This is the EgyptAir Quick Reference Handbook, Issue No. 013.

To bring this manual up to date, remove old pages and insert revised pages as follows:

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Model BD–500–1A11

EgyptAir

Quick Reference Handbook Volume

QRH

BD500–3AB48–32900–00 (309)
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This handbook contains suggested procedures only for quick reference. These procedures in no way supersede current procedures outlined in the approved Airplane Flight Manual and any revisions thereto. In case of conflict, the Airplane Flight Manual takes precedence.

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Issue	Description of change	Signature / Date incorporated
001	Initial issue.	Signature on file Jul 08/2016
002	Introduces changes to align with AFM Issue 002 and to update all chapters with new information.	Signature on file Sep 06/2016
003	Introduces changes to align with AFM Issue 003 and to update all chapters with new information.	Signature on file Oct 12/2016
004	Introduces changes to align with AFM Issue 004 and to update all chapters with new information.	Signature on file Nov 10/2016
005	Introduces changes to align with AFM Issue 005 and to update all chapters with new information.	Signature on file Dec 08/2016
006	Introduces changes to align with AFM Issue 006 and to update all chapters with new information.	Signature on file Apr 12/2017
007	Introduces changes to align with AFM Issue 007 and to update all chapters with new information.	Signature on file Aug 31/2017
008	Introduces changes to align with AFM Issue 008 and to update all chapters with new information.	Signature on file Jan 16/2018
009	Introduces changes to align with AFM Issue 009 and to update all chapters with new information.	Signature on file Aug 06/2018

Issue	Description of change	Signature / Date incorporated
010	Introduces changes to align with AFM Issue 010 and to update some chapters with new information.	Signature on file Oct 11/2018
011	Introduces changes to align with AFM Issue 011 and to update some chapters with new information.	Signature on file Jan 11/2019
012	Introduces changes to align with AFM Issue 012 and to update some chapters with new information.	Signature on file Jul 22/2019
012A	Introduces changes to align with AFM Issue 012A.	Signature on file Aug 20/2019
013	Introduces changes to align with AFM Issue 013 and to update some chapters with new information.	Signature on file Sep 23/2019

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* The asterisk indicates pages changed, added or deleted.

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* The asterisk indicates pages changed, added or deleted.

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* The asterisk indicates pages changed, added or deleted.

The option codes that follow appear adjacent to the applicable text.

Absence of an option code means that the data are applicable to all.

Option code	Description
<Metric>	ON A/C ALL Metric
<10100101C>	ON A/C ALL Extended operations (ETOPS) capability – 120-minute diversion – APU on demand
<10109100C>	ON A/C ALL Combined options: Authorities and ETOPS (<10100100C> or <10100101C> or <10100102C> or <10100103C>) and (<TC> or <FAA>)
<44301201C>	ON A/C ALL Ku-band connectivity system (Panasonic eXConnect®)
<44309202C>	ON A/C ALL Combined options: Ku-band connectivity system <44301201C> or <44301202C> or <44301211C> or <44300212C>
<72211001D>	ON A/C ALL Standard thrust rating – PW1521G-3

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A reference to the service bulletins that follow appears above applicable boxed text.

Service bulletin	Description

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A reference to the modifications that follow appears above applicable boxed text.

Modification	Description
219001	ON A/C ALL Integrated Air System Controller (IASC) Software (5.0) – Installed in production
291002	ON A/C ALL Hydraulic Systems #2 and #3 Alternating Current Motor Pumps (ACMP)(–1004) – Installed in production
732002	ON A/C ALL Full Authority Digital Engine Control (FADEC) software v2.10 – Installed in production
732003	ON A/C ALL Full Authority Digital Engine Control (FADEC) software v2.11 – Installed in production

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CHAPTER 1 – INDEX

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CHAPTER 2 – NON–NORMAL PROCEDURES

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NON-NORMAL PROCEDURE FORMAT

The procedures in this chapter assume that certain actions are accomplished by the crew, as follows:

- Automatic systems are functioning correctly.
- Normal procedures have been properly accomplished.
- MASTER WARNING / MASTER CAUTION switches are reset.
- Obvious corrective action (if any) is taken for crew awareness items.
- SEAT BELTS are selected ON as required.

DIVERSION TERMINOLOGY

The diversion terms used within this chapter are as follows:

- Plan to land at the nearest suitable airport – Intended for the flight crew to plan a landing while working through a non-normal checklist.
- Land at the nearest suitable airport – Landing airport and duration of the flight are at the discretion of the PIC. Extended flight beyond the nearest suitable airport is not recommended.
- Land immediately at the nearest suitable airport – Land without delay at the nearest airport where a safe approach and landing is reasonably assured.
- Suitable airport – Suitable airport is defined as the airport where a safe approach and landing is assured.

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AIR–CONDITIONING, BLEED AND PRESSURIZATION

CABIN ALT (Warning)

(1) Oxygen masks ..... On, 100%

(2) Crew communication ..... Establish

(3) Emergency descent procedure ..... Accomplish Refer to Air-conditioning, bleed and pressurization – Emergency descent.

– COMPLETE –

CABIN DIFF PRESS (Warning)

(1) AUTO PRESS ..... MAN

(2) MAN RATE ..... UP

(3) **CABIN DIFF PRESS** warning message goes out:

- **Yes –** Go to (4)
- **No –** Go to (8)

(4) CABIN DIFF PRESS warning message goes out:

(5) MAN RATE ..... Closely monitor and adjust as required to control pressurization. Refer to cabin altitude table.

(a) Set cabin altitude from the table or landing elevation, whichever is higher.

NOTE

Maximum value is 7800 feet.

Airplane pressure altitude (feet)	Cabin altitude (feet)
8000	500

CABIN DIFF PRESS (Warning) (Cont'd)

Airplane pressure altitude (feet)	Cabin altitude (feet)
10000	800
15000	1400
20000	2200
25000	3200
30000	4600
35000	5900
40000	7500

On approach:

(6) Cabin altitude .....Adjust to landing field elevation.

After landing:

(7) MAN RATE ..... UP

– COMPLETE –

(8) CABIN DIFF PRESS warning message stays on:

(9) L PACK ..... OFF

(10) R PACK ..... OFF

(11) Descent ..... 10000 feet or lowest safe altitude, whichever is higher.

(12) RAM AIR ..... OPEN

(13) RECIRC AIR ..... OFF

(14) EMER DEPRESS ..... ON

(15) Land at the nearest suitable airport.

– COMPLETE –

EMERGENCY DESCENT (Warning)

(1) EDM required:

- **Yes –** Go to (2)
- **No –** Go to (29)

(2) EDM required:

(3) Oxygen masks ..... If required, on, 100%

(4) SEAT BELTS ..... ON

(5) Cabin ..... Advise

(6) PAX OXY (if required) ..... DPLY

When thrust levers at IDLE:

(7) SPOILER lever ..... FULL then MAX

CAUTION

If the **SPOILER MISMATCH** advisory message comes on after the pilot has initiated descent, set IDLE and cycle the SPOILER lever to deploy spoilers.

(8) Altitude selection ..... As required

(9) HDG ..... As required

(10) Structural damage:

- **Yes –** Go to (11)
- **No –** Go to (20)

(11) Structural damage:

(12) Airspeed ..... Do not exceed the speed at which the damage occurred.

EMERGENCY DESCENT (Warning) (Cont'd)

At a safe altitude:

(13) SPOILER lever ..... RET

(14) Oxygen masks ..... As required

(15) EDM ..... Select off

(16) Transponder ..... As required

(17) FCP modes ..... As required

(18) Land at the nearest suitable airport.

(19) Unpressurized flight procedure ..... Accomplish Refer to Air-conditioning, bleed and pressurization – Unpressurized flight procedure.

– COMPLETE –

(20) No structural damage:

(21) Airspeed ..... Do not exceed V_{MO}/M_{MO}.

NOTE

When EDM mode is engaged, closely monitor airspeed and ensure that the aircraft is not going into overspeed. If the aircraft goes into overspeed, deactivate EDM and complete the emergency descent manually if required.

At a safe altitude:

(22) SPOILER lever ..... RET

(23) Oxygen masks ..... As required

(24) EDM ..... Select off

(25) Transponder ..... As required

(26) FCP modes ..... As required

EMERGENCY DESCENT (Warning) (Cont'd)

(27) Land at the nearest suitable airport.

(28) Unpressurized flight procedure ..... Accomplish Refer to Air-conditioning, bleed and pressurization – Unpressurized flight procedure.

– COMPLETE –

(29) EDM not required:

(30) EDM ..... Select off

(31) FCP modes ..... As required

– COMPLETE –

EQUIP BAY OVHT (Warning)

(1) EQUIP COOLING, EXHAUST ..... ON

NOTE

Minimize time below 10000 feet.

(2) Land immediately at the nearest suitable airport.

– COMPLETE –

AIR SYS ESS CTLR FAIL (Caution)

(1) EQUIP COOLING, EXHAUST ..... ON

(2) CABIN PWR (if galley chiller installed) ..... OFF

(3) EQUIP COOLING, INLET ..... OFF

(4) RECIRC AIR ..... OFF

(5) ANTI-ICE, WING ..... OFF

AIR SYS ESS CTLR FAIL (Caution) (Cont'd)

(6) Leave/avoid icing conditions.

(7) Descent ..... 10000 feet or lowest safe altitude, whichever is higher.

At 10000 feet or lowest safe altitude:

(8) L BLEED ..... OFF

(9) R BLEED ..... OFF

(10) APU BLEED ..... OFF

(11) EMER DEPRESS ..... ON

(12) AIR, CARGO FWD ..... VENT

(13) Consider live cargo.

When cabin is depressurized:

(14) RAM AIR ..... OPEN

(15) Land at the nearest suitable airport.

(16) Ice dispersal procedure ..... Accomplish, if required. Refer to Ice and rain protection – Ice dispersal procedure.

– COMPLETE –

APU BLEED LEAK (Caution)

(1) APU BLEED ..... OFF

(2) **APU BLEED LEAK** caution message goes out:

- **Yes –** Go to (3)
- **No –** Go to (5)

APU BLEED LEAK (Caution) (Cont'd)

(3) APU BLEED LEAK caution message goes out:

(4) No further action required.

– COMPLETE –

(5) APU BLEED LEAK caution message stays on:

(6) APU ..... OFF

(7) L BLEED ..... OFF

(8) L PACK ..... OFF

(9) XBLEED ..... MAN CLSD

(10) Altitude ..... Not above 31000 feet

(11) ANTI-ICE, WING ..... OFF

(12) Leave/avoid icing conditions.

– COMPLETE –

AUTO PRESS FAIL (Caution)

(1) AUTO PRESS ..... MAN

(2) MAN RATE ..... Closely monitor and adjust as required to control pressurization. Refer to cabin altitude table.

(a) Set cabin altitude from the table or landing elevation, whichever is higher.

NOTE

Maximum value is 7800 feet.

AUTO PRESS FAIL (Caution) (Cont'd)

Airplane pressure altitude (feet)	Cabin altitude (feet)
8000	500
10000	800
15000	1400
20000	2200
25000	3200
30000	4600
35000	5900
40000	7500

On approach:

(3) Cabin altitude .....Adjust to landing field elevation.

After landing:

(4) MAN RATE ..... UP

– COMPLETE –

CABIN ALT (Caution)

(1) **CABIN ALT LEVEL HI** advisory message is also shown:

- **Yes –** Go to (2)
- **No –** Go to (5)

(2) CABIN ALT LEVEL HI advisory message is also shown:

(3) Oxygen masks .....ON, 100%

(4) Crew communication .....Establish

– COMPLETE –

CABIN ALT (Caution) (Cont'd)

(5) CABIN ALT LEVEL HI advisory message is not shown:

(6) AUTO PRESS ..... MAN

(7) AUTO PRESS ..... Select auto

(8) CABIN ALT caution message goes out:

- **Yes –** Go to (9)
- **No –** Go to (11)

(9) CABIN ALT caution message goes out:

(10) No further action required.

– COMPLETE –

(11) CABIN ALT caution message stays on:

(12) AUTO PRESS ..... MAN

(13) MAN RATE ..... Closely monitor and adjust as required to control pressurization. Refer to cabin altitude table.

(a) Set cabin altitude from the table or landing elevation, whichever is higher.

NOTE

Maximum value is 7800 feet.

Airplane pressure altitude (feet)	Cabin altitude (feet)
8000	500
10000	800
15000	1400
20000	2200

CABIN ALT (Caution) (Cont'd)

Airplane pressure altitude (feet)	Cabin altitude (feet)
25000	3200
30000	4600
35000	5900
40000	7500

On approach:

(14) Cabin altitude .....Adjust to landing field elevation.

After landing:

(15) MAN RATE ..... UP

– COMPLETE –

DITCHING MISCONFIG (Caution)

(1) RAM AIR .....Select closed

– COMPLETE –

EMER DEPRESS ON (Caution)

(1) EMER DEPRESS required:

- **Yes –** Go to (2)
- **No –** Go to (4)

(2) EMER DEPRESS required:

(3) Pressurization ..... Monitor

– COMPLETE –

EMER DEPRESS ON (Caution) (Cont'd)

(4) EMER DEPRESS not required:

(5) EMER DEPRESS ..... OFF

– COMPLETE –

EMERGENCY DESCENT (Caution)

(1) Oxygen masks ..... If required, on, 100%

(2) SEAT BELTS ..... ON

(3) Cabin ..... Advise

(4) PAX OXY (if required) ..... DPLY

When thrust levers at IDLE:

(5) SPOILER lever ..... FULL then MAX

CAUTION

If the **SPOILER MISMATCH** advisory message comes on after the pilot has initiated descent, set IDLE and cycle the SPOILER lever to deploy the spoilers.

(6) Altitude selection ..... As required

(7) HDG ..... As required

(8) Structural damage:

- **Yes –** Go to (9)
- **No –** Go to (17)

(9) Structural damage:

(10) Airspeed ..... Do not exceed the speed at which the damage occurred.

EMERGENCY DESCENT (Caution) (Cont'd)

At a safe altitude:

(11) SPOILER lever ..... RET

(12) Oxygen masks ..... As required

(13) EDM ..... Select off

(14) FCP modes ..... As required

(15) Land at the nearest suitable airport.

(16) Unpressurized flight procedure ..... Accomplish Refer to Air-conditioning, bleed and pressurization – Unpressurized flight procedure.

– COMPLETE –

(17) No structural damage:

(18) Airspeed ..... Do not exceed V_{MO}/M_{MO}.

NOTE

When EDM mode is engaged, closely monitor airspeed and ensure that the aircraft is not going into overspeed. If the aircraft goes into overspeed, deactivate EDM and complete the emergency descent manually if required.

At a safe altitude:

(19) SPOILER lever ..... RET

(20) Oxygen masks ..... As required

(21) EDM ..... Select off

(22) FCP modes ..... As required

(23) Land at the nearest suitable airport.

EMERGENCY DESCENT (Caution) (Cont'd)

(24) Unpressurized flight procedure ..... Accomplish Refer to Air-conditioning, bleed and pressurization – Unpressurized flight procedure.

– COMPLETE –

ENG BLEED MISCONFIG (Caution)

(1) AIR synoptic page ..... Select

(2) Determine bleed source:

- **Engine –** Go to (3)
- **APU –** Go to (5)

(3) Engine is bleed source:

(4) XBLEED ..... AUTO

– COMPLETE –

(5) APU is bleed source:

(6) L BLEED ..... Select auto

(7) R BLEED ..... Select auto

(8) XBLEED ..... AUTO

(9) **ENG BLEED MISCONFIG** caution message goes out:

- **Yes –** Go to (10)
- **No –** Go to (12)

(10) ENG BLEED MISCONFIG caution message goes out:

(11) No further action required.

– COMPLETE –

ENG BLEED MISCONFIG (Caution) (Cont'd)

(12) ENG BLEED MISCONFIG caution message stays on:

(13) APU BLEED ..... OFF

– COMPLETE –

EQUIP BAY COOL FAIL (Caution)

(1) EQUIP COOLING, EXHAUST ..... ON

NOTE

Minimize time below 10000 feet.

(2) CABIN PWR (if galley chiller installed) ..... OFF

(3) Land at the nearest suitable airport.

– COMPLETE –

FWD CARGO HEAT FAIL (Caution)

(1) FWD CARGO ..... VENT

– COMPLETE –

FWD CARGO LO TEMP (Caution)

(1) FWD CARGO ..... HI HEAT

(2) **FWD CARGO LO TEMP** caution message goes out:

- **Yes –** Go to (3)
- **No –** Go to (5)

FWD CARGO LO TEMP (Caution) (Cont'd)

(3) FWD CARGO LO TEMP caution message goes out:

(4) No further action required.

– COMPLETE –

(5) FWD CARGO LO TEMP caution message stays on:

(6) Consider live cargo.

– COMPLETE –

L AIR SYS CTLR FAIL (Caution)

(1) L PACK ..... OFF

(2) TRIM AIR ..... OFF

(3) AIR, CARGO FWD ..... VENT

(4) Consider live cargo.

(5) L BLEED ..... OFF

(6) XBLEED ..... MAN CLSD

(7) APU BLEED ..... OFF

(8) ANTI-ICE, WING ..... OFF

(9) Altitude ..... Not above 31000 feet

(10) Leave/avoid icing conditions.

(11) Land at the nearest suitable airport.

(12) Ice dispersal procedure ..... Accomplish, if required. Refer to Ice and rain protection – Ice dispersal procedure.

– COMPLETE –

L BLEED FAIL (Caution)

(1) XBLEED ..... MAN CLSD

(2) L BLEED ..... OFF

(3) ANTI-ICE, WING ..... OFF

(4) APU BLEED ..... OFF

(5) L PACK ..... OFF

(6) Altitude ..... Not above 31000 feet

(7) Leave/avoid icing conditions.

(8) Ice dispersal procedure ..... Accomplish, if required. Refer to Ice and rain protection – Ice dispersal procedure.

– COMPLETE –

L BLEED LEAK (Caution)

(1) L BLEED ..... OFF

(2) APU BLEED ..... OFF

(3) L PACK ..... OFF

(4) Altitude ..... Not above 31000 feet

(5) XBLEED ..... MAN CLSD

(6) ANTI-ICE, WING ..... OFF

(7) Leave/avoid icing conditions.

(8) Ice dispersal procedure ..... Accomplish, if required. Refer to Ice and rain protection – Ice dispersal procedure.

L BLEED LEAK (Caution) (Cont'd)

(9) L BLEED LEAK caution message goes out:

→ **Yes –** Go to (10)

→ **No –** Go to (12)

(10) L BLEED LEAK caution message goes out:

(11) No further action required.

– COMPLETE –

(12) L BLEED LEAK caution message stays on:

(13) Left thrust lever ..... Confirm and reduce towards IDLE.

(14) L BLEED LEAK caution message goes out:

→ **Yes –** Go to (15)

→ **No –** Go to (17)

(15) L BLEED LEAK caution message goes out:

(16) No further action required.

– COMPLETE –

(17) L BLEED LEAK caution message stays on:

(18) Shutdown – Left engine procedure ..... Accomplish Refer to Power plant – Shutdown – Left engine.

– COMPLETE –

L BLEED OVHT (Caution)

(1) R BLEED auto:

→ **Yes –** Go to (2)

→ **No –** Go to (13)

L BLEED OVHT (Caution) (Cont'd)

(2) R BLEED auto:

(3) L BLEED ..... OFF

(4) Altitude ..... Not above 31000 feet

(5) All engines operating landing in icing conditions expected:

➔ **Yes –** Go to (6)

➔ **No –** Go to (11)

(6) All engines operating landing in icing conditions expected:

On approach:

(7) FMS, PERF – ARR – SLAT/FLAP 5

(8) FMS, PERF – ARR – VREF ..... $V_{REF(FLAP\ 5)}$ + 10

(9) OLD factor ..... Multiply by 1.50

Before landing:

(10) SLAT/FLAP lever 5

– COMPLETE –

(11) All engines operating landing in icing conditions not expected:

(12) No further action required.

– COMPLETE –

(13) R BLEED OFF:

(14) L BLEED ..... OFF

(15) ANTI-ICE, WING ..... OFF

(16) Leave/avoid icing conditions.

(17) L BLEED ..... Select auto

L BLEED OVHT (Caution) (Cont'd)

(18) **L BLEED OVHT** caution message stays out:

- **Yes –** Go to (19)
- **No –** Go to (21)

(19) L BLEED OVHT caution message stays out:

(20) Ice dispersal procedure ..... Accomplish, if required. Refer to Ice and rain protection – Ice dispersal procedure.

– COMPLETE –

(21) L BLEED OVHT caution message comes on:

(22) L BLEED ..... OFF

(23) L PACK ..... OFF

(24) Descent ..... 10000 feet or lowest safe altitude, whichever is higher.

(25) RAM AIR ..... OPEN

(26) RECIRC AIR ..... OFF

(27) EMER DEPRESS ..... ON

– COMPLETE –

<Mod 219001> or <Post-SB BD500–219001>

L PACK FAIL (Caution)

(1) L PACK ..... OFF

(2) **L PACK FAIL** caution message goes out:

- **Yes –** Go to (3)
- **No –** Go to (11)

L PACK FAIL (Caution) (Cont'd)

(3) L PACK FAIL caution message goes out:

(4) L PACK ..... Select auto

(5) L PACK FAIL caution message stays out:

→ **Yes –** Go to (6)

→ **No –** Go to (8)

(6) L PACK FAIL caution message stays out:

(7) No further action required.

– COMPLETE –

(8) L PACK FAIL caution message comes on:

(9) L PACK ..... OFF

(10) Altitude ..... Not above 31000 feet

– COMPLETE –

(11) L PACK FAIL caution message stays on:

(12) Altitude ..... Not above 31000 feet

(13) L BLEED ..... OFF

(14) APU BLEED ..... OFF

(15) ANTI-ICE, WING ..... OFF

(16) XBLEED ..... MAN CLSD

(17) Leave/avoid icing conditions.

(18) Ice dispersal procedure ..... Accomplish, if required. Refer to Ice and rain protection – Ice dispersal procedure.

– COMPLETE –

L PACK LEAK (Caution)

(1) L PACK ..... OFF

(2) Altitude ..... Not above 31000 feet

– COMPLETE –

L PACK OVHT (Caution)

(1) L PACK ..... OFF

(2) Altitude ..... Not above 31000 feet

– COMPLETE –

LDG ELEV MISCONFIG (Caution)

(1) FMS, PERF – ARR or CTP MAN LDG ELEV ..... Confirm correct landing elevation and BARO setting is computed.

– COMPLETE –

LEAK DET FAIL (Caution)

(1) Descent ..... 10000 feet or lowest safe altitude, whichever is higher.

At 10000 feet or lowest safe altitude:

(2) L BLEED ..... OFF

(3) R BLEED ..... OFF

(4) APU BLEED ..... OFF

(5) ANTI-ICE, WING ..... OFF

(6) RAM AIR ..... OPEN

LEAK DET FAIL (Caution) (Cont'd)

(7) RECIRC AIR ..... OFF

(8) EMER DEPRESS ..... ON

(9) Leave/avoid icing conditions.

(10) Land at the nearest suitable airport.

(11) Ice dispersal procedure ..... Accomplish, if required. Refer to Ice and rain protection – Ice dispersal procedure.

– COMPLETE –

R AIR SYS CTLR FAIL (Caution)

(1) R PACK ..... OFF

(2) TRIM AIR ..... OFF

(3) AIR, CARGO FWD ..... VENT

(4) Consider live cargo.

(5) R BLEED ..... OFF

(6) CABIN PWR (if IFE installed) ..... OFF

(7) Altitude ..... Not above 31000 feet

(8) Land at the nearest suitable airport.

(9) All engines operating landing in icing conditions expected:

- **Yes –** Go to (10)
- **No –** Go to (15)

(10) All engines operating landing in icing conditions expected:

On approach:

(11) FMS, PERF – ARR – SLAT/FLAP 5

(12) FMS, PERF – ARR – VREF ..... $V_{REF(FLAP\ 5)}$ + 10

R AIR SYS CTLR FAIL (Caution) (Cont'd)

(13) OLD factor ..... Multiply by 1.50

Before landing:

(14) SLAT/FLAP lever 5

– COMPLETE –

(15) All engines operating landing in icing conditions not expected:

(16) No further action required.

– COMPLETE –

R BLEED FAIL (Caution)

(1) XBLEED ..... MAN CLSD

(2) R BLEED ..... OFF

(3) ANTI-ICE, WING ..... OFF

(4) R PACK ..... OFF

(5) Altitude ..... Not above 31000 feet

(6) Leave/avoid icing conditions.

(7) Ice dispersal procedure ..... Accomplish, if required. Refer to Ice and rain protection – Ice dispersal procedure.

– COMPLETE –

R BLEED LEAK (Caution)

(1) R BLEED ..... OFF

(2) R PACK ..... OFF

(3) Altitude ..... Not above 31000 feet

(4) XBLEED ..... MAN CLSD

R BLEED LEAK (Caution) (Cont'd)

(5) ANTI-ICE, WING ..... OFF

(6) Leave/avoid icing conditions.

(7) Ice dispersal procedure ..... Accomplish, if required. Refer to Ice and rain protection – Ice dispersal procedure.

(8) **R BLEED LEAK** caution message goes out:

→ **Yes –** Go to (9)

→ **No –** Go to (11)

(9) R BLEED LEAK caution message goes out:

(10) No further action required.

– COMPLETE –

(11) R BLEED LEAK caution message stays on:

(12) Right thrust lever ..... Confirm and reduce towards IDLE.

(13) **R BLEED LEAK** caution message goes out:

→ **Yes –** Go to (14)

→ **No –** Go to (16)

(14) R BLEED LEAK caution message goes out:

(15) No further action required.

– COMPLETE –

(16) R BLEED LEAK caution message stays on:

(17) Shutdown – Right engine procedure ..... Accomplish Refer to Power plant – Shutdown – Right engine.

– COMPLETE –

R BLEED OVHT (Caution)

(1) L BLEED auto:

➔ **Yes –** Go to (2)

➔ **No –** Go to (13)

(2) L BLEED auto:

(3) R BLEED ..... OFF

(4) Altitude ..... Not above 31000 feet

(5) All engines operating landing in icing conditions expected:

➔ **Yes –** Go to (6)

➔ **No –** Go to (11)

(6) All engines operating landing in icing conditions expected:

On approach:

(7) FMS, PERF – ARR – SLAT/FLAP 5

(8) FMS, PERF – ARR – VREF ..... $V_{REF(FLAP\ 5)}$ + 10

(9) OLD factor ..... Multiply by 1.50

Before landing:

(10) SLAT/FLAP lever 5

– COMPLETE –

(11) All engines operating landing in icing conditions not expected:

(12) No further action required.

– COMPLETE –

(13) L BLEED OFF:

(14) R BLEED ..... OFF

(15) ANTI-ICE, WING ..... OFF

(16) Leave/avoid icing conditions.

R BLEED OVHT (Caution) (Cont'd)

(17) R BLEED ..... Select auto

(18) **R BLEED OVHT** caution message stays out:

- **Yes –** Go to (19)
- **No –** Go to (21)

(19) R BLEED OVHT caution message stays out:

(20) Ice dispersal procedure ..... Accomplish, if required. Refer to Ice and rain protection – Ice dispersal procedure.

– COMPLETE –

(21) R BLEED OVHT caution message comes on:

(22) R BLEED ..... OFF

(23) R PACK ..... OFF

(24) Descent ..... 10000 feet or lowest safe altitude, whichever is higher.

