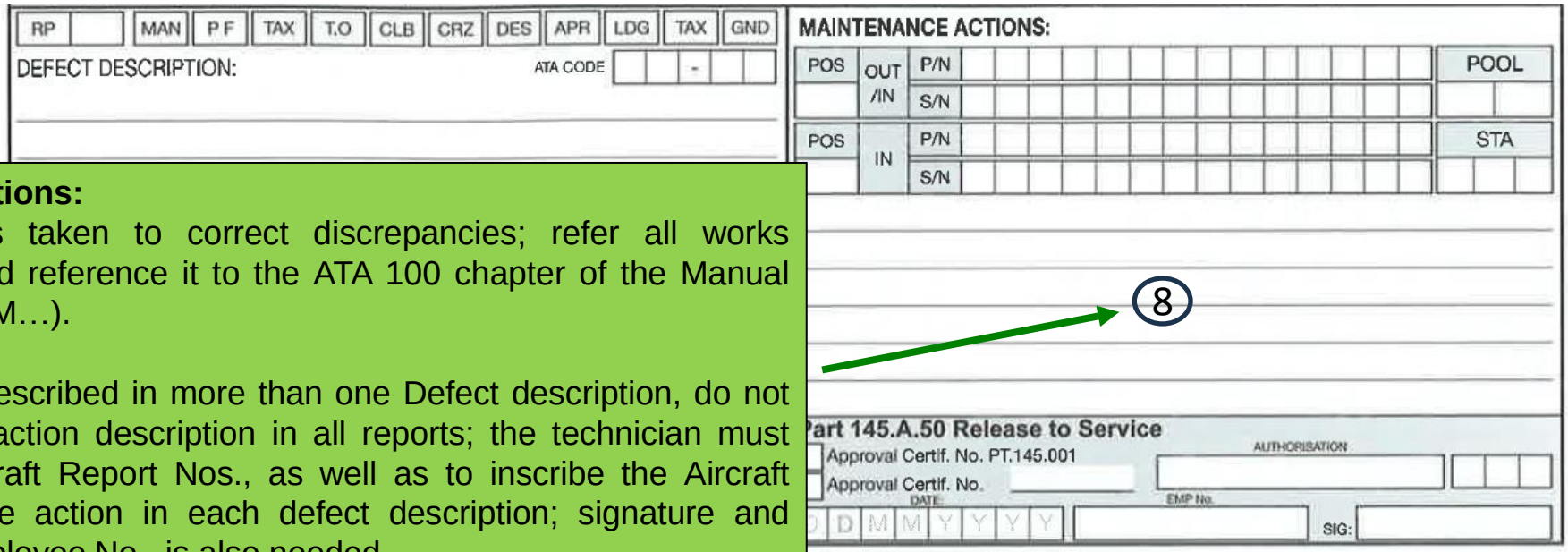


Flight Crew license number, or maintenance technician authorization number whenever filled by this last one

Place an X, when more than one discrepancy needs to be recorded during the same “intervention”; use next aircraft technical report and cross the header, except for A/C REG., “DD/MM/YYYY” and “STA-DEP”.

2-LINE MAINTENANCE

Aircraft Technical Log Book (TAP Mod. ME-2013) l Filling instructions



Maintenance Actions:
Describe actions taken to correct discrepancies; refer all works accomplished and reference it to the ATA 100 chapter of the Manual and revision(AMM…).

•Discrepancies described in more than one Defect description, do not need corrective action description in all reports; the technician must inscribe the Aircraft Report Nos., as well as to inscribe the Aircraft Report No of the action in each defect description; signature and authorization/employee No., is also needed

•When it is necessary to replace more than one rotable component, use an Aircraft technical Report per component; describe the discrepancy (all the ATR opened should refer the ATR where the discrepancy was originally written, and vice versa).

