



Presented by

Hélène REBEL

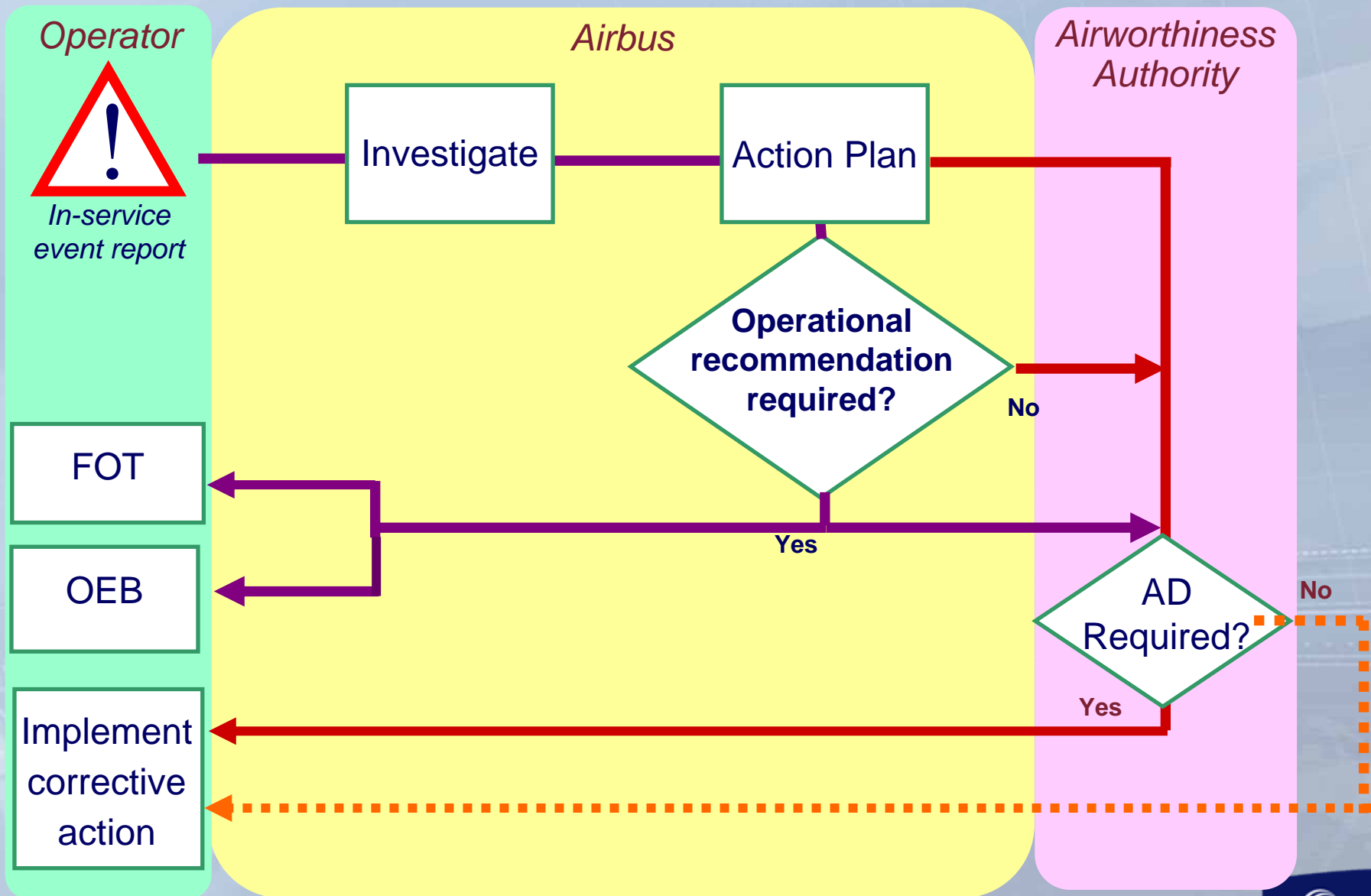
Group Manager A330/A340
Operational Standards