(25) RAM AIR ..... OPEN

(26) RECIRC AIR ..... OFF

(27) EMER DEPRESS ..... ON

– COMPLETE –

<Mod 219001> or <Post-SB BD500–219001>

R PACK FAIL (Caution)

(1) R PACK ..... OFF

(2) **R PACK FAIL** caution message goes out:

- **Yes –** Go to (3)
- **No –** Go to (11)

R PACK FAIL (Caution) (Cont'd)

(3) R PACK FAIL caution message goes out:

(4) R PACK ..... Select auto

(5) R PACK FAIL caution message stays out:

→ **Yes –** Go to (6)

→ **No –** Go to (8)

(6) R PACK FAIL caution message stays out:

(7) No further action required.

– COMPLETE –

(8) R PACK FAIL caution message comes on:

(9) R PACK ..... OFF

(10) Altitude ..... Not above 31000 feet

– COMPLETE –

(11) R PACK FAIL caution message stays on:

(12) Altitude ..... Not above 31000 feet

(13) R BLEED ..... OFF

(14) ANTI-ICE, WING ..... OFF

(15) XBLEED ..... MAN CLSD

(16) Leave/avoid icing conditions.

(17) Ice dispersal procedure ..... Accomplish, if required. Refer to Ice and rain protection – Ice dispersal procedure.

– COMPLETE –

R PACK LEAK (Caution)

(1) R PACK ..... OFF

(2) Altitude ..... Not above 31000 feet

– COMPLETE –

R PACK OVHT (Caution)

(1) R PACK ..... OFF

(2) Altitude ..... Not above 31000 feet

– COMPLETE –

RAM AIR FAIL (Caution)

(1) RAM AIR selected open:

➔ **Yes –** Go to (2)

➔ **No –** Go to (4)

(2) RAM AIR selected open:

NOTE

1. Fresh air flow is not available.
2. Crew and passenger oxygen is available if required.
3. Equipment bay overheat is possible.

(3) Land immediately at the nearest suitable airport.

– COMPLETE –

(4) RAM AIR selected closed:

(5) Cabin pressure ..... Monitor

RAM AIR FAIL (Caution) (Cont'd)

(6) R PACK ..... OFF

(7) Altitude ..... Not above 31000 feet

(8) Land at the nearest suitable airport.

(9) Unpressurized flight procedure ..... Accomplish, if required. Refer to Air-conditioning, bleed and pressurization – Unpressurized flight procedure.

– COMPLETE –

RECIRC AIR FAIL (Caution)

(1) RECIRC AIR ..... OFF

– COMPLETE –

TRIM AIR FAIL (Caution)

(1) TRIM AIR ..... OFF

(2) **TRIM AIR FAIL** caution message goes out:

- **Yes –** Go to (3)
- **No –** Go to (15)

(3) TRIM AIR FAIL caution message goes out:

(4) TRIM AIR ..... Select auto

(5) **TRIM AIR FAIL** caution message stays out:

- **Yes –** Go to (6)
- **No –** Go to (8)

TRIM AIR FAIL (Caution) (Cont'd)

(6) TRIM AIR FAIL caution message stays out:

(7) No further action required.

– COMPLETE –

(8) TRIM AIR FAIL caution message comes on:

(9) AIR, CARGO FWD ..... VENT

(10) Consider live cargo.

(11) TRIM AIR ..... OFF

(12) TRIM AIR FAIL caution message goes out:

- **Yes –** Go to (13)
- **No –** Go to (15)

(13) TRIM AIR FAIL caution message goes out:

(14) No further action required.

– COMPLETE –

(15) TRIM AIR FAIL caution message stays on:

(16) AIR synoptic page ..... Select

(17) Affected side ..... Check

(18) Select affected side:

- **Left side –** Go to (19)
- **Right side –** Go to (28)

(19) Left side affected:

(20) L BLEED ..... OFF

(21) APU BLEED ..... OFF

(22) L PACK ..... OFF

(23) Altitude ..... Not above 31000 feet

TRIM AIR FAIL (Caution) (Cont'd)

(24) XBLEED ..... MAN CLSD

(25) ANTI-ICE, WING ..... OFF

(26) Leave/avoid icing conditions.

(27) Ice dispersal procedure ..... Accomplish, if required. Refer to Ice and rain protection – Ice dispersal procedure.

– COMPLETE –

(28) Right side affected:

(29) R BLEED ..... OFF

(30) R PACK ..... OFF

(31) Altitude ..... Not above 31000 feet

(32) XBLEED ..... MAN CLSD

(33) ANTI-ICE, WING ..... OFF

(34) Leave/avoid icing conditions.

(35) Ice dispersal procedure ..... Accomplish, if required. Refer to Ice and rain protection – Ice dispersal procedure.

– COMPLETE –

TRIM AIR LEAK (Caution)

(1) TRIM AIR ..... OFF

(2) **TRIM AIR LEAK** caution message goes out:

- **Yes –** Go to (3)
- **No –** Go to (6)

TRIM AIR LEAK (Caution) (Cont'd)

(3) TRIM AIR LEAK caution message goes out:

(4) AIR, CARGO FWD ..... VENT

(5) Consider live cargo.

– COMPLETE –

(6) TRIM AIR LEAK caution message stays on:

(7) AIR synoptic page ..... Select

(8) Affected side ..... Check

(9) Select affected side:

➔ **Left side: –** Go to (10)

➔ **Right side: –** Go to (19)

(10) Left side affected:

(11) L BLEED ..... OFF

(12) APU BLEED ..... OFF

(13) L PACK ..... OFF

(14) Altitude ..... Not above 31000 feet

(15) XBLEED ..... MAN CLSD

(16) ANTI-ICE, WING ..... OFF

(17) Leave/avoid icing conditions.

(18) Ice dispersal procedure ..... Accomplish, if required. Refer to Ice and rain protection – Ice dispersal procedure.

– COMPLETE –

(19) Right side affected:

(20) R BLEED ..... OFF

(21) R PACK ..... OFF

TRIM AIR LEAK (Caution) (Cont'd)

(22) Altitude ..... Not above 31000 feet

(23) XBLEED ..... MAN CLSD

(24) ANTI-ICE, WING ..... OFF

(25) Leave/avoid icing conditions.

(26) Ice dispersal procedure ..... Accomplish, if required. Refer to Ice and rain protection – Ice dispersal procedure.

– COMPLETE –

WING A/ICE LEAK (Caution)

(1) ANTI-ICE, WING ..... OFF

(2) Leave/avoid icing conditions.

(3) Ice dispersal procedure ..... Accomplish, if required. Refer to Ice and rain protection – Ice dispersal procedure.

– COMPLETE –

XBLEED FAIL (Caution)

(1) AIR synoptic page ..... Select

(2) Determine position of XBLEED valve:

- **Failed open –** Go to (3)
- **Failed closed –** Go to (15)

(3) Valve is failed open:

(4) XBLEED ..... MAN OPEN

(5) Either L BLEED or R BLEED ..... OFF

XBLEED FAIL (Caution) (Cont'd)

(6) Altitude ..... Not above 31000 feet

(7) All engines operating landing in icing conditions expected:

➔ **Yes –** Go to (8)

➔ **No –** Go to (13)

(8) All engines operating landing in icing conditions expected:

On approach:

(9) FMS, PERF – ARR – SLAT/FLAP 5

(10) FMS, PERF – ARR – VREF ..... $V_{REF(FLAP\ 5)}$ + 10

(11) OLD factor ..... Multiply by 1.50

Before landing:

(12) SLAT/FLAP lever 5

– COMPLETE –

(13) All engines operating landing in icing conditions not expected:

(14) No further action required.

– COMPLETE –

(15) Valve is failed closed:

(16) XBLEED ..... MAN CLSD

– COMPLETE –

Emergency descent

(1) Oxygen masks ..... If required, on, 100%

(2) EDM ..... Select on

EDM is available only above 25000 feet.

(3) SEAT BELTS ..... ON

Emergency descent (Cont'd)

(4) Cabin .....Advise

(5) PAX OXY (if required) .....DPLY

When thrust levers at IDLE:

(6) SPOILER lever .....FULL then MAX

CAUTION

If the **SPOILER MISMATCH** advisory message comes on after the pilot has initiated descent, set IDLE and cycle the SPOILER lever to deploy the spoilers.

(7) Altitude selection .....As required

(8) HDG .....As required

(9) Structural damage:

- **Yes –** Go to (10)
- **No –** Go to (18)

(10) Structural damage:

(11) Airspeed ..... Do not exceed the speed at which the damage occurred.

At a safe altitude:

(12) SPOILER lever ..... RET

(13) Oxygen masks .....As required

(14) EDM ..... Select off

(15) FCP modes .....As required

(16) Land at the nearest suitable airport.

Emergency descent (Cont'd)

(17) Unpressurized flight procedure ..... Accomplish Refer to Air-conditioning, bleed and pressurization – Unpressurized flight procedure.

– COMPLETE –

(18) No structural damage:

(19) Airspeed ..... Do not exceed V_{MO}/M_{MO}.

NOTE

When EDM mode is engaged, closely monitor airspeed and ensure that the aircraft is not going into overspeed. If the aircraft goes into overspeed, deactivate EDM and complete the emergency descent manually if required.

At a safe altitude:

(20) SPOILER lever ..... RET

(21) Oxygen masks ..... As required

(22) EDM ..... Select off

(23) FCP modes ..... As required

(24) Land at the nearest suitable airport.

(25) Unpressurized flight procedure ..... Accomplish Refer to Air-conditioning, bleed and pressurization – Unpressurized flight procedure.

– COMPLETE –

Uncontrolled temperature in flight deck or cabin

(1) Cabin pressure normal:

→ **Yes –** Go to (2)

→ **No –** Go to (11)

(2) Cabin pressure normal:

(3) MAN TEMP ..... ON

(4) Adjust affected duct temperature manually.

(5) Temperature controlled:

→ **Yes –** Go to (6)

→ **No –** Go to (8)

(6) Temperature controlled:

(7) Temperature ..... Monitor

– COMPLETE –

(8) Temperature not controlled:

(9) Affected PACK ..... OFF

(10) Altitude ..... Not above 31000 feet

– COMPLETE –

(11) Cabin pressure not normal:

(12) Temperature in flight deck and cabin ..... Monitor

NOTE

The temperature in the aircraft can become uncontrollable during operation in unpressurized flight conditions for long periods of time.

– COMPLETE –

Unpressurized flight procedure

(1) Packs on:

➔ **Yes –** Go to (2)

➔ **No –** Go to (5)

(2) Packs on:

(3) Altitude ..... 10000 feet or lowest safe altitude, whichever is higher.

(4) EMER DEPRESS ..... ON

– COMPLETE –

(5) Packs off:

(6) Altitude ..... 10000 feet or lowest safe altitude, whichever is higher.

(7) L PACK ..... OFF

(8) R PACK ..... OFF

(9) RAM AIR ..... OPEN

(10) RECIRC AIR ..... OFF

(11) EMER DEPRESS ..... ON

– COMPLETE –

AURAL/VISUAL WARNING SYSTEM

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AURAL WARN FAIL (Caution)

(1) Aural warnings failed on:

➔ **Yes –** Go to (2)

➔ **No –** Go to (5)

(2) Aural warnings failed on:

(3) AURAL WARN .....INHIB

NOTE

Two crew members required in flight deck at all times.

(4) EICAS and PFDs .....Closely monitor

– COMPLETE –

(5) Aural warnings failed off:

NOTE

Two crew members required in flight deck at all times.

(6) EICAS and PFDs .....Closely monitor

– COMPLETE –

Aural warnings failed on

(1) AURAL WARN .....INHIB

NOTE

Two crew members required in flight deck at all times.

(2) EICAS and PFDs .....Closely monitor

– COMPLETE –

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AUTOMATIC FLIGHT CONTROL SYSTEM (AFCS)

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CONFIG AP (Warning)

(1) Takeoff .....Discontinue

– COMPLETE –

FD FAIL (Caution)

(1) In flight:

- **Yes –** Go to (2)
- **No –** Go to (4)

(2) In flight:

(3) XFR ..... Select

NOTE

RNP AR approaches are prohibited.

– COMPLETE –

(4) On ground:

(5) Departure data ..... Confirm complete

– COMPLETE –

FD MODE CHANGE (Caution)

(1) FD modes .....Confirm and re-select FCP modes

(2) **FD MODE CHANGE** caution message stays out:

- **Yes –** Go to (3)
- **No –** Go to (5)

FD MODE CHANGE (Caution) (Cont'd)

(3) FD MODE CHANGE caution message stays out:

(4) No further action required.

– COMPLETE –

(5) FD MODE CHANGE caution message comes on:

(6) Reversion panel, FD/AT ..... ALTN

(7) XFR ..... Select

(8) FD modes ..... Confirm and re-select FCP modes

– COMPLETE –

AUXILIARY POWER UNIT (APU)

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APU FIRE (Warning)

(1) In flight:

- **Yes –** Go to (2)
- **No –** Go to (12)

(2) In flight:

(3) Plan to land at the nearest suitable airport.

(4) APU ..... OFF

(5) APU, FIRE ..... Confirm and select

(6) After 10 seconds, **APU FIRE** warning message goes out:

- **Yes –** Go to (7)
- **No –** Go to (9)

(7) After 10 seconds, APU FIRE warning message goes out:

(8) Land immediately at the nearest suitable airport.

– COMPLETE –

(9) After 10 seconds, APU FIRE warning message stays on or there are other indications of fire:

(10) APU, BTL ..... Select

(11) Land immediately at the nearest suitable airport.

– COMPLETE –

(12) On ground:

(13) APU ..... OFF

(14) APU, FIRE ..... Select

(15) APU, BTL ..... Select

(16) Emergency evacuation procedure ..... As required Refer to Evacuation — Emergency evacuation.

– COMPLETE –

APU OVERSPEED (Warning)

(1) APU ..... OFF

(2) APU, FIRE ..... Confirm and select

(3) APU .....Do not restart.

– COMPLETE –

APU (Caution)

(1) APU required:

➔ **Yes –** Go to (2)

➔ **No –** Go to (5)

(2) APU required:

(3) STATUS synoptic page ..... Select

(4) APU ..... Monitor

– COMPLETE –

(5) APU not required:

(6) APU ..... OFF

– COMPLETE –

APU BLEED FAIL (Caution)

(1) APU BLEED ..... OFF

(2) APU BLEED ..... Select auto

(3) **APU BLEED FAIL** caution message goes out:

➔ **Yes –** Go to (4)

➔ **No –** Go to (6)

APU BLEED FAIL (Caution) (Cont'd)

(4) APU BLEED FAIL caution message goes out:

(5) No further action required.

– COMPLETE –

(6) APU BLEED FAIL caution message comes on:

(7) APU BLEED ..... OFF

(8) APU required for electrical power:

- **Yes –** Go to (9)
- **No –** Go to (12)

(9) APU required for electrical power:

(10) STATUS synoptic page ..... Select

(11) APU ..... Monitor

– COMPLETE –

(12) APU not required for electrical power:

(13) APU ..... OFF

– COMPLETE –

APU DOOR OPEN (Caution)

(1) APU (if available) .....START

(2) APU starts:

- **Yes –** Go to (3)
- **No –** Go to (5)

(3) APU starts:

(4) No further action required.

– COMPLETE –

APU DOOR OPEN (Caution) (Cont'd)

(5) APU does not start:

(6) APU ..... OFF

(7) Airspeed ..... Not more than 250 KIAS

– COMPLETE –

DITCHING AND FORCED LANDING

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Ditching

Preparation:

(1) Cabin crew ..... Brief

(2) ECL ..... DU 2

(3) ELT ..... ON

(4) SEAT BELTS ..... ON

(5) Cockpit door ..... Latch open

(6) TAWS, GEAR ..... INHIB

(7) TAWS, TERR ..... INHIB

(8) TAWS, FLAP ..... INHIB

(9) AVIONIC synoptic page ..... Select

(10) AVIO, SMS RUNWAY (if installed) ..... INHIB

Approach:

(11) RAM AIR ..... Check closed

(12) DITCHING ..... ON

(13) ANTI-ICE, WING ..... OFF

NOTE

1. Plan to land parallel to swells and wings level.
2. Aim to touch down with minimum airspeed and vertical rate, at a higher than normal landing attitude (approximately 11 degrees).
3. The **GEAR** warning message and aural will activate and cannot be muted.

(14) LDG LTS ..... ON

(15) Landing gear ..... UP

Ditching (Cont'd)

(16) Flaps .....Maximum available

NOTE

Flap extension may take approximately 3 minutes to reach landing flap.

(17) Harness ..... Tighten and lock

Just before contact:

(18) EMER LTS ..... ON

(19) PA ..... Give the brace command.

(20) L ENG, FIRE ..... Select

(21) APU, FIRE ..... Select

(22) R ENG, FIRE ..... Select

After water contact:

(23) Evacuation .....Initiate

(24) BATT 1 ..... OFF

(25) BATT 2 ..... OFF

– COMPLETE –

Forced landing

Preparation:

(1) Cabin crew .....Brief

(2) ECL ..... DU 2

(3) ELT ..... ON

(4) SEAT BELTS ..... ON

Forced landing (Cont'd)

(5) Cockpit door .....Latch open

(6) TAWS, GEAR .....INHIB

(7) TAWS, TERR .....INHIB

(8) TAWS, FLAP .....INHIB

(9) AVIONIC synoptic page ..... Select

(10) AVIO, SMS RUNWAY (if installed) .....INHIB

Approach:

(11) EMER DEPRESS ..... ON

(12) LDG LTS ..... ON

(13) Landing gear ..... As required

(14) ALTN GEAR ..... As required

(15) Flaps .....Maximum available

NOTE

Flap extension can take approximately 3 minutes to reach landing flap.

(16) Harness ..... Tighten and lock

Before contact:

NOTE

If any gear is down:

Land at a normal landing attitude and minimum vertical rate.

Forced landing (Cont'd)

If all gear are up:

1. Aim to touch down with minimum vertical rate at V_{REF}, at a lower than normal landing attitude (approximately 5 degrees).
2. The **GEAR** warning message and aural will activate and cannot be muted.

(17) EMER LTS ..... ON

(18) PA ..... Give the brace command.

(19) L ENG, FIRE ..... Select

(20) APU, FIRE ..... Select

(21) R ENG, FIRE ..... Select

After contact:

(22) SPOILER lever ..... FULL

(23) L ENG BTL 1 ..... Select

(24) APU BTL ..... Select

(25) R ENG BTL 2 ..... Select

(26) Evacuation ..... Initiate

(27) BATT 1 ..... OFF

(28) BATT 2 ..... OFF

– COMPLETE –

DOORS

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CKPT DOOR EMER ACCESS (Warning)

(1) COCKPIT DOOR, EMER ACCESS ..... DENY

– COMPLETE –

AFT DOOR (Caution)

(1) SEAT BELTS ..... ON

(2) DOOR synoptic page ..... Select

(3) Affected door ..... Determine

(4) Cabin crew ..... Advise

(5) Cabin pressure normal:

- **Yes –** Go to (6)
- **No –** Go to (8)

(6) Cabin pressure normal:

(7) No further action required.

– COMPLETE –

(8) Cabin pressure not normal:

(9) Descent ..... 10000 feet or lowest safe altitude, whichever is higher.

– COMPLETE –

AFT SLIDE (Caution)

(1) DOOR synoptic page ..... Select

(2) Affected slide ..... Determine

(3) Cabin crew ..... Check visual indicators and ARM if able.

AFT SLIDE (Caution) (Cont'd)

(4) **AFT SLIDE** caution message goes out:

➔ **Yes –** Go to (5)

➔ **No –** Go to (7)

(5) AFT SLIDE caution message goes out:

(6) No further action required.

– COMPLETE –

(7) AFT SLIDE caution message stays on:

(8) Cabin crew .....Advise

– COMPLETE –

CARGO DOOR (Caution)

(1) SEAT BELTS ..... ON

(2) Cabin pressure normal:

➔ **Yes –** Go to (3)

➔ **No –** Go to (5)

(3) Cabin pressure normal:

(4) No further action required.

– COMPLETE –

(5) Cabin pressure not normal:

(6) Descent ..... 10000 feet or lowest safe altitude, whichever is higher.

– COMPLETE –

CKPT DOOR LOCK FAIL (Caution)

(1) Cockpit door ..... Lock manually

– COMPLETE –

DOOR SLIDE DISARMED (Caution)

(1) DOOR synoptic page ..... Select

(2) Affected slide .....Determine

(3) Cabin crew .....Check visual indicators and ARM if able.

(4) **DOOR SLIDE DISARMED** caution message goes out:

➔ **Yes –** Go to (5)

➔ **No –** Go to (7)

(5) DOOR SLIDE DISARMED caution message goes out:

(6) No further action required.

– COMPLETE –

(7) DOOR SLIDE DISARMED caution message stays on:

(8) Cabin crew .....Advise

– COMPLETE –

EQUIP BAY DOOR (Caution)

(1) SEAT BELTS ..... ON

(2) Cabin pressure normal:

➔ **Yes –** Go to (3)

➔ **No –** Go to (5)

EQUIP BAY DOOR (Caution) (Cont'd)

(3) Cabin pressure normal:

(4) No further action required.

– COMPLETE –

(5) Cabin pressure not normal:

(6) Descent ..... 10000 feet or lowest safe altitude, whichever is higher.

– COMPLETE –

FWD DOOR (Caution)

(1) SEAT BELTS ..... ON

(2) DOOR synoptic page ..... Select

(3) Affected door ..... Determine

(4) Cabin crew ..... Advise

(5) Cabin pressure normal:

- **Yes –** Go to (6)
- **No –** Go to (8)

(6) Cabin pressure normal:

(7) No further action required.

– COMPLETE –

(8) Cabin pressure not normal:

(9) Descent ..... 10000 feet or lowest safe altitude, whichever is higher.

– COMPLETE –

FWD SLIDE (Caution)

(1) DOOR synoptic page ..... Select

(2) Affected slide ..... Determine

(3) Cabin crew ..... Check visual indicators and ARM if able.

(4) **FWD SLIDE** caution message goes out:

- **Yes –** Go to (5)
- **No –** Go to (7)

(5) FWD SLIDE caution message goes out:

(6) No further action required.

– COMPLETE –

(7) FWD SLIDE caution message stays on:

(8) Cabin crew ..... Advise

– COMPLETE –

OVERWING DOOR (Caution)

(1) SEAT BELTS ..... ON

(2) DOOR synoptic page ..... Select

(3) Affected door ..... Determine

(4) Cabin crew ..... Advise

(5) Cabin pressure normal:

- **Yes –** Go to (6)
- **No –** Go to (8)

OVERWING DOOR (Caution) (Cont'd)

(6) Cabin pressure normal:

(7) No further action required.

– COMPLETE –

(8) Cabin pressure not normal:

(9) Descent ..... 10000 feet or lowest safe altitude, whichever is higher.

– COMPLETE –

WING SLIDE (Caution)

(1) DOOR synoptic page ..... Select

(2) Affected slide .....Determine

(3) Cabin crew .....Advise

– COMPLETE –

ELECTRICAL

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EMER PWR ONLY (Warning)

(1) Airspeed ..... Not more than 300 KIAS/0.80 M

(2) XFR ..... If required, select to left side.

(3) CTP, XPDR/TCAS .....If required, select XPDR 1

(4) Plan to land at the nearest suitable airport.

(5) RAT GEN .....ON

(6) CABIN PWR .....OFF

(7) APU (if available) .....START

(8) L GEN .....OFF

(9) L GEN ..... Select on

(10) R GEN .....OFF

(11) R GEN ..... Select on

(12) **EMER PWR ONLY** warning message goes out:

- **Yes –** Go to (13)
- **No –** Go to (15)

(13) EMER PWR ONLY warning message goes out:

(14) Land at the nearest suitable airport.

– COMPLETE –

(15) EMER PWR ONLY warning message stays on:

(16) Confirm which EICAS message shown:

- **RAT GEN ON advisory message –** Go to (17)
- **BATT EMER PWR ON advisory message –** Go to (28)

(17) RAT GEN ON advisory message:

(18) EQUIP COOLING, EXHAUST .....ON

(19) Leave/avoid icing conditions.

EMER PWR ONLY (Warning) (Cont'd)

(20) Land immediately at the nearest suitable airport.

NOTE

Select the longest runway with minimal crosswind.

(21) Airspeed .....Not less than 155 KIAS until landing assured.

CAUTION

1. Below 148 KIAS the RAT generator may be inoperative and the airplane will be operating on battery power only.
2. Do not land on contaminated runway.

(22) Affected systems .....Review

Significant systems affected when operating on RAT power:

- Hydraulic pumps 2B, 3A, 3B, and PTU
- Rudder trim
- XPDR 2
- TCAS
- Right fuel pump
- ADSP 1 and ADSP 2
- Autothrottle
- DME 1 and 2
- NAV 2 and 3
- RAD ALT 2 and 3
- IRU 2
- TRU 1 and 2
- Attendant call lights
- Slats/flaps slower than normal
- Left and right thrust reversers

EMER PWR ONLY (Warning) (Cont'd)

- NAV to NAV transfer
- ADS-B
- VHF datalink/CPDLC
- Seat belt signs
- VHF 2
- HUD (if installed)
- DU 3, DU 4, and DU 5
- CCP 2 (available on DU 2 only)
- TAWS
- WXR
- HF 2 (if installed)
- SATCOM (if installed)
- GNSS 2 (LPV minimums not authorized)
- Exterior lighting (landing lights, strobe lights, navigation lights, beacon lights, taxi lights)
- Left and right ice detectors (manual anti-ice control only)
- Left and right windshield heating, right window heating
- Left and right windshield wipers
- Left and right map and reading lights
- Recirculation fan
- Fuel inerting
- Toilet flush
- MKP 2

On approach:

(23) Airspeed .....Not less than 155 KIAS until landing assured.

CAUTION

1. Below 148 KIAS the batteries may be the only source of electrical power, and last for at least 5 minutes. Batteries will recharge above 148 KIAS if go-around is required.

EMER PWR ONLY (Warning) (Cont'd)

2. Brakes are not available when batteries are depleted.
3. Do not land on contaminated runway.

(24) Approach speed ..... V_{REF}

NOTE

FMS VSPEEDS not available.

(25) OLD factor ..... Multiply by 1.30

Go-around considerations: Recommended speed V_{FE} – 10 kt.

After landing:

(26) Do not taxi.

(27) PARK BRAKE ..... ON

– COMPLETE –

(28) BATT EMER PWR ON advisory message:

WARNING

Batteries are the only source of electrical power and last for at least 5 minutes.

(29) EQUIP COOLING, EXHAUST ..... ON

(30) Land immediately at the nearest suitable airport.

NOTE

Select the longest runway with minimal crosswind.

(31) Affected systems ..... Review

EMER PWR ONLY (Warning) (Cont'd)

Significant systems affected when on battery power only:

- Hydraulic pumps 2B, 3A, 3B, and PTU
- Rudder trim
- Stabilizer trim
- XPDR 2
- TCAS
- Left and right fuel pump
- ADSP 1 and ADSP 2
- Autothrottle
- NAV to NAV transfer
- ADS-B
- VHF datalink/CPDLC
- Seat belt signs
- VHF 2
- HUD (if installed)
- DU 3, DU 4, and DU 5
- CCP 2 (available on DU 2 only)
- TAWS
- WXR
- HF 2 (if installed)
- SATCOM (if installed)
- GNSS 2 (LPV minimums not authorized)
- DME 1 and 2
- NAV 2 and 3
- RAD ALT 2 and 3
- IRU 2
- TRU 1, 2 and 3
- Attendant call lights
- Slats/flaps slower than normal
- Left and right thrust reversers
- Exterior lighting (landing lights, strobe lights, navigation lights, beacon lights, taxi lights)
- Left and right ice detectors (manual anti-ice control only)
- Left and right windshield heating, left and right window heating
- Left and right windshield wipers
- Left and right map and reading lights
- Recirculation fan
- Fuel inerting
- Toilet flush
- MKP 2

EMER PWR ONLY (Warning) (Cont'd)

On approach:

(32) Approach speed ..... V_{REF}

NOTE

FMS VSPEEDS not available.

