



EMERGENCY PROCEDURES
Power Plant

03-03-3

REV 56, Jan 31/03

C. Double Engine Failure (In Flight)

Indication: Engine failure indicated on EICAS; N₁, N₂, ITT and fuel flow indications.

- (1) IGNITION, CONT switch/light Press in Check the following:
- CONT IGNITION status message on.

If engines continue to run-down:

- (2) Thrust levers (both) SHUTOFF
- (3) ADG manual deploy handle Pull Check the following:
- EMER PWR ONLY warning message on, and
 - AC ESS BUS powered.

When ADG power is established:

- (4) STAB TRIM, CH 2 switch Press in to engage CH 2.
Check the following:
- STAB CH 2 INOP status message out.

- (5) Target airspeed Establish

AIRPLANE FLIGHT LEVEL	TARGET AIRSPEED
ABOVE FL 340	0.7 MACH
BELOW FL 340	240 KIAS

Maintain airspeed until ready to restart engines.

- (6) APU (if available, 30,000 feet and below) Start (Refer to chapter 2; LIMITATIONS - POWERPLANT-AUXILIARY POWER UNIT).
- (7) AC POWER, APU GEN switch (if APU available) Select to ON.

NOTE

1. If above 13,000 feet, relight using windmilling start procedure. Maintain 240 KIAS until ready to initiate windmill start.
2. If relighting using APU bleed air (13,000 feet and below), maintain between 170 to 190 KIAS until ready to start.



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C. Double Engine Failure (In Flight) (Cont'd)

Effectivity:

- Airplanes 7003 thru 7207 **not incorporating** Canadair Service Bulletin:
 - SB 601R-34-094, Installation of a New ADC (-140) and ARP (-104).

NOTE

3. After ADG deployment or APU generator switching, intermittent failure of the pilot's or copilot's air data systems may occur. These failures may result in uncommanded changes to the pilot's or copilot's flight instruments.
Flight crews should check and reset as required, the barometric altimeter setting, altitude preselector, V-speeds and speed bug settings after ADG deployment or APU generator switching events.

To Relight Using Windmilling Procedure (21, 000 feet and below):
Attempt to start both engines at the same time.

- (1) IGNITION, CONT
switch/light Check ON Check the following:
 - CONT IGNITION status message on.

NOTE

An altitude loss of approximately 5,000 feet can be expected when accelerating from 240 to 300 KIAS.

- (2) Airspeed Increase to 300 KIAS or greater, to achieve the required N₂.
Maintain airspeed throughout light-off until engine start is complete (stable idle).

NOTE

Airplanes 7002 thru 7304 – With the ADG deployed, during a windmilling start, an airspeed of 330 knots is permitted for 12 minutes or an airspeed of 335 knots is permitted for 4 minutes.

Airplanes 7305 and subsequent – There are no airspeed limitations with the ADG deployed during flight.



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C. Double Engine Failure (In Flight) (Cont'd)

When engine rotation is established:

Between 21,000 and 15,000 feet, ITT is below 90°C and N₂ reaches at least 12% or
At 15,000 feet and below, ITT is below 90°C and N₂ reaches at least 9%.

- (3) Thrust levers IDLE
- (4) Airspeed Maintain greater than 300 KIAS.
Maintain airspeed throughout light-off until engine start is complete (stable idle).
- (5) Engine indications Monitor

NOTE

If engines do not relight within 25 seconds from thrust lever movement to IDLE, retard thrust levers to SHUT OFF and maintain airspeed for 30 seconds and repeat relight procedure. N₂ acceleration should be positive and uninterrupted. Stable idle speed must be reached within 2 minutes.

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C. Double Engine Failure (In Flight) (Cont'd)

To relight using APU bleed air (13,000 feet and below):

NOTE

In-flight restarts have been demonstrated at 13,000 feet and below using the APU for bleed air with a 15 kVA electrical load.

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|---|--|------------------------|-----------------------|----------|-----------------------|----------|--|
| <p>(1) Target airspeed Re-establish</p> <table border="0" style="margin-left: 40px;"> <tr> <td style="text-align: left;">AIRPLANE WEIGHT</td> <td style="text-align: left;">TARGET AIRSPEED</td> </tr> <tr> <td>23,133 kg (51,000 lb)</td> <td>190 KIAS</td> </tr> <tr> <td>16,364 kg (36,000 lb)</td> <td>170 KIAS</td> </tr> </table> | AIRPLANE WEIGHT | TARGET AIRSPEED | 23,133 kg (51,000 lb) | 190 KIAS | 16,364 kg (36,000 lb) | 170 KIAS | |
| AIRPLANE WEIGHT | TARGET AIRSPEED | | | | | | |
| 23,133 kg (51,000 lb) | 190 KIAS | | | | | | |
| 16,364 kg (36,000 lb) | 170 KIAS | | | | | | |
| <p>(2) BLEED AIR, 10TH STAGE
L and R switch/lights Press out</p> | <p>to close the 10th stage bleed valves. Check the following:</p> <ul style="list-style-type: none"> • L and R 10TH SOV CLSD status message on. | | | | | | |
| <p>(3) BLEED AIR,
APU LCV switch/light Press in</p> | <p>to open the LCV.
Check the following:</p> <ul style="list-style-type: none"> • APU LCV OPEN status message on. | | | | | | |
| <p>(4) IGNITION , CONT
switch/light Check ON</p> | <p>Check the following:</p> <ul style="list-style-type: none"> • CONT IGNITION status message on. | | | | | | |



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C. Double Engine Failure (In Flight) (Cont'd)

Attempt to start one engine at a time:

- (5) ENG, L or R START switch/light Push Check the following:
- L or R ENGINE START status message on.