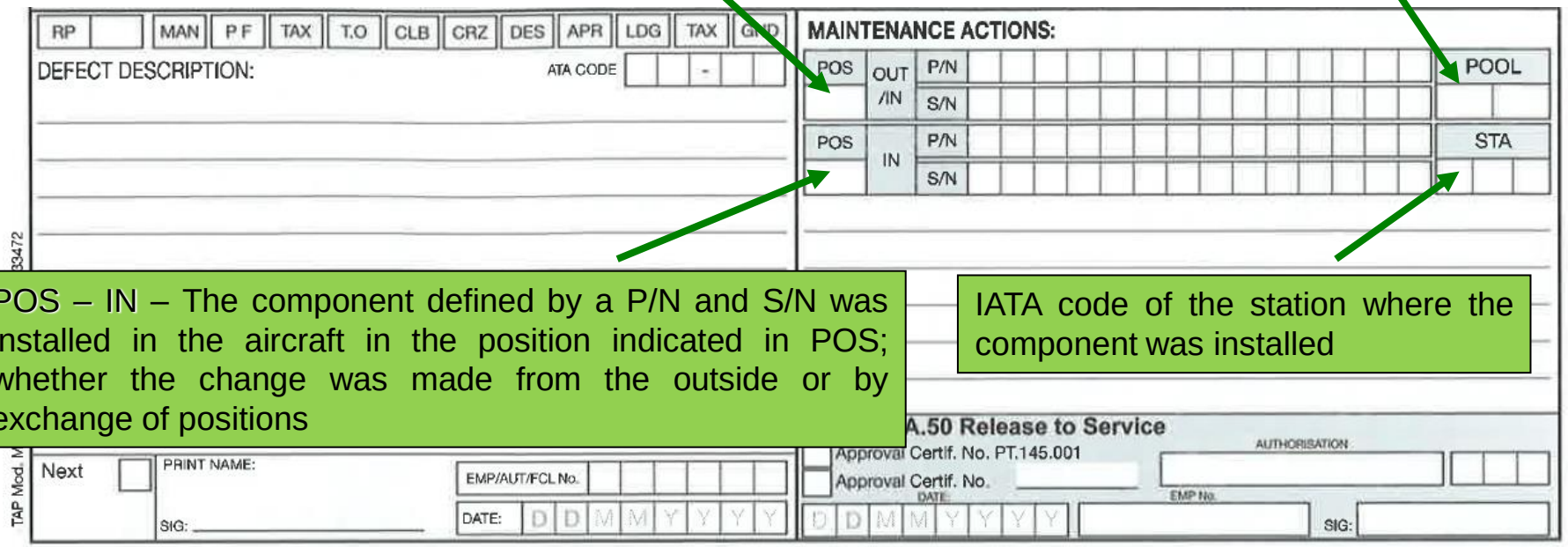
When the Defect Description block is "NIL", or diagonally crossed, the maintenance technician should do the same in Maintenance Action block

2-LINE MAINTENANCE

Aircraft Technical Log Book (TAP Mod. ME-2013) l Filling instructions

POS – OUT /IN – The component defined by its P/N and S/N was installed on the position indicated in POS after exchange within the same aircraft
POS – OUT /IN – The component defined by its P/N was removed from the aircraft from the position indicated in POS

Identification of the company that supplied the installed component

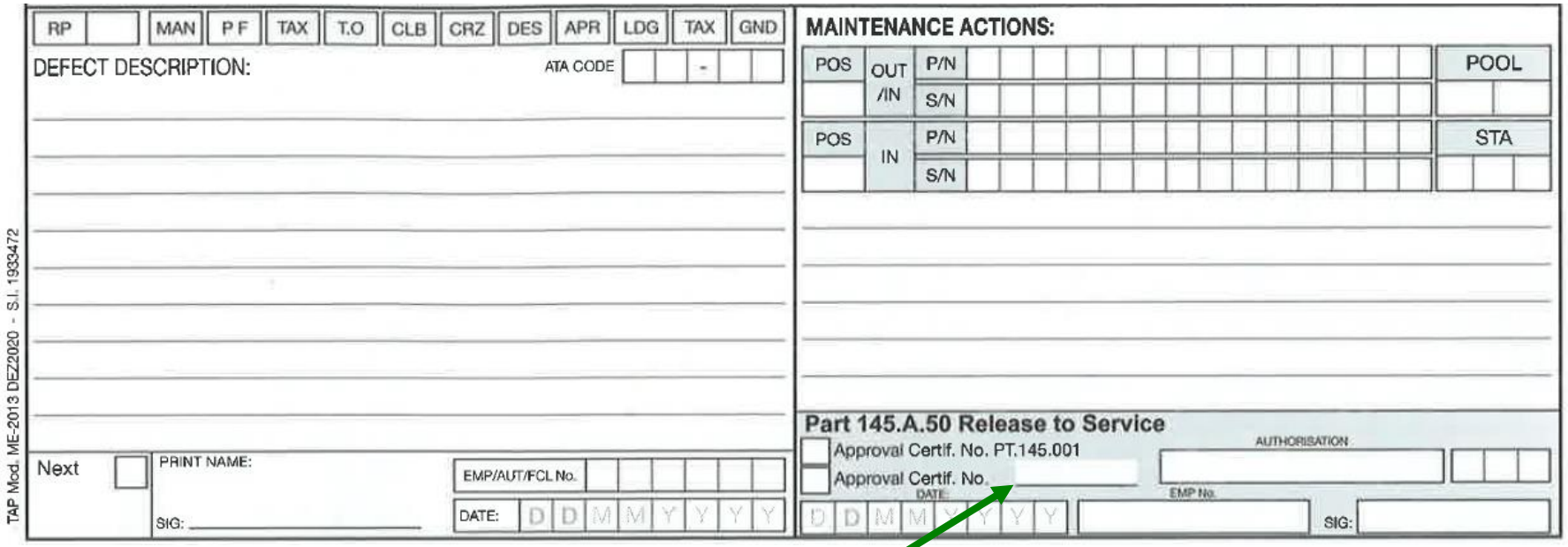


POS – IN – The component defined by a P/N and S/N was installed in the aircraft in the position indicated in POS; whether the change was made from the outside or by exchange of positions