(33) OLD factor ..... Multiply by 1.30

CAUTION

1. Brakes are not available when batteries are depleted.
2. Do not land on contaminated runway.

After landing:

(34) Do not taxi.

(35) PARK BRAKE ..... ON

– COMPLETE –

AC BUS 1 (Caution)

(1) HYD 2B ..... OFF

(2) Anti-ice system .....Operate manually in icing conditions

(3) Leave/avoid icing conditions.

(4) Affected systems .....Review

Significant systems affected:

AC BUS 1 (Caution) (Cont'd)

- Hydraulic pump 2B
- TRU 1
- SATCOM
- Left landing light
- Left taxi light
- Nose landing light
- Left windshield heater and wiper
- Cockpit power outlet
- Toilet flush (below 20000 feet)

– COMPLETE –

AC BUS 2 (Caution)

(1) HYD 3A ..... OFF

(2) HYD 3B ..... OFF

(3) Anti-ice system .....Operate manually in icing conditions

(4) Leave/avoid icing conditions.

NOTE

Drag may be higher than normal. Fuel burn may increase due to extra drag.

(5) Affected systems .....Review

Significant systems affected:

- Hydraulic pumps 3A and 3B
- Hydraulic pump 2B (when single engine-driven generator or APU available)
- MFS 2
- Nose taxi light
- Right landing light
- Right taxi light
- Right windshield heater and wiper

AC BUS 2 (Caution) (Cont'd)

- Slats/flaps slower than normal
- Right fuel pump
- Recirculation fan
- TRU 2
- Right window heater

– COMPLETE –

AC ESS BUS (Caution)

(1) Affected systems .....Review

Significant systems affected:

- Left fuel pump
- TRU 3
- Left window heater

– COMPLETE –

APU GEN FAIL (Caution)

(1) APU GEN ..... OFF

(2) APU GEN ..... Select on

(3) **APU GEN FAIL** caution message stays out:

➔ **Yes –** Go to (4)

➔ **No –** Go to (6)

(4) APU GEN FAIL caution message stays out:

(5) No further action required.

– COMPLETE –

APU GEN FAIL (Caution) (Cont'd)

(6) APU GEN FAIL caution message comes on:

(7) APU GEN ..... OFF

(8) **L GEN OFF** or **R GEN OFF** status message is also shown:

→ **Yes –** Go to (9)

→ **No –** Go to (11)

(9) L GEN OFF or R GEN OFF status message is also shown:

(10) Land at the nearest suitable airport.

– COMPLETE –

(11) L GEN OFF or R GEN OFF status message is not shown:

(12) No further action required

– COMPLETE –

BATT 1 FAIL (Caution)

(1) BATT 1 ..... OFF

(2) BATT 1 ..... AUTO

(3) **BATT 1 FAIL** caution message stays out:

→ **Yes –** Go to (4)

→ **No –** Go to (6)

(4) BATT 1 FAIL caution message stays out:

(5) No further action required.

– COMPLETE –

(6) BATT 1 FAIL caution message comes on:

(7) BATT 1 ..... OFF

– COMPLETE –

BATT 1 OVERTEMP (Caution)

(1) BATT 1 ..... OFF

(2) Land at nearest suitable airport.

– COMPLETE –

BATT 2 FAIL (Caution)

(1) BATT 2 ..... OFF

(2) BATT 2 ..... AUTO

(3) **BATT 2 FAIL** caution message stays out:

➔ **Yes –** Go to (4)

➔ **No –** Go to (6)

(4) BATT 2 FAIL caution message stays out:

(5) No further action required.

– COMPLETE –

(6) BATT 2 FAIL caution message comes on:

(7) BATT 2 ..... OFF

– COMPLETE –

BATT 2 OVERTEMP (Caution)

(1) BATT 2 ..... OFF

(2) Land at the nearest suitable airport.

– COMPLETE –

BATT DISCHARGING (Caution)

(1) APU or external power available:

➔ **Yes –** Go to (2)

➔ **No –** Go to (4)

(2) APU or external power available:

(3) APU or external power ..... START / Establish

– COMPLETE –

(4) APU or external power not available:

(5) BATT 1 ..... OFF

(6) BATT 2 ..... OFF

– COMPLETE –

DC BUS 1 (Caution)

(1) Land at the nearest suitable airport.

If time and conditions permit:

(2) PTU ..... OFF

(3) Leave/avoid icing conditions.

NOTE

RNP AR approaches are prohibited.

(4) Affected systems ..... Review

Significant systems affected:

- Left thrust reverser
- PTU
- DME 1
- TAWS

DC BUS 1 (Caution) (Cont'd)

- Hydraulic 1 pressure indication
- Hydraulic 2 quantity indication
- Flaps slower than normal
- Rudder trim
- Fuel inerting
- Autothrottle
- ADSP 1
- DU 3
- Attendant call lights
- Left map light
- Left windshield heat
- Aft toilet
- Forward toilet
- Exterior lighting (navigation lights)
- SATCOM (if installed)
- HUD (if installed)

– COMPLETE –

DC BUS 2 (Caution)

(1) Land at the nearest suitable airport.

If time and conditions permit:

(2) Affected systems .....Review

Significant systems affected:

- Right thrust reverser
- Hydraulic 2 pressure indication
- Slats slower than normal
- Recirculation fan
- ADSP 2
- DU 4 and DU 5
- DME 2
- NAV 2
- RAD ALT 2
- XPDR 2
- VHF 2
- Weather radar
- Right map light
- Right window heat

DC BUS 2 (Caution) (Cont'd)

- GNSS 2
- HF 2 (if installed)
- MKP 2
- Right windshield heat
- R HUD (if installed)

– COMPLETE –

DC EMER BUS (Caution)

(1) Land at the nearest suitable airport.

NOTE

Do not shut down the APU.

(2) Affected systems .....Review

Significant systems affected:

- Left fuel shutoff valve
- Right fuel shutoff valve
- Hydraulic 1 shutoff valve
- Hydraulic 2 shutoff valve
- RAT manual deployment
- APU inlet door power

– COMPLETE –

DC ESS BUS 1 (Caution)

NOTE

The **L BRAKE FAIL** and **R BRAKE FAIL** caution messages come on with the **DC ESS BUS 1** caution message when the landing gear is extended. The steps in these caution messages are included in this procedure and do not need to be done separately. The OLD factor in this procedure must be applied and already includes the affected systems.

(1) Cockpit door ..... Lock manually

(2) Cabin crew .....Advise

NOTE

Forward lavatory smoke detection is inoperative.

(3) AUTOBRAKE ..... OFF

(4) Land at the nearest suitable airport.

NOTE

Do not shut down the APU.

(5) Affected systems .....Review

Significant systems affected:

- APU start
- APU door actuator
- Left fuel pump
- Trim air
- Forward lavatory smoke detection
- Wheel brakes – reduced braking force
- DU 1
- ACP 3
- HF 1
- MKP 1

DC ESS BUS 1 (Caution) (Cont'd)

- Crew oxygen pressure indication
- Remote cockpit door lock
- Passenger oxygen auto deploy function
- VHF 3
- L HUD (if installed)

On approach:

(6) OLD factor ..... Multiply by 1.50

(7) Brakes .....After landing, apply with caution.

NOTE

Anti–skid may not be available on left and right brakes.

(8) Thrust reversers .....After landing, apply as required.

– COMPLETE –

DC ESS BUS 2 (Caution)

(1) SPD mode ..... MAN

NOTE

Do not re-select FMS SPD mode.

(2) NAV SRC .....FMS 1

(3) XFR .....Select to left side.

(4) ANTI-ICE, WING ..... OFF

(5) Leave/avoid icing conditions.

(6) Land at the nearest suitable airport.

(7) Cabin crew .....Advise

DC ESS BUS 2 (Caution) (Cont'd)

NOTE

Aft lavatory smoke detection is inoperative.

(8) AUTOBRAKE ..... OFF

(9) Use AVIONIC, CTP tab for R CTP functions.

NOTE

1. LPV and RNP AR approaches are prohibited with single FMS operative.
2. With single FMS operation, auto tuning for a NAV to NAV transfer will not occur on the cross-side PFD. Manual tuning is required.

(10) Affected systems .....Review

NOTE

The **L BRAKE FAIL** and **R BRAKE FAIL** caution messages come on with the **DC ESS BUS 2** caution message when the landing gear is extended. The steps in these caution messages are included in this procedure and do not need to be done separately. The OLD factor in this procedure must be applied and already includes the affected systems.

Significant systems affected:

- Hydraulic 3 quantity indication
- Aft lavatory smoke detection
- Outflow valve manual control
- Wing anti-ice
- ADSP 4
- APPR 1
- CCP 2
- CTP 2

DC ESS BUS 2 (Caution) (Cont'd)

- Passenger oxygen auto deploy function
- Wheel brakes – reduced braking force
- FMS 2
- MKP 2

(11) Go-around procedure ..... Accomplish, if required.

On approach:

(12) OLD factor ..... Multiply by 1.50

(13) Brakes .....After landing, apply with caution.

NOTE

Anti-skid may not be available on left and right brakes.

(14) Thrust reversers .....After landing, apply as required.

– COMPLETE –

DC ESS BUS 3 (Caution)

(1) SPD mode ..... MAN

NOTE

Do not re-select FMS SPD mode.

(2) NAV SRC .....FMS 2

(3) XFR .....Select to right side.

(4) Altitude .....Not above 37000 feet

(5) EQUIP COOLING, EXHAUST .....ON

(6) Leave/avoid icing conditions.

DC ESS BUS 3 (Caution) (Cont'd)

(7) Land at the nearest suitable airport.

NOTE

Select the longest runway with minimal crosswind.

(8) CTP 2, XPDR/TCAS ..... Select XPDR 2

(9) Use AVIONIC, CTP tab for L CTP functions.

NOTE

1. LPV and RNP AR approaches are prohibited with single FMS operative.
2. With single FMS operation, auto tuning for a NAV to NAV transfer will not occur on the cross-side PFD. Manual tuning is required.

(10) Affected systems .....Review

Significant systems affected:

- Hydraulic 1 quantity indication
- Hydraulic 3 pressure indication
- PFCC 3
- MFS (1 pair)
- Slats/flaps slower than normal
- Rudder degraded
- Right stick shaker
- Gravity transfer
- Alternate gear extension
- Equipment bay cooling
- ADSP 3
- CCP 1
- CTP 1
- FMS 1
- GNSS 1
- ISI
- NAV 1
- OMS
- RAD ALT 1
- Reversion panel

DC ESS BUS 3 (Caution) (Cont'd)

- Ram air
- Wing anti-ice
- DU 2
- XPDR 1
- VHF 1
- Left window heat
- L HUD (if installed)
- CPDLC (if installed)

(11) Go-around procedure ..... Accomplish, if required.

On approach:

(12) FMS, PERF – ARR – SLAT/FLAP 4

(13) FMS, PERF – ARR – VREF ..... $V_{REF(FLAP\ 4)}$

(14) OLD factor ..... Multiply by 1.15

Before landing:

(15) SLAT/FLAP lever 4

– COMPLETE –

L GEN FAIL (Caution)

(1) L GEN ..... OFF

(2) L GEN ..... Select on

(3) **L GEN FAIL** caution message stays out:

→ **Yes –** Go to (4)

→ **No –** Go to (6)

(4) L GEN FAIL caution message stays out:

(5) No further action required.

– COMPLETE –

L GEN FAIL (Caution) (Cont'd)

(6) L GEN FAIL caution message comes on:

(7) L GEN ..... OFF

(8) APU (if available) .....START

(9) **R GEN OFF** or **APU GEN OFF** status message is also shown:

- **Yes –** Go to (10)
- **No –** Go to (12)

(10) R GEN OFF or APU GEN OFF status message is also shown:

(11) Land at the nearest suitable airport.

– COMPLETE –

(12) R GEN OFF or APU GEN OFF status message is not shown:

(13) No further action required

– COMPLETE –

L GEN OIL (Caution)

(1) APU (if available) .....START

(2) L GEN .....Confirm and OFF

(3) L DISC ..... Confirm and DISC

(4) **R GEN OFF** or **APU GEN OFF** status message is also shown:

- **Yes –** Go to (5)
- **No –** Go to (7)

(5) R GEN OFF or APU GEN OFF status message is also shown:

(6) Land at the nearest suitable airport.

– COMPLETE –

L GEN OIL (Caution) (Cont'd)

(7) R GEN OFF or APU GEN OFF status message is not shown:

(8) No further action required

– COMPLETE –

R GEN FAIL (Caution)

(1) R GEN ..... OFF

(2) R GEN ..... Select on

(3) **R GEN FAIL** caution message stays out:

- **Yes –** Go to (4)
- **No –** Go to (6)

(4) R GEN FAIL caution message stays out:

(5) No further action required.

– COMPLETE –

(6) R GEN FAIL caution message comes on:

(7) R GEN ..... OFF

(8) APU (if available) .....START

(9) **L GEN OFF** or **APU GEN OFF** status message is also shown:

- **Yes –** Go to (10)
- **No –** Go to (12)

(10) L GEN OFF or APU GEN OFF status message is also shown:

(11) Land at the nearest suitable airport.

– COMPLETE –

R GEN FAIL (Caution) (Cont'd)

(12) L GEN OFF or APU GEN OFF status message is not shown:

(13) No further action required

– COMPLETE –

R GEN OIL (Caution)

(1) APU (if available) .....START

(2) R GEN .....Confirm and OFF

(3) R DISC ..... Confirm and DISC

(4) **L GEN OFF** or **APU GEN OFF** status message is also shown:

- **Yes –** Go to (5)
- **No –** Go to (7)

(5) L GEN OFF or APU GEN OFF status message is also shown:

(6) Land at the nearest suitable airport.

– COMPLETE –

(7) L GEN OFF or APU GEN OFF status message is not shown:

(8) No further action required

– COMPLETE –

RAT GEN FAIL (Caution)

In use and in flight:

(1) RAT GEN .....ON

– COMPLETE –

EVACUATION

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Emergency evacuation

(1) DOME ..... ON
(2) ATC ..... Advise
(3) PARK BRAKE ..... ON
(4) ECL ..... DU 2 and DU 3
(5) SPOILER lever ..... Ensure RET
(6) Thrust levers ..... IDLE
(7) L ENG run ..... OFF
(8) R ENG run ..... OFF
(9) APU ..... OFF
(10) L ENG FIRE ..... Select
(11) APU FIRE ..... Select
(12) R ENG FIRE ..... Select
(13) EMER DEPRESS ..... ON
(14) EMER LTS ..... ON
(15) Evacuation ..... Initiate
(16) BATT 1 ..... OFF
(17) BATT 2 ..... OFF

– COMPLETE –

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FIRE PROTECTION

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AFT CARGO BTL FAIL (Caution)

(1) Cargo in aft cargo bay:

➔ **Yes –** Go to (2)

➔ **No –** Go to (4)

(2) Cargo in aft cargo bay:

(3) Land at the nearest suitable airport.

– COMPLETE –

(4) No cargo in aft cargo bay:

(5) No further action required.

– COMPLETE –

AFT CARGO SMOKE FAIL (Caution)

(1) Cargo in aft cargo bay:

➔ **Yes –** Go to (2)

➔ **No –** Go to (5)

(2) Cargo in aft cargo bay:

(3) AIR, CARGO AFT ..... OFF

(4) Land at the nearest suitable airport.

– COMPLETE –

(5) No cargo in aft cargo bay:

(6) No further action required.

– COMPLETE –

APU BTL FAIL (Caution)

(1) APU required for flight:

➔ **Yes –** Go to (2)

➔ **No –** Go to (4)

(2) APU required for flight:

(3) Land at the nearest suitable airport.

– COMPLETE –

(4) APU not required for flight:

(5) APU ..... OFF

– COMPLETE –

APU FIRE DET FAIL (Caution)

(1) APU required for flight:

➔ **Yes –** Go to (2)

➔ **No –** Go to (4)

(2) APU required for flight:

(3) Land at the nearest suitable airport.

– COMPLETE –

(4) APU not required for flight:

(5) APU ..... OFF

– COMPLETE –

CARGO BTL FAIL (Caution)

(1) Cargo in either cargo bay:

- **Yes –** Go to (2)
- **No –** Go to (4)

(2) Cargo in either cargo bay:

(3) Land at the nearest suitable airport.

– COMPLETE –

(4) No cargo in either cargo bay:

(5) No further action required.

– COMPLETE –

EQUIP BAY SMOKE FAIL (Caution)

NOTE

This message can appear after power loss to EFAN or temporarily (for less than 2 minutes) during power transients.

(1) **EMER PWR ONLY** warning message or **AIR SYS ESS CTLR FAIL** caution message is also shown:

- **Yes –** Go to (2)
- **No –** Go to (4)

(2) EMER PWR ONLY warning message or AIR SYS ESS CTLR FAIL caution message is also shown:

(3) No further action required.

– COMPLETE –

EQUIP BAY SMOKE FAIL (Caution) (Cont'd)

(4) EMER PWR ONLY warning message or AIR SYS ESS CTLR FAIL caution message is not shown:

(5) RECIRC AIR ..... OFF

(6) CABIN PWR (if galley chiller installed) ..... OFF

(7) EQUIP COOLING, INLET ..... OFF

(8) EQUIP BAY COOL FAIL caution message is also shown:

➔ **Yes –** Go to (9)

➔ **No –** Go to (12)

(9) EQUIP BAY COOL FAIL caution message is also shown:

(10) EQUIP COOLING, EXHAUST ..... ON

(11) Land at the nearest suitable airport.

– COMPLETE –

(12) EQUIP BAY COOL FAIL caution message is not shown:

(13) EQUIP COOLING, EXHAUST ..... VLV ONLY

(14) Land at the nearest suitable airport.

– COMPLETE –

FIRE SYSTEM FAIL (Caution)

(1) Land immediately at the nearest suitable airport.

– COMPLETE –

FWD CARGO BTL FAIL (Caution)

(1) Cargo in forward cargo bay:

→ **Yes –** Go to (2)

→ **No –** Go to (4)

(2) Cargo in forward cargo bay:

(3) Land at the nearest suitable airport.

– COMPLETE –

(4) No cargo in forward cargo bay:

(5) No further action required.

– COMPLETE –

FWD CARGO SMOKE FAIL (Caution)

(1) Cargo in forward cargo bay:

→ **Yes –** Go to (2)

→ **No –** Go to (5)

(2) Cargo in forward cargo bay:

(3) AIR, CARGO FWD ..... OFF

(4) Land at the nearest suitable airport.

– COMPLETE –

(5) No cargo in forward cargo bay:

(6) No further action required.

– COMPLETE –

L ENG BTL FAIL (Caution)

(1) Land at the nearest suitable airport.

– COMPLETE –

L ENG FIRE DET FAIL (Caution)

(1) Land at the nearest suitable airport.

– COMPLETE –

LAV SMOKE FAIL (Caution)

(1) Cabin crew .....Advise

– COMPLETE –

L-R ENG BTL FAIL (Caution)

(1) Land at the nearest suitable airport.

– COMPLETE –

MLG BAY OVHT DET FAIL (Caution)

(1) STATUS synoptic page ..... Select

(2) Brake temperature is green:

- **Yes –** Go to (3)
- **No –** Go to (5)

(3) Brake temperature is green:

(4) No further action required.

– COMPLETE –

MLG BAY OVHT DET FAIL (Caution) (Cont'd)

(5) Brake temperature is not green:

(6) Airspeed ..... Not more than 250 KIAS

(7) Landing gear ..... DN

When brake temperature is within normal range:

(8) Landing gear ..... As required

– COMPLETE –

R ENG BTL FAIL (Caution)

(1) Land at the nearest suitable airport.

– COMPLETE –

R ENG FIRE DET FAIL (Caution)

(1) Land at the nearest suitable airport.

– COMPLETE –

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FLIGHT CONTROLS

CONFIG FLAP (Warning)

(1) Takeoff .....Discontinue

– COMPLETE –

CONFIG RUDDER TRIM (Warning)

(1) Takeoff .....Discontinue

– COMPLETE –

CONFIG SIDESTICK (Warning)

(1) Takeoff .....Discontinue

– COMPLETE –

CONFIG SPOILER (Warning)

(1) Takeoff .....Discontinue

– COMPLETE –

CONFIG STAB TRIM (Warning)

(1) Takeoff .....Discontinue

– COMPLETE –

FLT CTRL DIRECT (Warning)

WARNING

Controllability is reduced and fly-by-wire envelope protection is not available. Minimize control inputs.

FLT CTRL DIRECT (Warning) (Cont'd)

(1) Assume manual control.

(2) Airspeed ..... Not more than 300 KIAS/0.80 M

(3) Plan to land at the nearest suitable airport.

Significant systems affected:

- Autopilot
- Flight director may not be available
- Roll authority reduced
- Flight spoilers
- Sidestick priority
- Ground lift dumping
- Nosewheel steering may not be available

CAUTION

1. Do not attempt this reset procedure more than once.
2. Do not attempt reset:
   - If there were significant flight control induced aircraft transients immediately before the reversion to direct mode.
   - Unless the aircraft is stable, straight, level and trimmed.

(4) PFCC 1 ..... OFF

(5) PFCC 1 ..... Select on

FLT CTRL DIRECT (Warning) (Cont'd)

After 30 seconds:

(6) PFCC 2 ..... OFF

(7) PFCC 2 ..... Select on

After 30 seconds:

(8) PFCC 3 ..... OFF

(9) PFCC 3 ..... Select on

(10) **FLT CTRL DIRECT** warning message goes out:

- **Yes –** Go to (11)
- **No –** Go to (13)

(11) FLT CTRL DIRECT warning message goes out:

(12) Land at the nearest suitable airport.

– COMPLETE –

(13) FLT CTRL DIRECT warning message stays on:

(14) Altitude ..... Not above 31000 feet

(15) Land immediately at the nearest suitable airport.

NOTE

Select the longest runway with minimal crosswind.

On approach:

CAUTION

Control authority is reduced. Minimize control inputs.

(16) FMS, PERF – ARR – SLAT/FLAP 4

FLT CTRL DIRECT (Warning) (Cont'd)

(17) FMS, PERF – ARR – VREF ..... $V_{REF(FLAP\ 4)}$ + 10

(18) OLD factor ..... Multiply by 1.45

Before landing:

(19) SLAT/FLAP lever 4

After touchdown:

(20) SPOILER lever ..... FULL

– COMPLETE –

L ELEVATOR FAIL (Warning)

(1) Airspeed ..... Not more than 200 KIAS

(2) Do not retract flaps.

(3) Land at the nearest suitable airport.

NOTE

Select the longest runway with minimal crosswind.

On approach:

(4) FMS, PERF – ARR – SLAT/FLAP 4

(5) FMS, PERF – ARR – VREF ..... $V_{REF(FLAP\ 4)}$ + 10

(6) OLD factor ..... Multiply by 1.30

Go-around considerations:

It is acceptable to retract the slats/flaps to a go-around FLAP setting but not beyond:

- If the slats/flaps are in FLAP 4, then the go-around setting is FLAP 2.
- If the slats/flaps are in FLAP 5, then the go-around setting is FLAP 4.

L ELEVATOR FAIL (Warning) (Cont'd)

Fuel consumption will be increased by a factor of:

- 1.5 with slats/flaps extended at FLAP 2.
- 2.1 with slats/flaps extended at FLAP 4.

Before landing:

(7) SLAT/FLAP lever 4

– COMPLETE –

R ELEVATOR FAIL (Warning)

(1) Airspeed ..... Not more than 200 KIAS

(2) Do not retract flaps.

(3) Land at the nearest suitable airport.

NOTE

Select the longest runway with minimal crosswind.

On approach:

(4) FMS, PERF – ARR –SLAT/FLAP 4

(5) FMS, PERF – ARR – VREF ..... $V_{REF(FLAP\ 4)}$ + 10

(6) OLD factor ..... Multiply by 1.30

Go-around considerations:

It is acceptable to retract the slats/flaps to a go-around FLAP setting but not beyond:

- If the slats/flaps are in FLAP 4, then the go-around setting is FLAP 2.
- If the slats/flaps are in FLAP 5, then the go-around setting is FLAP 4.

R ELEVATOR FAIL (Warning) (Cont'd)

Fuel consumption will be increased by a factor of:

- 1.5 with slats/flaps extended at FLAP 2.
- 2.1 with slats/flaps extended at FLAP 4.

Before landing:

(7) SLAT/FLAP lever 4

– COMPLETE –

RUDDER FAIL (Warning)

(1) FLT CTRL synoptic page ..... Select

(2) Rudder position ..... Check

(3) Airspeed ..... Not more than 200 KIAS or the speed at which the failure occurred, whichever is higher.

(4) Do not retract flaps.

(5) Land immediately at the nearest suitable airport.

NOTE

1. Select the longest runway with minimal crosswind.
2. If rudder has failed out of neutral position use lateral control and differential thrust as required to maintain straight flight until touchdown.
3. Ensure the rudder pedals are centered before touchdown.
4. Nosewheel steering is still available.

On approach:

(6) FMS, PERF – ARR – SLAT/FLAP 5

RUDDER FAIL (Warning) (Cont'd)

(7) FMS, PERF – ARR – VREF ..... $V_{REF(FLAP\ 5)}$ + 5

(8) OLD factor ..... Multiply by 1.85

Go-around considerations:

It is acceptable to retract the slats/flaps to a go-around FLAP setting but not beyond:

- If the slats/flaps are in FLAP 4, then the go-around setting is FLAP 2.
- If the slats/flaps are in FLAP 5, then the go-around setting is FLAP 4.

Fuel consumption will be increased by a factor of:

- 1.5 with slats/flaps extended at FLAP 2.
- 2.1 with slats/flaps extended at FLAP 4.

Before landing:

(9) SLAT/FLAP lever 5

WARNING

If the rudder has failed out of neutral position, maintain differential thrust until directional control is established on the runway.

CAUTION

1. Do not prolong the flare or delay the derotation.
2. Use prompt differential braking as required to assist in directional control.

RUDDER FAIL (Warning) (Cont'd)

Immediately after touchdown:

(10) SPOILER lever .....FULL

– COMPLETE –

ADS DEGRADED (Caution)

NOTE

1. Avoid abrupt maneuvering.
2. Avoid use of the spoiler lever until airspeed is less than 300 KIAS/0.80 M and altitude is below 35000 feet.

(1) Airspeed ..... Not more than 300 KIAS/0.80 M

(2) Altitude .....Not above 35000 feet

(3) Land at the nearest suitable airport.

On approach:

(4) FMS, PERF – ARR – SLAT/FLAP 4

(5) FMS, PERF – ARR – VREF .....$V_{REF(FLAP\ 4)}$ + 10

(6) OLD factor ..... Multiply by 1.30

Before landing:

(7) SLAT/FLAP lever 4

– COMPLETE –

AILERON FAIL (Caution)

(1) Failure occurs at speed less than or equal to 200 KIAS:

➔ **Yes –** Go to (2)

➔ **No –** Go to (6)

(2) Failure occurs at speed less than or equal to 200 KIAS:

(3) Airspeed ..... Not more than 200 KIAS

(4) OLD factor ..... Multiply by 1.15

(5) Land at the nearest suitable airport.

