



**A330/A340**  
FLIGHT CREW  
OPERATING MANUAL

## PROCEDURES

### ABNORMAL AND EMERGENCY PROCEDURES

AIR

#### [QRH] BLEED 1+2 FAULT (APU BLEED ON)

Ident.: PRO-ABN-AIR-00014558.0004001 / 27 FEB 18

Applicable to: ALL

Apply this procedure when both engine bleed supply systems are failed at the end of the **AIR ENG 1+2 BLEED FAULT** ECAM procedure and if the APU bleed supplies the aircraft.

- **At ANY TIME of the procedure, if CAB PR EXCESS CAB ALT alert triggers: APPLY ECAM PROC**

MONITOR CABIN PRESSURE

MAX FL: 220

AVOID ICING CONDITIONS

RCL pb..... PRESS

*This action enables to recover the subtitle (if any) associated with the **AIR ENG 1+2 BLEED FAULT** alert.*

- **If no subtitle with **AIR ENG 1+2 BLEED FAULT** alert**  
and

**If both engine bleeds lost NOT due to engine fire NOR Start Air Valve failed open:**

PACK 1..... ON

PACK 2..... ON

ENG 1 BLEED..... ON

ENG 2 BLEED..... ON

APU BLEED..... OFF

- **If no engine bleed recovered:**

APU BLEED..... ON

- **If PACK 1 available:**

PACK 2..... OFF

ENG 1 BLEED..... OFF

ENG 2 BLEED..... OFF

WING A.ICE NOT AVAILABLE

- **If **RIGHT LEAK** or **BLEED 2 NOT CLOSED** subtitle with **AIR ENG 1+2 BLEED FAULT** alert**  
or

**If engine 2 bleed lost due to engine 2 fire or Start Air Valve 2 failed open:**

PACK 1..... ON

ENG 1 BLEED..... ON

APU BLEED..... OFF

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AIR

**[QRH] BLEED 1+2 FAULT (APU BLEED ON) (Cont'd)**

- If engine 1 bleed not recovered:  
APU BLEED..... ON  
ENG 1 BLEED..... OFF  
WING A.I.CE NOT AVAILABLE



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AIR

#### [QRH] BLEED 1+2 FAULT (APU BLEED NOT AVAILABLE)

Ident.: PRO-ABN-AIR-00014559.0004001 / 27 FEB 18

Applicable to: ALL

Apply this procedure when both engine bleed supply systems are failed at the end of the **AIR ENG 1+2 BLEED FAULT** ECAM procedure and if the APU bleed is NOT available to supply the aircraft.

- At ANY TIME of the procedure, if **CAB PR EXCESS CAB ALT** alert triggers: APPLY ECAM PROC

MAX FL: 100 / MEA-MORA  
AVOID ICING CONDITIONS

RCL pb..... PRESS

*This action enables to recover the subtitle (if any) associated with the **AIR ENG 1+2 BLEED FAULT** alert.*

- If no subtitle with **AIR ENG 1+2 BLEED FAULT** alert  
and

**If both engine bleeds lost NOT due to engine fire NOR Start Air Valve failed open NOR APU leak fed by engine:**

PACK 1..... ON

PACK 2..... ON

ENG 1 BLEED..... ON

ENG 2 BLEED..... ON

- If no engine bleed recovered:

ENG 1 BLEED..... OFF

ENG 2 BLEED..... OFF

WING A.ICE NOT AVAILABLE

- When **CAB PR  $\Delta$ P < 1 psi**:

RAM AIR..... ON

- If both engine bleeds lost due to any of the following failures: Bleed failure (indicated by either **LEFT LEAK** and/or **RIGHT LEAK** and/or **BLEED 1 NOT CLOSED** and/or **BLEED 2 NOT CLOSED** subtitles) or engine fire or Start Air Valve failed open or APU leak fed by engine:

NO ENGINE BLEED CAN BE RECOVERED

WING A.ICE NOT AVAILABLE

- When **CAB PR  $\Delta$ P < 1 psi**:

RAM AIR..... ON

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AIR

**[QRH] BLEED 1+2 FAULT (APU BLEED NOT AVAILABLE) (Cont'd)**

- If **LEFT LEAK** or **BLEED 1 NOT CLOSED** subtitle with **AIR ENG 1+2 BLEED FAULT** alert  
or  
If engine 1 bleed lost due to engine 1 fire or Start Air Valve 1 failed open or APU leak fed  
by engine:  
PACK 2.....ON  
ENG 2 BLEED.....ON
  - If engine 2 bleed not recovered:  
ENG 2 BLEED.....OFF  
WING A.ICE NOT AVAILABLE
    - When CAB PR  $\Delta P < 1$  psi:  
RAM AIR.....ON
- If **RIGHT LEAK** or **BLEED 2 NOT CLOSED** subtitle with **AIR ENG 1+2 BLEED FAULT** alert  
or  
If engine 2 bleed lost due to engine 2 fire or Start Air Valve 2 failed open:  
PACK 1.....ON  
ENG 1 BLEED.....ON
  - If engine 1 bleed not recovered:  
ENG 1 BLEED.....OFF  
WING A.ICE NOT AVAILABLE
    - When CAB PR  $\Delta P < 1$  psi:  
RAM AIR.....ON



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AIR

**AIR ABNORM BLEED CONFIG (X BLEED CLOSED)**

Applicable to: MSN 1552-1693

Ident.: PRO-ABN-AIR-E-00018720.0001001 / 21 MAR 16

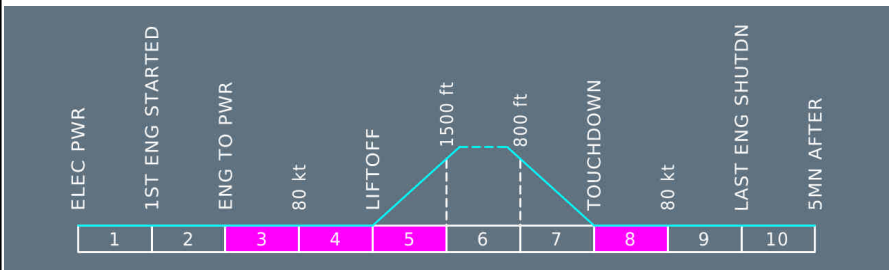
**ANNUNCIATIONS**

Triggering Conditions:

L2

This alert triggers when at least one engine bleed fails, is OFF, or is not supplied.

Flight Phase Inhibition:



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AIR

**AIR ABNORM BLEED CONFIG (X BLEED CLOSED) (Cont'd)**

Ident.: PRO-ABN-AIR-E-00017700.0012001 / 06 JUL 21

- If BLEED is abnormally selected OFF:

ENG 1(2) BLEED OFF

- IF BLEED NOT RECOVERED:

X BLEED.....CLOSE

L2

CLOSE, if:

- LEAK, or
- ENG FIRE (detected, or FIRE pushbutton pressed), or
- Engine start valve failed open, or
- Overpressure with the bleed valve failed open, or
- Overtemperature with the bleed valve failed open.

L1

- In the case of engine bleed overtemperature and the associated engine bleed valve failed open:

PACK (AFFECTED SIDE).....OFF

WING A.I.CE.....OFF

AVOID ICING CONDITIONS

- IF SEVERE ICE ACCRETION

MIN SPD.....VLS +10/G DOT

MANEUVER WITH CARE

Note: 1. Refer to PRO-ABN-COND [QRH] SINGLE PACK OPERATION.

2. APU BLEED pb-sw must not be used for wing anti-ice purpose, or after ENG 1 FIRE.

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AIR

**AIR ABNORM BLEED CONFIG (X BLEED CLOSED) (Cont'd)**

Ident.: PRO-ABN-AIR-E-00017701.0005001 / 12 JUL 18

L12

**STATUS**

**AVOID ICING CONDITIONS**

● **IF SEVERE ICE ACCRETION**

MIN SPD.....VLS + 10/G DOT

- Note: The speed must not be lower than :
- G DOT, when in CONF 0
  - VLS +10 kt for other configurations.