IATA code of the station where the component was installed

2-LINE MAINTENANCE

Aircraft Technical Log Book (TAP Mod. ME-2013) l Filling instructions

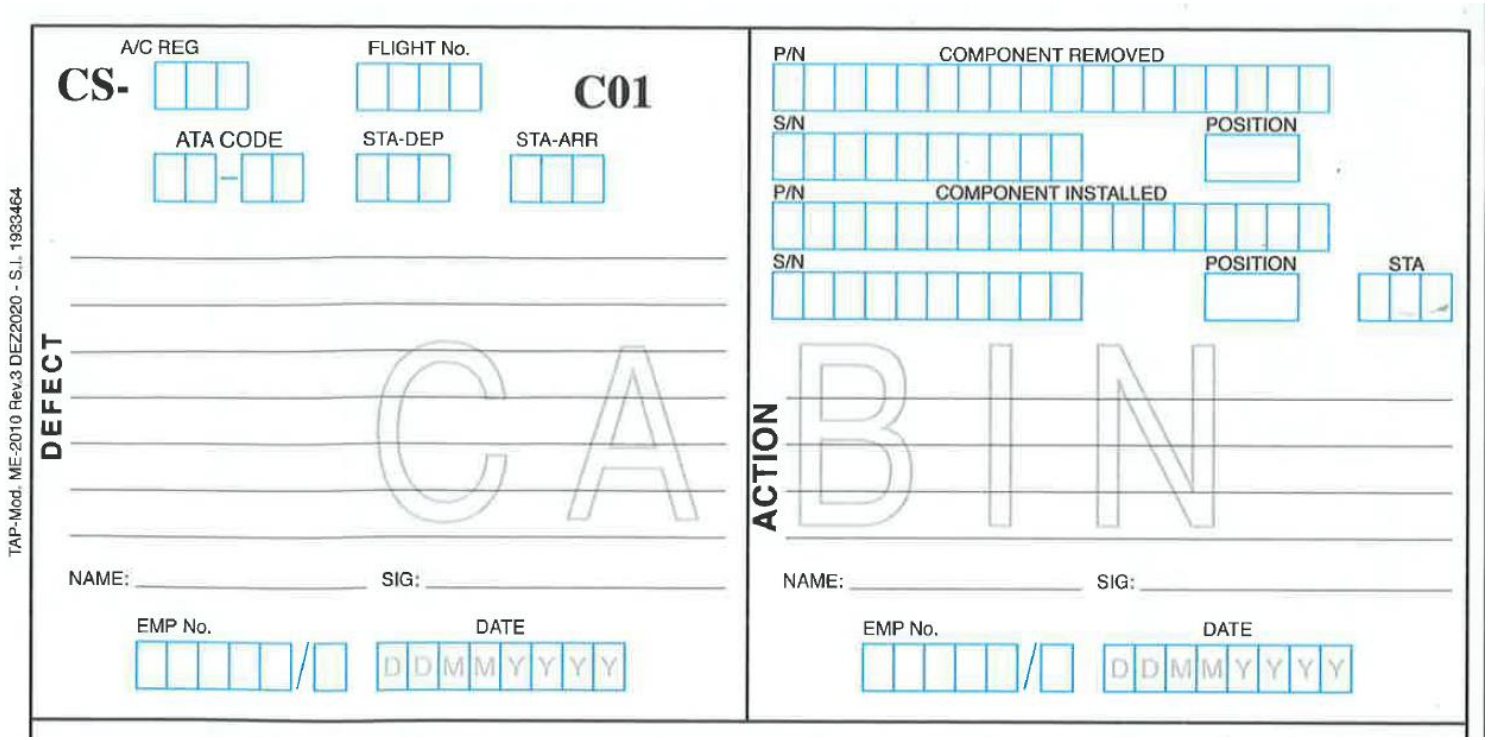


The filling is made by an A, B1 or B2.
Approval Certificate Nº-PT.145.001 –Place an X, if the release is under Part -145 certification.
Approval Certificate Nº___ - Place an X, if the release in under another certification that is not TAP. In this case , the technician must fill the blank with the respective approval certificate number. Cross, if the release to service is under TAP Part 145 approval
Authorization Nº - Internal authorization number of the Maintenance Certifying Staff

