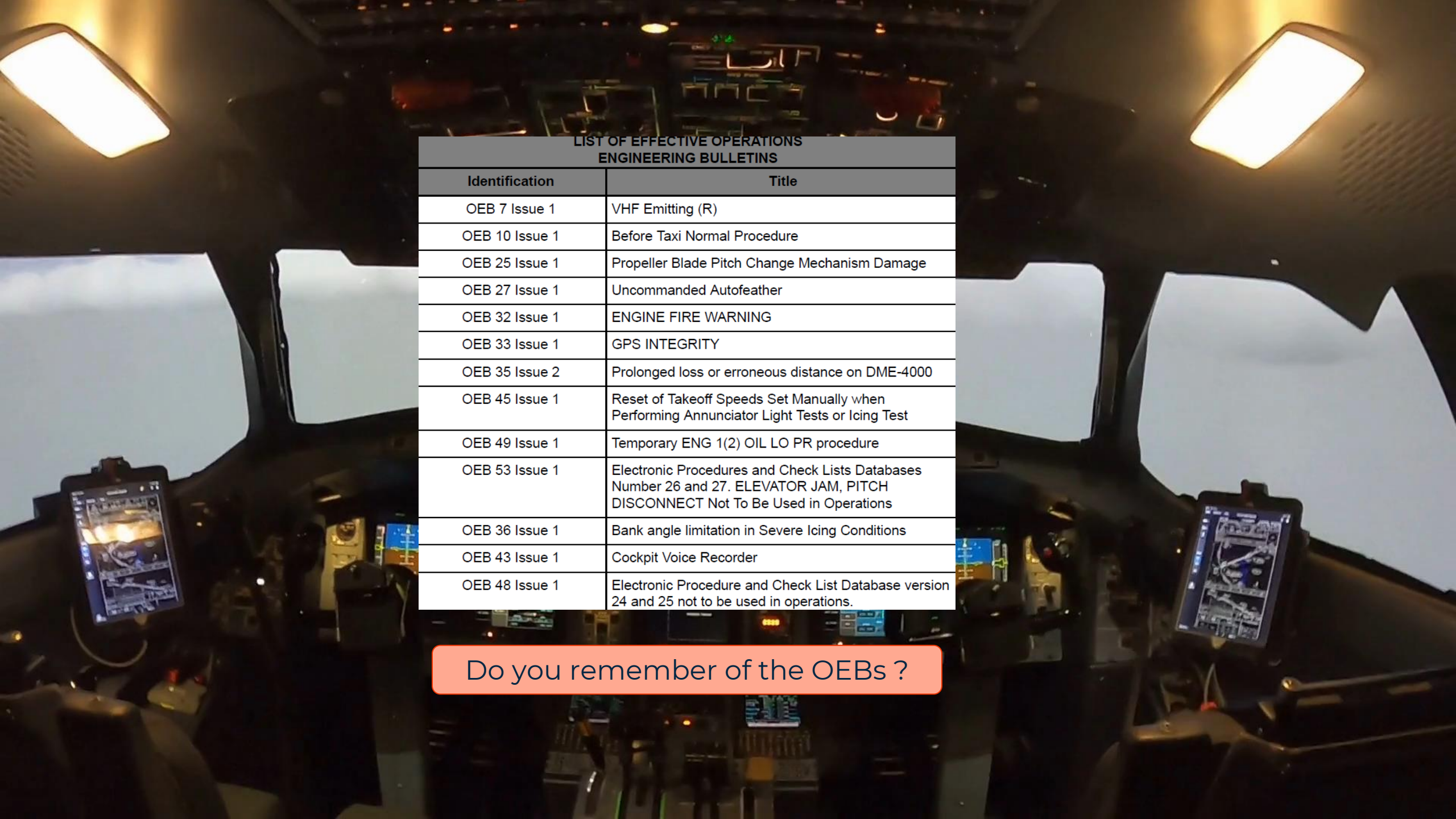
Flight Safety Conference

29th – 30th November 2023

Operational Engineering Bulletins Reduction Plan

Léo MAUPU

Flight Operations Support Manager



LIST OF EFFECTIVE OPERATIONS ENGINEERING BULLETINS	
Identification	**Title**
OEB 7 Issue 1	VHF Emitting (R)
OEB 10 Issue 1	Before Taxi Normal Procedure
OEB 25 Issue 1	Propeller Blade Pitch Change Mechanism Damage
OEB 27 Issue 1	Uncommanded Autofeather
OEB 32 Issue 1	ENGINE FIRE WARNING
OEB 33 Issue 1	GPS INTEGRITY
OEB 35 Issue 2	Prolonged loss or erroneous distance on DME-4000
OEB 45 Issue 1	Reset of Takeoff Speeds Set Manually when Performing Annunciator Light Tests or Icing Test
OEB 49 Issue 1	Temporary ENG 1(2) OIL LO PR procedure
OEB 53 Issue 1	Electronic Procedures and Check Lists Databases Number 26 and 27. ELEVATOR JAM, PITCH DISCONNECT Not To Be Used in Operations
OEB 36 Issue 1	Bank angle limitation in Severe Icing Conditions