When relight envelope is established:

At 13,000 feet and below, ITT is below 90°C and N₂ reaches at least 28%.

- (6) Thrust lever IDLE Monitor engine parameters carefully.
- (7) Engine indications Monitor carefully.

NOTE

If engine does not relight within 25 seconds from thrust lever movement to IDLE, retard thrust lever to shut off, press affected ENG STOP switch/light and attempt to relight the other engine.

If neither engine is restarted :

- (1) Consider a forced landing or ditching. Notify cabin crew.
- (2) Thrust levers BOTH SHUT OFF
- (3) Target airspeed Re-establish as best glide speed.

AIRPLANE WEIGHT	TARGET AIRSPEED
23,133 kg (51,000 lb)	190 KIAS
16,364 kg (36,000 lb)	170 KIAS

- (4) Prepare for a forced landing or ditching.
(Refer to the DITCHING section in this Chapter).

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C. Double Engine Failure (In Flight) (Cont'd)

When at least one engine is stabilized at flight idle:

- (1) Thrust lever(s) As required

Airplanes 7002 thru 7304:

- (2) Airspeed Not more than 250 KIAS for the remainder of the flight.

Airplanes 7305 and subsequent:

- (2) No airspeed limitation with the ADG deployed.

- (3) AC POWER,
 GEN 1 or GEN 2 switch Select affected generator ON.
 - GEN 1 or GEN 2 OFF caution message out.

Effectivity:

- Airplanes 7003 thru 7207 **not incorporating** Canadair Service Bulletin:
 - SB 601R-34-094, Installation of a New ADC (-140) and ARP (-104).

NOTE

After ADG deployment or APU generator switching, intermittent failure of the pilot's or copilot's air data systems may occur. These failures may result in uncommanded changes to the pilot's or copilot's flight instruments.

Flight crews should check and reset as required, the barometric altimeter setting, altitude preselector, V-speeds and speed bug settings after ADG deployment or APU generator switching events.

Operative engine:

- (4) BLEED AIR, 10TH STAGE
 L or R switch/lights Check OPEN Check the following:
 - L or R 10TH SOV CLSD status message out.
- (5) AIR-CONDITIONING,
 L or R PACK switch/lights Check ON Check the following:
 - L or R PACK OFF status messages out.

NOTE

1. Use only one air-conditioning pack during single engine operations, when the operating engine is the only 10th-stage bleed source.
2. Airplane altitude maximum 25,000 feet during single pack operations.

DOT Approved	Airplane Flight Manual CSP A-012	
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C. Double Engine Failure (In Flight) (Cont'd)

When at least one engine is stabilized at flight idle (Cont'd):

Re-establish normal power:

- (6) ADG manual deploy handle Stow
- (7) ADG PWR TXFR switch Press to override.

If only one engine is operating:

- (8) Single engine procedures Accomplish Refer to chapter 5; ABNORMAL PROCEDURES - SINGLE ENGINE PROCEDURES.

D. Jet Pipe Overheat

Indication: L or R JETPIPE OVHT warning message and "JETPIPE OVERHEAT" aural on.

Affected engine:

- (1) Thrust lever Confirm and retard slowly until warning message goes out.

If L or R JETPIPE OVHT message persists:

- (2) Single engine procedures Accomplish Refer to chapter 5; ABNORMAL PROCEDURES - SINGLE ENGINE PROCEDURES.



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E. Engine Oil Pressure Low

Indication: L or R ENG OIL PRESS warning message, "ENGINE OIL" aural on
or left or right oil pressure readout indicates less than 25 psi.

- (1) Affected engine oil pressure Check
- (2) Affected thrust lever Confirm and retard to IDLE

If L or R ENG OIL PRESS warning message is on and oil pressure is below 25 psi;

OR

If affected engine oil temperature is increasing or decreasing abnormally:

- (3) Single engine procedures Accomplish Refer to chapter 5; ABNORMAL
PROCEDURES - SINGLE
ENGINE PROCEDURES.

**If the left or right oil pressure readout is below 25 psi and ENG OIL PRESS warning
message is not displayed and oil temperature is normal;**

OR

**If L or R ENG OIL PRESS warning message is on and oil pressure and oil
temperature are normal:**

- (3) Affected thrust lever Adjust as required.
- (4) Engine instruments Monitor