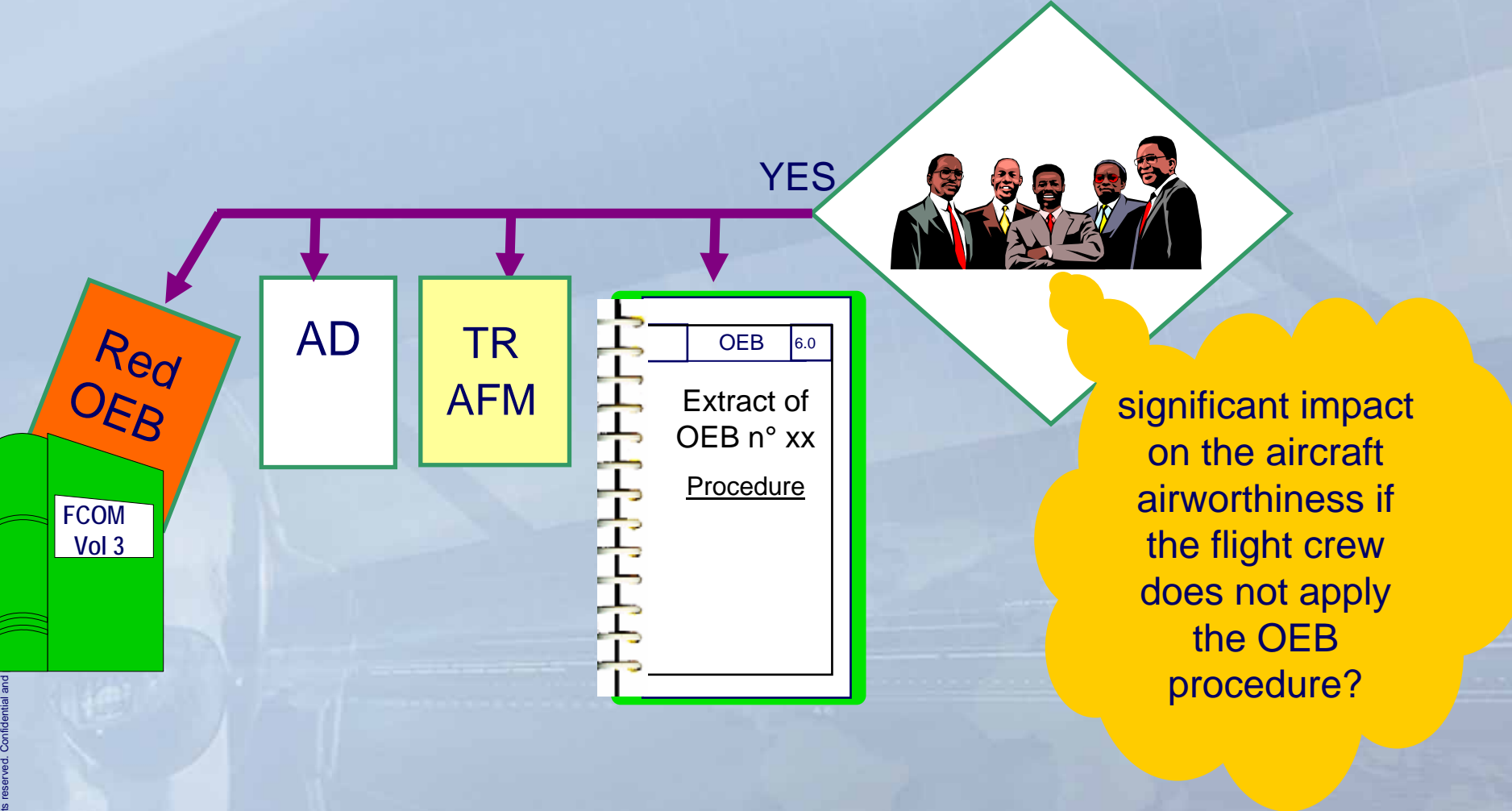
How to deal with the OEBs

Contents

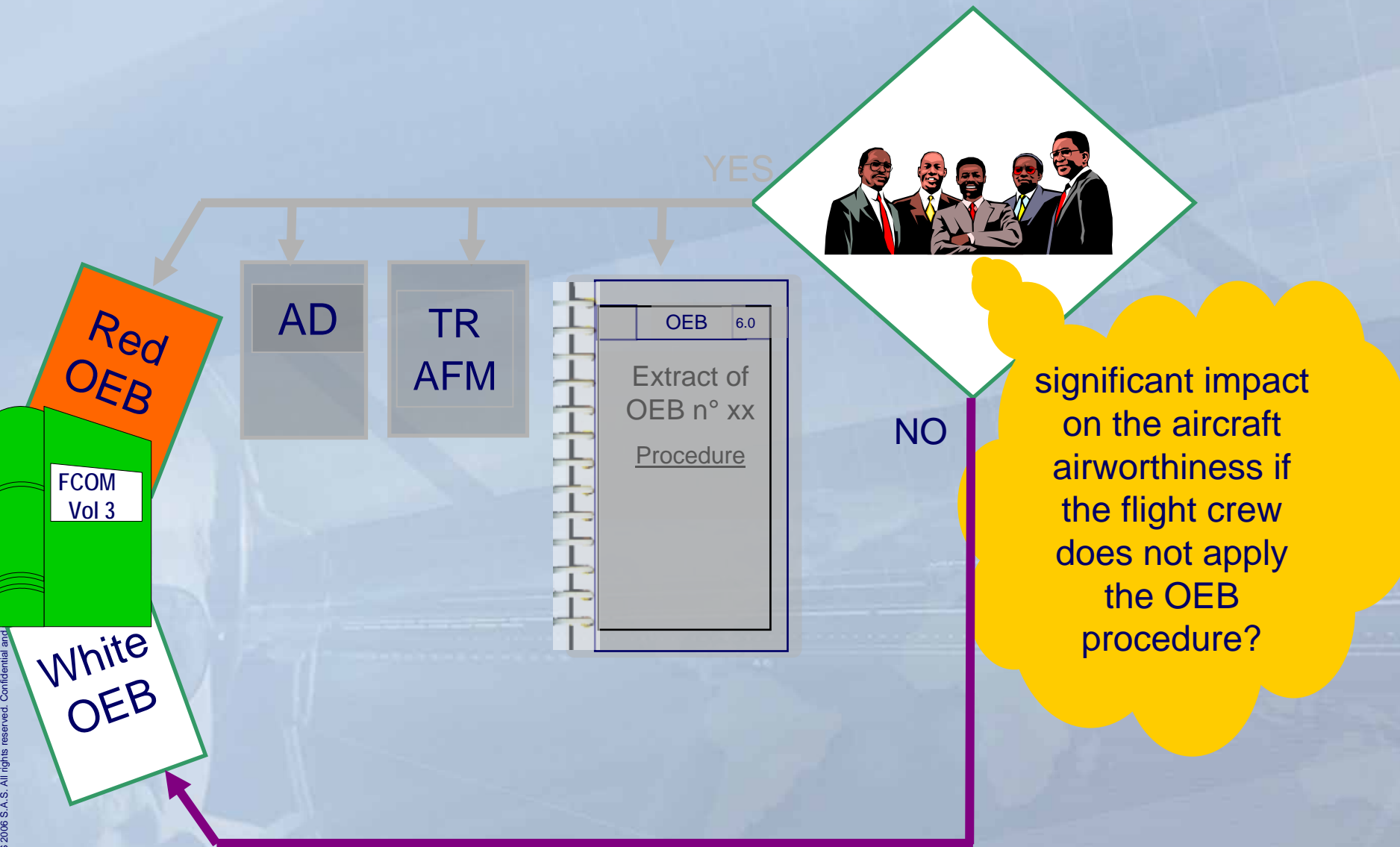
- 1 Red / White OEB Policy
- 2 OEB review during preliminary cockpit preparation
- 3 OEB reminder function
- 4 How to handle OEB's procedures
- 5 Conclusion