OEB 43 Issue 1	Cockpit Voice Recorder
OEB 48 Issue 1	Electronic Procedure and Check List Database version 24 and 25 not to be used in operations.

Do you remember of the OEBs ?

OEB Definition

An OEB is a **rapid** and **temporary** instruction that mitigates the issue that

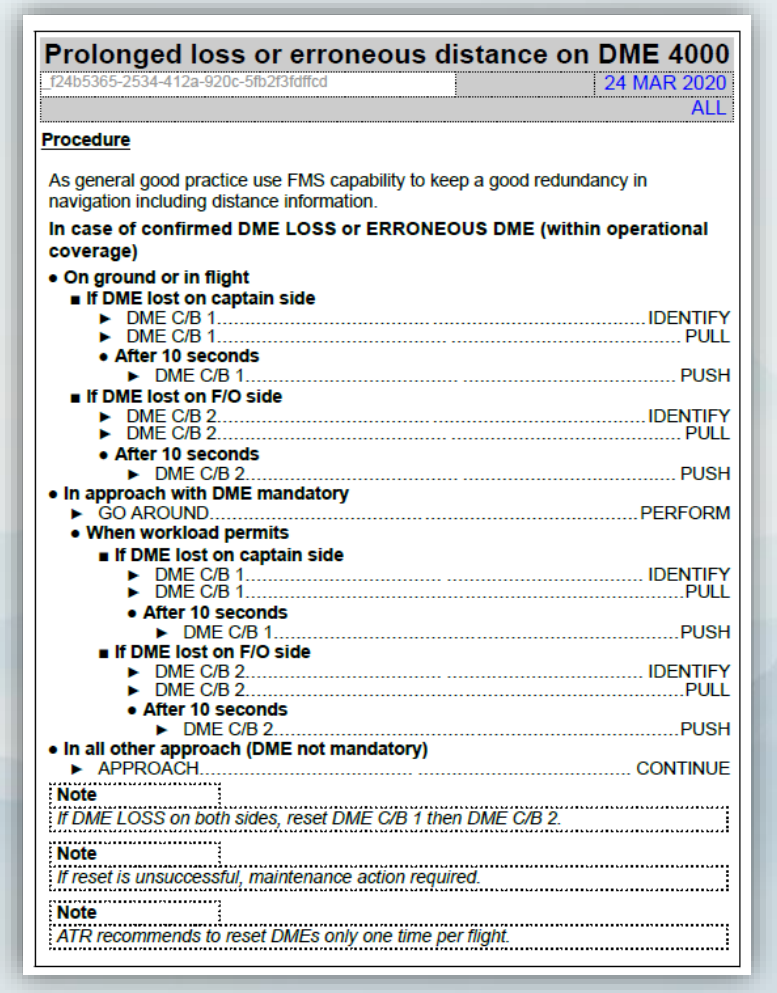
- Has a significant impact on aircraft operations
- Requires communication to all flight crews of new/revised operational procedures or limitation changes.
- Available in the FCOM/QRH

OEB Example

OEB n°35 Prolonged loss or erroneous distance on DME 4000

- Explanation : DME-4000 occurrences have been described in service. DME occurrences are random and not related to a systematic pattern of navaid, route or phase of flight. DME-4000 occurrences belong to two categories:
  - **Prolonged loss of distance**
  - **Erroneous distance**

  In such case, it has been observed that the reset of the affected DME C/Bs restores the system.



