Operations Engineering Bulletin reminder function

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1 | Introduction

The OEB reminder function provides help to the flight crew by enabling them to clearly identify the ECAM messages affected by an OEB.
Airbus strongly supports the use of this device since it reduces the flight crew workload, decreases the possibility to forget an OEB procedure and keeps the flight crew confidence in the ECAM. This article intends to further promote this function and its use.

2 | Operations Engineering Bulletin

Operations Engineering Bulletins are issued by Airbus in parallel to the FCOM / QRH in order to provide temporary operational procedures that address any deviation, from initial design objectives, having an operational impact. OEB procedures are recommended by Airbus, and should be followed immediately.

There are two types of OEBs, distinguished by their RED or WHITE color code.

RED OEBs
are issued to highlight procedures having a significant impact on the aircraft airworthiness and are subject to an Airworthiness Directive.
Red OEBs are included in the FCOM Volume 3, and a copy of their procedure is copied in the QRH OEB chapter.
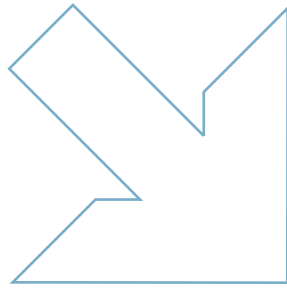
WHITE OEBs
are issued to highlight information or procedures having an impact on the aircraft airworthiness.
White OEBs are included in FCOM Volume 3. If the OEB procedure is a deviation to ECAM, the OEB procedure is also copied in the QRH OEB chapter.

During the preliminary cockpit preparation, the flight crew must review all OEBs applicable to the aircraft. It must pay a particular attention to the red OEBs, and more particularly to the red OEBs that override an ECAM procedure.

Note: Airbus is currently working on a new QRH List of Effective OEB (LEOEB) layout that will provide our operators with the list of all applicable OEB versus their color and their impact on ECAM, if any (for additional information, please refer to the Operations Liaison Meeting 2006 presentation).

3 | Operations Engineering Bulletin reminder function

The Flight Warning Computer (FWC) OEB reminder function is implemented to enable the flight crew to clearly identify on the ECAM, all the procedures / status messages affected by an OEB.

When a warning / caution occurs, a message informs immediately the flight crew that an OEB exists for the corresponding displayed alert / status. In this case, the flight crew must refer to the QRH instead of the ECAM procedures.

Three cases may arise:
- Only the ECAM procedure is affected
- Only the status message is affected
- Both the ECAM procedure and the corresponding status messages are affected

Only the ECAM procedure is affected:
The ECAM alert title and related status messages do not change. All the corresponding actions are suppressed and replaced by a "REFER TO QRH PROC" message.

Example:

```
AIR PACK1 OVHT
-REFER TO QRH PROC          ECAM UPPER DISPLAY (E/WD)

              STATUS
.WHEN PACK OVHT OUT:   INOP SYS
-PACK1........ON       PACK1    ECAM LOWER DISPLAY (SD)
```

Only the ECAM status messages are affected:
The ECAM alert title and related status messages do not change. The corresponding procedure does not change, except for the additional "FOR STS REFER TO QRH" line. The related status messages on the ECAM do not change, except for the additional "REFER TO QRH PROC" title.

Example:

```
AIR PACK1 OVHT
 -PACK1.......OFF
•WHEN PACK OVHT OUT:          ECAM UPPER DISPLAY (E/WD)
 -PACK1.......ON
 -FOR STS REFER TO QRH

              STATUS
REFER TO QRH PROC
.WHEN PACK OVHT OUT:   PACK1   ECAM LOWER DISPLAY (SD)
 -PACK1........ON
```