Red / White OEB policy

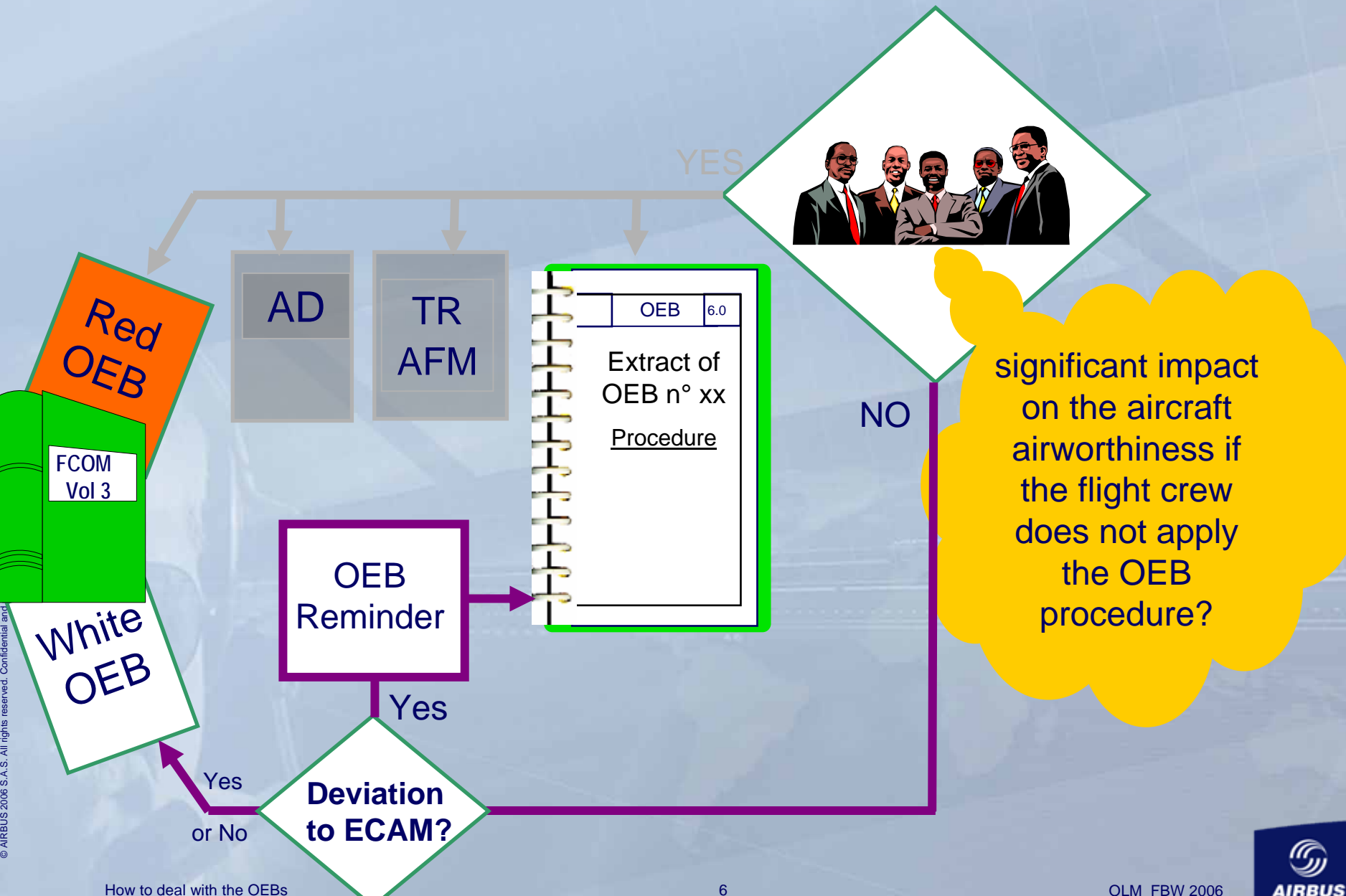




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Red / White OEB policy

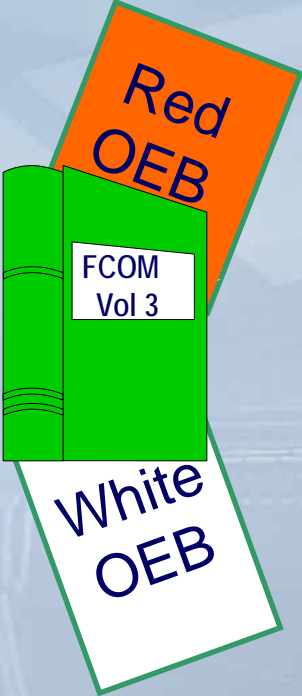
Today

Proc of
**Red
OEBs**

Proc of
White
OEBs
with OEB
reminder

TRs of QRH

All OEBs



	OEB	6.0
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Extract of OEB n°
xx

Procedure

Red / White OEB policy

Today

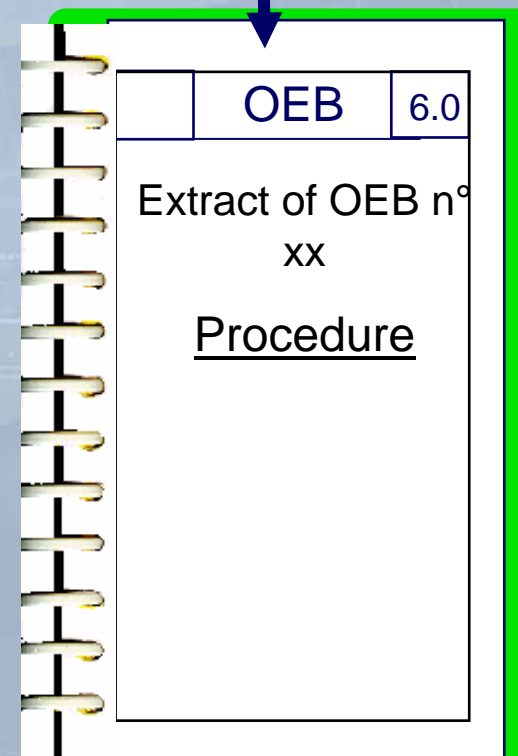
Why are not all OEBs in the QRH?

- Red OEBs for rapid access
- OEB reminder because the ECAM procedure is removed
- Not to thicken too much the QRH