**MANEUVER WITH CARE**

**APPR PROC**

● **IF SEVERE ICE ACCRETION**


FOR LDG.....USE FLAP 3

*This line is replaced by "FOR LDG: USE FLAP 3" when CONF 3 is selected, as a reminder.*

APPR SPD.....VLS + 10 KT

LDG DIST PROC.....APPLY

**INOP SYS**

WING A. ICE  
ENG 1(2) BLEED  
PACK 1(2)  
FWD CRG TEMP 



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AIR


**AIR ABNORM BLEED CONFIG (X BLEED CLOSED)**

Applicable to: MSN 1820-1832

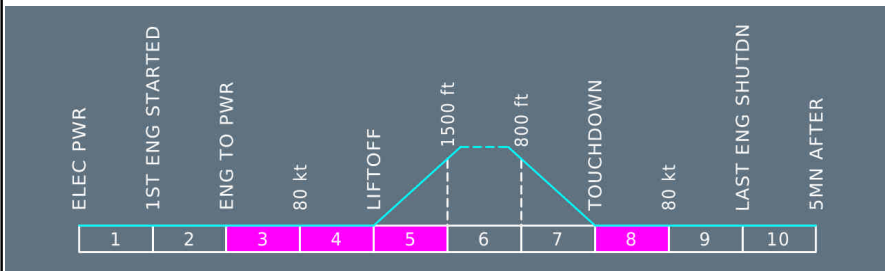
Ident.: PRO-ABN-AIR-E-00018720.0001001 / 21 MAR 16

**ANNUNCIATIONS**

Triggering Conditions:

 This alert triggers when at least one engine bleed fails, is OFF, or is not supplied.

Flight Phase Inhibition:



*Continued on the following page*





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### ABNORMAL AND EMERGENCY PROCEDURES

AIR

#### **AIR ABNORM BLEED CONFIG (X BLEED CLOSED) (Cont'd)**

Ident.: PRO-ABN-AIR-E-00017700.0006001 / 27 FEB 18

- If BLEED is abnormally selected OFF:

ENG 1(2) BLEED OFF

- IF BLEED NOT RECOVERED:

X BLEED.....CLOSE

L2

CLOSE, if:

- LEAK, or
- ENG FIRE (detected, or FIRE pushbutton pressed), or
- Engine start valve failed open, or
- Overpressure with the bleed valve failed open, or
- Overtemperature with the bleed valve failed open.

L1

- In the case of engine bleed overtemperature and the associated engine bleed valve failed open:

PACK (AFFECTED SIDE).....OFF

WING A.ICE.....OFF

AVOID ICING CONDITIONS

- IF SEVERE ICE ACCRETION

MIN SPD.....VLS +10/G DOT

MANEUVER WITH CARE

L2

Note: APU BLEED pb-sw must not be used for wing anti-ice purpose, or after ENG 1 FIRE.

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**AIR ABNORM BLEED CONFIG (X BLEED CLOSED) (Cont'd)**

Ident.: PRO-ABN-AIR-E-00017701.0005001 / 12 JUL 18

<div> <div>L12</div> <div> <div>AVOID ICING CONDITIONS</div> <div> <div> <div>● IF SEVERE ICE ACCRETION</div> <div> MIN SPD.....VLS + 10/G DOT </div> <div> <div>Note:</div> <div> The speed must not be lower than : </div> <div> <div>- G DOT, when in CONF 0</div> <div>- VLS +10 kt for other configurations.</div> </div> </div> </div> <div>MANEUVER WITH CARE</div> <div> <div>APPR PROC</div> <div> <div>● IF SEVERE ICE ACCRETION</div> <div> FOR LDG.....USE FLAP 3 </div> <div> This line is replaced by "FOR LDG: USE FLAP 3" when CONF 3 is selected, as a reminder. </div> <div> APPR SPD..... VLS + 10 KT </div> <div> LDG DIST PROC.....APPLY </div> </div> </div> </div> </div> </div>	<div> <div>STATUS</div> <div> <div>INOP SYS</div> <div> <div>WING A. ICE</div> <div>ENG 1(2) BLEED</div> <div>PACK 1(2)</div> <div>FWD CRG TEMP &lt;img alt="warning icon" data-bbox="761 331 786 344"/&gt;</div> </div> </div> </div>
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**PROCEDURES**  
**ABNORMAL AND EMERGENCY PROCEDURES**