Prolonged loss or erroneous distance on DME 4000

f24b5365-2534-412a-920c-5fb2f3fdffcd — 24 MAR 2020

ALL

Procedure

As general good practice use FMS capability to keep a good redundancy in navigation including distance information.

In case of confirmed DME LOSS or ERRONEOUS DME (within operational coverage)

- **On ground or in flight**
  - **If DME lost on captain side**
    - ► DME C/B 1 ..... IDENTIFY
    - ► DME C/B 1 ..... PULL
    - **After 10 seconds**
      - ► DME C/B 1 ..... PUSH
  - **If DME lost on F/O side**
    - ► DME C/B 2 ..... IDENTIFY
    - ► DME C/B 2 ..... PULL
    - **After 10 seconds**
      - ► DME C/B 2 ..... PUSH
- **In approach with DME mandatory**
  - ► GO AROUND ..... PERFORM
  - **When workload permits**
    - **If DME lost on captain side**
      - ► DME C/B 1 ..... IDENTIFY
      - ► DME C/B 1 ..... PULL
      - **After 10 seconds**
        - ► DME C/B 1 ..... PUSH
    - **If DME lost on F/O side**
      - ► DME C/B 2 ..... IDENTIFY
      - ► DME C/B 2 ..... PULL
      - **After 10 seconds**
        - ► DME C/B 2 ..... PUSH
- **In all other approach (DME not mandatory)**
  - ► APPROACH ..... CONTINUE

Note

If DME LOSS on both sides, reset DME C/B 1 then DME C/B 2.

Note

If reset is unsuccessful, maintenance action required.

Note

ATR recommends to reset DMEs only one time per flight.

OEB Management

OEB Distribution

- *Monitor ATR communication?*
- *OEB distribution to all stakeholders?*

Flight crew awareness

- *Training?*

OEB Reduction plan

End 2020 : 44 active OEB for all ATR fleet

ATR Flight Safety Board acted the need to **reduce the number of active OEB**.

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LOEB extract from Fleet manual for 72-600 Rev. 10.0 July 2020

13 OEBs for one aircraft

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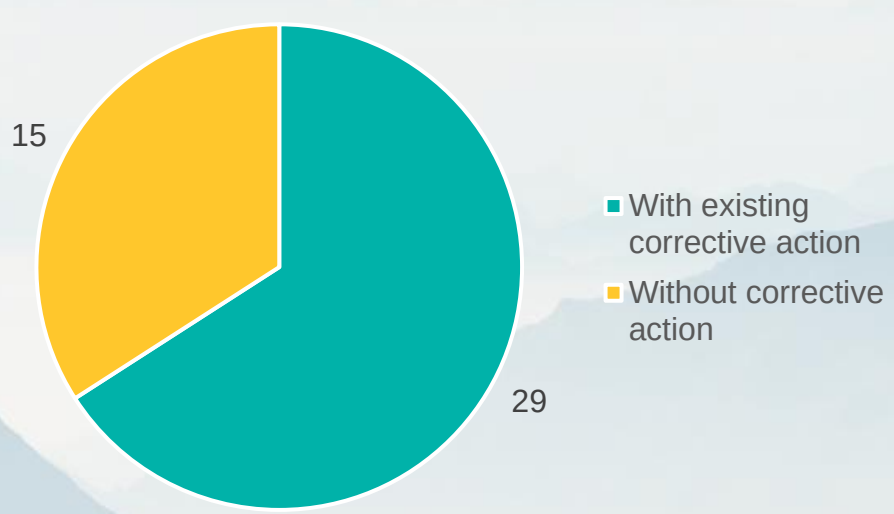

OEB Category n°1 :Active with existing corrective action.