NOTE

1. Select the longest runway with minimal crosswind.
2. Roll rate may be reduced. Avoid over-control.

– COMPLETE –

(6) Failure occurs at speed more than 200 KIAS:

(7) Airspeed ..... Not more than 300 KIAS or the speed at which the failure occurred, whichever is lower.

(8) OLD factor ..... Multiply by 1.15

(9) Land at the nearest suitable airport.

NOTE

1. Select the longest runway with minimal crosswind.
2. Roll rate may be reduced. Avoid over-control.

– COMPLETE –

ALPHA LIMIT (Caution)

NOTE

Low speed warning/protection increased due to wing anti-ice system malfunction in icing conditions.

On approach:

(1) FMS, PERF – ARR – VREF ..... V_{REF} + 5

(2) OLD factor ..... Multiply by 1.20

– COMPLETE –

FLAP FAIL (Caution)

(1) **SLAT-FLAP FAIL** caution message is also shown:

- **Yes –** Go to (2)
- **No –** Go to (4)

(2) SLAT-FLAP FAIL caution message is also shown:

(3) SLAT-FLAP FAIL procedure ..... Accomplish Refer to Flight controls – SLAT-FLAP FAIL.

– COMPLETE –

(4) SLAT-FLAP FAIL caution message is not shown:

(5) SLAT/FLAP lever ..... Select previous position.

(6) SLAT/FLAP lever ..... Re-select desired position.

(7) **FLAP FAIL** caution message goes out:

- **Yes –** Go to (8)
- **No –** Go to (10)

FLAP FAIL (Caution) (Cont'd)

(8) FLAP FAIL caution message goes out:

(9) No further action required.

– COMPLETE –

(10) FLAP FAIL caution message stays on:

(11) Altitude ..... Not above 20000 feet

(12) Airspeed ..... Not more than V_{FE}.

NOTE

1. If slat/flap are confirmed 0, reduction of cruise airspeed/altitude are not required.
2. High alpha protection setting is adjusted to account for the failure.
3. The recommended airspeed until final approach is V_{FE} – 10 KIAS for the selected SLAT/FLAP lever position.

(13) Anti-ice system ..... Operate manually in icing conditions.

(14) Land at the nearest suitable airport.

NOTE

Select the longest runway with minimal crosswind.

(15) **SLAT SKEW** caution message is also shown:

➔ **Yes –** Go to (16)

➔ **No –** Go to (47)

FLAP FAIL (Caution) (Cont'd)

(16) SLAT SKEW caution message is also shown:

(17) Check FLAP position:

- **FLAP position is 0-1 –** Go to (18)
- **FLAP position is 2 –** Go to (24)
- **FLAP position is 3 –** Go to (30)
- **FLAP position is 4 –** Go to (36)
- **FLAP position is 5 –** Go to (42)

(18) FLAP position is 0-1:

(19) Maximum landing weight ..... Use the table to determine the value and correct for wind and slope.

FLAP FAIL (Caution) (Cont'd)

LANDING WEIGHT KG (LB) LIMITED BY MAXIMUM BRAKE ENERGY AND TIRE SPEED							
FLIGHT CONTROL FAILURE		V_{REF}+54KT					
OAT		PRESSURE ALTITUDE (FT)					
^{0}C	^{0}F	0	2000	4000	6000	8000	10000
-20 AND BELOW	-4 AND BELOW	69580 (153400)	64090 (141300)	58780 (129600)	54060 (119200)	49710 (109600)	45580 (100500)
0	32	63180 (139300)	57920 (127700)	53290 (117500)	48980 (108000)	44900 (99000)	41050 (90500)
20	68	57560 (126900)	52970 (116800)	48670 (107300)	44580 (98300)	40770 (89900)	37140 (81900)
30	86	55150 (121600)	50750 (111900)	46530 (102600)	42590 (93900)	38910 (85800)	35420 (78100)
40 AND ABOVE	104 AND ABOVE	52970 (116800)	48620 (107200)	44580 (98300)	40680 (89700)	37190 (82000)	33700 (74300)

CS300_LW_ATA27_DVREF54_05AUG2016

Wind correction:

Tailwind: decrease landing weight by 25% per 10kts of tailwind.

Runway Slope Correction:

Downhill: decrease maximum landing weight by 2% per 1% downhill slope.

Landing weight limited by brake energy and tire speed – ΔVREF 54 kt
Figure 02–11–1

FLAP FAIL (Caution) (Cont'd)

On approach:

(20) TAWS, FLAP .....INHIB

(21) FMS, PERF – ARR – SLAT/FLAP 4

(22) FMS, PERF – ARR – VREF .....$V_{REF(FLAP\ 4)}$ + 54

(23) OLD factor .....Multiply by value from table.

OLD factor Dry runway	OLD factor Wet runway
1.85	2.10

Go-around considerations: Do not retract flaps.

– COMPLETE –

(24) FLAP position is 2:

(25) Maximum landing weight ..... Use the table to determine the value and correct for wind and slope.

FLAP FAIL (Caution) (Cont'd)

LANDING WEIGHT KG (LB) LIMITED BY MAXIMUM BRAKE ENERGY AND TIRE SPEED							
FLIGHT CONTROL FAILURE		V_{REF}+33KT					
OAT		PRESSURE ALTITUDE (FT)					
^{0}C	^{0}F	0	2000	4000	6000	8000	10000
-20 AND BELOW	-4 AND BELOW	78330 (172700)	75740 (167000)	73160 (161300)	70620 (155700)	66310 (146200)	61140 (134800)
0	32	75380 (166200)	72800 (160500)	70300 (155000)	65490 (144400)	60410 (133200)	55740 (122900)
20	68	72660 (160200)	70170 (154700)	65220 (143800)	60140 (132600)	55510 (122400)	51300 (113100)
30	86	71440 (157500)	67900 (149700)	62680 (138200)	57740 (127300)	53380 (117700)	49350 (108800)
40 AND ABOVE	104 AND ABOVE	70260 (154900)	65360 (144100)	60280 (132900)	55610 (122600)	51430 (113400)	47440 (104600)

CS300_LW_ATA27_DVREF33_05AUG2016

Wind correction:

Tailwind: decrease landing weight by 20% per 10kts of tailwind.

Runway Slope Correction:

Downhill: decrease maximum landing weight by 2% per 1% downhill slope.

Landing weight limited by brake energy and tire speed – ΔVREF 33 kt
Figure 02–11–2

FLAP FAIL (Caution) (Cont'd)

On approach:

(26) TAWS, FLAP .....INHIB

(27) FMS, PERF – ARR – SLAT/FLAP 4

(28) FMS, PERF – ARR – VREF .....$V_{REF(FLAP\ 4)}$ + 33

(29) OLD factor .....Multiply by value from table.

OLD factor Dry runway	OLD factor Wet runway
1.60	1.80

Go-around considerations: Do not retract flaps.

– COMPLETE –

(30) FLAP position is 3:

(31) Maximum landing weight ..... Use the table to determine the value and correct for wind and slope.

FLAP FAIL (Caution) (Cont'd)

LANDING WEIGHT KG (LB) LIMITED BY MAXIMUM BRAKE ENERGY AND TIRE SPEED							
FLIGHT CONTROL FAILURE		V_{REF}+22KT					
OAT		PRESSURE ALTITUDE (FT)					
^{0}C	^{0}F	0	2000	4000	6000	8000	10000
-20 AND BELOW	-4 AND BELOW	82960 (182900)	80370 (177200)	77740 (171400)	75110 (165600)	72480 (159800)	69620 (153500)
0	32	80010 (176400)	77380 (170600)	74790 (164900)	72160 (159100)	69620 (153500)	64720 (142700)
20	68	77290 (170400)	74700 (164700)	72120 (159000)	69580 (153400)	64540 (142300)	59640 (131500)
30	86	75970 (167500)	73430 (161900)	70890 (156300)	67130 (148000)	62090 (136900)	57370 (126500)
40 AND ABOVE	104 AND ABOVE	74790 (164900)	72210 (159200)	69710 (153700)	64720 (142700)	59820 (131900)	55380 (122100)

CS300_LW_ATA27_DVREF22_05AUG2016

Wind correction:

Tailwind: decrease landing weight by 19% per 10kts of tailwind.

Runway Slope Correction:

Downhill: decrease maximum landing weight by 2% per 1% downhill slope.

Landing weight limited by brake energy and tire speed – ΔVREF 22 kt
Figure 02–11–3

FLAP FAIL (Caution) (Cont'd)

On approach:

(32) TAWS, FLAP .....INHIB

(33) FMS, PERF – ARR – SLAT/FLAP 4

(34) FMS, PERF – ARR – VREF .....$V_{REF(FLAP\ 4)}$ + 22

(35) OLD factor .....Multiply by value from table.

OLD factor Dry runway	OLD factor Wet runway
1.45	1.55

Go-around considerations: Do not retract flaps.

– COMPLETE –

(36) FLAP position is 4:

(37) Maximum landing weight ..... Use the table to determine the value and correct for wind and slope.

FLAP FAIL (Caution) (Cont'd)

LANDING WEIGHT KG (LB) LIMITED BY MAXIMUM BRAKE ENERGY AND TIRE SPEED							
FLIGHT CONTROL FAILURE		V_{REF}+15KT					
OAT		PRESSURE ALTITUDE (FT)					
^{0}C	^{0}F	0	2000	4000	6000	8000	10000
-20 AND BELOW	-4 AND BELOW	85230 (187900)	82680 (182300)	80010 (176400)	77380 (170600)	74750 (164800)	71840 (158400)
0	32	82280 (181400)	79690 (175700)	77060 (169900)	74430 (164100)	71840 (158400)	68990 (152100)
20	68	79600 (175500)	77010 (169800)	74380 (164000)	71800 (158300)	69260 (152700)	65540 (144500)
30	86	78330 (172700)	75740 (167000)	73160 (161300)	70530 (155500)	68030 (150000)	63140 (139200)
40 AND ABOVE	104 AND ABOVE	77110 (170000)	74520 (164300)	71930 (158600)	69350 (152900)	65770 (145000)	60910 (134300)

CS300_LW_ATA27_DVREF15_05AUG2016

Wind correction:

Tailwind: decrease landing weight by 18% per 10kts of tailwind.

Runway Slope Correction:

Downhill: decrease maximum landing weight by 2% per 1% downhill slope.

Landing weight limited by brake energy and tire speed – ΔVREF 15 kt
Figure 02–11–4

FLAP FAIL (Caution) (Cont'd)

On approach:

(38) TAWS, FLAP .....INHIB

(39) FMS, PERF – ARR – SLAT/FLAP 4

(40) FMS, PERF – ARR – VREF .....$V_{REF(FLAP\ 4)}$ + 15

(41) OLD factor ..... Multiply by 1.40

Go-around considerations: Do not retract flaps.

– COMPLETE –

(42) FLAP position is 5:

On approach:

(43) TAWS, FLAP .....INHIB

(44) FMS, PERF – ARR – SLAT/FLAP 4

(45) FMS, PERF – ARR – VREF .....$V_{REF(FLAP\ 4)}$ + 9

(46) OLD factor ..... Multiply by 1.40

Go-around considerations: Do not retract flaps.

– COMPLETE –

(47) SLAT SKEW caution message is not shown:

(48) Check FLAP position:

- **FLAP position is 0-1 –** Go to (49)
- **FLAP position is 2 –** Go to (56)
- **FLAP position is 3, 4 or 5 –** Go to (63)

(49) FLAP position is 0-1:

(50) Maximum landing weight .....Use the table to determine value and correct for wind and slope.

FLAP FAIL (Caution) (Cont'd)

LANDING WEIGHT KG (LB) LIMITED BY MAXIMUM BRAKE ENERGY AND TIRE SPEED							
FLIGHT CONTROL FAILURE		V_{REF}+41KT					
OAT		PRESSURE ALTITUDE (FT)					
^{0}C	^{0}F	0	2000	4000	6000	8000	10000
-20 AND BELOW	-4 AND BELOW	75340 (166100)	72750 (160400)	69980 (154300)	64630 (142500)	59510 (131200)	54830 (120900)
0	32	72390 (159600)	69170 (152500)	63820 (140700)	58690 (129400)	54150 (119400)	49940 (110100)
20	68	68850 (151800)	63500 (140000)	58420 (128800)	53880 (118800)	49660 (109500)	45720 (100800)
30	86	66130 (145800)	60870 (134200)	56060 (123600)	51750 (114100)	47670 (105100)	43810 (96600)
40 AND ABOVE	104 AND ABOVE	63540 (140100)	58460 (128900)	53930 (118900)	49750 (109700)	45760 (100900)	42040 (92700)

CS300_LW_ATA27_DVREF41_05AUG2016

Wind correction:

Tailwind: decrease landing weight by 21% per 10kts of tailwind.

Runway Slope Correction:

Downhill: decrease maximum landing weight by 2% per 1% downhill slope.

Landing weight limited by brake energy and tire speed – ΔVREF 41 kt
Figure 02–11–5

FLAP FAIL (Caution) (Cont'd)

On approach:

(51) TAWS, FLAP .....INHIB

(52) FMS, PERF – ARR – SLAT/FLAP 4

(53) FMS, PERF – ARR – VREF .....$V_{REF(FLAP\ 4)}$ + 41

(54) OLD factor .....Multiply by value from table.

OLD factor Dry runway	OLD factor Wet runway
1.65	1.80

Go-around considerations: Do not retract flaps.

Before landing:

(55) SLAT/FLAP lever 4

– COMPLETE –

(56) FLAP position is 2:

(57) Maximum landing weight .....Use the table to determine value and correct for wind and slope.

FLAP FAIL (Caution) (Cont'd)

LANDING WEIGHT KG (LB) LIMITED BY MAXIMUM BRAKE ENERGY AND TIRE SPEED							
FLIGHT CONTROL FAILURE		V_{REF}+15KT					
OAT		PRESSURE ALTITUDE (FT)					
^{0}C	^{0}F	0	2000	4000	6000	8000	10000
-20 AND BELOW	-4 AND BELOW	85230 (187900)	82680 (182300)	80010 (176400)	77380 (170600)	74750 (164800)	71840 (158400)
0	32	82280 (181400)	79690 (175700)	77060 (169900)	74430 (164100)	71840 (158400)	68990 (152100)
20	68	79600 (175500)	77010 (169800)	74380 (164000)	71800 (158300)	69260 (152700)	65540 (144500)
30	86	78330 (172700)	75740 (167000)	73160 (161300)	70530 (155500)	68030 (150000)	63140 (139200)
40 AND ABOVE	104 AND ABOVE	77110 (170000)	74520 (164300)	71930 (158600)	69350 (152900)	65770 (145000)	60910 (134300)

CS300_LW_ATA27_DVREF15_05AUG2016

Wind correction:

Tailwind: decrease landing weight by 18% per 10kts of tailwind.

Runway Slope Correction:

Downhill: decrease maximum landing weight by 2% per 1% downhill slope.

Landing weight limited by brake energy and tire speed – ΔVREF 15 kt
Figure 02–11–6

FLAP FAIL (Caution) (Cont'd)

On approach:

(58) TAWS, FLAP ..... INHIB

(59) FMS, PERF – ARR – SLAT/FLAP 4

(60) FMS, PERF – ARR – VREF ..... $V_{REF(FLAP\ 4)}$ + 15

(61) OLD factor ..... Multiply by 1.45

Go-around considerations: Do not retract flaps.

Before landing:

(62) SLAT/FLAP lever 4

– COMPLETE –

(63) FLAP position is 3, 4 or 5:

On approach:

(64) TAWS, FLAP ..... INHIB

(65) FMS, PERF – ARR – SLAT/FLAP 4

(66) FMS, PERF – ARR – VREF ..... $V_{REF(FLAP\ 4)}$ + ΔV_{REF}. Set value from table.

(67) OLD factor ..... Multiply by value from table.

FLAP	$\Delta V_{REF\ (FLAP\ 4)}$	OLD factor
3	5	1.25
4	5	1.20
5	5	1.20

Go-around considerations: Do not retract flaps.

Before landing:

(68) SLAT/FLAP lever 4

– COMPLETE –

FLAP SLOW (Caution)

(1) Flap movement ..... Monitor

– COMPLETE –

FLT CTRL DIRECT (Caution)

CAUTION

Fly-by-wire envelope protection is not available. Minimize control inputs.

(1) Assume manual control.

(2) Airspeed ..... Not more than 300 KIAS/0.80 M

(3) Plan to land at the nearest suitable airport.

Significant systems affected:

- Autopilot
- Flight director may not be available
- Sidestick priority may not be available
- Automatic ground lift dumping may not be available (manual control available)
- Nosewheel steering may not be available

CAUTION

1. Do not attempt this reset procedure more than once.

FLT CTRL DIRECT (Caution) (Cont'd)

2. Do not attempt reset:
   - If there were significant flight control induced aircraft transients immediately before the reversion to direct mode.
   - Unless the aircraft is stable, straight, level and trimmed.

(4) PFCC 1 ..... OFF

(5) PFCC 1 ..... Select on

After 30 seconds:

(6) PFCC 2 ..... OFF

(7) PFCC 2 ..... Select on

After 30 seconds:

(8) PFCC 3 ..... OFF

(9) PFCC 3 ..... Select on

(10) **FLT CTRL DIRECT** caution message goes out:

➔ **Yes –** Go to (11)

➔ **No –** Go to (13)

(11) FLT CTRL DIRECT caution message goes out:

(12) Land at the nearest suitable airport.

– COMPLETE –

(13) FLT CTRL DIRECT caution message stays on:

(14) Altitude ..... Not above 31000 feet

(15) Land at the nearest suitable airport.

FLT CTRL DIRECT (Caution) (Cont'd)

NOTE

Select the longest runway with minimal crosswind.

On approach:

CAUTION

Control authority is reduced. Minimize control inputs.

(16) FMS, PERF – ARR – SLAT/FLAP 4

(17) FMS, PERF – ARR – VREF ..... $V_{REF(FLAP\ 4)}$ + 10

(18) OLD factor ..... Multiply by 1.45

Before landing:

(19) SLAT/FLAP lever 4

After touchdown:

(20) SPOILER lever .....FULL

– COMPLETE –

FLT CTRL DIRECT ADS (Caution)

CAUTION

Fly-by-wire envelope protection is not available. Minimize control inputs.

(1) Assume manual control.

FLT CTRL DIRECT ADS (Caution) (Cont'd)

(2) Airspeed reliable:

➔ **Yes –** Go to (3)

➔ **No –** Go to (27)

(3) Airspeed reliable:

(4) Airspeed ..... Not more than 300 KIAS/0.80 M

(5) Plan to land at the nearest suitable airport.

Significant systems affected:

- Autopilot
- Flight director may not be available
- Stick shaker may not be available

(6) At least two valid ADSP sources become available:

➔ **Yes –** Go to (7)

➔ **No –** Go to (25)

(7) At least two valid ADSP sources become available:

CAUTION

1. Do not attempt this reset procedure more than once.
2. Do not attempt reset:
   - If there were significant flight control induced aircraft transients immediately before the reversion to direct mode.
   - Unless the aircraft is stable, straight, level and trimmed.

FLT CTRL DIRECT ADS (Caution) (Cont'd)

(8) PFCC 1 ..... OFF

(9) PFCC 1 ..... Select on

After 30 seconds:

(10) PFCC 2 ..... OFF

(11) PFCC 2 ..... Select on

After 30 seconds:

(12) PFCC 3 ..... OFF

(13) PFCC 3 ..... Select on

(14) **FLT CTRL DIRECT ADS** caution message goes out:

- **Yes –** Go to (15)
- **No –** Go to (17)

(15) FLT CTRL DIRECT ADS caution message goes out:

(16) Land at the nearest suitable airport.

– COMPLETE –

(17) FLT CTRL DIRECT ADS caution message stays on:

(18) Altitude ..... Not above 31000 feet

(19) Land at the nearest suitable airport.

NOTE

Select the longest runway with minimal crosswind.

FLT CTRL DIRECT ADS (Caution) (Cont'd)

On approach:

CAUTION

Control authority is reduced. Minimize control inputs.

(20) FMS, PERF – ARR – SLAT/FLAP 4

(21) FMS, PERF – ARR – VREF ..... $V_{REF(FLAP\ 4)}$ + 10

(22) OLD factor ..... Multiply by 1.45

Before landing:

(23) SLAT/FLAP lever 4

After touchdown:

(24) SPOILER lever ..... FULL

– COMPLETE –

(25) At least two ADSP sources do not become available:

(26) Unreliable airspeed procedure ..... Accomplish Refer to Instruments system – Unreliable airspeed.

– COMPLETE –

(27) Airspeed unreliable:

(28) Unreliable airspeed procedure ..... Accomplish Refer to Instruments system – Unreliable airspeed.

– COMPLETE –

FLT CTRL DIRECT IRS (Caution)

CAUTION

Fly-by-wire envelope protection is not available. Minimize control inputs.

(1) Assume manual control.

(2) Airspeed ..... Not more than 300 KIAS/0.80 M

(3) Plan to land at the nearest suitable airport.

Significant systems affected:

- Autopilot
- Flight director may not be available

(4) FMS, POS – IRS ..... SET IRS HDG, if required.

NOTE

It may take up to 7 minutes for an IRS to become available.

(5) At least one IRS becomes available:

➔ **Yes –** Go to (6)

➔ **No –** Go to (24)

(6) At least one IRS becomes available:

CAUTION

1. Do not attempt this reset procedure more than once.

FLT CTRL DIRECT IRS (Caution) (Cont'd)

2. Do not attempt reset:
   - If there were significant flight control induced aircraft transients immediately before the reversion to direct mode.
   - Unless the aircraft is stable, straight, level and trimmed.

(7) PFCC 1 ..... OFF

(8) PFCC 1 ..... Select on

After 30 seconds:

(9) PFCC 2 ..... OFF

(10) PFCC 2 ..... Select on

After 30 seconds:

(11) PFCC 3 ..... OFF

(12) PFCC 3 ..... Select on

(13) **FLT CTRL DIRECT IRS** caution message goes out:

➔ **Yes –** Go to (14)

➔ **No –** Go to (16)

(14) FLT CTRL DIRECT IRS caution message goes out:

(15) Land at the nearest suitable airport.

– COMPLETE –

(16) FLT CTRL DIRECT IRS caution message stays on:

(17) Altitude ..... Not above 31000 feet

(18) Land at the nearest suitable airport.

FLT CTRL DIRECT IRS (Caution) (Cont'd)

NOTE

Select the longest runway with minimal crosswind.

On approach:

CAUTION

Control authority is reduced. Minimize control inputs.

(19) FMS, PERF – ARR – SLAT/FLAP 4

(20) FMS, PERF – ARR – VREF ..... $V_{REF(FLAP\ 4)}$ + 10

(21) OLD factor ..... Multiply by 1.45

Before landing:

(22) SLAT/FLAP lever 4

After touchdown:

(23) SPOILER lever ..... FULL

– COMPLETE –

(24) No IRS becomes available:

(25) Altitude ..... Not above 31000 feet

(26) Land at the nearest suitable airport.

NOTE

Select the longest runway with minimal crosswind.

FLT CTRL DIRECT IRS (Caution) (Cont'd)

On approach:

CAUTION

Control authority is reduced. Minimize control inputs.

(27) FMS, PERF – ARR – SLAT/FLAP 4

(28) FMS, PERF – ARR – VREF ..... $V_{REF(FLAP\ 4)}$ + 10

(29) OLD factor ..... Multiply by 1.45

Before landing:

(30) SLAT/FLAP lever 4

After touchdown:

(31) SPOILER lever .....FULL

– COMPLETE –

GND LIFT DUMP FAIL (Caution)

On approach:

(1) OLD factor ..... Multiply by 1.55

After touchdown:

(2) SPOILER lever .....FULL

– COMPLETE –

GND SPOILER FAIL (Caution)

On approach:

(1) FMS, PERF – ARR – SLAT/FLAP 4

GND SPOILER FAIL (Caution) (Cont'd)

(2) FMS, PERF – ARR – VREF ..... $V_{REF(FLAP\ 4)}$

(3) OLD factor ..... Multiply by 1.20

Before landing:

(4) SLAT/FLAP lever 4

– COMPLETE –

L ELEVATOR FAIL (Caution)

(1) Airspeed ..... Not more than 200 KIAS or the speed at which the failure occurred, whichever is higher.

(2) Land at the nearest suitable airport.

NOTE

Select the longest runway with minimal crosswind.

On approach:

(3) FMS, PERF – ARR – SLAT/FLAP 4

(4) FMS, PERF – ARR – VREF ..... $V_{REF(FLAP\ 4)}$ + 10

(5) OLD factor ..... Multiply by 1.30

Before landing:

(6) SLAT/FLAP lever 4

– COMPLETE –

L SIDESTICK (Caution)

(1) Right seat pilot becomes flying pilot.

(2) Right glareshield, SIDESTICK ..... PTY

L SIDESTICK (Caution) (Cont'd)

(3) Navigation modes .....Confirm

– COMPLETE –

PITCH AUTHORITY (Caution)

CAUTION

Pitch is approaching maximum available authority.

(1) FLT CTRL synoptic page ..... Select

(2) Flight controls ..... Monitor

(3) Airspeed ..... Not more than 250 KIAS

(4) Land immediately at the nearest suitable airport.

NOTE

1. Select the longest runway with minimal crosswind.
2. If elevator(s) is/are close to nose up limit: Pitch up and flare authority are limited. Higher airspeed gives better pitch up authority. Do not extend flaps further until on approach.
3. If elevator(s) is/are close to nose down limit: Pitch down authority is limited. Slower airspeed gives better pitch down authority. Avoid spoiler use and rapid thrust increases.
4. Fuel burn may increase due to extra drag.

On approach:

(5) FMS, PERF – ARR – SLAT/FLAP 4

PITCH AUTHORITY (Caution) (Cont'd)

(6) FMS, PERF – ARR – VREF ..... $V_{REF(FLAP\ 4)}$ + 10

(7) OLD factor ..... Multiply by 1.30

Before landing:

(8) SLAT/FLAP lever 4

– COMPLETE –

R ELEVATOR FAIL (Caution)

(1) Airspeed ..... Not more than 200 KIAS or the speed at which the failure occurred, whichever is higher.

(2) Land at the nearest suitable airport.

NOTE

Select the longest runway with minimal crosswind.

On approach:

(3) FMS, PERF – ARR – SLAT/FLAP 4

(4) FMS, PERF – ARR – VREF ..... $V_{REF(FLAP\ 4)}$ + 10

(5) OLD factor ..... Multiply by 1.30

Before landing:

(6) SLAT/FLAP lever 4

– COMPLETE –

R SIDESTICK (Caution)

(1) Left seat pilot becomes flying pilot.

(2) Left glareshield, SIDESTICK ..... PTY

R SIDESTICK (Caution) (Cont'd)

(3) Navigation modes .....Confirm

– COMPLETE –

ROLL AUTHORITY (Caution)

CAUTION

Roll is approaching maximum available authority. Flight control system is compensating for an airplane asymmetry. Minimize control inputs.

(1) FLT CTRL synoptic page ..... Select

(2) Flight controls ..... Monitor

(3) Land immediately at the nearest suitable airport.

NOTE

1. Select the longest runway with minimal crosswind.
2. Drag may be higher than normal. Do not rely on FMS fuel predictions.

– COMPLETE –

RUDDER DEGRADED (Caution)

(1) Land at the nearest suitable airport.