Proc of
**Red
OEBs**

Proc of
White
OEBs
with OEB
reminder

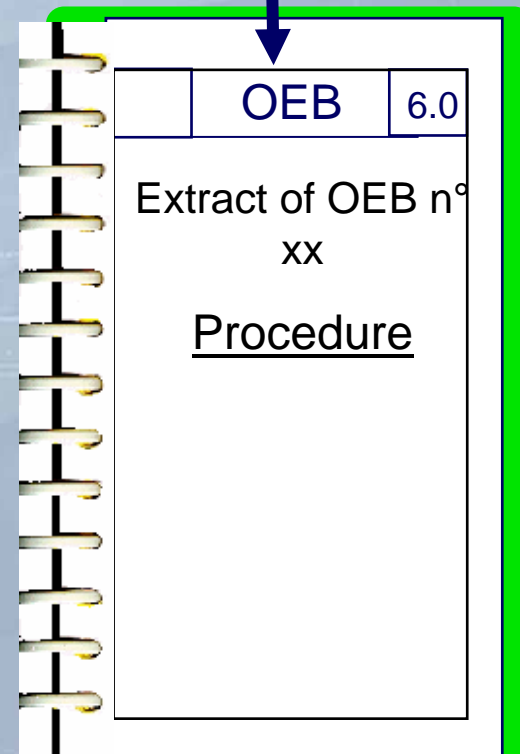
TRs of QRH

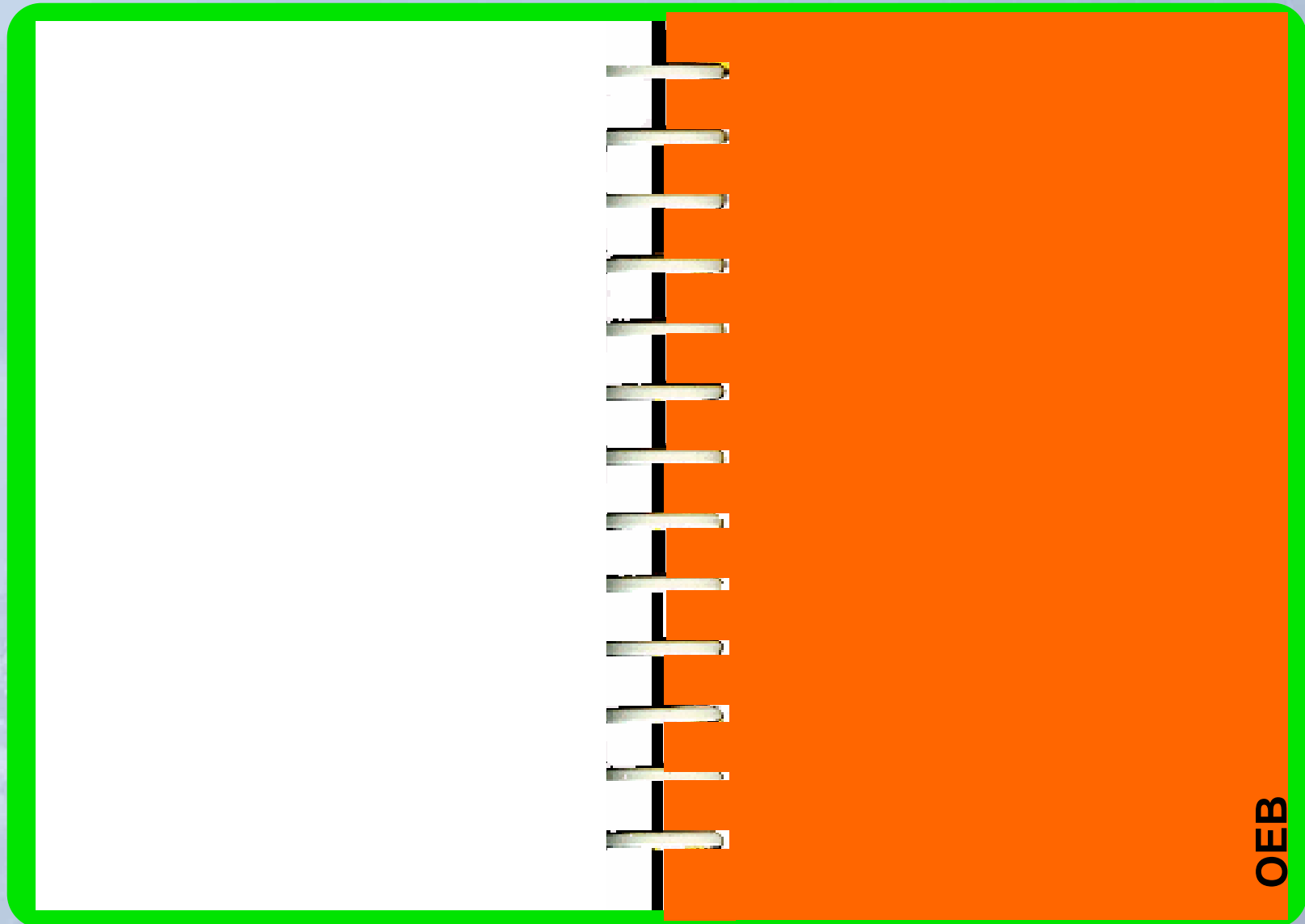


Why change?

- Ease the pilot's OEB review during preliminary cockpit preparation
- Ease the access to any OEB procedure
- Keep rapid access to red OEBs (they are in first position)
- QRH thickness should not grow:
 - ◆ Better Airline/Airbus communication for corrective action helps minimize the number of OEBs
 - ◆ One page per OEB / reduced paper weight