OEB is active to aircraft that have not been retrofitted with associated SB.

OEB Category n°2 : Active without corrective action.

OEB is active to all aircraft concerned with the issue

OEB Reduction plan

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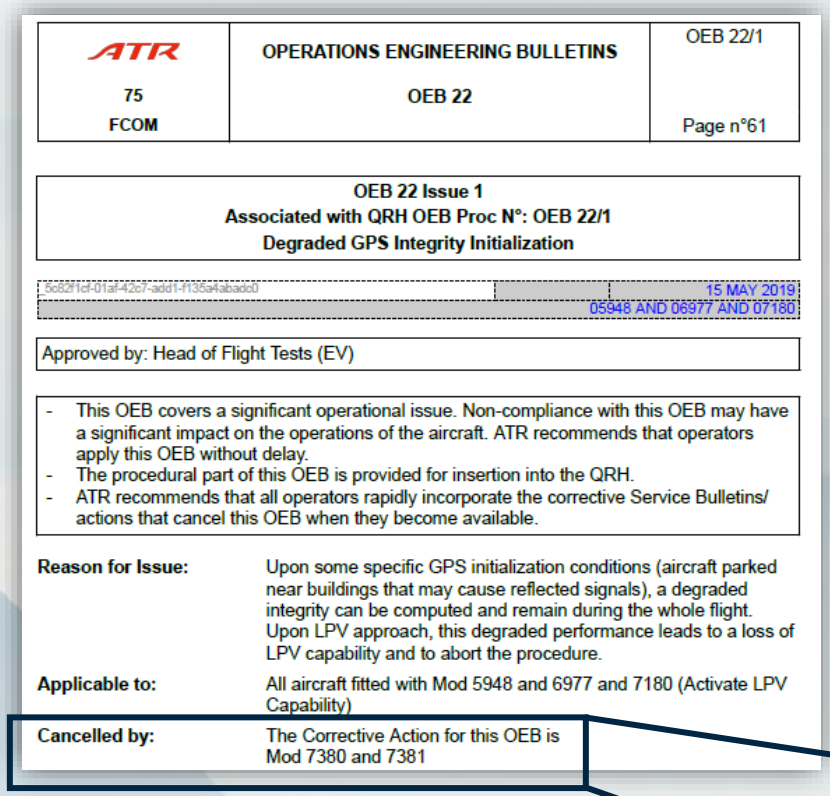


ATR 75 FCOM	OPERATIONS ENGINEERING BULLETINS OEB 22	OEB 22/1 Page n°61

OEB 22 Issue 1
Associated with QRH OEB Proc N°: OEB 22/1
Degraded GPS Integrity Initialization

5c82f1cf-01af-42c7-add1-f135a4abadc0 — 15 MAY 2019
05948 AND 06977 AND 07180

Approved by: Head of Flight Tests (EV)

- This OEB covers a significant operational issue. Non-compliance with this OEB may have a significant impact on the operations of the aircraft. ATR recommends that operators apply this OEB without delay.
- The procedural part of this OEB is provided for insertion into the QRH.
- ATR recommends that all operators rapidly incorporate the corrective Service Bulletins/ actions that cancel this OEB when they become available.

Reason for Issue: Upon some specific GPS initialization conditions (aircraft parked near buildings that may cause reflected signals), a degraded integrity can be computed and remain during the whole flight. Upon LPV approach, this degraded performance leads to a loss of LPV capability and to abort the procedure.

Applicable to: All aircraft fitted with Mod 5948 and 6977 and 7180 (Activate LPV Capability)

Cancelled by: The Corrective Action for this OEB is Mod 7380 and 7381

ATR promotes the implementation of SB solutions that cancel OEBs

AND

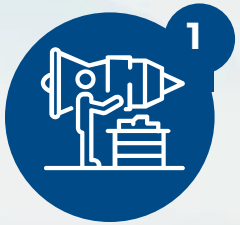
Track implementation of the retrofit.