NOTE

Select the longest runway with minimal crosswind.

– COMPLETE –

SLAT FAIL (Caution)

(1) **SLAT-FLAP FAIL** caution message is also shown:

➔ **Yes –** Go to (2)

➔ **No –** Go to (4)

(2) SLAT-FLAP FAIL caution message is also shown:

(3) SLAT-FLAP FAIL procedure ..... Accomplish Refer to Flight controls – SLAT-FLAP FAIL.

– COMPLETE –

(4) SLAT-FLAP FAIL caution message is not shown:

(5) SLAT/FLAP lever ..... Select previous position.

(6) SLAT/FLAP lever ..... Re-select desired position.

(7) **SLAT FAIL** caution message goes out:

➔ **Yes –** Go to (8)

➔ **No –** Go to (10)

(8) SLAT FAIL caution message goes out:

(9) No further action required.

– COMPLETE –

(10) SLAT FAIL caution message stays on:

(11) Altitude ..... Not above 20000 feet

(12) Airspeed ..... Not more than V_{FE}.

NOTE

1. If slat/flap are confirmed 0, reduction of cruise airspeed/altitude are not required.
2. High alpha protection setting is adjusted to account for the failure.

SLAT FAIL (Caution) (Cont'd)

3. The recommended airspeed until final approach is V_{FE} – 10 KIAS for the selected SLAT/FLAP lever position.

(13) Anti-ice system .....Operate manually in icing conditions.

(14) Land at the nearest suitable airport.

NOTE

Select the longest runway with minimal crosswind.

On approach:

(15) SLAT position ..... Check

(16) FMS, PERF – ARR – SLAT/FLAP 4

(17) FMS, PERF – ARR – VREF ..... $V_{REF(FLAP\ 4)} + \Delta V_{REF}$. Set value from table.

(18) OLD factor .....Multiply by value from table.

SLAT	$\Delta V_{REF\ (FLAP\ 4)}$	OLD factor
IN	15	1.40
OUT/MID/FULL	5	1.20

Before landing:

(19) SLAT/FLAP lever 4

– COMPLETE –

SLAT SKEW (Caution)

(1) Altitude .....Not above 20000 feet

SLAT SKEW (Caution) (Cont'd)

(2) Airspeed ..... Not more than V_{FE}.

NOTE

1. If slat/flap are confirmed 0, reduction of cruise airspeed/altitude are not required.
2. High alpha protection setting is adjusted to account for the failure.
3. The recommended airspeed until final approach is V_{FE} – 10 KIAS for the selected SLAT/FLAP lever position.

(3) Anti-ice system .....Operate manually in icing conditions.

(4) Land at the nearest suitable airport.

NOTE

Select the longest runway with minimal crosswind.

(5) **FLAP FAIL** caution message is also shown:

➔ **Yes –** Go to (6)

➔ **No –** Go to (47)

(6) FLAP FAIL caution message is also shown:

(7) SLAT/FLAP lever ..... Select previous position.

(8) SLAT/FLAP lever .....Re-select desired position.

(9) **FLAP FAIL** caution message goes out:

➔ **Yes –** Go to (10)

➔ **No –** Go to (16)

SLAT SKEW (Caution) (Cont'd)

(10) FLAP FAIL caution message goes out:

(11) Maximum landing weight ..... Use the table to determine the value and correct for wind and slope.

SLAT SKEW (Caution) (Cont'd)

LANDING WEIGHT KG (LB) LIMITED BY MAXIMUM BRAKE ENERGY AND TIRE SPEED							
FLIGHT CONTROL FAILURE		V_{REF}+15KT					
OAT		PRESSURE ALTITUDE (FT)					
^{0}C	^{0}F	0	2000	4000	6000	8000	10000
-20 AND BELOW	-4 AND BELOW	85230 (187900)	82680 (182300)	80010 (176400)	77380 (170600)	74750 (164800)	71840 (158400)
0	32	82280 (181400)	79690 (175700)	77060 (169900)	74430 (164100)	71840 (158400)	68990 (152100)
20	68	79600 (175500)	77010 (169800)	74380 (164000)	71800 (158300)	69260 (152700)	65540 (144500)
30	86	78330 (172700)	75740 (167000)	73160 (161300)	70530 (155500)	68030 (150000)	63140 (139200)
40 AND ABOVE	104 AND ABOVE	77110 (170000)	74520 (164300)	71930 (158600)	69350 (152900)	65770 (145000)	60910 (134300)

CS300_LW_ATA27_DVREF15_05AUG2016

Wind correction:

Tailwind: decrease landing weight by 18% per 10kts of tailwind.

Runway Slope Correction:

Downhill: decrease maximum landing weight by 2% per 1% downhill slope.

Landing weight limited by brake energy and tire speed – ΔVREF 15 kt
Figure 02–11–7

SLAT SKEW (Caution) (Cont'd)

On approach:

(12) FMS, PERF – ARR – SLAT/FLAP 4

(13) FMS, PERF – ARR – VREF ..... $V_{REF(FLAP\ 4)}$ + 15

(14) OLD factor ..... Multiply by 1.40

Before landing:

(15) SLAT/FLAP lever 4

– COMPLETE –

(16) FLAP FAIL caution message stays on:

(17) Check FLAP position:

- **FLAP position is 0-1 –** Go to (18)
- **FLAP position is 2 –** Go to (24)
- **FLAP position is 3 –** Go to (30)
- **FLAP position is 4 –** Go to (36)
- **FLAP position is 5 –** Go to (42)

(18) FLAP position is 0-1:

(19) Maximum landing weight ..... Use the table to determine the value and correct for wind and slope.

SLAT SKEW (Caution) (Cont'd)

LANDING WEIGHT KG (LB) LIMITED BY MAXIMUM BRAKE ENERGY AND TIRE SPEED							
FLIGHT CONTROL FAILURE		V_{REF}+54KT					
OAT		PRESSURE ALTITUDE (FT)					
^{0}C	^{0}F	0	2000	4000	6000	8000	10000
-20 AND BELOW	-4 AND BELOW	69580 (153400)	64090 (141300)	58780 (129600)	54060 (119200)	49710 (109600)	45580 (100500)
0	32	63180 (139300)	57920 (127700)	53290 (117500)	48980 (108000)	44900 (99000)	41050 (90500)
20	68	57560 (126900)	52970 (116800)	48670 (107300)	44580 (98300)	40770 (89900)	37140 (81900)
30	86	55150 (121600)	50750 (111900)	46530 (102600)	42590 (93900)	38910 (85800)	35420 (78100)
40 AND ABOVE	104 AND ABOVE	52970 (116800)	48620 (107200)	44580 (98300)	40680 (89700)	37190 (82000)	33700 (74300)

CS300_LW_ATA27_DVREF54_05AUG2016

Wind correction:

Tailwind: decrease landing weight by 25% per 10kts of tailwind.

Runway Slope Correction:

Downhill: decrease maximum landing weight by 2% per 1% downhill slope.

Landing weight limited by brake energy and tire speed – ΔVREF 54 kt
Figure 02–11–8

SLAT SKEW (Caution) (Cont'd)

On approach:

(20) TAWS, FLAP ..... INHIB

(21) FMS, PERF – ARR – SLAT/FLAP 4

(22) FMS, PERF – ARR – VREF ..... $V_{REF(FLAP\ 4)}$ + 54

(23) OLD factor ..... Multiply by value from table.

OLD factor Dry runway	OLD factor Wet runway
1.85	2.10

– COMPLETE –

(24) FLAP position is 2:

(25) Maximum landing weight ..... Use the table to determine the value and correct for wind and slope.

SLAT SKEW (Caution) (Cont'd)

LANDING WEIGHT KG (LB) LIMITED BY MAXIMUM BRAKE ENERGY AND TIRE SPEED							
FLIGHT CONTROL FAILURE		V_{REF}+33KT					
OAT		PRESSURE ALTITUDE (FT)					
^{0}C	^{0}F	0	2000	4000	6000	8000	10000
-20 AND BELOW	-4 AND BELOW	78330 (172700)	75740 (167000)	73160 (161300)	70620 (155700)	66310 (146200)	61140 (134800)
0	32	75380 (166200)	72800 (160500)	70300 (155000)	65490 (144400)	60410 (133200)	55740 (122900)
20	68	72660 (160200)	70170 (154700)	65220 (143800)	60140 (132600)	55510 (122400)	51300 (113100)
30	86	71440 (157500)	67900 (149700)	62680 (138200)	57740 (127300)	53380 (117700)	49350 (108800)
40 AND ABOVE	104 AND ABOVE	70260 (154900)	65360 (144100)	60280 (132900)	55610 (122600)	51430 (113400)	47440 (104600)

CS300_LW_ATA27_DVREF33_05AUG2016

Wind correction:

Tailwind: decrease landing weight by 20% per 10kts of tailwind.

Runway Slope Correction:

Downhill: decrease maximum landing weight by 2% per 1% downhill slope.

Landing weight limited by brake energy and tire speed – ΔVREF 33 kt
Figure 02–11–9

SLAT SKEW (Caution) (Cont'd)

On approach:

(26) TAWS, FLAP ..... INHIB

(27) FMS, PERF – ARR – SLAT/FLAP 4

(28) FMS, PERF – ARR – VREF ..... $V_{REF(FLAP\ 4)}$ + 33

(29) OLD factor ..... Multiply by value from table.

OLD factor Dry runway	OLD factor Wet runway
1.60	1.80

– COMPLETE –

(30) FLAP position is 3:

(31) Maximum landing weight ..... Use the table to determine the value and correct for wind and slope.

SLAT SKEW (Caution) (Cont'd)

LANDING WEIGHT KG (LB) LIMITED BY MAXIMUM BRAKE ENERGY AND TIRE SPEED							
FLIGHT CONTROL FAILURE		V_{REF}+22KT					
OAT		PRESSURE ALTITUDE (FT)					
^{0}C	^{0}F	0	2000	4000	6000	8000	10000
-20 AND BELOW	-4 AND BELOW	82960 (182900)	80370 (177200)	77740 (171400)	75110 (165600)	72480 (159800)	69620 (153500)
0	32	80010 (176400)	77380 (170600)	74790 (164900)	72160 (159100)	69620 (153500)	64720 (142700)
20	68	77290 (170400)	74700 (164700)	72120 (159000)	69580 (153400)	64540 (142300)	59640 (131500)
30	86	75970 (167500)	73430 (161900)	70890 (156300)	67130 (148000)	62090 (136900)	57370 (126500)
40 AND ABOVE	104 AND ABOVE	74790 (164900)	72210 (159200)	69710 (153700)	64720 (142700)	59820 (131900)	55380 (122100)

CS300_LW_ATA27_DVREF22_05AUG2016

Wind correction:

Tailwind: decrease landing weight by 19% per 10kts of tailwind.

Runway Slope Correction:

Downhill: decrease maximum landing weight by 2% per 1% downhill slope.

Landing weight limited by brake energy and tire speed – ΔVREF 22 kt
Figure 02–11–10

SLAT SKEW (Caution) (Cont'd)

On approach:

(32) TAWS, FLAP ..... INHIB

(33) FMS, PERF – ARR – SLAT/FLAP 4

(34) FMS, PERF – ARR – VREF ..... $V_{REF(FLAP\ 4)}$ + 22

(35) OLD factor ..... Multiply by value from table.

OLD factor Dry runway	OLD factor Wet runway
1.45	1.55

– COMPLETE –

(36) FLAP position is 4:

(37) Maximum landing weight ..... Use the table to determine the value and correct for wind and slope.

SLAT SKEW (Caution) (Cont'd)

LANDING WEIGHT KG (LB) LIMITED BY MAXIMUM BRAKE ENERGY AND TIRE SPEED							
FLIGHT CONTROL FAILURE		V_{REF}+15KT					
OAT		PRESSURE ALTITUDE (FT)					
^{0}C	^{0}F	0	2000	4000	6000	8000	10000
-20 AND BELOW	-4 AND BELOW	85230 (187900)	82680 (182300)	80010 (176400)	77380 (170600)	74750 (164800)	71840 (158400)
0	32	82280 (181400)	79690 (175700)	77060 (169900)	74430 (164100)	71840 (158400)	68990 (152100)
20	68	79600 (175500)	77010 (169800)	74380 (164000)	71800 (158300)	69260 (152700)	65540 (144500)
30	86	78330 (172700)	75740 (167000)	73160 (161300)	70530 (155500)	68030 (150000)	63140 (139200)
40 AND ABOVE	104 AND ABOVE	77110 (170000)	74520 (164300)	71930 (158600)	69350 (152900)	65770 (145000)	60910 (134300)

CS300_LW_ATA27_DVREF15_05AUG2016

Wind correction:

Tailwind: decrease landing weight by 18% per 10kts of tailwind.

Runway Slope Correction:

Downhill: decrease maximum landing weight by 2% per 1% downhill slope.

Landing weight limited by brake energy and tire speed – ΔVREF 15 kt
Figure 02–11–11

SLAT SKEW (Caution) (Cont'd)

On approach:

(38) TAWS, FLAP ..... INHIB

(39) FMS, PERF – ARR – SLAT/FLAP 4

(40) FMS, PERF – ARR – VREF ..... $V_{REF(FLAP\ 4)}$ + 15

(41) OLD factor ..... Multiply by 1.40

– COMPLETE –

(42) FLAP position is 5:

On approach:

(43) TAWS, FLAP ..... INHIB

(44) FMS, PERF – ARR – SLAT/FLAP 4

(45) FMS, PERF – ARR – VREF ..... $V_{REF(FLAP\ 4)}$ + 9

(46) OLD factor ..... Multiply by 1.40

– COMPLETE –

(47) FLAP FAIL caution message is not shown:

(48) Maximum landing weight ..... Use the table to determine the value and correct for wind and slope.

SLAT SKEW (Caution) (Cont'd)

LANDING WEIGHT KG (LB) LIMITED BY MAXIMUM BRAKE ENERGY AND TIRE SPEED							
FLIGHT CONTROL FAILURE		V_{REF}+15KT					
OAT		PRESSURE ALTITUDE (FT)					
^{0}C	^{0}F	0	2000	4000	6000	8000	10000
-20 AND BELOW	-4 AND BELOW	85230 (187900)	82680 (182300)	80010 (176400)	77380 (170600)	74750 (164800)	71840 (158400)
0	32	82280 (181400)	79690 (175700)	77060 (169900)	74430 (164100)	71840 (158400)	68990 (152100)
20	68	79600 (175500)	77010 (169800)	74380 (164000)	71800 (158300)	69260 (152700)	65540 (144500)
30	86	78330 (172700)	75740 (167000)	73160 (161300)	70530 (155500)	68030 (150000)	63140 (139200)
40 AND ABOVE	104 AND ABOVE	77110 (170000)	74520 (164300)	71930 (158600)	69350 (152900)	65770 (145000)	60910 (134300)

CS300_LW_ATA27_DVREF15_05AUG2016

Wind correction:

Tailwind: decrease landing weight by 18% per 10kts of tailwind.

Runway Slope Correction:

Downhill: decrease maximum landing weight by 2% per 1% downhill slope.

Landing weight limited by brake energy and tire speed – ΔVREF 15 kt
Figure 02–11–12

SLAT SKEW (Caution) (Cont'd)

On approach:

(49) FMS, PERF – ARR – SLAT/FLAP 4

(50) FMS, PERF – ARR – VREF ..... $V_{REF(FLAP\ 4)}$ + 15

(51) OLD factor ..... Multiply by 1.40

Before landing:

(52) SLAT/FLAP lever 4

– COMPLETE –

SLAT SLOW (Caution)

(1) Slat movement ..... Monitor

– COMPLETE –

SLAT-FLAP FAIL (Caution)

(1) SLAT/FLAP lever ..... Select previous position.

(2) SLAT/FLAP lever ..... Re-select desired position.

(3) **SLAT-FLAP FAIL** caution message goes out:

- **Yes –** Go to (4)
- **No –** Go to (6)

(4) SLAT–FLAP FAIL caution message goes out:

(5) No further action required.

– COMPLETE –

(6) SLAT–FLAP FAIL caution message stays on:

(7) Altitude ..... Not above 20000 feet

(8) Airspeed ..... Not more than V_{FE}.

SLAT-FLAP FAIL (Caution) (Cont'd)

NOTE

1. If slat/flap are confirmed 0, reduction of cruise airspeed/altitude are not required.
2. High alpha protection setting is adjusted to account for the failure.
3. The recommended airspeed until final approach is V_{FE} – 10 KIAS for the selected SLAT/FLAP lever position.

(9) Anti-ice system .....Operate manually in icing conditions.

(10) Land at the nearest suitable airport.

NOTE

Select the longest runway with minimal crosswind.

(11) Check FLAP position:

- **FLAP position is 0-1 –** Go to (12)
- **FLAP position is 2 –** Go to (26)
- **FLAP position is 3 –** Go to (40)
- **FLAP position is 4 –** Go to (53)
- **FLAP position is 5 –** Go to (66)

(12) FLAP position is 0-1:

(13) Check SLAT position:

- **SLAT position IN –** Go to (14)
- **SLAT position OUT/MID/FULL –** Go to (20)

SLAT-FLAP FAIL (Caution) (Cont'd)

(14) SLAT position IN:

(15) Maximum landing weight ..... Use the table to determine the value and correct for wind and slope.

SLAT-FLAP FAIL (Caution) (Cont'd)

LANDING WEIGHT KG (LB) LIMITED BY MAXIMUM BRAKE ENERGY AND TIRE SPEED							
FLIGHT CONTROL FAILURE		V_{REF}+54KT					
OAT		PRESSURE ALTITUDE (FT)					
^{0}C	^{0}F	0	2000	4000	6000	8000	10000
-20 AND BELOW	-4 AND BELOW	69580 (153400)	64090 (141300)	58780 (129600)	54060 (119200)	49710 (109600)	45580 (100500)
0	32	63180 (139300)	57920 (127700)	53290 (117500)	48980 (108000)	44900 (99000)	41050 (90500)
20	68	57560 (126900)	52970 (116800)	48670 (107300)	44580 (98300)	40770 (89900)	37140 (81900)
30	86	55150 (121600)	50750 (111900)	46530 (102600)	42590 (93900)	38910 (85800)	35420 (78100)
40 AND ABOVE	104 AND ABOVE	52970 (116800)	48620 (107200)	44580 (98300)	40680 (89700)	37190 (82000)	33700 (74300)

CS300_LW_ATA27_DVREF54_05AUG2016

Wind correction:

Tailwind: decrease landing weight by 25% per 10kts of tailwind.

Runway Slope Correction:

Downhill: decrease maximum landing weight by 2% per 1% downhill slope.

Landing weight limited by brake energy and tire speed – ΔVREF 54 kt
Figure 02–11–13

SLAT-FLAP FAIL (Caution) (Cont'd)

On approach:

(16) TAWS, FLAP ..... INHIB

(17) FMS, PERF – ARR – SLAT/FLAP 4

(18) FMS, PERF – ARR – VREF ..... $V_{REF(FLAP\ 4)}$ + 54

(19) OLD factor ..... Multiply by value from table.

OLD factor Dry runway	OLD factor Wet runway
1.85	2.10

– COMPLETE –

(20) SLAT position OUT/MID/FULL:

(21) Maximum landing weight ..... Use the table to determine the value and correct for wind and slope.

SLAT-FLAP FAIL (Caution) (Cont'd)

LANDING WEIGHT KG (LB) LIMITED BY MAXIMUM BRAKE ENERGY AND TIRE SPEED							
FLIGHT CONTROL FAILURE		V_{REF}+41KT					
OAT		PRESSURE ALTITUDE (FT)					
^{0}C	^{0}F	0	2000	4000	6000	8000	10000
-20 AND BELOW	-4 AND BELOW	75340 (166100)	72750 (160400)	69980 (154300)	64630 (142500)	59510 (131200)	54830 (120900)
0	32	72390 (159600)	69170 (152500)	63820 (140700)	58690 (129400)	54150 (119400)	49940 (110100)
20	68	68850 (151800)	63500 (140000)	58420 (128800)	53880 (118800)	49660 (109500)	45720 (100800)
30	86	66130 (145800)	60870 (134200)	56060 (123600)	51750 (114100)	47670 (105100)	43810 (96600)
40 AND ABOVE	104 AND ABOVE	63540 (140100)	58460 (128900)	53930 (118900)	49750 (109700)	45760 (100900)	42040 (92700)

CS300_LW_ATA27_DVREF41_05AUG2016

Wind correction:

Tailwind: decrease landing weight by 21% per 10kts of tailwind.

Runway Slope Correction:

Downhill: decrease maximum landing weight by 2% per 1% downhill slope.

Landing weight limited by brake energy and tire speed – ΔVREF 41 kt
Figure 02–11–14

SLAT-FLAP FAIL (Caution) (Cont'd)

On approach:

(22) TAWS, FLAP .....INHIB

(23) FMS, PERF – ARR – SLAT/FLAP 4

(24) FMS, PERF – ARR – VREF .....$V_{REF(FLAP\ 4)}$ + 41

(25) OLD factor .....Multiply by value from table.

OLD factor Dry runway	OLD factor Wet runway
1.65	1.80

– COMPLETE –

(26) FLAP position is 2:

(27) Check SLAT position:

- **SLAT position IN –** Go to (28)
- **SLAT position OUT/MID/FULL –** Go to (34)

(28) SLAT position IN:

(29) Maximum landing weight ..... Use the table to determine the value and correct for wind and slope.

SLAT-FLAP FAIL (Caution) (Cont'd)

LANDING WEIGHT KG (LB) LIMITED BY MAXIMUM BRAKE ENERGY AND TIRE SPEED							
FLIGHT CONTROL FAILURE		V_{REF}+33KT					
OAT		PRESSURE ALTITUDE (FT)					
^{0}C	^{0}F	0	2000	4000	6000	8000	10000
-20 AND BELOW	-4 AND BELOW	78330 (172700)	75740 (167000)	73160 (161300)	70620 (155700)	66310 (146200)	61140 (134800)
0	32	75380 (166200)	72800 (160500)	70300 (155000)	65490 (144400)	60410 (133200)	55740 (122900)
20	68	72660 (160200)	70170 (154700)	65220 (143800)	60140 (132600)	55510 (122400)	51300 (113100)
30	86	71440 (157500)	67900 (149700)	62680 (138200)	57740 (127300)	53380 (117700)	49350 (108800)
40 AND ABOVE	104 AND ABOVE	70260 (154900)	65360 (144100)	60280 (132900)	55610 (122600)	51430 (113400)	47440 (104600)

CS300_LW_ATA27_DVREF33_05AUG2016

Wind correction:

Tailwind: decrease landing weight by 20% per 10kts of tailwind.

Runway Slope Correction:

Downhill: decrease maximum landing weight by 2% per 1% downhill slope.

Landing weight limited by brake energy and tire speed – ΔVREF 33 kt
Figure 02–11–15

SLAT-FLAP FAIL (Caution) (Cont'd)

On approach:

(30) TAWS, FLAP ..... INHIB

(31) FMS, PERF – ARR – SLAT/FLAP 4

(32) FMS, PERF – ARR – VREF ..... $V_{REF(FLAP\ 4)}$ + 33

(33) OLD factor ..... Multiply by value from table.

OLD factor Dry runway	OLD factor Wet runway
1.60	1.80

– COMPLETE –

(34) SLAT position OUT/MID/FULL:

(35) Maximum landing weight ..... Use the table to determine the value and correct for wind and slope.

SLAT-FLAP FAIL (Caution) (Cont'd)

LANDING WEIGHT KG (LB) LIMITED BY MAXIMUM BRAKE ENERGY AND TIRE SPEED							
FLIGHT CONTROL FAILURE		V_{REF}+15KT					
OAT		PRESSURE ALTITUDE (FT)					
^{0}C	^{0}F	0	2000	4000	6000	8000	10000
-20 AND BELOW	-4 AND BELOW	85230 (187900)	82680 (182300)	80010 (176400)	77380 (170600)	74750 (164800)	71840 (158400)
0	32	82280 (181400)	79690 (175700)	77060 (169900)	74430 (164100)	71840 (158400)	68990 (152100)
20	68	79600 (175500)	77010 (169800)	74380 (164000)	71800 (158300)	69260 (152700)	65540 (144500)
30	86	78330 (172700)	75740 (167000)	73160 (161300)	70530 (155500)	68030 (150000)	63140 (139200)
40 AND ABOVE	104 AND ABOVE	77110 (170000)	74520 (164300)	71930 (158600)	69350 (152900)	65770 (145000)	60910 (134300)

CS300_LW_ATA27_DVREF15_05AUG2016

Wind correction:

Tailwind: decrease landing weight by 18% per 10kts of tailwind.

Runway Slope Correction:

Downhill: decrease maximum landing weight by 2% per 1% downhill slope.

Landing weight limited by brake energy and tire speed – ΔVREF 15 kt
Figure 02–11–16

SLAT-FLAP FAIL (Caution) (Cont'd)

On approach:

(36) TAWS, FLAP ..... INHIB

(37) FMS, PERF – ARR – SLAT/FLAP 4

(38) FMS, PERF – ARR – VREF ..... $V_{REF(FLAP\ 4)}$ + 15

(39) OLD factor ..... Multiply by 1.45

– COMPLETE –

(40) FLAP position is 3:

(41) Check SLAT position:

➔ **SLAT position IN –** Go to (42)

➔ **SLAT position OUT/MID/FULL –** Go to (48)

(42) SLAT position IN:

(43) Maximum landing weight ..... Use the table to determine the value and correct for wind and slope.

SLAT-FLAP FAIL (Caution) (Cont'd)

LANDING WEIGHT KG (LB) LIMITED BY MAXIMUM BRAKE ENERGY AND TIRE SPEED							
FLIGHT CONTROL FAILURE		V_{REF}+22KT					
OAT		PRESSURE ALTITUDE (FT)					
^{0}C	^{0}F	0	2000	4000	6000	8000	10000
-20 AND BELOW	-4 AND BELOW	82960 (182900)	80370 (177200)	77740 (171400)	75110 (165600)	72480 (159800)	69620 (153500)
0	32	80010 (176400)	77380 (170600)	74790 (164900)	72160 (159100)	69620 (153500)	64720 (142700)
20	68	77290 (170400)	74700 (164700)	72120 (159000)	69580 (153400)	64540 (142300)	59640 (131500)
30	86	75970 (167500)	73430 (161900)	70890 (156300)	67130 (148000)	62090 (136900)	57370 (126500)
40 AND ABOVE	104 AND ABOVE	74790 (164900)	72210 (159200)	69710 (153700)	64720 (142700)	59820 (131900)	55380 (122100)

CS300_LW_ATA27_DVREF22_05AUG2016

Wind correction:

Tailwind: decrease landing weight by 19% per 10kts of tailwind.

Runway Slope Correction:

Downhill: decrease maximum landing weight by 2% per 1% downhill slope.

Landing weight limited by brake energy and tire speed – ΔVREF 22 kt
Figure 02–11–17

SLAT-FLAP FAIL (Caution) (Cont'd)

On approach:

(44) TAWS, FLAP .....INHIB

(45) FMS, PERF – ARR – SLAT/FLAP 4

(46) FMS, PERF – ARR – VREF .....$V_{REF(FLAP\ 4)}$ + 22

(47) OLD factor .....Multiply by value from table.