Both the ECAM procedure and the corresponding status messages are affected:
The ECAM alert title does not change. All the corresponding actions are suppressed and replaced by a "REFER TO QRH PROC" message. The related status messages on the ECAM do not change, except for the additional "REFER TO QRH PROC" title.
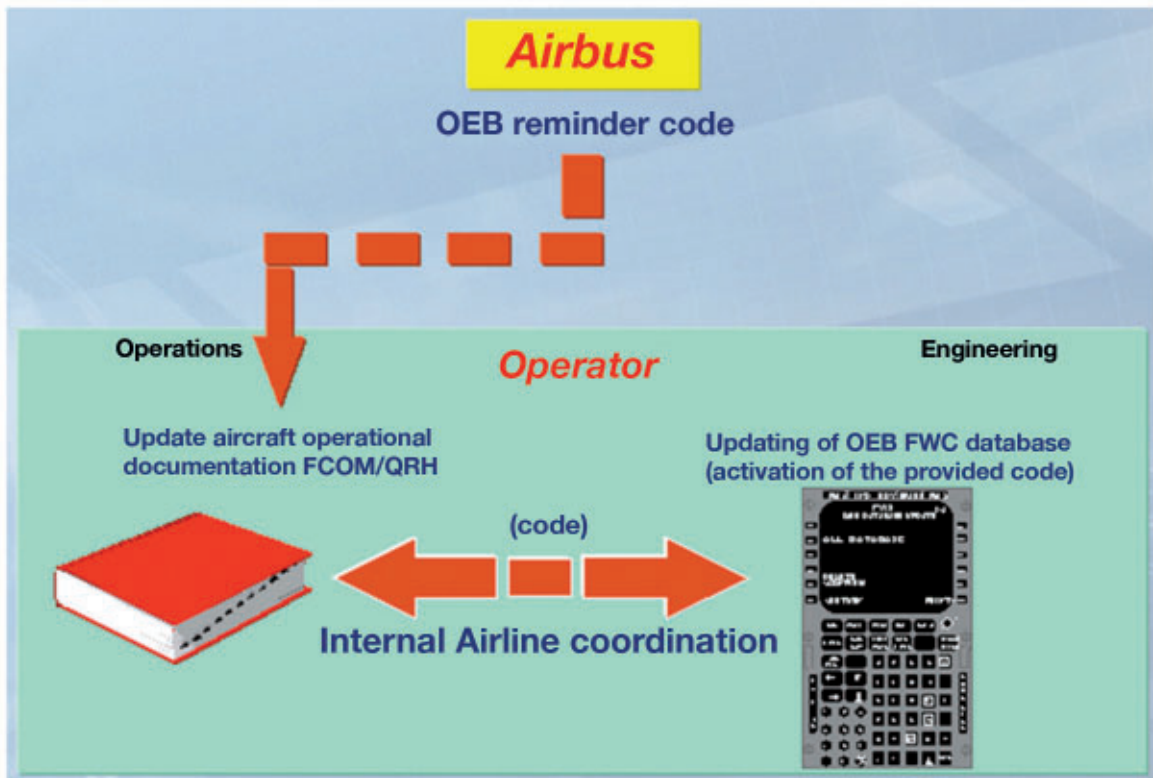
Example:

```
AIR PACK1 OVHT
-REFER TO QRH PROC          ECAM UPPER DISPLAY (E/WD)

              STATUS
REFER TO QRH PROC    INOP SYS
.WHEN PACK OVHT OUT:          ECAM LOWER DISPLAY (SD)
 -PACK1........ON    PACK1
```

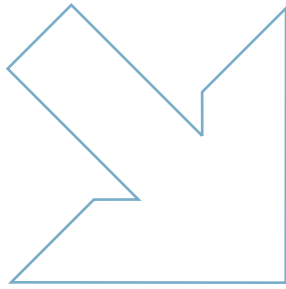## 4 | Activation / deactivation of the OEB Reminder function:

Activation of the OEB Reminder function:

When an ECAM warning / caution is affected by an OEB, an OEB Reminder code is provided in the operational documentation (FCOM Vol.3 & QRH). This code allows the operator to activate the OEB Reminder function for the concerned ECAM warning / caution, according to the AMM task (Load OEB Reminder information into FWC using MCDU).