Cancelled by: The Corrective Action for this OEB is Mod 7380 and 7381

OEB Reduction plan

OEB Category n°2 : Active without corrective action.
OEB is active to all aircraft concerned with the issue.

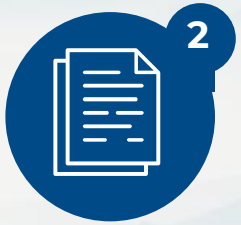
ATR actions:



Technical fix

Develop technical modifcation to fix the OEB issue

OR



Integration inside documentation

Cancel OEB by integrating the OEB inside standard procedure.

OEB Reduction plan

OEB Category n°2 : Active without corrective action.
OEB is active to all aircraft concerned with the issue.

Airline example

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July 2020

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OEB 56 Issue 4	Potential temporary loss of all Cockpit Display Systems
OEB 60 Issue 2	Electronic procedures and checklists databases not to be used in operations

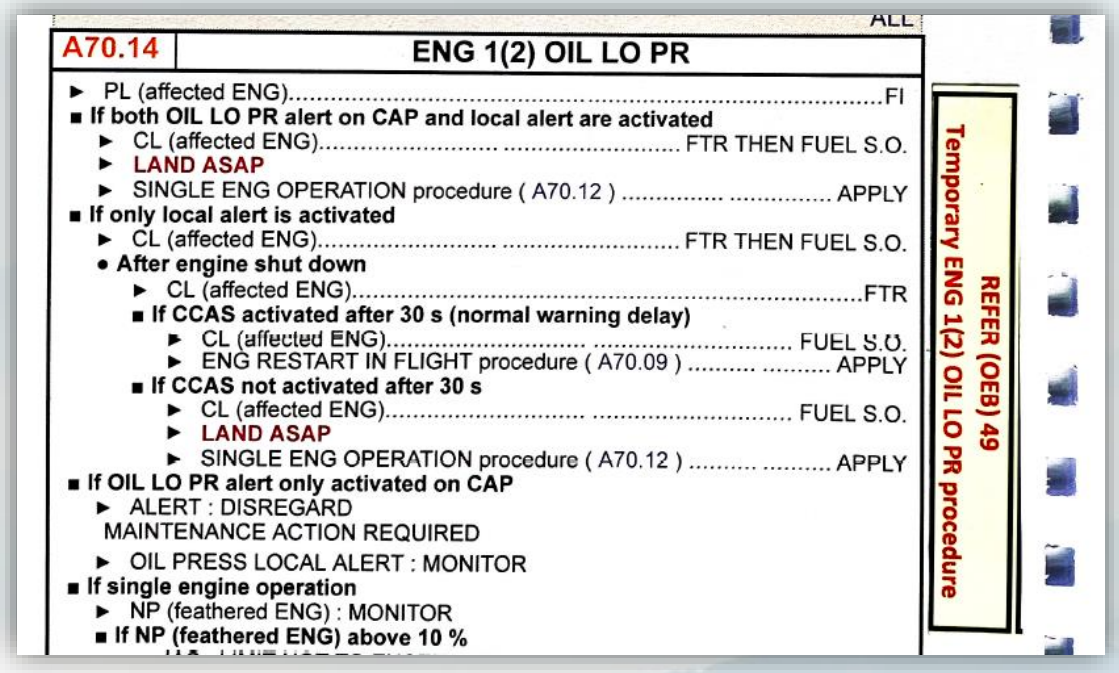
Oct 2023

OEB Category n°1 :Active with existing corrective action.

OEB Category n°2 : Active without corrective action.