OLD factor Dry runway	OLD factor Wet runway
1.45	1.55

– COMPLETE –

(48) SLAT position OUT/MID/FULL:

On approach:

(49) TAWS, FLAP .....INHIB

(50) FMS, PERF – ARR – SLAT/FLAP 4

(51) FMS, PERF – ARR – VREF .....$V_{REF(FLAP\ 4)}$ + 5

(52) OLD factor ..... Multiply by 1.25

(53) FLAP position is 4:

(54) Check SLAT position:

- **SLAT position IN –** Go to (55)
- **SLAT position OUT/MID/FULL –** Go to (61)

(55) SLAT position IN:

(56) Maximum landing weight ..... Use the table to determine the value and correct for wind and slope.

SLAT-FLAP FAIL (Caution) (Cont'd)

LANDING WEIGHT KG (LB) LIMITED BY MAXIMUM BRAKE ENERGY AND TIRE SPEED							
FLIGHT CONTROL FAILURE		V_{REF}+15KT					
OAT		PRESSURE ALTITUDE (FT)					
^{0}C	^{0}F	0	2000	4000	6000	8000	10000
-20 AND BELOW	-4 AND BELOW	85230 (187900)	82680 (182300)	80010 (176400)	77380 (170600)	74750 (164800)	71840 (158400)
0	32	82280 (181400)	79690 (175700)	77060 (169900)	74430 (164100)	71840 (158400)	68990 (152100)
20	68	79600 (175500)	77010 (169800)	74380 (164000)	71800 (158300)	69260 (152700)	65540 (144500)
30	86	78330 (172700)	75740 (167000)	73160 (161300)	70530 (155500)	68030 (150000)	63140 (139200)
40 AND ABOVE	104 AND ABOVE	77110 (170000)	74520 (164300)	71930 (158600)	69350 (152900)	65770 (145000)	60910 (134300)

CS300_LW_ATA27_DVREF15_05AUG2016

Wind correction:

Tailwind: decrease landing weight by 18% per 10kts of tailwind.

Runway Slope Correction:

Downhill: decrease maximum landing weight by 2% per 1% downhill slope.

Landing weight limited by brake energy and tire speed – ΔVREF 15 kt
Figure 02–11–18

SLAT-FLAP FAIL (Caution) (Cont'd)

On approach:

(57) TAWS, FLAP ..... INHIB

(58) FMS, PERF – ARR – SLAT/FLAP 4

(59) FMS, PERF – ARR – VREF ..... $V_{REF(FLAP\ 4)}$ + 15

(60) OLD factor ..... Multiply by 1.40

– COMPLETE –

(61) SLAT position OUT/MID/FULL:

On approach:

(62) TAWS, FLAP ..... INHIB

(63) FMS, PERF – ARR – SLAT/FLAP 4

(64) FMS, PERF – ARR – VREF ..... $V_{REF(FLAP\ 4)}$ + 5

(65) OLD factor ..... Multiply by 1.20

(66) FLAP position is 5:

(67) SLAT position ..... Check

On approach:

(68) TAWS, FLAP ..... INHIB

(69) FMS, PERF – ARR – SLAT/FLAP 4

(70) FMS, PERF – ARR – VREF ..... $V_{REF(FLAP\ 4)}$ + ΔV_{REF}

(71) OLD factor ..... Multiply by value from table.

SLAT	$\Delta V_{REF\ (FLAP\ 4)}$	OLD factor
IN	9	1.40
OUT/MID/FULL	5	1.20

– COMPLETE –

SLAT-FLAP LEVER FAIL (Caution)

(1) Altitude ..... Not above 20000 feet

(2) Airspeed ..... Not more than V_{FE}.

NOTE

1. If slat/flap are confirmed 0, reduction of cruise airspeed/altitude are not required.
2. The recommended airspeed until final approach is V_{FE} – 10 KIAS for the selected SLAT/FLAP lever position.
3. Slats/flaps will be deployed with the ALTN FLAP switch.

(3) Anti-ice system ..... Operate manually in icing conditions.

(4) Land at the nearest suitable airport.

On approach:

(5) Airspeed ..... Not more than 200 KIAS

(6) TAWS, FLAP ..... INHIB

(7) PTU ..... ON

(8) HYD 3B ..... ON

(9) HYD 2B ..... ON

(10) FMS, PERF – ARR – SLAT/FLAP 4

(11) FMS, PERF – ARR – VREF ..... $V_{REF(FLAP\ 4)}$ + 5

(12) OLD factor ..... Multiply by 1.25

Go-around considerations: Do not retract flaps.

Before landing:

(13) SLAT/FLAP lever 3

SLAT-FLAP LEVER FAIL (Caution) (Cont'd)

(14) ALTN FLAP ..... DPLY

– COMPLETE –

SPOILER DEGRADED (Caution)

(1) Altitude ..... Not above 37000 feet

NOTE

Select the longest runway with minimal crosswind.

(2) OLD factor ..... Multiply by 1.20

– COMPLETE –

SPOILER DPLY (Caution)

(1) SPOILER lever ..... RET

– COMPLETE –

SPOILER FAIL (Caution)

NOTE

Roll rate may be reduced. Avoid over-control.

(1) Altitude ..... Not above 33000 feet

NOTE

Select the longest runway with minimal crosswind.

(2) OLD factor ..... Multiply by 1.30

– COMPLETE –

SPOILER LEVER FAIL (Caution)

(1) SPOILER lever ..... RET

NOTE

1. Spoilers will retract and be inoperative for the remainder of the flight.
2. Ground lift dumping will deploy on landing.

(2) Spoiler lever failed in the RET position:

➔ **Yes –** Go to (3)

➔ **No –** Go to (5)

(3) Spoiler lever failed in the RET position:

(4) Altitude ..... Not above 33000 feet

– COMPLETE –

(5) Spoiler lever not failed in the RET position:

(6) Thrust levers ..... Advance momentarily until spoilers retract.

(7) Altitude ..... Not above 33000 feet

– COMPLETE –

STAB DEGRADED (Caution)

On approach:

(1) FMS, PERF – ARR – SLAT/FLAP 4

(2) FMS, PERF – ARR – VREF ..... $V_{REF(FLAP\ 4)}$ + 10

(3) OLD factor ..... Multiply by 1.30

STAB DEGRADED (Caution) (Cont'd)

Before landing:

(4) SLAT/FLAP lever 4

– COMPLETE –

STAB TRIM FAIL (Caution)

(1) Airspeed ..... Not more than 250 KIAS

(2) Land at the nearest suitable airport.

NOTE

Select the longest runway with minimal crosswind.

On approach:

(3) FMS, PERF – ARR – SLAT/FLAP 4

(4) FMS, PERF – ARR – VREF ..... $V_{REF(FLAP\ 4)}$ + 10

(5) OLD factor ..... Multiply by 1.30

Before landing:

(6) SLAT/FLAP lever 4

– COMPLETE –

YAW AUTHORITY (Caution)

CAUTION

Rudder is approaching maximum available authority. Flight control system is compensating for an airplane asymmetry. Minimize control inputs.

YAW AUTHORITY (Caution) (Cont'd)

(1) FLT CTRL synoptic page ..... Select

(2) Flight controls ..... Monitor

(3) Land immediately at the nearest suitable airport.

NOTE

1. Select the longest runway with minimal crosswind.
2. Drag may be higher than normal. Do not rely on FMS fuel predictions.

– COMPLETE –

Rudder pedal jammed

(1) FLT CTRL synoptic page ..... Select

(2) Airspeed ..... Not more than 200 KIAS or the speed at which the failure occurred, whichever is higher.

(3) Rudder position ..... Check

(4) Rudder trim ..... Adjust, if required, to center lateral stick.

NOTE

Rudder trim should be applied in the direction of the failed pedal.

(5) NOSE STEER ..... OFF

(6) Land immediately at the nearest suitable airport.

Rudder pedal jammed (Cont'd)

NOTE

1. Select the longest runway with minimal crosswind.
2. If rudder has failed out of neutral position use lateral control and differential thrust as required to maintain straight flight until touchdown.

On approach:

(7) FMS, PERF – ARR – SLAT/FLAP 5

(8) FMS, PERF – ARR – VREF ..... $V_{REF(FLAP\ 5)}$ + 5

(9) OLD factor ..... Multiply by 1.85

Before landing:

(10) SLAT/FLAP lever 5

WARNING

If the rudder has failed out of neutral position, maintain differential thrust until directional control is established on the runway.

CAUTION

1. Do not prolong the flare or delay the derotation.
2. Use prompt differential braking as required to assist in directional control.

Immediately after touchdown:

(11) SPOILER lever ..... FULL

Rudder pedal jammed (Cont'd)

When stopped:

(12) NOSE STEER ..... Select on

NOTE

Normal tiller steering is available.

– COMPLETE –

Slat-flap lever jammed

(1) Altitude ..... Not above 20000 feet

(2) Airspeed ..... Not more than V_{FE}.

NOTE

1. If slat/flap are confirmed 0, reduction of cruise airspeed/altitude are not required.
2. The recommended airspeed until final approach is V_{FE} – 10 KIAS for the selected SLAT/FLAP lever position.
3. Slats/flaps will be deployed using the ALTN FLAP switch.

(3) Anti-ice system ..... Operate manually in icing conditions.

(4) Land at the nearest suitable airport.

On approach:

(5) Airspeed ..... Not more than 200 KIAS

(6) TAWS, FLAP ..... INHIB

(7) PTU ..... ON

Slat-flap lever jammed (Cont'd)

(8) HYD 3B ..... ON

(9) HYD 2B ..... ON

(10) FMS, PERF – ARR – SLAT/FLAP 4

(11) FMS, PERF – ARR – VREF ..... $V_{REF(FLAP\ 4)}$ + 5

(12) OLD factor ..... Multiply by 1.25

Go-around considerations: Do not retract flaps.

Before landing:

(13) ALTN FLAP ..... DPLY

– COMPLETE –

Spoiler lever jammed

(1) Spoiler lever jammed in RET position:

- **Yes –** Go to (2)
- **No –** Go to (4)

(2) Spoiler lever jammed in RET position:

(3) Altitude ..... Not above 33000 feet

– COMPLETE –

(4) Spoiler lever not in RET position:

(5) Thrust levers ..... Advance momentarily until spoilers retract.

NOTE

1. The **SPOILER MISMATCH** advisory message comes on when spoilers are retracted.
2. Ground lift dumping will deploy on landing.

Spoiler lever jammed (Cont'd)

(6) Altitude ..... Not above 33000 feet

– COMPLETE –

Stall recovery

(1) Autopilot ..... Disengage

(2) Autothrottle ..... Select off

(3) Pitch attitude ..... Lower nose to reduce angle of attack.

(4) Roll attitude ..... Wings level

(5) Thrust levers ..... As required

(6) SPOILER lever ..... RET

(7) Return to the desired flight path.

NOTE

During recovery always control pitch attitude in a smooth steady manner, respecting stick shaker.

– COMPLETE –

Upset recovery – Nose high

(1) Autopilot ..... Disengage

(2) Autothrottle ..... Select off

(3) Pitch attitude ..... As required to reduce angle of attack.

(4) Roll attitude ..... As required

(5) Thrust levers ..... As required

Upset recovery – Nose high (Cont'd)

(6) SPOILER lever ..... As required

(7) Return to desired flight path when airspeed is sufficiently increasing.

NOTE

Reducing thrust may assist in achieving a nose down pitch rate.

WARNING

Avoid excessive use of pitch trim or rudder which can result in high structural loads.

– COMPLETE –

Upset recovery – Nose low

(1) Autopilot ..... Disengage

(2) Autothrottle ..... Select off

(3) Pitch attitude ..... As required to reduce angle of attack.

(4) Roll attitude ..... As required

(5) Thrust levers ..... As required

(6) SPOILER lever ..... As required

(7) Return to desired flight path.

NOTE

During recovery always control pitch attitude in a smooth steady manner, respecting stick shaker. Recovery from stall may be required.

Upset recovery – Nose low (Cont'd)

WARNING

Avoid excessive use of pitch trim or rudder which can result in high structural loads.

– COMPLETE –

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FUEL

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APU FUEL SOV FAIL (Caution)

(1) APU required:

➔ **Yes –** Go to (2)

➔ **No –** Go to (5)

(2) APU required:

(3) STATUS synoptic page ..... Select

(4) APU ..... Monitor

– COMPLETE –

(5) APU not required:

(6) APU ..... OFF

– COMPLETE –

FUEL COLLECTOR LO LVL (Caution)

(1) L BOOST PUMP ..... AUTO

(2) R BOOST PUMP ..... AUTO

(3) Aircraft attitude ..... Reduce pitch to 10 degrees nose up or less and maintain coordinated flight.

(4) Land at the nearest suitable airport.

(5) Fuel quantity/balance ..... Monitor

If necessary to balance fuel:

(6) GRAV XFR ..... ON and monitor

– COMPLETE –

FUEL CTR XFR FAIL (Caution)

(1) FUEL synoptic page ..... Select

NOTE

Reduction of pitch attitude can be necessary if in climb. Unless terrain is a factor, reduce pitch attitude.

(2) Center tank quantity decreasing:

- **Yes –** Go to (3)
- **No –** Go to (6)

(3) Center tank quantity decreasing:

(4) Fuel quantity/balance ..... Monitor

If necessary to balance fuel:

(5) GRAV XFR ..... ON

– COMPLETE –

(6) Center tank quantity not decreasing:

NOTE

All fuel remaining in the center tank is considered unusable.

(7) Land at the nearest suitable airport.

(8) Fuel quantity/balance ..... Monitor

If necessary to balance fuel:

(9) GRAV XFR ..... ON and monitor

– COMPLETE –

FUEL IMBALANCE (Caution)

(1) FUEL synoptic page ..... Select

NOTE

Consider potential fuel leak.

(2) Fuel quantity/balance ..... Monitor

(3) MAN XFR ..... Select to side with low quantity

(4) Wait for the **FUEL MAN XFR COMPLETE** advisory message to be shown.

(5) MAN XFR ..... OFF

NOTE

It is acceptable to do repetitive, pre-emptive manual transfers to the lower quantity side.

(6) **FUEL IMBALANCE** caution message goes out:

- **Yes –** Go to (7)
- **No –** Go to (9)

(7) FUEL IMBALANCE caution message goes out:

When fuel is balanced:

(8) Fuel quantity/balance ..... Monitor

– COMPLETE –

(9) FUEL IMBALANCE caution message stays on:

(10) GRAV XFR ..... ON

FUEL IMBALANCE (Caution) (Cont'd)

NOTE

1. A steady heading sideslip will accelerate gravity crossflow operation. Fly one wing low slip (on the side with less fuel) to ensure proper operation and to accelerate gravity crossflow.
2. It may take considerable time for fuel to balance.

When fuel is balanced:

(11) GRAV XFR ..... Select off

(12) Fuel quantity/balance ..... Monitor

– COMPLETE –

FUEL LEAK SUSPECT (Caution)

(1) In flight:

➔ **Yes –** Go to (2)

➔ **No –** Go to (19)

(2) In flight:

(3) Plan to land at the nearest suitable airport.

(4) FUEL synoptic page ..... Select

(5) Fuel quantity/balance ..... Monitor

(6) GRAV XFR ..... Select off

(7) L BOOST PUMP ..... OFF

(8) R BOOST PUMP ..... OFF

(9) MAN XFR ..... OFF

FUEL LEAK SUSPECT (Caution) (Cont'd)

(10) Engine fuel leak is visually confirmed:

- **Yes –** Go to (11)
- **No –** Go to (17)

(11) Engine fuel leak is visually confirmed:

(12) Select affected engine:

- **Left engine –** Go to (13)
- **Right engine –** Go to (15)

(13) Left engine affected:

(14) Shutdown – Left engine procedure ..... Accomplish Refer to Power plant – Shutdown – Left engine.

– COMPLETE –

(15) Right engine affected:

(16) Shutdown – Right engine procedure ..... Accomplish Refer to Power plant – Shutdown – Right engine.

– COMPLETE –

(17) Engine fuel leak is not visually confirmed:

(18) Land immediately at the nearest suitable airport.

– COMPLETE –

(19) On ground:

(20) Engines are on:

- **Yes –** Go to (21)
- **No –** Go to (24)

(21) Engines are on:

(22) AC external power ..... Establish

FUEL LEAK SUSPECT (Caution) (Cont'd)

(23) APU and engine(s) ..... OFF

– COMPLETE –

(24) Engines are off:

(25) APU is on:

- **Yes –** Go to (26)
- **No –** Go to (39)

(26) APU is on:

(27) Right tank quantity above 2830 kg (6225 lb):

- **Yes –** Go to (28)
- **No –** Go to (37)

(28) Right tank quantity above 2830 kg (6225 lb):

(29) MAN XFR L

When FUEL MAN XFR COMPLETE advisory message comes on:

(30) MAN XFR ..... OFF

NOTE

The **FUEL LEAK SUSPECT** caution message should go out after 5 minutes.

(31) After 5 minutes, **FUEL LEAK SUSPECT** caution message goes out:

- **Yes –** Go to (32)
- **No –** Go to (34)

(32) After 5 minutes, FUEL LEAK SUSPECT caution message goes out:

(33) No further action required.

– COMPLETE –

FUEL LEAK SUSPECT (Caution) (Cont'd)

(34) After 5 minutes, FUEL LEAK SUSPECT caution message stays on:

(35) AC external power ..... Establish

(36) APU and engine(s) ..... OFF

– COMPLETE –

(37) Right tank quantity below 2830 kg (6225 lb):

(38) FMS, FPLN – FUEL ..... Confirm BLOCK fuel entry.

– COMPLETE –

(39) APU is off:

(40) Right tank quantity above 2830 kg (6225 lb):

- **Yes –** Go to (41)
- **No –** Go to (43)

(41) Right tank quantity above 2830 kg (6225 lb):

(42) Do not start APU.

– COMPLETE –

(43) Right tank quantity below 2830 kg (6225 lb):

(44) FMS, FPLN – FUEL ..... Confirm BLOCK fuel entry.

– COMPLETE –

FUEL MAN XFR FAIL (Caution)

(1) MAN XFR ..... OFF

(2) L BOOST PUMP ..... AUTO

(3) R BOOST PUMP ..... AUTO

(4) GRAV XFR ..... ON

FUEL MAN XFR FAIL (Caution) (Cont'd)

(5) Fuel quantity/balance ..... Monitor

– COMPLETE –

FUEL TANK HI TEMP (Caution)

(1) Land at the nearest suitable airport.

– COMPLETE –

FUEL TANK LO TEMP (Caution)

(1) Altitude ..... Descend or deviate to a warmer air mass.

NOTE

Consider increasing airspeed to M_{MO}/V_{MO}.

(2) FUEL synoptic page ..... Select

(3) Fuel temperature ..... Monitor

– COMPLETE –

L ENG FUEL LO PRESS (Caution)

(1) L BOOST PUMP ..... ON

(2) R BOOST PUMP ..... ON

(3) **L ENG FUEL LO PRESS** caution message goes out:

- **Yes –** Go to (4)
- **No –** Go to (6)

L ENG FUEL LO PRESS (Caution) (Cont'd)

(4) L ENG FUEL LO PRESS caution message goes out:

(5) Land at the nearest suitable airport.

– COMPLETE –

(6) L ENG FUEL LO PRESS caution message stays on:

(7) Left thrust lever .....Avoid abrupt changes.

(8) Left engine instruments ..... Monitor

(9) Left engine fuel flow normal:

- **Yes –** Go to (10)
- **No –** Go to (12)

(10) Left engine fuel flow normal:

(11) Land at the nearest suitable airport.

– COMPLETE –

(12) Left engine fuel flow not normal:

(13) L BOOST PUMP ..... AUTO

(14) R BOOST PUMP ..... AUTO

(15) Shutdown – Left engine procedure ..... Accomplish Refer to Power plant – Shutdown – Left engine.

– COMPLETE –

L ENG FUEL SOV FAIL (Caution)

(1) Indicated after an engine fire procedure:

- **Yes –** Go to (2)
- **No –** Go to (5)

L ENG FUEL SOV FAIL (Caution) (Cont'd)

(2) Indicated after an engine fire procedure:

(3) L BOOST PUMP ..... OFF

(4) R BOOST PUMP ..... OFF

– COMPLETE –

(5) Message not due to engine fire procedure:

(6) Engine instruments ..... Monitor

– COMPLETE –

L FUEL LO QTY (Caution)

(1) L BOOST PUMP ..... AUTO

(2) R BOOST PUMP ..... AUTO

(3) Fuel quantity ..... Check

(4) Land immediately at the nearest suitable airport.

NOTE

Minimum fuel to conduct a go-around is 442 kg (975 lbs) in each wing and assumes a maximum airplane climb attitude of 10 degrees nose up.

(5) Fuel imbalance procedure ..... Accomplish, if required. Refer to Fuel – FUEL IMBALANCE.

– COMPLETE –

R ENG FUEL LO PRESS (Caution)

(1) L BOOST PUMP ..... ON

(2) R BOOST PUMP ..... ON

R ENG FUEL LO PRESS (Caution) (Cont'd)

(3) R ENG FUEL LO PRESS caution message goes out:

- **Yes –** Go to (4)
- **No –** Go to (6)

(4) R ENG FUEL LO PRESS caution message goes out:

(5) Land at the nearest suitable airport.

– COMPLETE –

(6) R ENG FUEL LO PRESS caution message stays on:

(7) Right thrust lever .....Avoid abrupt changes.

(8) Right engine instruments ..... Monitor

(9) Right engine fuel flow normal:

- **Yes –** Go to (10)
- **No –** Go to (12)

(10) Right engine fuel flow normal:

(11) Land at the nearest suitable airport.

– COMPLETE –

(12) Right engine fuel flow not normal:

(13) L BOOST PUMP ..... AUTO

(14) R BOOST PUMP ..... AUTO

(15) Shutdown – Right engine procedure ..... Accomplish Refer to Power plant – Shutdown – Right engine.

– COMPLETE –

R ENG FUEL SOV FAIL (Caution)

(1) Indicated after an engine fire procedure:

➔ **Yes –** Go to (2)

➔ **No –** Go to (5)

(2) Indicated after an engine fire procedure:

(3) L BOOST PUMP ..... OFF

(4) R BOOST PUMP ..... OFF

– COMPLETE –

(5) Message not due to engine fire procedure:

(6) Engine instruments ..... Monitor

– COMPLETE –

R FUEL LO QTY (Caution)

(1) L BOOST PUMP ..... AUTO

(2) R BOOST PUMP ..... AUTO

(3) Fuel quantity ..... Check

(4) Land immediately at the nearest suitable airport.

NOTE

Minimum fuel to conduct a go-around is 442 kg (975 lbs) in each wing and assumes a maximum airplane climb attitude of 10 degrees nose up.

(5) Fuel imbalance procedure ..... Accomplish, if required. Refer to Fuel – FUEL IMBALANCE.

– COMPLETE –

Fuel quantity indication failure

(1) L BOOST PUMP ..... OFF

(2) R BOOST PUMP ..... OFF

(3) Land at the nearest suitable airport.

– COMPLETE –

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HYDRAULIC POWER

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HYD 1 HI TEMP (Caution)

(1) HYD synoptic page ..... Select

(2) PTU ..... OFF

(3) HYD 1 temperature less than 120°C:

➔ **Yes –** Go to (4)

➔ **No –** Go to (6)

(4) HYD 1 temperature less than 120°C:

(5) HYD 1 system temperature ..... Monitor

– COMPLETE –

(6) HYD 1 temperature more than 120°C:

(7) HYD 1 SOV .....CLSD

NOTE

The **HYD 1 LO PRESS** caution message appears with this step but does not need to be done separately. The OLD factor in this procedure must be applied and includes the affected systems.

(8) Land at the nearest suitable airport.

NOTE

Select the longest runway with minimal crosswind.

(9) Altitude .....Not above 33000 feet

(10) Affected systems .....Review

Significant systems affected:

- MFS 1 and 3
- Flaps slower than normal

HYD 1 HI TEMP (Caution) (Cont'd)

- Ground spoilers
- Landing gear retraction
- Normal landing gear extension
- Left thrust reverser

On approach:

(11) FMS, PERF – ARR –SLAT/FLAP 4

(12) FMS, PERF – ARR – VREF ..... $V_{REF(FLAP\ 4)}$

(13) OLD factor ..... Multiply by value from table.

OLD factor Dry or wet runway	OLD factor Contaminated runway conditions
1.30	1.40

Go-around considerations: Use the steps deferred to after go-around procedure if gear retraction is required.

Before landing:

(14) SLAT/FLAP lever 4

(15) Landing gear ..... DN

(16) ALTN GEAR ..... DN

After go-around:

If gear retraction is required:

(17) PTU ..... ON

(18) ALTN GEAR ..... NORM

(19) Landing gear ..... UP

(20) PTU ..... AUTO

– COMPLETE –

HYD 1 LO PRESS (Caution)

(1) **HYD 1 HI TEMP** caution message previously shown:

→ **Yes –** Go to (2)

→ **No –** Go to (4)

(2) HYD 1 HI TEMP caution message previously shown:

(3) No further action required.

– COMPLETE –

(4) HYD 1 HI TEMP caution message not previously shown:

(5) HYD synoptic page ..... Select

(6) HYD 1 fluid quantity indication is more than 5% or is invalid:

→ **Yes –** Go to (7)

→ **No –** Go to (24)

(7) HYD 1 fluid quantity indication is more than 5% or is invalid:

(8) PTU ..... ON

(9) **HYD 1 LO PRESS** caution message goes out:

→ **Yes –** Go to (10)

→ **No –** Go to (12)

(10) HYD 1 LO PRESS caution message goes out:

(11) No further action required.

– COMPLETE –

(12) HYD 1 LO PRESS caution message stays on:

(13) HYD 1 SOV ..... CLSD

(14) PTU ..... OFF

(15) Altitude ..... Not above 33000 feet

(16) Land at the nearest suitable airport.

HYD 1 LO PRESS (Caution) (Cont'd)

NOTE

Select the longest runway with minimal crosswind.

(17) Affected systems .....Review

Significant systems affected:

- MFS 1 and 3
- Flaps slower than normal
- Ground spoilers
- Landing gear retraction
- Normal landing gear extension
- Left thrust reverser

On approach:

(18) FMS, PERF– ARR – SLAT/FLAP 4

(19) FMS, PERF– ARR – VREF .....$V_{REF(FLAP\ 4)}$

(20) OLD factor .....Multiply by value from table.

OLD factor Dry or wet runway	OLD factor Contaminated runway conditions
1.30	1.40

Go–around considerations: Do not retract gear.

Before landing:

(21) SLAT/FLAP lever 4

(22) Landing gear ..... DN

(23) ALTN GEAR ..... DN

– COMPLETE –

HYD 1 LO PRESS (Caution) (Cont'd)

(24) HYD 1 fluid quantity indication is less than 5%:

(25) HYD 1 SOV .....CLSD

(26) PTU ..... OFF

(27) Altitude .....Not above 33000 feet

(28) Land at the nearest suitable airport.

NOTE

Select the longest runway with minimal crosswind.

(29) Affected systems .....Review

Significant systems affected:

- MFS 1 and 3
- Flaps slower than normal
- Ground spoilers
- Landing gear retraction
- Normal landing gear extension
- Left thrust reverser

On approach:

(30) FMS, PERF– ARR – SLAT/FLAP 4

(31) FMS, PERF– ARR – VREF .....$V_{REF(FLAP\ 4)}$

(32) OLD factor .....Multiply by value from table.

OLD factor Dry or wet runway	OLD factor Contaminated runway conditions
1.30	1.40

Go–around considerations: Do not retract gear.