All OEBs
procedures





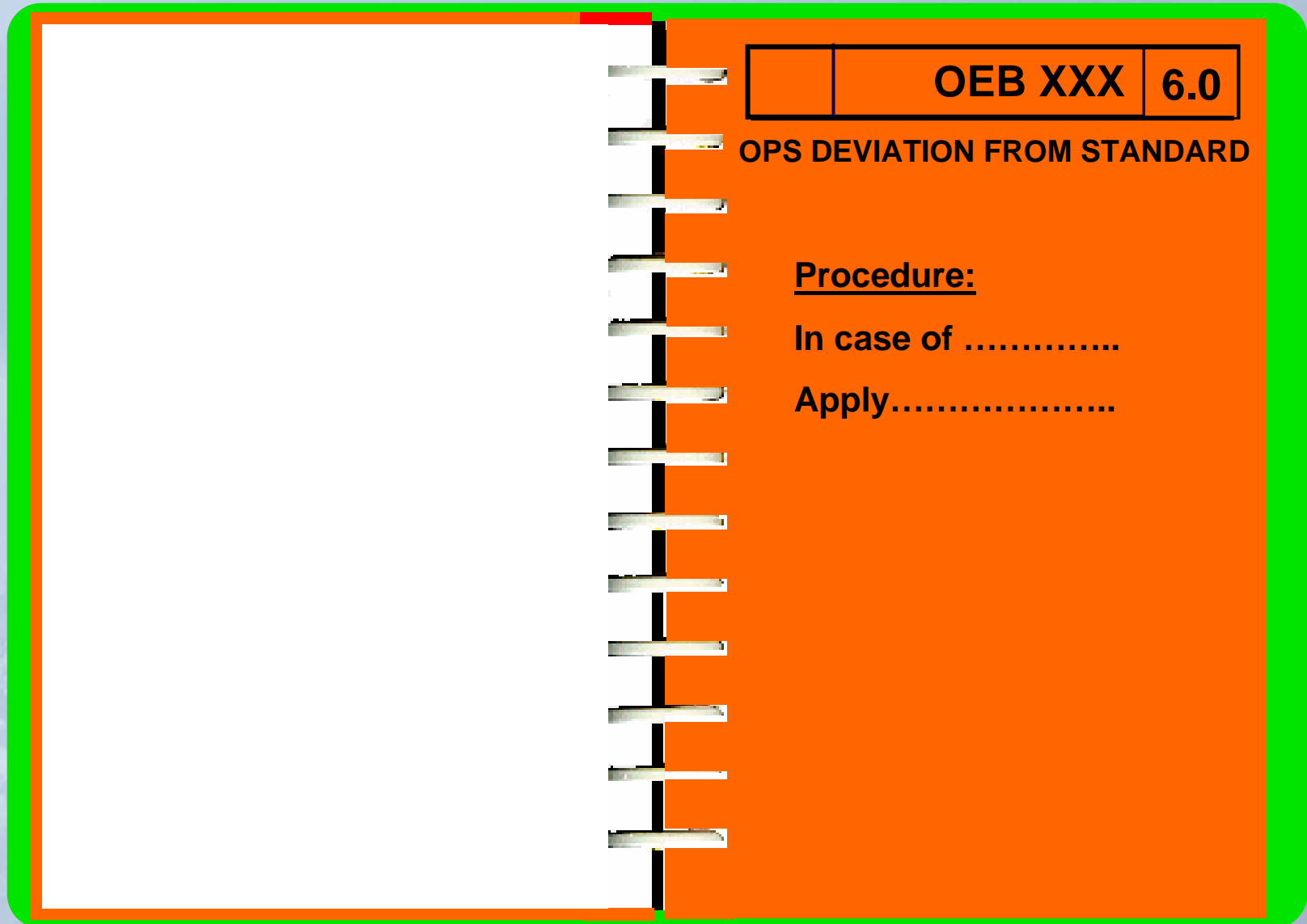
A340 QRH SECTION 6 (FLIGHT OPERATIONS)

LIST OF OEB

OEB NO	TYP	AFFECTS ECAM	DATE	TITLE	EFFECTIVITY
001-12	R	Y	AUG1997	OPS DEVIATIONS FROM STANDARD	ALL
010-2	R	N	AUG1997	AIR COND CABIN COMFORT	ALL
005-2	W	Y	OCT 1999	FUEL TRIM LINE DAMAGE	ALL
046-1	W	N	JUN2003	SPURIOUS ECAM AFTER ENG FIRE	ALL

06 DEC 2004

L/OEB 001



	OEB XXX	6.0
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SPURIOUS ECAM AFTER ENG FIRE

Procedure:

In case of

Apply.....

A340 QRH SECTION 6 (FLIGHT OPERATIONS)						
LIST OF OEB						
OEB NO	TYP	AFFECTS ECAM	---DATE---	TITLE	EFFECTIVITY	
001-12	R	Y	AUG1997	OPS DEVIATIONS FROM STANDARD	ALL	
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OEB review during preliminary cockpit preparation

Tomorrow

- ✓ Review OEBs from QRH:

A340

QRH

OEB
N0

TYP

AFFECTS
ECAM

Without OEB
reminder function

With OEB
reminder function

001-12

R

Y



OEB entry point
must be known

No need to know
the OEB entry point

010-2

R

N

005-2

W

Y

046-1

W

N

OEB review during preliminary cockpit preparation

Tomorrow

- ✓ Review OEBs from QRH:

A340

QRH

Without OEB
reminder function

With OEB
reminder function

OEB
N0

TYP

AFFECTS
ECAM

001-12

R

Y

010-2

R

N



OEB entry point
must be known

OEB entry point
must be known

005-2

W

Y

046-1

W

N

OEB review during preliminary cockpit preparation

Tomorrow

- ✓ Review OEBs from QRH:

A340	QRH	
OEB NO	TYP	AFFECTS ECAM
001-12	R	Y
010-2	R	N
005-2	W	Y
046-1	W	N

Without OEB reminder function

With OEB reminder function

OEB entry point should be known

No need to know the OEB entry point



OEB review during preliminary cockpit preparation

Tomorrow

- ✓ Review OEBs from QRH:

A340	QRH	
OEB N0	TYP	AFFECTS ECAM
001-12	R	Y
010-2	R	N
005-2	W	Y
046-1	W	N

Without OEB reminder function

With OEB reminder function

OEB entry point should be known

OEB entry point should be known



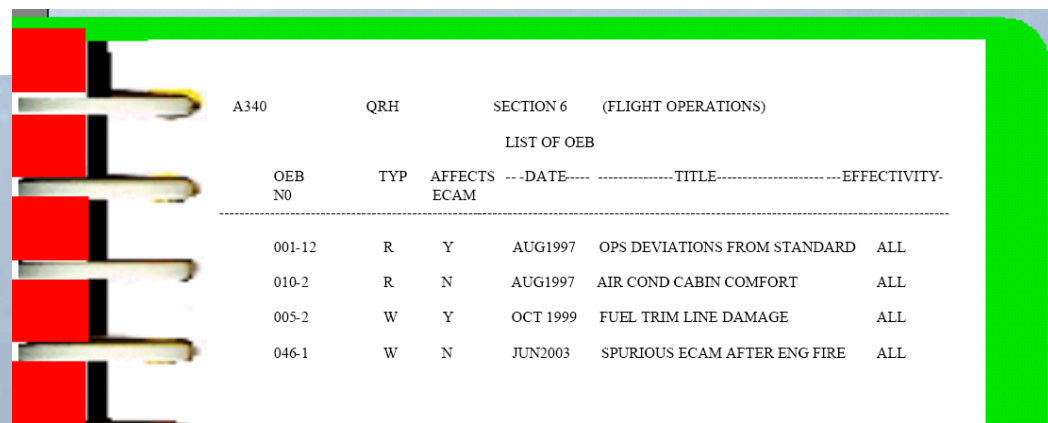
OEB review during preliminary cockpit preparation

Tomorrow

- ✓ The list of applicable OEB is part of the technical status of the aircraft
- ✓ The **SOP** 3.03.02 “Technical condition of the aircraft” and the **FCTM** will be amended:

The flight crew must review all OEBs applicable to the aircraft. The flight crew must pay a particular attention to the red OEBs, and more particularly to the red OEBs that must be applied before the ECAM procedure.

To ease this task, he can refer to the list of applicable OEBs in the QRH section 6 that identifies the OEB color and if the OEB procedure deviates from the ECAM procedure and/or STATUS



A340 QRH SECTION 6 (FLIGHT OPERATIONS)
LIST OF OEB

OEB NO	TYP	AFFECTS ECAM	---DATE---	TITLE-----	EFFECTIVITY-
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OEB review during preliminary cockpit preparation

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For Airlines activating systematically the published OEB reminder codes:
Their flight crews have not to memorize in which condition the OEB procedure applies, provided the OEB is linked with an OEB reminder code.

OEB review during preliminary cockpit preparation

- ✓ As for any QRH page, Airbus suggests that the operator customizes the list of OEBs to each aircraft (remove non applicable OEBs for a given MSN)

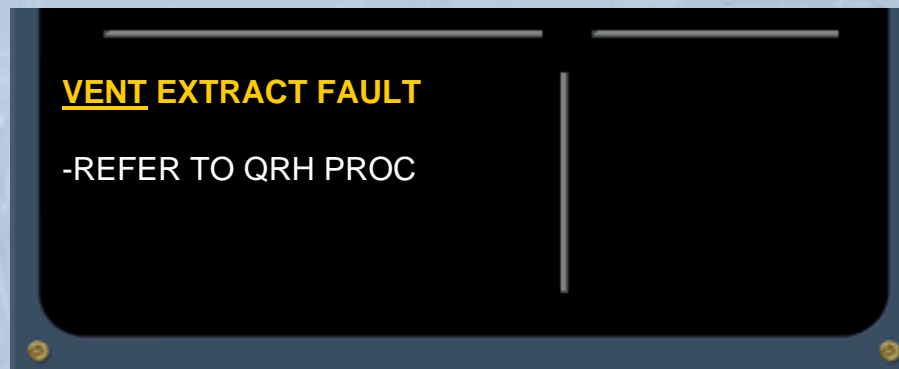
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OEB reminder

✓ Airbus strongly recommends the operators to activate the OEB reminder function and enter the OEB codes

- ✓ To ease the pilot task - no need to memorize when to apply the OEB procedure when ECAM is affected
- ✓ To clearly identify on the ECAM all warnings and status procedures affected by an OEB (red or white)



OEB reminder

Airbus

FOT/OIT
+ OEB/QRH (code)

FOT/OIT (without code)

Operations

Airline

Engineering

Update aircraft operational
documentation FCOM/QRH

Updating of OEB FWC database



OEB code

Internal Airline coordination



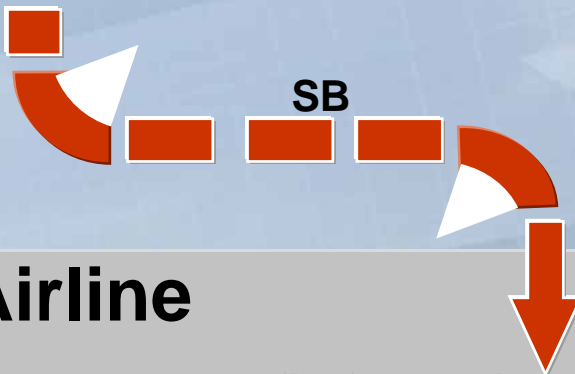
OEB reminder

✓ Consider implementing a way to inform your pilots that the OEB reminder code is entered in the MCDU:

- ✓ Put a stamp on the List of OEBs of the QRH?
- ✓ Put a stamp on the OEB of the QRH?