AIR

**AIR ABNORM BLEED CONFIG (X BLEED CLOSED)**

Applicable to: MSN 1926-1987

Ident.: PRO-ABN-AIR-E-00018720.0001001 / 21 MAR 16

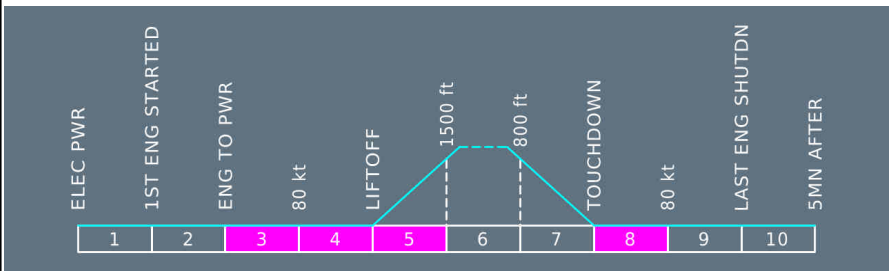
**ANNUNCIATIONS**

Triggering Conditions:

L2

This alert triggers when at least one engine bleed fails, is OFF, or is not supplied.

Flight Phase Inhibition:



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**A330/A340**  
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## PROCEDURES

### ABNORMAL AND EMERGENCY PROCEDURES

AIR

#### AIR ABNORM BLEED CONFIG (X BLEED CLOSED) (Cont'd)

Ident.: PRO-ABN-AIR-E-00017700.0007001 / 01 OCT 19

- If BLEED is abnormally selected OFF:

ENG 1(2) BLEED OFF

- IF BLEED NOT RECOVERED:

X BLEED.....CLOSE

L2

CLOSE, if:

- LEAK, or
- ENG FIRE (detected, or FIRE pushbutton pressed), or
- Engine start valve failed open, or
- Overpressure with the bleed valve failed open, or
- Overtemperature with the bleed valve failed open.

L1

- In the case of engine bleed overtemperature and the associated engine bleed valve failed open:

PACK (AFFECTED SIDE).....OFF

- If wing leak or pylon leak and PACK FLOW is not set to HI:

PACK FLOW.....HI

WING A.ICE.....OFF

AVOID ICING CONDITIONS

- IF SEVERE ICE ACCRETION

MIN SPD.....VLS +10/G DOT

MANEUVER WITH CARE

L2

Note: APU BLEED pb-sw must not be used for wing anti-ice purpose, or after ENG 1 FIRE.

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AIR

**AIR ABNORM BLEED CONFIG (X BLEED CLOSED) (Cont'd)**

Ident.: PRO-ABN-AIR-E-00017701.0005001 / 12 JUL 18

L12

**STATUS**

**AVOID ICING CONDITIONS**

● **IF SEVERE ICE ACCRETION**

MIN SPD.....VLS + 10/G DOT

Note: The speed must not be lower than :

- G DOT, when in CONF 0
- VLS +10 kt for other configurations.

**MANEUVER WITH CARE**

**APPR PROC**

● **IF SEVERE ICE ACCRETION**

FOR LDG.....USE FLAP 3

*This line is replaced by "FOR LDG: USE FLAP 3" when CONF 3 is selected, as a reminder.*

APPR SPD.....VLS + 10 KT

LDG DIST PROC.....APPLY

**INOP SYS**

WING A. ICE  
ENG 1(2) BLEED  
PACK 1(2)  
FWD CRG TEMP



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AIR


**AIR ABNORM BLEED CONFIG (X BLEED OPEN)**

Applicable to: MSN 1552-1693

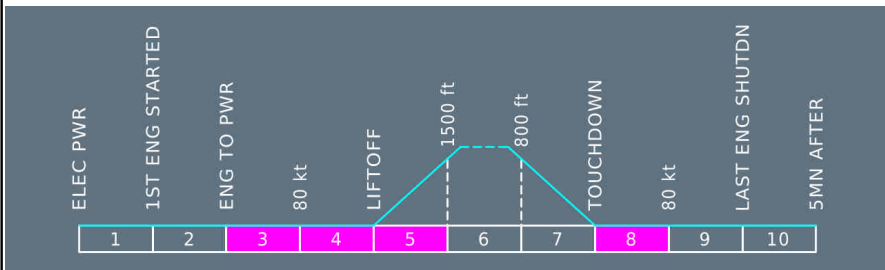
Ident.: PRO-ABN-AIR-D-00018721.0001001 / 21 MAR 16

**ANNUNCIATIONS**

Triggering Conditions:

 This alert triggers when at least one engine bleed fails, is OFF, or is not supplied.