2-LINE MAINTENANCE

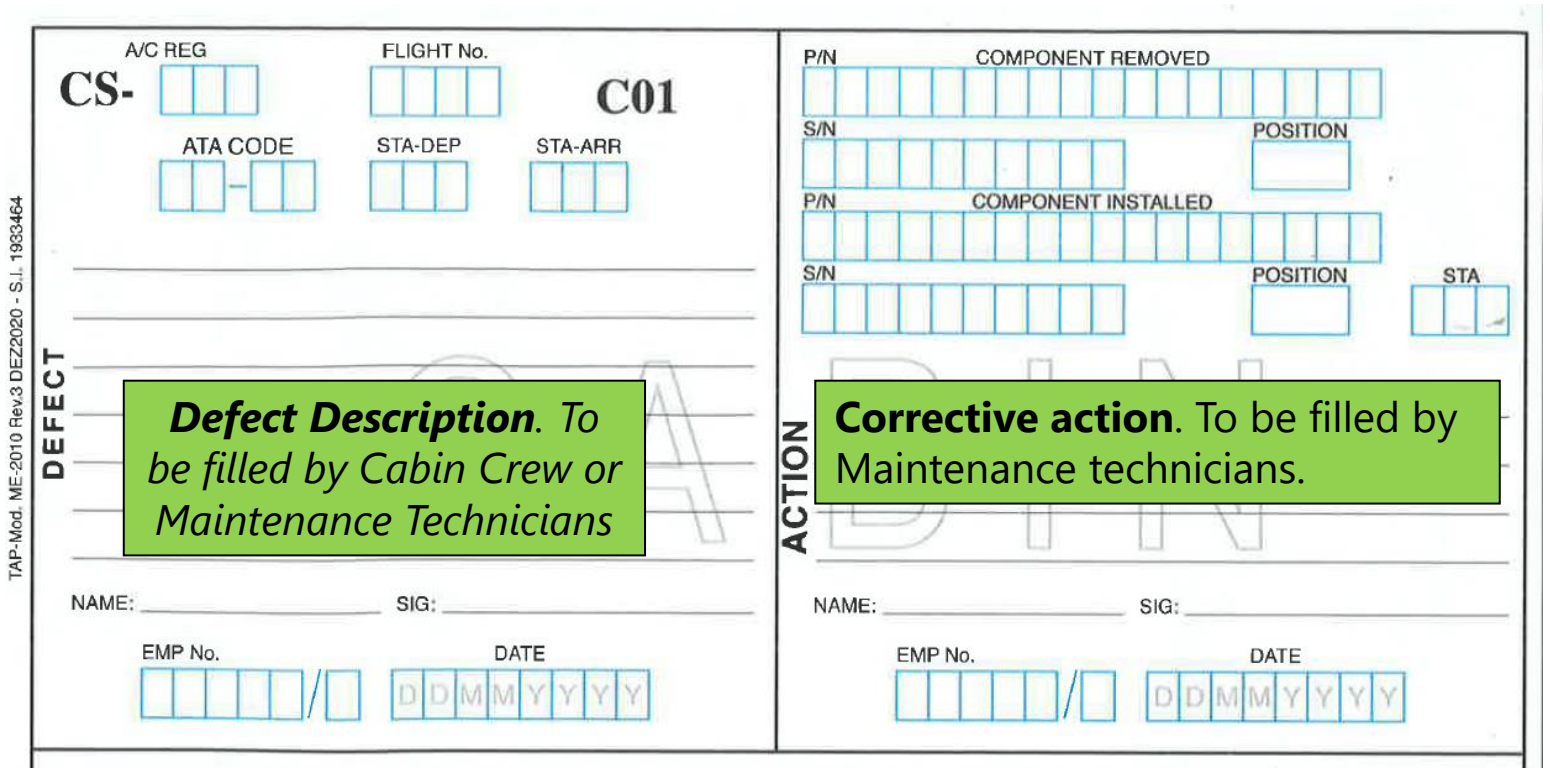
Cabin Trouble Report (TAP Mod. ME-2010) l Introduction

All the discrepancies related with passenger's commodity and services should be recorded on the Cabin Trouble Report. Discrepancies refer to safety and emergency equipment, water and waste equipment, and generally all related with pax cabin or galleys rotable components (coffee makers, ovens) should be written in the Technical LogBook.



2-LINE MAINTENANCE

Cabin Discrepancies Book (TAP Mod. ME-2010) l Composition



Defect Description. *To be filled by Cabin Crew or Maintenance Technicians*

Corrective action. To be filled by Maintenance technicians.

2-LINE MAINTENANCE

Hold Item List (TAP Mod. ME-2030) l Introduction

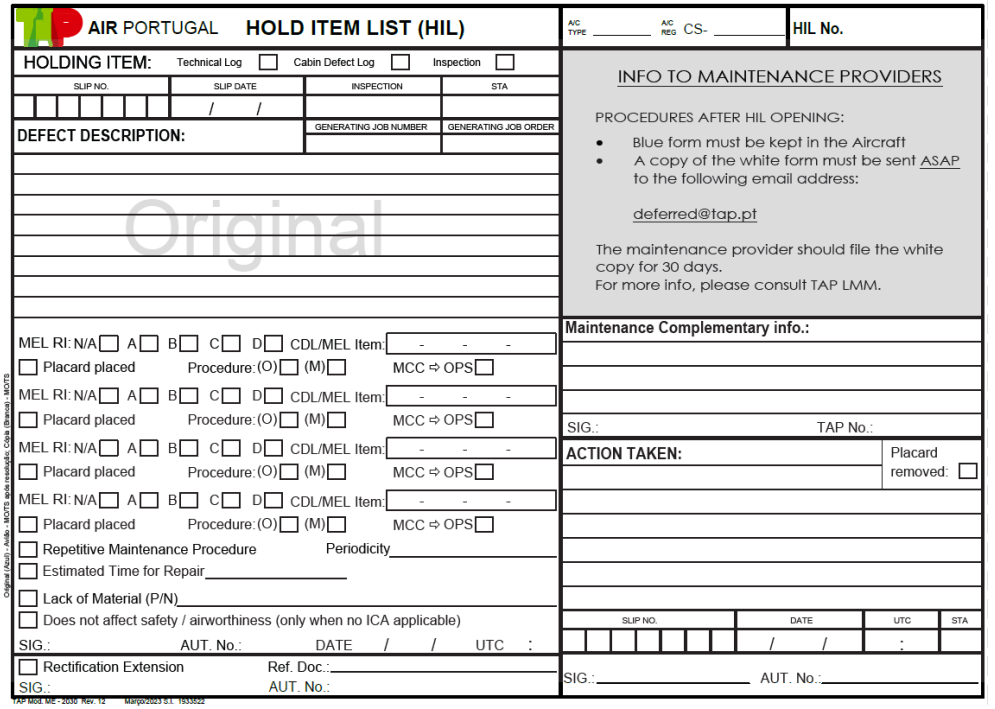
The **Hold Item List** (HIL) is used to control all discrepancies detected during aircraft operation, line or base maintenance inspections, which can not be solved right away, and can be deferred for a subsequente opportunity.