OEB reminder

Airbus



SB

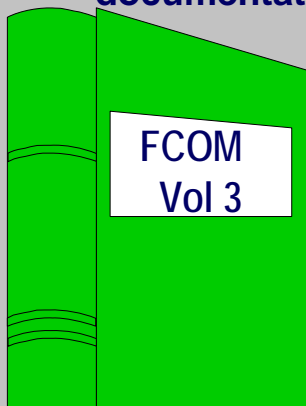
Operations

Airline

Engineering

Remove OEB from aircraft documentation FCOM/QRH

- Retrofit of corrective modification
- Engineering order to update FWC database



FCOM
Vol 3

(code)



Internal Airline coordination



OEB reminder

✓ Long Range:

- ✓ Standard from production

- ✓ Activation for in-service aircraft via RFC (A330, Mod 45057, SB 31-3020 / A340, Mod 45057, SB 31-4032)

✓ Single Aisle:

- ✓ Available from production upon request via RFC

- ✓ Activation for in-service aircraft RFC (Mod 25590 SB 31-1113).

- ✓ FWCs from E2 std are capable of OEB reminder function

- ✓ Actions launched to harmonize between programs to have this function as standard for both SA & LR programs

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When the OEB procedure supersedes the ECAM

I have seen an OEB on this ECAM caution during the preliminary cockpit preparation



“Refer to QRH procedure”



OEB XXX	6.0
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VENT EXTRACT FAULT

Procedure:

In case of VENT EXTRACT FAULT:

-EXTRACT.....OVRD

-PACK FLOW.....LO

VENT EXTRACT FAULT

-EXTRACT.....OVRD

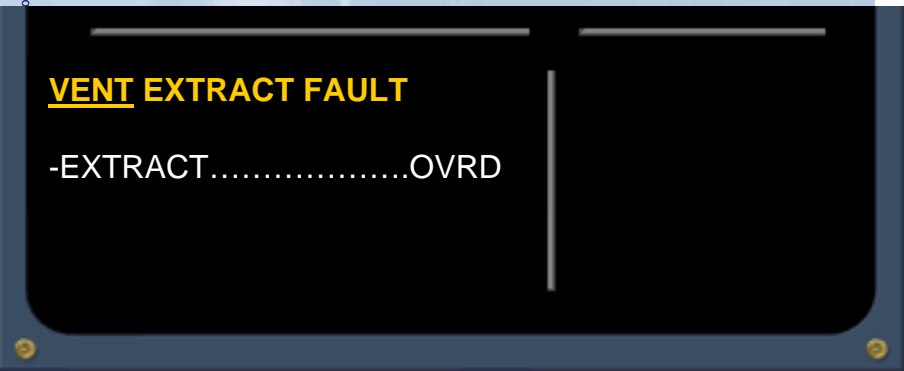


When the OEB procedure supersedes the ECAM

✓ Call “STOP ECAM” if at any time, **if you realize too late that an OEB applies**, and apply QRH procedure



“STOP ECAM”



	OEB XXX	6.0
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VENT EXTRACT FAULT

Procedure:

In case of VENT EXTRACT FAULT:

- EXTRACT.....OVRD
- PACK FLOW.....LO

When the OEB procedure supersedes the ECAM

“Refer to QRH procedure”



VENT EXTRACT FAULT

-REFER TO QRH PROC

	OEB XXX	6.0
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VENT EXTRACT FAULT

Procedure:

In case of VENT EXTRACT FAULT:

-EXTRACT.....OVRD

-PACK FLOW.....LO

How to handle OEBs procedure

When the OEB procedure applies independently of the ECAM

I have something to do before the top of descent on this aircraft...



“Refer to QRH procedure”



	OEB XXX	6.0
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ENG STALL AT DESCENT INITIATION

Procedure:

Just before top of descent:

-WING A/ICE.....ON



Training for handling OEBs

- ✓ Two fictitious OEBs will be used:
 - ✓ With and without OEB reminder code
- ✓ Training will be implemented when the new List of OEBs in QRH is published.
- ✓ Training on MFTD and simulator will include:
 - ✓ The review of the OEBs before the flight and how to handle the OEB in flight:
 - ✓ Without OEB reminder function
 - ✓ With OEB reminder function (simulators will be fitted with OEB reminder function)



Conclusion

- ✓ First Airbus objective: Ensure safe aircraft operation
 - ✓ When necessary, Airbus issue OEBs and develop necessary action plan
- ✓ High Airbus activity to cancel OEBs:
 - ✓ At development level
 - ✓ To establish an OEB review with the Airlines
 - ✓ For tracking SB retrofit
- ✓ Airbus strongly recommends using the OEB reminder function

Conclusion

Tomorrow

- ✓ Airbus is developing tools to ease the pilots tasks:
 - ✓ FCOM amendments + All OEBs in QRH
 - ✓ Training for handling OEBs

Conclusion

Tomorrow

- ✓ Airbus is developing tools to ease the pilots tasks:
 - ✓ FCOM amendments + All OEBs in QRH
 - ✓ Training for handling OEBs



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