Flight Phase Inhibition:




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**AIR ABNORM BLEED CONFIG (X BLEED OPEN) (Cont'd)**

Ident.: PRO-ABN-AIR-D-00017704.0006001 / 06 JUL 21

- 5
- If BLEED is abnormally selected OFF:  
ENG 1 (2) BLEED OFF
  - IF BLEED NOT RECOVERED:  
X BLEED.....OPEN
- L2
- OPEN, if all of the following are applicable:
- No LEAK
  - No ENG FIRE (detected, or FIRE pushbutton pressed)
  - No engine start valve failed open
  - No overpressure with the bleed valve failed open
  - No overtemperature with the bleed valve failed open.
- L1
- If WING A.ICE OFF, and no engine failed:  
PACK FLOW.....LO
- L2
- Pack flow is limited to 80 %.
- L1
- If WING A.ICE ON or one engine failed:  
PACK (AFFECTED SIDE IF OPPOSITE PACK HEALTHY).....OFF
- L1
- FWD CRG COOLING  .....OFF
- If WING A.ICE ON or one engine failed:  
PACK (AFFECTED SIDE IF OPPOSITE PACK HEALTHY).....OFF
- Note: Refer to PRO-ABN-COND [QRH] SINGLE PACK OPERATION.

Ident.: PRO-ABN-AIR-D-00017706.0001001 / 21 MAR 16

STATUS	
ONE PACK ONLY IF WAI ON	<b>INOP SYS</b>  ENG 1(2) BLEED FWD CRG TEMP  PACK 1(2) (If selected OFF)



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AIR


**AIR ABNORM BLEED CONFIG (X BLEED OPEN)**

Applicable to: MSN 1820-1987

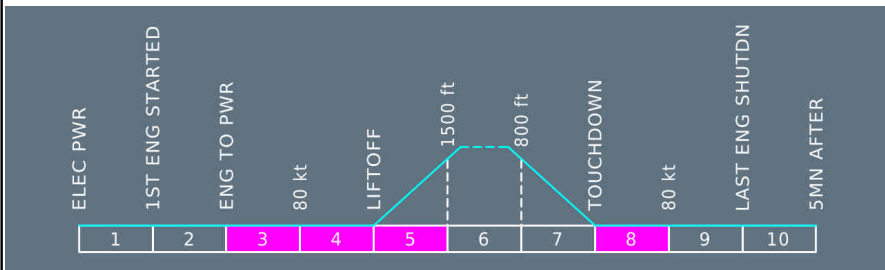
Ident.: PRO-ABN-AIR-D-00018721.0001001 / 21 MAR 16

**ANNUNCIATIONS**

Triggering Conditions:

 This alert triggers when at least one engine bleed fails, is OFF, or is not supplied.

Flight Phase Inhibition:



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AIR

**AIR ABNORM BLEED CONFIG (X BLEED OPEN) (Cont'd)**

Ident.: PRO-ABN-AIR-D-00017704.0003001 / 26 OCT 18

- If BLEED is abnormally selected OFF:

ENG 1 (2) BLEED OFF

- IF BLEED NOT RECOVERED:

X BLEED.....OPEN

L2

OPEN, if:

- No LEAK, and
- No ENG FIRE (detected, or FIRE pushbutton pressed), and
- No engine start valve failed open, and
- No overpressure with the bleed valve failed open, and
- No overtemperature with the bleed valve failed open.

L1

- If WING A.ICE OFF, and no engine failed:

PACK FLOW.....LO

L2

Pack flow is limited to 80 %.

L1

FWD CRG COOLING <img alt="cabin cooling icon" data-bbox="385 488 405 505"/>.....OFF

- If WING A.ICE ON or one engine failed:

PACK (AFFECTED SIDE IF OPPOSITE PACK HEALTHY).....OFF

Ident.: PRO-ABN-AIR-D-00017706.0001001 / 21 MAR 16

**STATUS**

**INOP SYS**

ONE PACK ONLY IF WAI ON

ENG 1(2) BLEED  
FWD CRG TEMP <img alt="cabin temp icon" data-bbox="860 675 880 690"/>  
PACK 1(2) (If selected OFF)