In most cases the postponing of the corrective actions are referenced in the Minimum Equipment List (MEL) and/or Configuration Deviation List (CDL).

Open HILs are located at the beginning of the ATLB.

Whenever the ATLB is completed, open HILs must be attached to the new logbook.

The form is filled according to the instruction contained in the **P2.04** – **Deferred Defects Corrections**.



AIR PORTUGAL **HOLD ITEM LIST (HIL)**

A/C TYPE _____ A/C REG CS- _____ HIL No.

HOLDING ITEM: Technical Log ☐ Cabin Defect Log ☐ Inspection ☐

SLIP NO.	SLIP DATE	INSPECTION	STA
	/ /		

DEFECT DESCRIPTION: | GENERATING JOB NUMBER | GENERATING JOB ORDER

Original

MEL RI: N/A ☐ A ☐ B ☐ C ☐ D ☐ CDL/MEL Item: - - -
☐ Placard placed Procedure: (O) ☐ (M) ☐ MCC ⇨ OPS ☐

MEL RI: N/A ☐ A ☐ B ☐ C ☐ D ☐ CDL/MEL Item: - - -
☐ Placard placed Procedure: (O) ☐ (M) ☐ MCC ⇨ OPS ☐

MEL RI: N/A ☐ A ☐ B ☐ C ☐ D ☐ CDL/MEL Item: - - -
☐ Placard placed Procedure: (O) ☐ (M) ☐ MCC ⇨ OPS ☐

MEL RI: N/A ☐ A ☐ B ☐ C ☐ D ☐ CDL/MEL Item: - - -
☐ Placard placed Procedure: (O) ☐ (M) ☐ MCC ⇨ OPS ☐

☐ Repetitive Maintenance Procedure Periodicity _____
☐ Estimated Time for Repair _____
☐ Lack of Material (P/N) _____
☐ Does not affect safety / airworthiness (only when no ICA applicable)

SIG.: AUT. No.: DATE / / UTC :

☐ Rectification Extension Ref. Doc.: _____
SIG.: AUT. No.:

INFO TO MAINTENANCE PROVIDERS

PROCEDURES AFTER HIL OPENING:

- Blue form must be kept in the Aircraft
- A copy of the white form must be sent ASAP to the following email address:

deferred@tap.pt

The maintenance provider should file the white copy for 30 days.
For more info, please consult TAP LMM.

Maintenance Complementary info.:

SIG.: TAP No.:

ACTION TAKEN: Placard removed: ☐

SLIP NO.	DATE	UTC	STA
	/ /	:	

SIG.: _____ AUT. No.: _____

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Hold Item List (TAP Mod. ME-2030) I Procedures – Record of defect corrections

The record of defect correction, in the ATLB or CTR, is elaborated:

FOR THE DEFECT DESCRIPTION FIELD:

- Transcribe the defect as written in the original ATLB or CTR sheet;
- Record the number of the original ATLB or CTR sheet;
- Record the number of the HIL formatted as: **“REF. HIL NºXXXXXX”**;
- Sign and record the technician authorization number.

FOR THE MAINTENANCE ACTIONS FIELD:

- Describe the maintenance action(s) that were accomplished for defect correctio;
- Refer the approved data used and respective revision and revision date;
- Sign and record the technician authorization number;
- Write **HIL CLOSED** if the Maintenance action that was accomplished does correct the defect, or **HIL REMAINS OPEN** if the defect remains open.

2-LINE MAINTENANCE

Hold Item List (TAP Mod. ME-2030) l Procedures –

Aircraft Release with deferred items

- When the aircraft is released with deferred items some entries that shall be made in the ATLB and in the HIL.

- The discrepancy is described in the Aircraft Technical report and fully transcribed to a HIL TAP Mod. ME-2030 where it has to be indicated the respective MEL, CDL or any other ICA classification and the non-solving reason (see NTM15-05).
- A Contracted Line Station is authorized by TAP to differ a discrepancy if the issue could not be solved, and the release could be given in accordance with MEL/CDL. The Differed item should be recorded on the Technical Log.