HYD 1 LO PRESS (Caution) (Cont'd)

Before landing:

(33) SLAT/FLAP lever 4

(34) Landing gear ..... DN

(35) ALTN GEAR ..... DN

– COMPLETE –

HYD 1 SOV FAIL (Caution)

(1) SOV required closed for any other non-normal procedure:

➔ **Yes –** Go to (2)

➔ **No –** Go to (4)

(2) SOV required closed for any other non-normal procedure:

(3) HYD 1 SOV ..... CLSD

– COMPLETE –

(4) SOV not required closed for any other non-normal procedure:

(5) HYD synoptic page ..... Select

(6) HYD 1A flow line is green:

➔ **Yes –** Go to (7)

➔ **No –** Go to (9)

(7) HYD 1A flow line is green:

(8) No further action required.

– COMPLETE –

(9) HYD 1A flow line is white:

(10) HYD 1 SOV ..... CLSD

(11) HYD 1 SOV ..... Select open

HYD 1 SOV FAIL (Caution) (Cont'd)

(12) Hydraulic system 1 ..... Monitor

– COMPLETE –

HYD 1-2 LO PRESS (Caution)

(1) Plan to land at the nearest suitable airport.

(2) HYD 3B ..... ON

(3) HYD 2B ..... ON

(4) PTU ..... OFF

(5) **HYD 1-2 LO PRESS** caution message goes out:

- **Yes –** Go to (6)
- **No –** Go to (10)

(6) HYD 1-2 LO PRESS caution message goes out:

(7) HYD synoptic page ..... Select

(8) Hydraulic pressure and temperature ..... Monitor

(9) Land immediately at the nearest suitable airport.

– COMPLETE –

(10) HYD 1-2 LO PRESS caution message stays on:

(11) Land immediately at the nearest suitable airport.

(12) HYD 1 SOV ..... CLSD

(13) HYD 3A ..... ON

(14) HYD 2 SOV ..... CLSD

(15) HYD 2B ..... OFF

(16) NOSE STEER ..... OFF

HYD 1-2 LO PRESS (Caution) (Cont'd)

NOTE

Select the longest runway with minimal crosswind.

(17) Altitude ..... Not above 33000 feet

CAUTION

Do not land on contaminated runway.

(18) Affected systems ..... Review

Significant systems affected:

- MFS 1, 3 and 4
- Slats/flaps slower than normal
- Ground spoilers
- Landing gear retraction
- Normal landing gear extension
- Nosewheel steering
- Both thrust reversers

NOTE

Minimize control inputs.

On approach:

(19) FMS, PERF – ARR – SLAT/FLAP 4

(20) FMS, PERF – ARR – VREF ..... $V_{REF(FLAP\ 4)}$ + 10

(21) OLD factor ..... Multiply by 1.85

Go-around considerations: Do not retract gear.

HYD 1-2 LO PRESS (Caution) (Cont'd)

Before landing:

(22) SLAT/FLAP lever 4

(23) Landing gear ..... DN

(24) ALTN GEAR ..... DN

– COMPLETE –

HYD 1-3 LO PRESS (Caution)

(1) Plan to land at the nearest suitable airport.

(2) PTU ..... OFF

(3) HYD 3A ..... ON

(4) HYD 3B ..... ON

(5) HYD 2B ..... ON

(6) **HYD 1-3 LO PRESS** caution message goes out:

- **Yes –** Go to (7)
- **No –** Go to (11)

(7) HYD 1-3 LO PRESS caution message goes out:

(8) HYD synoptic page ..... Select

(9) Hydraulic pressure and temperature ..... Monitor

(10) Land immediately at the nearest suitable airport.

– COMPLETE –

(11) HYD 1-3 LO PRESS caution message stays on:

(12) Land immediately at the nearest suitable airport.

HYD 1-3 LO PRESS (Caution) (Cont'd)

NOTE

Select the longest runway with minimal crosswind.

(13) Airspeed ..... Not more than V_{FE}.

NOTE

1. If slat/flap are confirmed 0, reduction of cruise airspeed is not required.
2. High alpha protection setting is adjusted to account for the failure.
3. The recommended airspeed until final approach is V_{FE} – 10 KIAS for the selected SLAT/FLAP lever position.

(14) HYD 1 SOV ..... CLSD

(15) HYD 3A ..... OFF

(16) HYD 3B ..... OFF

(17) Altitude ..... Not above 33000 feet

(18) Affected systems ..... Review

Significant systems affected:

- Left elevator
- MFS 1, 2 and 3
- Flaps
- Slats slower than normal
- Ground spoilers
- Landing gear retraction
- Normal landing gear extension

HYD 1-3 LO PRESS (Caution) (Cont'd)

- Left thrust reverser

NOTE

Minimize control inputs.

(19) Check FLAP position:

→ **FLAP position is 0-1 –** Go to (20)

→ **FLAP position is 2 –** Go to (29)

→ **FLAP position is 3, 4 or 5 –** Go to (38)

(20) FLAP position is 0-1:

(21) Maximum landing weight ..... Use the table to determine the value and correct for wind and slope.

HYD 1-3 LO PRESS (Caution) (Cont'd)

LANDING WEIGHT KG (LB) LIMITED BY MAXIMUM BRAKE ENERGY AND TIRE SPEED							
FLIGHT CONTROL FAILURE		HYD 1-3 V_{REF}+41KT					
OAT		PRESSURE ALTITUDE (FT)					
^{0}C	^{0}F	0	2000	4000	6000	8000	10000
-20 AND BELOW	-4 AND BELOW	74570 (164400)	72030 (158800)	69530 (153300)	64630 (142500)	59510 (131200)	54830 (120900)
0	32	71660 (158000)	69170 (152500)	63820 (140700)	58690 (129400)	54150 (119400)	49940 (110100)
20	68	68850 (151800)	63500 (140000)	58420 (128800)	53880 (118800)	49660 (109500)	45720 (100800)
30	86	66130 (145800)	60870 (134200)	56060 (123600)	51750 (114100)	47670 (105100)	43810 (96600)
40 AND ABOVE	104 AND ABOVE	63540 (140100)	58460 (128900)	53930 (118900)	49750 (109700)	45760 (100900)	42040 (92700)

CS300_LW_ATA29_HYD13_DVREF41_05AUG2016

Wind correction:

Tailwind: decrease landing weight by 21% per 10kts of tailwind.

Runway Slope Correction:

Downhill: decrease maximum landing weight by 2% per 1% downhill slope.

Landing weight limited by brake energy and tire speed – HYD 1–3 – ΔVREF 41 kt
Figure 02–13–1

HYD 1-3 LO PRESS (Caution) (Cont'd)

On approach:

(22) TAWS, FLAP ..... INHIB

(23) FMS, PERF – ARR – SLAT/FLAP 4

(24) FMS, PERF – ARR – VREF ..... $V_{REF(FLAP\ 4)}$ +41

(25) OLD factor ..... Multiply by value from table.

OLD factor Dry runway	OLD factor Wet runway
1.85	2.20

Go-around considerations: Do not retract gear.

Before landing:

(26) SLAT/FLAP lever 4

(27) Landing gear ..... DN

(28) ALTN GEAR ..... DN

– COMPLETE –

(29) FLAP position is 2:

(30) Maximum landing weight ..... Use the table to determine the value and correct for wind and slope.

HYD 1-3 LO PRESS (Caution) (Cont'd)

LANDING WEIGHT KG (LB) LIMITED BY MAXIMUM BRAKE ENERGY AND TIRE SPEED							
FLIGHT CONTROL FAILURE		HYD 1-3 V_{REF}+15KT					
OAT		PRESSURE ALTITUDE (FT)					
^{0}C	^{0}F	0	2000	4000	6000	8000	10000
-20 AND BELOW	-4 AND BELOW	84050 (185300)	81510 (179700)	78830 (173800)	76200 (168000)	73570 (162200)	70570 (155600)
0	32	81100 (178800)	78510 (173100)	75930 (167400)	73250 (161500)	70660 (155800)	67720 (149300)
20	68	78420 (172900)	75840 (167200)	73250 (161500)	70620 (155700)	68080 (150100)	65090 (143500)
30	86	77150 (170100)	74570 (164400)	71980 (158700)	69390 (153000)	66850 (147400)	63140 (139200)
40 AND ABOVE	104 AND ABOVE	75930 (167400)	73340 (161700)	70800 (156100)	68260 (150500)	65680 (144800)	60910 (134300)

CS300_LW_ATA29_HYD13_DVREF15_05AUG2016

Wind correction:

Tailwind: decrease landing weight by 18% per 10kts of tailwind.

Runway Slope Correction:

Downhill: decrease maximum landing weight by 2% per 1% downhill slope.

Landing weight limited by brake energy and tire speed – HYD 1–3 – ΔVREF 15 kt
Figure 02–13–2

HYD 1-3 LO PRESS (Caution) (Cont'd)

On approach:

(31) TAWS, FLAP ..... INHIB

(32) FMS, PERF – ARR – SLAT/FLAP 4

(33) FMS, PERF – ARR – VREF ..... $V_{REF(FLAP\ 4)}$ +15

(34) OLD factor ..... Multiply by value from table.

OLD factor Dry runway	OLD factor Wet runway
1.50	1.80

Go-around considerations: Do not retract gear.

Before landing:

(35) SLAT/FLAP lever 4

(36) Landing gear ..... DN

(37) ALTN GEAR ..... DN

– COMPLETE –

(38) FLAP position is 3, 4 or 5:

On approach:

(39) TAWS, FLAP ..... INHIB

(40) FMS, PERF – ARR – SLAT/FLAP 4

(41) FMS, PERF – ARR – VREF ..... $V_{REF(FLAP\ 4)}$ +ΔV_{REF}. Set value from table.

(42) OLD factor ..... Multiply by value from table.

FLAP	$\Delta V_{REF(FLAP\ 4)}$	OLD factor Dry runway	OLD factor Wet runway
3	10	1.40	1.60

HYD 1-3 LO PRESS (Caution) (Cont'd)

FLAP	$\Delta V_{REF(FLAP\ 4)}$	OLD factor Dry runway	OLD factor Wet runway
4	10	1.45	1.65
5	10	1.55	1.70

Go-around considerations: Do not retract gear.

Before landing:

(43) SLAT/FLAP lever 4

(44) Landing gear ..... DN

(45) ALTN GEAR ..... DN

– COMPLETE –

HYD 2 HI TEMP (Caution)

(1) HYD synoptic page ..... Select

(2) HYD 2B ..... OFF

(3) HYD 2 temperature less than 120°C:

- **Yes –** Go to (4)
- **No –** Go to (6)

(4) HYD 2 temperature less than 120°C:

(5) HYD 2 system temperature ..... Monitor

– COMPLETE –

(6) HYD 2 temperature more than 120°C:

(7) HYD 2 SOV ..... CLSD

HYD 2 HI TEMP (Caution) (Cont'd)

NOTE

The **HYD 2 LO PRESS** caution message appears with this step but does not need to be done separately. The OLD factor in this procedure must be applied and includes the affected systems.

(8) PTU ..... OFF

(9) NOSE STEER ..... OFF

NOTE

Select the longest runway with minimal crosswind.

(10) Land at the nearest suitable airport.

(11) Altitude ..... Not above 37000 feet

(12) Affected systems ..... Review

Significant systems affected:

- MFS 4
- Slats slower than normal
- PTU
- Nosewheel steering
- Right thrust reverser

On approach:

(13) FMS, PERF – ARR – SLAT/FLAP 4

(14) FMS, PERF – ARR – VREF ..... $V_{REF(FLAP\ 4)}$

(15) OLD factor ..... Multiply by value from table.

HYD 2 HI TEMP (Caution) (Cont'd)

OLD factor Dry or wet runway	OLD factor Contaminated runway conditions
1.20	1.30

Before landing:

(16) SLAT/FLAP lever 4

– COMPLETE –

HYD 2 LO PRESS (Caution)

(1) **HYD 2 HI TEMP** caution message previously shown:

➔ **Yes –** Go to (2)

➔ **No –** Go to (4)

(2) HYD 2 HI TEMP caution message previously shown:

(3) No further action required.

– COMPLETE –

(4) HYD 2 HI TEMP caution message not previously shown:

(5) HYD synoptic page ..... Select

(6) HYD 2 fluid quantity indication is more than 5% or is invalid:

➔ **Yes –** Go to (7)

➔ **No –** Go to (23)

(7) HYD 2 fluid quantity indication is more than 5% or is invalid:

(8) HYD 2B ..... ON

(9) **HYD 2 LO PRESS** caution message goes out:

➔ **Yes –** Go to (10)

➔ **No –** Go to (12)

HYD 2 LO PRESS (Caution) (Cont'd)

(10) HYD 2 LO PRESS caution message goes out:

(11) No further action required.

– COMPLETE –

(12) HYD 2 LO PRESS caution message stays on:

(13) HYD 2 SOV ..... CLSD

(14) HYD 2B ..... OFF

(15) PTU ..... OFF

(16) NOSE STEER ..... OFF

NOTE

Select the longest runway with minimal crosswind.

(17) Altitude ..... Not above 37000 feet

NOTE

Drag may be higher than normal. Fuel burn may increase due to extra drag.

(18) Affected systems ..... Review

Significant systems affected:

- MFS 4
- Slats slower than normal
- PTU
- Nosewheel steering
- Right thrust reverser

On approach:

(19) FMS, PERF – ARR – SLAT/FLAP 4

HYD 2 LO PRESS (Caution) (Cont'd)

(20) FMS, PERF – ARR – VREF ..... $V_{REF(FLAP\ 4)}$

(21) OLD factor ..... Multiply by value from table.

OLD factor Dry or wet runway	OLD factor Contaminated runway conditions
1.20	1.30

Before landing:

(22) SLAT/FLAP lever 4

– COMPLETE –

(23) HYD 2 fluid quantity indication is less than 5%:

(24) HYD 2 SOV ..... CLSD

(25) HYD 2B ..... OFF

(26) PTU ..... OFF

(27) NOSE STEER ..... OFF

NOTE

Select the longest runway with minimal crosswind.

(28) Altitude ..... Not above 37000 feet

NOTE

Drag may be higher than normal. Fuel burn may increase due to extra drag.

(29) Affected systems ..... Review

Significant systems affected:

- MFS 4
- Slats slower than normal

HYD 2 LO PRESS (Caution) (Cont'd)

- PTU
- Nosewheel steering
- Right thrust reverser

On approach:

(30) FMS, PERF – ARR – SLAT/FLAP 4

(31) FMS, PERF – ARR – VREF ..... $V_{REF(FLAP\ 4)}$

(32) OLD factor ..... Multiply by value from table.

OLD factor Dry or wet runway	OLD factor Contaminated runway conditions
1.20	1.30

Before landing:

(33) SLAT/FLAP lever 4

– COMPLETE –

HYD 2 SOV FAIL (Caution)

(1) SOV required closed for any other non-normal procedure:

➔ **Yes –** Go to (2)

➔ **No –** Go to (4)

(2) SOV required closed for any other non-normal procedure:

(3) HYD 2 SOV ..... CLSD

– COMPLETE –

(4) SOV not required closed for any other non-normal procedure:

(5) HYD synoptic page ..... Select

HYD 2 SOV FAIL (Caution) (Cont'd)

(6) HYD 2A flow line is green:

➔ **Yes –** Go to (7)

➔ **No –** Go to (9)

(7) HYD 2A flow line is green:

(8) No further action required.

– COMPLETE –

(9) HYD 2A flow line is white:

(10) HYD 2 SOV ..... CLSD

(11) HYD 2 SOV ..... Select open

(12) Hydraulic system 2 ..... Monitor

– COMPLETE –

HYD 2-3 LO PRESS (Caution)

CAUTION

Control authority is reduced. Minimize control inputs.

(1) Plan to land at the nearest suitable airport.

(2) PTU ..... OFF

(3) HYD 3A ..... ON

(4) HYD 3B ..... ON

(5) HYD 2B ..... ON

HYD 2-3 LO PRESS (Caution) (Cont'd)

(6) **HYD 2-3 LO PRESS** caution message goes out:

→ **Yes –** Go to (7)

→ **No –** Go to (11)

(7) HYD 2-3 LO PRESS caution message goes out:

(8) HYD synoptic page ..... Select

(9) Hydraulic pressure and temperature ..... Monitor

(10) Land immediately at the nearest suitable airport.

– COMPLETE –

(11) HYD 2-3 LO PRESS caution message stays on:

(12) Land immediately at the nearest suitable airport.

(13) Airspeed ..... Not more than V_{FE}.

NOTE

1. If slat/flap are confirmed 0, reduction of cruise airspeed is not required.
2. High alpha protection setting is adjusted to account for the failure.
3. The recommended airspeed until final approach is V_{FE} – 10 KIAS for the selected SLAT/FLAP lever position.

(14) HYD 3A ..... OFF

(15) HYD 3B ..... OFF

(16) HYD 2 SOV ..... CLSD

(17) HYD 2B ..... OFF

(18) NOSE STEER ..... OFF

HYD 2-3 LO PRESS (Caution) (Cont'd)

NOTE

Select the longest runway with minimal crosswind.

(19) Altitude ..... Not above 33000 feet

(20) Affected systems ..... Review

Significant systems affected:

- Right elevator
- Ailerons
- MFS 2 and 4
- Slats
- Flaps slower than normal
- PTU
- Nosewheel steering
- Right thrust reverser

NOTE

Minimize control inputs.

(21) Check SLAT position:

➔ **SLAT position IN –** Go to (22)

➔ **SLAT position OUT/MID/FULL –** Go to (29)

(22) SLAT position IN:

(23) Maximum landing weight ..... Use the table to determine the value and correct for wind and slope.

HYD 2-3 LO PRESS (Caution) (Cont'd)

LANDING WEIGHT KG (LB) LIMITED BY MAXIMUM BRAKE ENERGY AND TIRE SPEED							
FLIGHT CONTROL FAILURE		HYD 2-3 V_{REF}+20KT					
OAT		PRESSURE ALTITUDE (FT)					
^{0}C	^{0}F	0	2000	4000	6000	8000	10000
-20 AND BELOW	-4 AND BELOW	82550 (182000)	79960 (176300)	77330 (170500)	74700 (164700)	72070 (158900)	69210 (152600)
0	32	79560 (175400)	76970 (169700)	74380 (164000)	71800 (158300)	69260 (152700)	66360 (146300)
20	68	76880 (169500)	74290 (163800)	71750 (158200)	69170 (152500)	66260 (146100)	61320 (135200)
30	86	75610 (166700)	73020 (161000)	70480 (155400)	67940 (149800)	63820 (140700)	59010 (130100)
40 AND ABOVE	104 AND ABOVE	74380 (164000)	71840 (158400)	69350 (152900)	66450 (146500)	61500 (135600)	56880 (125400)

CS300_LW_ATA29_HYD23_DVREF20_05AUG2016

Wind correction:

Tailwind: decrease landing weight by 18% per 10kts of tailwind.

Runway Slope Correction:

Downhill: decrease maximum landing weight by 2% per 1% downhill slope.

Landing weight limited by brake energy and tire speed – HYD 2–3 – ΔVREF 20 kt
Figure 02–13–3

HYD 2-3 LO PRESS (Caution) (Cont'd)

On approach:

(24) Rudder trim .....Set ½ a triangle width of RIGHT trim

NOTE

The triangle refers to the inverted triangular rudder trim pointer.

(25) FMS, PERF – ARR – SLAT/FLAP 4

(26) FMS, PERF – ARR – VREF .....$V_{REF(FLAP\ 4)}$ +20

(27) OLD factor .....Multiply by value from table.

OLD factor Dry runway	OLD factor Wet runway
1.45	1.55

Before landing:

(28) SLAT/FLAP lever 4

– COMPLETE –

(29) SLAT position OUT/MID/FULL:

On approach:

(30) Rudder trim .....Set ½ a triangle width of RIGHT trim

NOTE

The triangle refers to the inverted triangular rudder trim pointer.

(31) FMS, PERF – ARR – SLAT/FLAP 4

(32) FMS, PERF – ARR – VREF .....$V_{REF(FLAP\ 4)}$ +10

HYD 2-3 LO PRESS (Caution) (Cont'd)

(33) OLD factor .....Multiply by value from table.

OLD factor Dry runway	OLD factor Wet runway
1.30	1.35

Before landing:

(34) SLAT/FLAP lever 4

– COMPLETE –

HYD 3 HI TEMP (Caution)

(1) HYD synoptic page ..... Select

(2) HYD 3B ..... AUTO

(3) HYD 3A ..... OFF

(4) HYD 3 temperature less than 120°C:

➔ **Yes –** Go to (5)

➔ **No –** Go to (7)

(5) HYD 3 temperature less than 120°C:

(6) HYD 3 system temperature ..... Monitor

– COMPLETE –

(7) HYD 3 temperature more than 120°C:

(8) HYD 3B ..... OFF

HYD 3 HI TEMP (Caution) (Cont'd)

NOTE

The **HYD 3 LO PRESS** caution message appears with this step but does not need to be done separately. The OLD factor in this procedure must be applied and includes the affected systems.

(9) Land at the nearest suitable airport.

(10) Altitude ..... Not above 37000 feet

(11) Affected systems ..... Review

Significant systems affected:

- MFS 2
- Slats/flaps slower than normal

On approach:

(12) FMS, PERF – ARR – SLAT/FLAP 4

(13) FMS, PERF – ARR – VREF ..... $V_{REF(FLAP\ 4)}$

(14) OLD factor ..... Multiply by 1.15

Before landing:

(15) SLAT/FLAP lever 4

– COMPLETE –

HYD 3 LO PRESS (Caution)

(1) **HYD 3 HI TEMP** caution message previously shown:

➔ **Yes –** Go to (2)

➔ **No –** Go to (4)

HYD 3 LO PRESS (Caution) (Cont'd)

(2) HYD 3 HI TEMP caution message previously shown:

(3) No further action required.

– COMPLETE –

(4) HYD 3 HI TEMP caution message not previously shown:

(5) AC BUS 2 caution message is also shown:

- **Yes –** Go to (6)
- **No –** Go to (15)

(6) AC BUS 2 caution message is also shown:

(7) HYD 3A ..... OFF

(8) HYD 3B ..... OFF

(9) Altitude ..... Not above 37000 feet

NOTE

Drag may be higher than normal. Fuel burn may increase due to extra drag.

(10) Affected systems ..... Review

Significant systems affected:

- MFS 2
- Slats/flaps slower than normal

On approach:

(11) FMS, PERF – ARR – SLAT/FLAP 4

(12) FMS, PERF – ARR – VREF ..... $V_{REF(FLAP\ 4)}$

(13) OLD factor ..... Multiply by 1.15

HYD 3 LO PRESS (Caution) (Cont'd)

Before landing:

(14) SLAT/FLAP lever 4

– COMPLETE –

(15) AC BUS 2 caution message is not shown:

(16) HYD synoptic page ..... Select

(17) HYD 3 fluid quantity indication is more than 5% or is invalid:

- **Yes –** Go to (18)
- **No –** Go to (33)

(18) HYD 3 fluid quantity indication is more than 5% or is invalid:

(19) HYD 3A ..... ON

(20) HYD 3B ..... ON

(21) **HYD 3 LO PRESS** caution message goes out:

- **Yes –** Go to (22)
- **No –** Go to (24)

(22) HYD 3 LO PRESS caution message goes out:

(23) No further action required.

– COMPLETE –

(24) HYD 3 LO PRESS caution message stays on:

(25) HYD 3A ..... OFF

(26) HYD 3B ..... OFF

(27) Altitude ..... Not above 37000 feet

HYD 3 LO PRESS (Caution) (Cont'd)

NOTE

Drag may be higher than normal. Fuel burn may increase due to extra drag.

(28) Affected systems .....Review

Significant systems affected:

- MFS 2
- Slats/flaps slower than normal

On approach:

(29) FMS, PERF – ARR – SLAT/FLAP 4

(30) FMS, PERF – ARR – VREF .....$V_{REF(FLAP\ 4)}$

(31) OLD factor ..... Multiply by 1.15

Before landing:

(32) SLAT/FLAP lever 4

– COMPLETE –

(33) HYD 3 fluid quantity indication is less than 5%:

(34) HYD 3A ..... OFF

(35) HYD 3B ..... OFF

(36) Altitude .....Not above 37000 feet

NOTE

Drag may be higher than normal. Fuel burn may increase due to extra drag.

HYD 3 LO PRESS (Caution) (Cont'd)

(37) Affected systems .....Review

Significant systems affected:

- MFS 2
- Slats/flaps slower than normal

On approach:

(38) FMS, PERF – ARR – SLAT/FLAP 4

(39) FMS, PERF – ARR – VREF .....$V_{REF(FLAP\ 4)}$

(40) OLD factor ..... Multiply by 1.15

Before landing:

(41) SLAT/FLAP lever 4

– COMPLETE –

HYD EDP 1A FAIL (Caution)

(1) HYD synoptic page ..... Select

(2) PTU ..... OFF

(3) System pressure stays normal:

➔ **Yes –** Go to (4)

➔ **No –** Go to (6)

(4) System pressure stays normal:

(5) PTU ..... AUTO

– COMPLETE –

(6) System pressure does not stay normal:

(7) PTU .....ON

(8) HYD 1 SOV .....CLSD

HYD EDP 1A FAIL (Caution) (Cont'd)

(9) Hydraulic system 1 ..... Monitor

On approach:

(10) OLD factor .....Multiply by value from table.

OLD factor Dry or wet runway	OLD factor Contaminated runway conditions
1.20	1.30

On landing:

(11) Do not use left thrust reverser.

– COMPLETE –

HYD EDP 2A FAIL (Caution)

(1) HYD synoptic page ..... Select

(2) HYD 2B ..... OFF

(3) System pressure stays normal:

- **Yes –** Go to (4)
- **No –** Go to (6)

(4) System pressure stays normal:

(5) HYD 2B ..... AUTO

– COMPLETE –

(6) System pressure does not stay normal:

(7) HYD 2B .....ON

(8) HYD 2 SOV .....CLSD

(9) Hydraulic system 2 ..... Monitor

HYD EDP 2A FAIL (Caution) (Cont'd)

On approach:

(10) OLD factor .....Multiply by value from table.

OLD factor Dry or wet runway	OLD factor Contaminated runway conditions
1.20	1.30

On landing:

(11) Do not use right thrust reverser.

– COMPLETE –

HYD PTU FAIL (Caution)

(1) PTU ..... OFF

– COMPLETE –

<Mod 291002> or <Post-SB BD500-291002>

HYD PUMP 2B FAIL (Caution)

(1) HYD 2B ..... ON

(2) **HYD PUMP 2B FAIL** caution message goes out:

➔ **Yes –** Go to (3)

➔ **No –** Go to (5)

(3) HYD PUMP 2B FAIL caution message goes out:

(4) No further action required.

– COMPLETE –

HYD PUMP 2B FAIL (Caution) (Cont'd)

(5) HYD PUMP 2B FAIL caution message stays on:

(6) HYD 2B ..... OFF

– COMPLETE –

HYD PUMP 3A FAIL (Caution)

(1) HYD 3A ..... OFF

– COMPLETE –

<Mod 291002> or <Post-SB BD500-291002>

HYD PUMP 3B FAIL (Caution)

(1) HYD 3B ..... ON

(2) HYD PUMP 3B FAIL caution message goes out:

→ **Yes –** Go to (3)

→ **No –** Go to (5)

(3) HYD PUMP 3B FAIL caution message goes out:

(4) No further action required.

– COMPLETE –

(5) HYD PUMP 3B FAIL caution message stays on:

(6) HYD 3B ..... OFF

– COMPLETE –

HYD RAT PUMP FAIL (Caution)

(1) Land immediately at the nearest suitable airport.