OEB Category n°2 : with corrective action planned for 2024

In service feedback – good practices to manage OEBs



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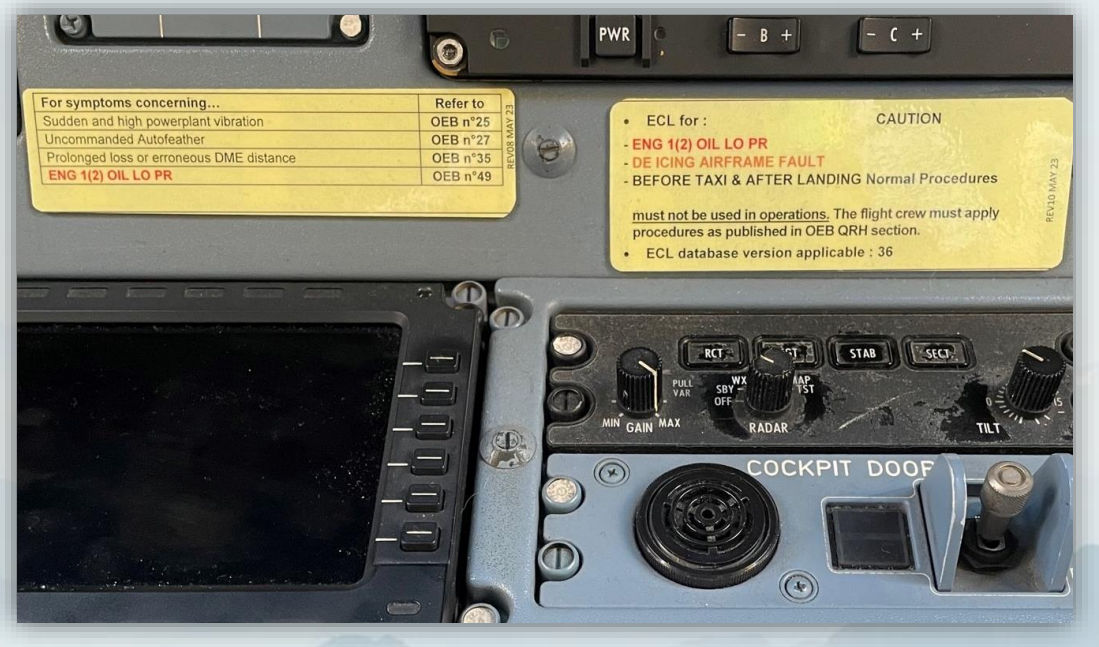
A70.14 **ENG 1(2) OIL LO PR**

- ► PL (affected ENG)..... FI
- ■ **If both OIL LO PR alert on CAP and local alert are activated**
  - ► CL (affected ENG)..... FTR THEN FUEL S.O.
  - ► **LAND ASAP**
  - ► SINGLE ENG OPERATION procedure (A70.12) ..... APPLY
- ■ **If only local alert is activated**
  - ► CL (affected ENG)..... FTR THEN FUEL S.O.
  - • **After engine shut down**
    - ► CL (affected ENG)..... FTR
    - ■ **If CCAS activated after 30 s (normal warning delay)**
      - ► CL (affected ENG)..... FUEL S.O.
      - ► ENG RESTART IN FLIGHT procedure (A70.09) ..... APPLY
    - ■ **If CCAS not activated after 30 s**
      - ► CL (affected ENG)..... FUEL S.O.
      - ► **LAND ASAP**
      - ► SINGLE ENG OPERATION procedure (A70.12) ..... APPLY
- ■ **If OIL LO PR alert only activated on CAP**
  - ► ALERT : DISREGARD
    MAINTENANCE ACTION REQUIRED
  - ► OIL PRESS LOCAL ALERT : MONITOR
- ■ **If single engine operation**
  - ► NP (feathered ENG) : MONITOR
  - ■ **If NP (feathered ENG) above 10 %**

REFER (OEB) 49
Temporary ENG 1(2) OIL LO PR procedure

Note in QRH



Placards in cockpit

Conclusion

Significant reduction of the OEB
Continuous effort on OEB backlog

Sensibilize and train the flight crew
Crew should be able to identify OEB situation and refer to it.

Check if technical fix is available
And report it if installed.