After the release, a copy of HIL TAP Mod. ME-2030 must be sent to the following e-mail:

- **deferred@tap.pt**

2-LINE MAINTENANCE

Hold Item List (TAP Mod. ME-2030) l Procedures –

Aircraft Release with deferred items

Aircraft with deferred items, for which Repetitive Maintenance Procedures (RMP) are applicable:

- In accordance with MEL, or any other ICA there are some discrepancies which need Repetitive Maintenance Procedures until final fix (before each flight, every x, hrs/cycles/days). Every time a RMP is Required TAP MCC informs the provider.

It is mandatory to register in the Aircraft Technical Report, All the above Maintenance Procedures as follows:

- Defect description: - Maintenance Procedure Ref HIL Nº xxxxxxx.
- Maintenance Actions: - Fill with the related maintenance procedure applied.

3-CONTACTS/NOTIFICATIONS

Contacts | Introduction

Any occurence notification has the purpose to contribute for Flight Safety increase and promote the Prevention of future accidents and aircraft incidentes.

All occurences such as accidents, incidentes and others, as well as delays or differed items (HILs), involving TAP aircrafts, must be reported immediately by phone, e-mail to the MCC (ME/MO/CM).

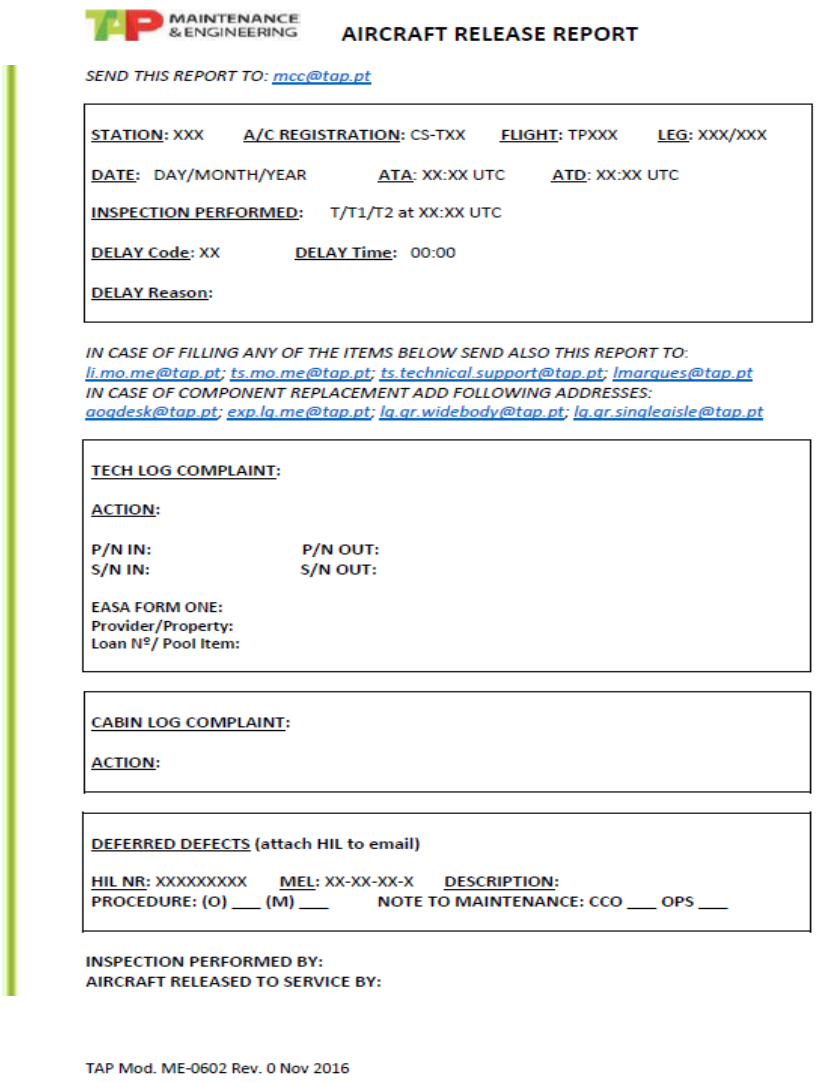
	Aircraft	Phone	SITA Code	E-mail
Occurences call MCC +351 927052542	All fleet	(+351) 218 415 454 or (+351) 218 415 231	LISMSTP	mcc@tap.pt
For Technical Support call Trouble Shooting * Technical Support Desk	All fleet	(+351) 217 656 800 (TSD)* or (+351) 218 415 453 (TS)	LISMSTP	ts.technical.support@tap.pt ts.mo.me@tap.pt
Line Maintenance at Lisbon	All fleet	(+351) 218 415 374 or (+351) 218 415 927	LISMMTP	li.mo.me@tap.pt

3-CONTACTS/NOTIFICATIONS

Notification of Regular Messages l Aircraft Release Report

All relevant information related to the assistance of a TAP aircraft shall be communicated to TAP at LIS using the form **Aircraft Release Report** (TAP Mod. ME-602).

TAP or contracted Line Maintenance Stations must send to the designated addresses the data related to Technical delays, inspections performed, Maintenance actions, deffered items (in accordance with or any other approved data) and componentes replacements.