It is important to note that the aircraft operational documentation has to be updated before or at the same time as the activation of the OEB Reminder function since the actions of the affected ECAM alert may be suppressed (the flight crew is asked to refer to the QRH).
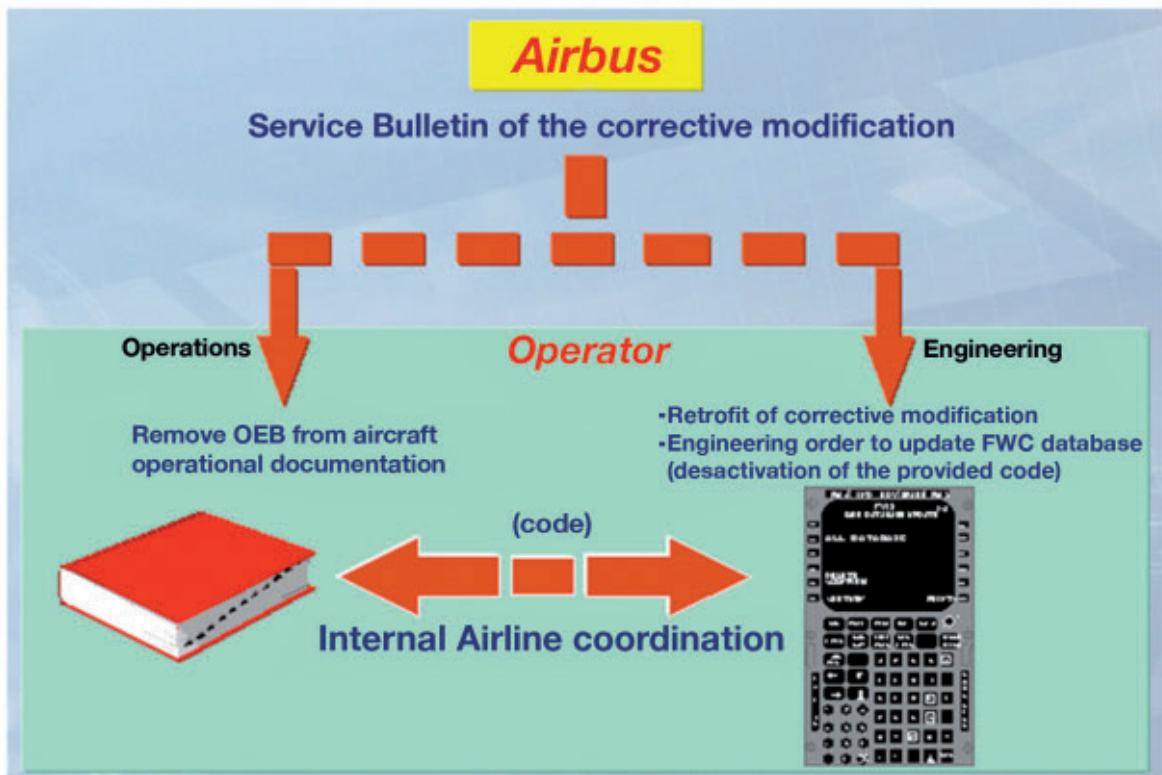
Deactivation of the OEB Reminder function:

Once a corrective solution is available, Airbus provides an associated SB that allows the retrofit of the corrective modification. As soon as the SB is retrofitted, the OEB Reminder function has to be deactivated according to the AMM task (Delete OEB REMINDER information into FWC using MCDU).

It is important to note that the aircraft operational documentation has to be updated at the same time or after the deactivation of the OEB Reminder function.

5 | OEB reminder function
Airline implementation

The OEB Reminder function was presented during the Operations Liaison Meeting 2006 and during the last 15th Performance & Operations Conference held in Puerto-Vallarta,Mexico, in April 2007.

These conferences, together with a survey that we conducted do confirm the following:
As indicated in chapter 4 above, **appropriate coordination** between the Flight Operations and Maintenance / Engineering departments within the airline is **key** to an efficient implementation and operation of the OEB reminder function.

Analysis of positive answers from airlines that use the function shows that an adequate implementation process is as follows:
Step 1:
Each OEB is validated by the Operational Engineering.
Step 2:
The documentation (FCOM and QRH) is updated and distributed.
Step 3:
If there is an OEB reminder code to be activated, the item is handed over to the
Maintenance Engineering to activate the code on the Flight Warning Computer (FWC) of the aircraft.
Step 4:
During the retrofit of the correcting modification, the deletion of the OEB reminder
code is integrated in the work order
Step 5:
Once the retrofit is completed for all aircraft of the fleet, the documentation is updated.

6 | Conclusion

The OEB reminder function provides help to the flight crew by enabling them to clearly / easily identify ECAM procedures overridden by OEBs. It is a very good tool to assure that the flight crew are made aware of the correct procedure when a Temporary Procedure overrides the ECAM.

Operators have to be aware that this device requires special attention and a specific management should be put in place. The Operational Engineering and the Aircraft Engineering, as well as the Maintenance Control Center, have to be involved in a common process to deal with the OEB reminder function.

For long-range aircraft, the OEB reminder function is optional, and is free-of-charge through RFC/RMO Service Bulletin (SB) 31-3020 for A330 aircraft, and SB 31-4032 for A340 aircraft.

For single-aisle aircraft, Airbus has launched a fleet-wide, free-of-charge, Airbus-monitored retrofit campaign (SB 31-1264) that consists of upgrading the FWC to the H2F2 Standard for all single-aisle family aircraft. This retrofit campaign also includes the optional activation of the OEB reminder function (for additional information, please refer to the Retrofit Information Letter (RIL), reference SER/916.0551/06, dated Nov. 15, 2006).

Note: This device does not exist on A300-600 / A310 Family.

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