MAINTENANCE & ENGINEERING

AIRCRAFT RELEASE REPORT

SEND THIS REPORT TO: mcc@tap.pt

STATION: XXX **A/C REGISTRATION:** CS-TXX **FLIGHT:** TPXXX **LEG:** XXX/XXX

DATE: DAY/MONTH/YEAR **ATA:** XX:XX UTC **ATD:** XX:XX UTC

INSPECTION PERFORMED: T/T1/T2 at XX:XX UTC

DELAY Code: XX **DELAY Time:** 00:00

DELAY Reason:

IN CASE OF FILLING ANY OF THE ITEMS BELOW SEND ALSO THIS REPORT TO:
li.mo.me@tap.pt; ts.mo.me@tap.pt; ts.technical.support@tap.pt; lmarques@tap.pt
IN CASE OF COMPONENT REPLACEMENT ADD FOLLOWING ADDRESSES:
aogdesk@tap.pt; exp.lg.me@tap.pt; lg.gr.widebody@tap.pt; lg.gr.singleaisle@tap.pt

TECH LOG COMPLAINT:

ACTION:

P/N IN: **P/N OUT:**
S/N IN: **S/N OUT:**

EASA FORM ONE:
Provider/Property:
Loan Nº/ Pool Item:

CABIN LOG COMPLAINT:

ACTION:

DEFERRED DEFECTS (attach HIL to email)

HIL NR: XXXXXXXXX **MEL:** XX-XX-XX-X **DESCRIPTION:**
PROCEDURE: (O) ___ (M) ___ **NOTE TO MAINTENANCE: CCO ___ OPS ___**

INSPECTION PERFORMED BY:
AIRCRAFT RELEASED TO SERVICE BY:

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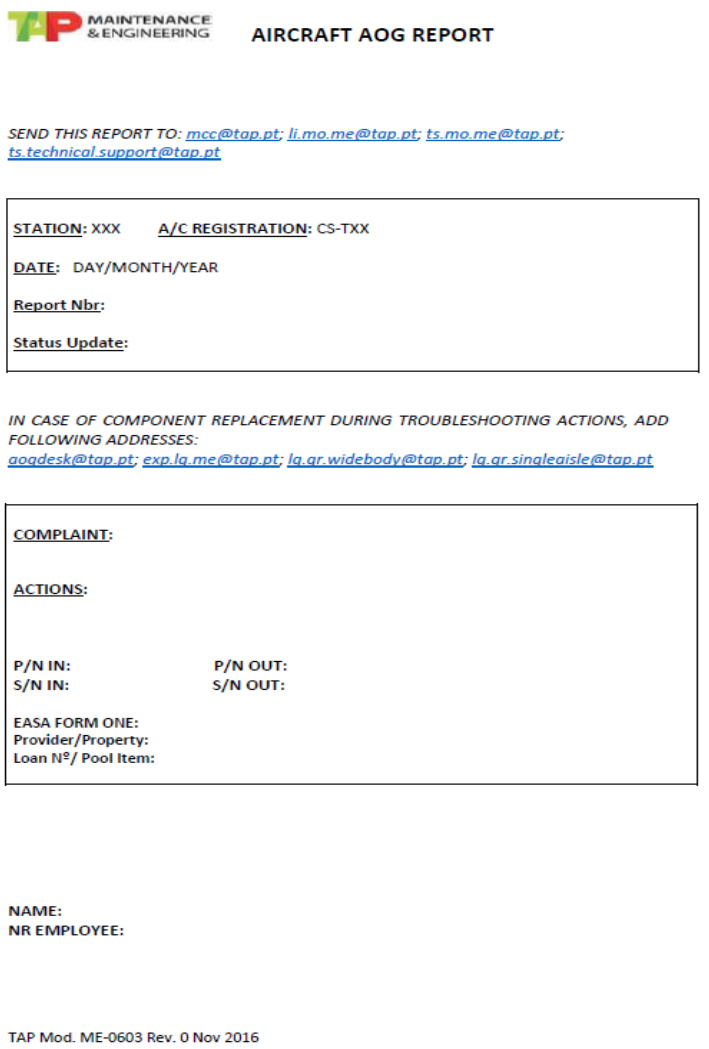
3-CONTACTS/NOTIFICATIONS

Notification of Regular Messages l Aircraft AOG Report

In case an aircraft is AOG with a Technical problem, requiring troubleshooting and/or spare parts, the form **Aircraft AOG Report** (TAP Mod. ME-0603) should be used to inform about the aircraft status and the progress of the actions, sending as many messages as necessary (within an one hour interval maximum).

The last of these messages shall include a summary of all actions and relevant data, as well as the departure time.

If due to other reasons, the Flight does not depart immediately after accomplishment of maintenance works and the aircraft has already been released to service, this final message shall nevertheless be sent as soon as the release is signed in the aircraft technical logbook.



MAINTENANCE & ENGINEERING

AIRCRAFT AOG REPORT

SEND THIS REPORT TO: mcc@tap.pt; li.mo.me@tap.pt; ts.mo.me@tap.pt; ts.technical.support@tap.pt

STATION: XXX **A/C REGISTRATION:** CS-TXX

DATE: DAY/MONTH/YEAR

Report Nbr:

Status Update:

IN CASE OF COMPONENT REPLACEMENT DURING TROUBLESHOOTING ACTIONS, ADD FOLLOWING ADDRESSES:
aogdesk@tap.pt; exp.lg.me@tap.pt; lg.qr.widebody@tap.pt; lg.qr.singleaisle@tap.pt

COMPLAINT:

ACTIONS:

P/N IN: **P/N OUT:**
S/N IN: **S/N OUT:**

EASA FORM ONE:
Provider/Property:
Loan Nº/ Pool Item:

NAME:
NR EMPLOYEE:

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4-DOCUMENTATION

Technical Literature at Line Stations

One of the basic conditions to ensure that maintenance Works are performed according with safety and quality, consists of ensuring that the performance of such work is based on technical documents approved, well preserved and updated.

TAP Line Stations or Contracted Line Stations included on the distribution list for revisions, are responsible to promptly incorporate the documentation and should keep up to date the library.

TAP Technical Publications Area is responsible to supplying the latest and valid revision of the technical documentation.

An acknowledgement receipt sheet with the updated list of the allocated technical documentation is always attached to each shipment which has to be returned by e-mail, with the signature of the Station person responsible for the reception.

Any query concerning this subject must be addressed to Maintenance Control Centre:

- mcc@tap.pt

Início

5-MATERIAL

Rotable Tag Purpose l Removal/Installation and Utilization Procedures for the Rotable Tag

Before installation of any unit on the aircraft, it has to be checked that its physical condition is apparently good, and its expiring date (if applicable) is not over. The Authorized Release Certificate and TAP Serviceable Tag (if applicable) have both to be removed and detached from the operative/to be installed unit.

At contracted Line Stations, if the Serviceable Tag is available, it has to be properly filled out, identifying the inoperative unit removed and its position. In case the TAP Serviceable Tag is unavailable, the stations shall give the equivalent information in a proper document belonging to the provided unit (A/C movement/trace tag). One of these documents must be attached to the removed unit.

The Rotables Management Department (ME/LG/GR) has to be informed about the replacement by receiving from the provider the Component Replacement Information, through the Aircraft Release Report or AIRCRAFT AOG REPORT, as applicable. The reports must be sent to the components replacement contact e-mail addresses. After receiving this message, and for rotable units provided by TAP, a new unit will be sent for allocation replenishment.

This information must also be sent to MCC – mcc@tap.pt

CONCLUSION

You have seen all the chapters!

Please answer the **Quiz** in the following slides.

Check your answers at **slide 162.**

1 General Information

2 Line Maintenance

3 Contacts/Notifications

4 Documentations

5 Material

6 Quiz

6-QUIZ

1/7 – What type of occurrences must be reported by the Line Maintenance Provider?

1-Delays and deferred items, as applicable.

2- Accidents and incidentes.

3- All type of occurrences including the ones referred on the other options.

6-QUIZ

2/7 – Whenever an HIL opened, which copy form should be kept in the aircraft?

1- White.

2- Blue.

3- Yellow.

6-QUIZ

3/7 – When oils are verified, pertaining blocks in the Aircraft Technical Log Book:

1- If no oil is added to any system, cross horizontally the open space.

2- If oils added, inscribe quantity in liters.

3- All the above options are correct.

6-QUIZ

4/7 – To write in the ATLB, you must use a:

1- Hard tip dark ink pen, and write in capital letters.

2- Pencil.

3- A computer.

6-QUIZ

5/7 – After na HIL opening, Provider should send ASAP a digitalized copy to:

1- ts.mo.me@tap.pt and ts.technical.support@tap.pt
(Trouble Shooting at LIS).

2- ts.mo.me@tap.pt and mcc@tap.pt
(Maintenance Control Centre at LIS).

3- deferred@tap.pt

6-QUIZ

6/7 – For how long must the Provider archive the HIL original?

1- Six months.

2- 30 days.

3- One year.

6-QUIZ

7/7 – When no failures/defects/malfunctions are reported on ATLB what you need to do?

1- Write NIL on the ATLB block.

2- Diagonally cross the ATLB block.

3- All the options are applicable and all remaining blocks, on this item, must be filled and signed.

6-QUIZ - Answers

Question	Correct Answer
1/7 – What type of occurrences must be reported by the Line Maintenance Provider?	3- All type of occurrences including the ones referred on the other options.
2/7 – Whenever an HIL opened, which copy form should be kept in the aircraft?	2- Blue.
3/7 – When oils are verified, pertaining blocks in the Aircraft Technical Log Book:	3- All the above options are correct.
4/7 – To write in the ATLB, you must use a:	1- Hard tip dark ink pen, and write in capital letters.
5/7 – After na HIL opening, Provider should send ASAP a digitalized copy to:	3- deferred@tap.pt
6/7 – For how long must the Provider archive the HIL original?	2- 30 days.
7/7 – When no failures/defects/malfunctions are reported on ATLB what you need to do?	3- All the options are applicable and all remaining blocks, on this item, must be filled and signed.

Thank you!

TAP MAINTENANCE & ENGINEERING