HYD RAT PUMP FAIL (Caution) (Cont'd)

(2) APU (if available) ..... START

(3) HYD 3A ..... ON

(4) HYD 3B ..... ON

(5) HYD 2B ..... ON

(6) HYD synoptic page ..... Select

(7) Hydraulic systems ..... Monitor

– COMPLETE –

ICE AND RAIN PROTECTION

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L WING A/ICE FAIL (Warning)

(1) In flight:

➔ **Yes –** Go to (2)

➔ **No –** Go to (15)

(2) In flight:

(3) ANTI-ICE, WING ..... OFF

(4) Leave/avoid icing conditions.

(5) **L WING A/ICE FAIL** warning message goes out:

➔ **Yes –** Go to (6)

➔ **No –** Go to (8)

(6) L WING A/ICE FAIL warning message goes out:

(7) No further action required.

– COMPLETE –

(8) L WING A/ICE FAIL warning message stays on:

(9) APU BLEED ..... OFF

(10) L BLEED ..... OFF

(11) XBLEED ..... MAN CLSD

(12) L PACK ..... OFF

(13) Altitude ..... Not above 31000 feet

(14) Ice dispersal procedure ..... Accomplish, if required. Refer to Ice and rain protection – Ice dispersal procedure.

– COMPLETE –

(15) On ground:

(16) ANTI-ICE, WING ..... OFF

(17) APU BLEED ..... OFF

L WING A/ICE FAIL (Warning) (Cont'd)

(18) L BLEED ..... OFF

(19) XBLEED ..... MAN CLSD

(20) L PACK ..... OFF

– COMPLETE –

R WING A/ICE FAIL (Warning)

(1) In flight:

- **Yes –** Go to (2)
- **No –** Go to (14)

(2) In flight:

(3) ANTI-ICE, WING ..... OFF

(4) Leave/avoid icing conditions.

(5) **R WING A/ICE FAIL** warning message goes out:

- **Yes –** Go to (6)
- **No –** Go to (8)

(6) R WING A/ICE FAIL warning message goes out:

(7) No further action required.

– COMPLETE –

(8) R WING A/ICE FAIL warning message stays on:

(9) R BLEED ..... OFF

(10) XBLEED ..... MAN CLSD

(11) R PACK ..... OFF

(12) Altitude ..... Not above 31000 feet

R WING A/ICE FAIL (Warning) (Cont'd)

(13) Ice dispersal procedure ..... Accomplish, if required. Refer to Ice and rain protection – Ice dispersal procedure.

– COMPLETE –

(14) On ground:

(15) ANTI-ICE, WING ..... OFF

(16) R BLEED ..... OFF

(17) XBLEED ..... MAN CLSD

(18) R PACK ..... OFF

– COMPLETE –

COWL A/ICE ON (Caution)

(1) ANTI-ICE, L COWL ..... AUTO

(2) ANTI-ICE, R COWL ..... AUTO

– COMPLETE –

ICE (Caution)

(1) ANTI-ICE, L COWL ..... ON

(2) ANTI-ICE, R COWL ..... ON

(3) Below 35000 feet (both bleeds available) or 31000 feet (single bleed):

➔ **Yes –** Go to (4)

➔ **No –** Go to (12)

(4) Below 35000 feet (both bleeds available) or 31000 feet (single bleed):

(5) ANTI-ICE, WING ..... ON

ICE (Caution) (Cont'd)

(6) ICE caution message goes out:

➔ **Yes –** Go to (7)

➔ **No –** Go to (9)

(7) ICE caution message goes out:

(8) Anti-ice system ..... As required

– COMPLETE –

(9) ICE caution message stays on:

(10) Leave/avoid icing conditions.

(11) Ice dispersal procedure ..... Accomplish, if required. Refer to Ice and rain protection – Ice dispersal procedure.

– COMPLETE –

(12) Above 35000 feet (both bleeds available) or 31000 feet (single bleed):

(13) ANTI-ICE, WING ..... OFF

(14) Leave/avoid icing conditions or descend below 35000 feet (or 31000 feet for single bleed) to select ANTI-ICE, WING to ON.

(15) Ice dispersal procedure ..... Accomplish, if required. Refer to Ice and rain protection – Ice dispersal procedure.

– COMPLETE –

L COWL A/ICE FAIL (Caution)

(1) ANTI-ICE, L COWL ..... OFF

(2) Leave/avoid icing conditions.

– COMPLETE –

L COWL A/ICE FAIL ON (Caution)

(1) ANTI-ICE, L COWL ..... OFF, if not required.

(2) Leave/avoid icing conditions.

– COMPLETE –

L ICE DET FAIL (Caution)

NOTE

Wing and cowl anti-ice automatic function may not be available.

(1) Anti-ice system .....Operate manually in icing conditions.

– COMPLETE –

L SIDE WDW HEAT FAIL (Caution)

(1) WINDOW HEAT, L SIDE ..... OFF

(2) WINDOW HEAT, L SIDE ..... Select auto

(3) **L SIDE WDW HEAT FAIL** caution message goes out:

- **Yes –** Go to (4)
- **No –** Go to (6)

(4) L SIDE WDW HEAT FAIL caution message goes out:

(5) No further action required.

– COMPLETE –

(6) L SIDE WDW HEAT FAIL caution message stays on:

(7) WINDOW HEAT, L SIDE ..... OFF

– COMPLETE –

L WING A/ICE LO HEAT (Caution)

(1) Engine thrust .....Increase, as required.

(2) **L WING A/ICE LO HEAT** caution message goes out:

- **Yes –** Go to (3)
- **No –** Go to (5)

(3) L WING A/ICE LO HEAT caution message goes out:

(4) No further action required.

– COMPLETE –

(5) L WING A/ICE LO HEAT caution message stays on:

(6) Leave/avoid icing conditions.

(7) Ice dispersal procedure ..... Accomplish, if required. Refer to Ice and rain protection – Ice dispersal procedure.

– COMPLETE –

L WING A/ICE OVHT (Caution)

(1) L BLEED auto:

- **Yes –** Go to (2)
- **No –** Go to (20)

(2) L BLEED auto:

(3) L BLEED ..... OFF

(4) **L WING A/ICE OVHT** caution message goes out:

- **Yes –** Go to (5)
- **No –** Go to (15)

(5) L WING A/ICE OVHT caution message goes out:

(6) Altitude .....Not above 31000 feet

L WING A/ICE OVHT (Caution) (Cont'd)

(7) All engines operating landing in icing conditions expected:

➔ **Yes –** Go to (8)

➔ **No –** Go to (13)

(8) All engines operating landing in icing conditions expected:

On approach:

(9) FMS, PERF – ARR – SLAT/FLAP 5

(10) FMS, PERF – ARR – VREF ..... $V_{REF(FLAP\ 5)}$ + 10

(11) OLD factor ..... Multiply by 1.50

Before landing:

(12) SLAT/FLAP lever 5

– COMPLETE –

(13) All engines operating landing in icing conditions not expected:

(14) No further action required.

– COMPLETE –

(15) L WING A/ICE OVHT caution message stays on:

(16) ANTI-ICE, WING ..... OFF

(17) Leave/avoid icing conditions.

(18) L BLEED ..... Select auto

(19) Ice dispersal procedure ..... Accomplish, if required. Refer to Ice and rain protection – Ice dispersal procedure.

– COMPLETE –

(20) L BLEED OFF:

(21) ANTI-ICE, WING ..... OFF

(22) Leave/avoid icing conditions.

L WING A/ICE OVHT (Caution) (Cont'd)

(23) Ice dispersal procedure ..... Accomplish, if required. Refer to Ice and rain protection – Ice dispersal procedure.

– COMPLETE –

L WSHLD HEAT FAIL (Caution)

(1) L WSHLD ..... OFF

(2) L WSHLD ..... Select auto

(3) **L WSHLD HEAT FAIL** caution message goes out:

- **Yes –** Go to (4)
- **No –** Go to (6)

(4) L WSHLD HEAT FAIL caution message goes out:

(5) No further action required.

– COMPLETE –

(6) L WSHLD HEAT FAIL caution message stays on:

(7) L WSHLD ..... OFF

(8) Leave/avoid icing conditions.

– COMPLETE –

R COWL A/ICE FAIL (Caution)

(1) ANTI-ICE, R COWL ..... OFF

(2) Leave/avoid icing conditions.

– COMPLETE –

R COWL A/ICE FAIL ON (Caution)

(1) ANTI-ICE, R COWL ..... OFF, if not required.

(2) Leave/avoid icing conditions.

– COMPLETE –

R ICE DET FAIL (Caution)

NOTE

Wing and cowl anti-ice automatic function may not be available.

(1) Anti-ice system .....Operate manually in icing conditions.

– COMPLETE –

R SIDE WDW HEAT FAIL (Caution)

(1) WINDOW HEAT, R SIDE ..... OFF

(2) WINDOW HEAT, R SIDE ..... Select auto

(3) **R SIDE WDW HEAT FAIL** caution message goes out:

- **Yes –** Go to (4)
- **No –** Go to (6)

(4) R SIDE WDW HEAT FAIL caution message goes out:

(5) No further action required.

– COMPLETE –

(6) R SIDE WDW HEAT FAIL caution message stays on:

(7) WINDOW HEAT, R SIDE ..... OFF

– COMPLETE –

R WING A/ICE LO HEAT (Caution)

(1) Engine thrust .....Increase, as required.

(2) **R WING A/ICE LO HEAT** caution message goes out:

- **Yes –** Go to (3)
- **No –** Go to (5)

(3) R WING A/ICE LO HEAT caution message goes out:

(4) No further action required.

– COMPLETE –

(5) R WING A/ICE LO HEAT caution message stays on:

(6) Leave/avoid icing conditions.

(7) Ice dispersal procedure ..... Accomplish, if required. Refer to Ice and rain protection – Ice dispersal procedure.

– COMPLETE –

R WING A/ICE OVHT (Caution)

(1) R BLEED auto:

- **Yes –** Go to (2)
- **No –** Go to (20)

(2) R BLEED auto:

(3) R BLEED ..... OFF

(4) **R WING A/ICE OVHT** caution message goes out:

- **Yes –** Go to (5)
- **No –** Go to (15)

(5) R WING A/ICE OVHT caution message goes out:

(6) Altitude .....Not above 31000 feet

R WING A/ICE OVHT (Caution) (Cont'd)

(7) All engines operating landing in icing conditions expected:

➔ **Yes –** Go to (8)

➔ **No –** Go to (13)

(8) All engines operating landing in icing conditions expected:

On approach:

(9) FMS, PERF – ARR – SLAT/FLAP 5

(10) FMS, PERF – ARR – VREF ..... $V_{REF(FLAP\ 5)}$ + 10

(11) OLD factor ..... Multiply by 1.50

Before landing:

(12) SLAT/FLAP lever 5

– COMPLETE –

(13) All engines operating landing in icing conditions not expected:

(14) No further action required.

– COMPLETE –

(15) R WING A/ICE OVHT caution message stays on:

(16) ANTI-ICE, WING ..... OFF

(17) Leave/avoid icing conditions.

(18) R BLEED ..... Select auto

(19) Ice dispersal procedure ..... Accomplish, if required. Refer to Ice and rain protection – Ice dispersal procedure.

– COMPLETE –

(20) R BLEED OFF:

(21) ANTI-ICE, WING ..... OFF

(22) Leave/avoid icing conditions.

R WING A/ICE OVHT (Caution) (Cont'd)

(23) Ice dispersal procedure ..... Accomplish, if required. Refer to Ice and rain protection – Ice dispersal procedure.

– COMPLETE –

R WSHLD HEAT FAIL (Caution)

(1) R WSHLD ..... OFF

(2) R WSHLD ..... Select auto

(3) **R WSHLD HEAT FAIL** caution message goes out:

- **Yes –** Go to (4)
- **No –** Go to (6)

(4) R WSHLD HEAT FAIL caution message goes out:

(5) No further action required.

– COMPLETE –

(6) R WSHLD HEAT FAIL caution message stays on:

(7) R WSHLD ..... OFF

(8) Leave/avoid icing conditions.

– COMPLETE –

WING A/ICE FAIL (Caution)

(1) ANTI-ICE, WING ..... OFF

(2) Leave/avoid icing conditions.

(3) **WING A/ICE FAIL** caution message goes out:

- **Yes –** Go to (4)
- **No –** Go to (6)

WING A/ICE FAIL (Caution) (Cont'd)

(4) WING A/ICE FAIL caution message goes out:

(5) Ice dispersal procedure ..... Accomplish, if required. Refer to Ice and rain protection – Ice dispersal procedure.

– COMPLETE –

(6) WING A/ICE FAIL caution message stays on:

(7) AIR synoptic page ..... Select

(8) Identify failed L WAIV or R WAIV (amber and open):

- **L WAIV –** Go to (9)
- **R WAIV –** Go to (16)
- **No valve is amber –** Go to (22)

(9) L WAIV failed:

(10) APU BLEED ..... OFF

(11) L BLEED ..... OFF

(12) XBLEED ..... MAN CLSD

(13) L PACK ..... OFF

(14) Altitude ..... Not above 31000 feet

(15) Ice dispersal procedure ..... Accomplish, if required. Refer to Ice and rain protection – Ice dispersal procedure.

– COMPLETE –

(16) R WAIV failed:

(17) R BLEED ..... OFF

(18) XBLEED ..... MAN CLSD

(19) R PACK ..... OFF

WING A/ICE FAIL (Caution) (Cont'd)

(20) Altitude ..... Not above 31000 feet

(21) Ice dispersal procedure ..... Accomplish, if required. Refer to Ice and rain protection – Ice dispersal procedure.

– COMPLETE –

(22) No valve is amber:

(23) L BLEED ..... OFF

(24) R BLEED ..... OFF

(25) Descent ..... 10000 feet or lowest safe altitude, whichever is higher.

(26) RAM AIR ..... OPEN

(27) RECIRC AIR ..... OFF

(28) EMER DEPRESS ..... ON

(29) Ice dispersal procedure ..... Accomplish, if required. Refer to Ice and rain protection – Ice dispersal procedure.

– COMPLETE –

WING A/ICE MISCONFIG (Caution)

(1) L BLEED and/or R BLEED ..... If available, select auto.

Only one bleed is available:

(2) Altitude ..... Not above 31000 feet

(3) **WING A/ICE MISCONFIG** caution message goes out:

- **Yes –** Go to (4)
- **No –** Go to (6)

WING A/ICE MISCONFIG (Caution) (Cont'd)

(4) WING A/ICE MISCONFIG caution message goes out:

(5) No further action required.

– COMPLETE –

(6) WING A/ICE MISCONFIG caution message stays on:

(7) Leave/avoid icing conditions.

(8) Ice dispersal procedure ..... Accomplish, if required. Refer to Ice and rain protection – Ice dispersal procedure.

– COMPLETE –

WING A/ICE ON (Caution)

(1) ANTI-ICE, WING ..... AUTO or OFF

– COMPLETE –

Arcing, delaminated, shattered, or cracked window or windshield

(1) Affected WSHLD or WINDOW HEAT ..... OFF

(2) AUTO PRESS ..... MAN

(3) MAN RATE ..... UP, to achieve differential pressure (ΔP) of 7.2 psid or less

(4) Crew and passenger oxygen .....On, if required

(5) Descent .....Initiate, if required

(6) Windshield core ply or inboard ply is shattered:

- **Yes –** Go to (7)
- **No –** Go to (11)

Arcing, delaminated, shattered, or cracked window or windshield (Cont'd)

(7) Windshield core ply or inboard ply is shattered:

When operating below 8000 feet:

(8) Airspeed ..... Reduce to minimum practical.

(9) Cabin altitude ..... Set to destination airport elevation.

(10) Land at the nearest suitable airport.

– COMPLETE –

(11) Windshield core ply or inboard ply is not shattered:

When operating below 8000 feet:

(12) Airspeed ..... Reduce to minimum practical.

– COMPLETE –

Ice dispersal procedure

(1) Airspeed ..... Increase to V_{MO}/M_{MO}, if possible.

(2) Ice remains on wing leading edge:

- **Yes –** Go to (3)
- **No –** Go to (8)

(3) Ice remains on wing leading edge:

(4) Maneuvering speed ..... Not less than 200 KIAS

On approach:

(5) FMS, PERF – ARR – VREF ..... V_{REF} + 10

(6) OLD factor ..... Multiply by 1.30

Ice dispersal procedure (Cont'd)

Before landing:

(7) Do not prolong the flare.

– COMPLETE –

(8) Ice does not remain on wing leading edge:

(9) No further action required.

– COMPLETE –

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INSTRUMENTS SYSTEM

ADS 1 PROBE HEAT FAIL (Caution)

(1) **ADS 2 FAIL** advisory message is also shown:

→ **Yes –** Go to (2)

→ **No –** Go to (4)

(2) ADS 2 FAIL advisory message is also shown:

(3) Reversion panel, L PFD ..... Select ADS until ADS 3 is shown.

NOTE

1. L PFD and ISI have the same ADS source.
2. Airspeed and altitude data from ADS 1 are unreliable in icing conditions.

– COMPLETE –

(4) ADS 2 FAIL advisory message is not shown:

(5) Reversion panel, L PFD ..... Select ADS until ADS 4 is shown.

(6) XFR ..... Select to left side.

NOTE

1. Use L PFD (or L HUD, if installed) for approach.
2. Minimize crosswind for approach.
3. Airspeed and altitude data from ADS 2 may be degraded in sideslip.
4. Airspeed and altitude data from ADS 1 are unreliable in icing conditions.
5. Touch and go procedures are prohibited.

– COMPLETE –

ADS 1 SLIPCOMP FAIL (Caution)

(1) **ADS 2 FAIL** advisory message is also shown:

→ **Yes –** Go to (2)

→ **No –** Go to (4)

(2) ADS 2 FAIL advisory message is also shown:

(3) XFR ..... Select to right side.

NOTE

1. Use R PFD (or R HUD, if installed) for approach.
2. Minimize crosswind for approach.
3. Airspeed and altitude data from ADS 1 are degraded in sideslip.
4. Touch and go procedures are prohibited.

– COMPLETE –

(4) ADS 2 FAIL advisory message is not shown:

(5) Reversion panel, L PFD ..... Select ADS until ADS 4 is shown.

NOTE

Airspeed and altitude data from ADS 1 are degraded in sideslip.

– COMPLETE –

ADS 2 PROBE HEAT FAIL (Caution)

(1) **ADS 1 FAIL** advisory message is also shown:

→ **Yes –** Go to (2)

→ **No –** Go to (4)

(2) ADS 1 FAIL advisory message is also shown:

(3) Reversion panel, R PFD ..... Select ADS until ADS 3 is shown.

NOTE

1. R PFD and ISI have the same ADS source.
2. Airspeed and altitude data from ADS 2 are unreliable in icing conditions.

– COMPLETE –

(4) ADS 1 FAIL advisory message is not shown:

(5) Reversion panel, R PFD ..... Select ADS until ADS 4 is shown.

(6) XFR .....Select to right side.

NOTE

1. Use R PFD (or R HUD, if installed) for approach.
2. Minimize crosswind for approach.
3. Airspeed and altitude data from ADS 1 may be degraded in sideslip.
4. Airspeed and altitude data from ADS 2 are unreliable in icing conditions.
5. Touch and go procedures are prohibited.

– COMPLETE –

ADS 2 SLIPCOMP FAIL (Caution)

(1) **ADS 1 FAIL** advisory message is also shown:

→ **Yes –** Go to (2)

→ **No –** Go to (4)

(2) ADS 1 FAIL advisory message is also shown:

(3) XFR ..... Select to left side.

NOTE

1. Use L PFD (or L HUD, if installed) for approach.
2. Minimize crosswind for approach.
3. Airspeed and altitude data from ADS 2 are degraded in sideslip.
4. Touch and go procedures are prohibited.

– COMPLETE –

(4) ADS 1 FAIL advisory message is not shown:

(5) Reversion panel, R PFD ..... Select ADS until ADS 4 is shown.

NOTE

Airspeed and altitude data from ADS 2 are degraded in sideslip.

– COMPLETE –

ADS 3 FAIL (Caution)

(1) Reversion panel, ISI ..... Select ADS until ADSREV is shown vertically.

– COMPLETE –

ADS 3 PROBE HEAT FAIL (Caution)

(1) Reversion panel, ISI ..... Select ADS until ADSREV is shown vertically.

(2) **ADS 1 FAIL** or **ADS 2 FAIL** advisory message is also shown:

- **Yes –** Go to (3)
- **No –** Go to (9)

(3) ADS 1 FAIL or ADS 2 FAIL advisory message is also shown:

(4) Confirm which EICAS message is also shown:

- **ADS 1 FAIL advisory message –** Go to (5)
- **ADS 2 FAIL advisory message –** Go to (7)

(5) ADS 1 FAIL advisory message is also shown:

(6) XFR ..... Select to right side.

NOTE

1. Use R PFD (or R HUD, if installed) for approach.
2. Minimize crosswind for approach.
3. L PFD and ISI have the same ADS source.
4. Airspeed and altitude data from ADS 4 are degraded in sideslip.
5. Airspeed and altitude data from ADS 3 are unreliable in icing conditions.
6. Touch and go procedures are prohibited.

– COMPLETE –

(7) ADS 2 FAIL advisory message is also shown:

(8) XFR ..... Select to left side.

ADS 3 PROBE HEAT FAIL (Caution) (Cont'd)

NOTE

1. Use L PFD (or L HUD, if installed) for approach.
2. Minimize crosswind for approach.
3. R PFD and ISI have the same ADS source.
4. Airspeed and altitude data from ADS 4 are degraded in sideslip.
5. Airspeed and altitude data from ADS 3 are unreliable in icing conditions.
6. Touch and go procedures are prohibited.

– COMPLETE –

(9) ADS 1 FAIL and ADS 2 FAIL advisory message are not shown:

NOTE

1. Airspeed and altitude data from ADS 3 are unreliable in icing conditions.
2. Airspeed and altitude data from ADS 4 are degraded in sideslip.

– COMPLETE –

ADS 3 SLIPCOMP FAIL (Caution)

(1) ADS 1 FAIL or ADS 2 FAIL advisory message is also shown:

→ **Yes –** Go to (2)

→ **No –** Go to (3)

ADS 3 SLIPCOMP FAIL (Caution) (Cont'd)

(2) ADS 1 FAIL or ADS 2 FAIL advisory message is also shown:

NOTE

Airspeed and altitude data on ISI and from ADS 3 are degraded in sideslip.

– COMPLETE –

(3) ADS 1 FAIL and ADS 2 FAIL advisory message are not shown:

(4) Reversion panel, ISI ..... Select ADS until ADSREV is shown vertically.

NOTE

Airspeed and altitude data from ADS 3 are degraded in sideslip.

– COMPLETE –

ADS 4 PROBE HEAT FAIL (Caution)

(1) ADS 1 FAIL or ADS 2 FAIL advisory message is also shown:

→ **Yes –** Go to (2)

→ **No –** Go to (10)

(2) ADS 1 FAIL or ADS 2 FAIL advisory message is also shown:

(3) Confirm which EICAS message is also shown:

→ **ADS 1 FAIL advisory message –** Go to (4)

→ **ADS 2 FAIL advisory message –** Go to (7)

(4) ADS 1 FAIL advisory message is also shown:

(5) Reversion panel, L PFD ..... Select ADS until ADS 3 is shown.

ADS 4 PROBE HEAT FAIL (Caution) (Cont'd)

(6) XFR ..... Select to right side.

NOTE

1. Use R PFD (or R HUD, if installed) for approach.
2. Minimize crosswind for approach.
3. L PFD and ISI have the same ADS source.
4. Airspeed and altitude data from ADS 3 are degraded in sideslip.
5. Airspeed and altitude data from ADS 4 are unreliable in icing conditions.
6. Touch and go procedures are prohibited.

– COMPLETE –

(7) ADS 2 FAIL advisory message is also shown:

(8) Reversion panel, R PFD ..... Select ADS until ADS 3 is shown.

(9) XFR ..... Select to left side.

NOTE

1. Use L PFD (or L HUD, if installed) for approach.
2. Minimize crosswind for approach.
3. R PFD and ISI have the same ADS source.
4. Airspeed and altitude data from ADS 3 are degraded in sideslip.
5. Airspeed and altitude data from ADS 4 are unreliable in icing conditions.

ADS 4 PROBE HEAT FAIL (Caution) (Cont'd)

6. Touch and go procedures are prohibited.

– COMPLETE –

(10) ADS 1 FAIL and ADS 2 FAIL advisory message are not shown:

NOTE

1. Airspeed and altitude data from ADS 4 are unreliable in icing conditions.
2. Airspeed and altitude data from ADS 3 are degraded in sideslip.

– COMPLETE –

ADS 4 SLIPCOMP FAIL (Caution)

(1) **ADS 1 FAIL** or **ADS 2 FAIL** advisory message is also shown:

→ **Yes –** Go to (2)

→ **No –** Go to (8)

(2) ADS 1 FAIL or ADS 2 FAIL advisory message is also shown:

(3) Confirm which EICAS message is also shown:

→ **ADS 1 FAIL advisory message –** Go to (4)

→ **ADS 2 FAIL advisory message –** Go to (6)

(4) ADS 1 FAIL advisory message is also shown:

(5) XFR .....Select to right side.

NOTE

1. Use R PFD (or R HUD, if installed) for approach.

ADS 4 SLIPCOMP FAIL (Caution) (Cont'd)

2. Minimize crosswind for approach.
3. Airspeed and altitude data from ADS 4 are degraded in sideslip.
4. Touch and go procedures are prohibited.

– COMPLETE –

(6) ADS 2 FAIL advisory message is also shown:

(7) XFR ..... Select to left side.

NOTE

1. Use L PFD (or L HUD, if installed) for approach.
2. Minimize crosswind for approach.
3. Airspeed and altitude data from ADS 4 are degraded in sideslip.
4. Touch and go procedures are prohibited.

– COMPLETE –

(8) ADS 1 FAIL and ADS 2 FAIL advisory message are not shown:

NOTE

Airspeed and altitude data from ADS 4 are degraded in sideslip.

– COMPLETE –

ADS ISI PROBE HEAT (Caution)

(1) **ADS 1 FAIL** or **ADS 2 FAIL** advisory message is also shown:

→ **Yes –** Go to (2)

→ **No –** Go to (10)

(2) ADS 1 FAIL or ADS 2 FAIL advisory message is also shown:

(3) Confirm which EICAS message is also shown:

→ **ADS 1 FAIL advisory message –** Go to (4)

→ **ADS 2 FAIL advisory message –** Go to (7)

(4) ADS 1 FAIL advisory message is also shown:

(5) Reversion panel, L PFD ..... Select ADS until ADS 2 is shown.

(6) Land at the nearest suitable airport.

NOTE

1. L PFD and R PFD have the same ADS source.
2. Airspeed and altitude data on ISI and from ADS 3 and ADS 4 are unreliable in icing conditions and degraded in sideslip.
3. The **FLT CTRL DIRECT ADS** caution message may be shown.

– COMPLETE –

(7) ADS 2 FAIL advisory message is also shown:

(8) Reversion panel, R PFD ..... Select ADS until ADS 1 is shown.

(9) Land at the nearest suitable airport.

ADS ISI PROBE HEAT (Caution) (Cont'd)

NOTE

1. L PFD and R PFD have the same ADS source.
2. Airspeed and altitude data on ISI and from ADS 3 and ADS 4 are unreliable in icing conditions and degraded in sideslip.
3. The **FLT CTRL DIRECT ADS** caution message may be shown.

– COMPLETE –

(10) ADS 1 FAIL and ADS 2 FAIL advisory message are not shown:

NOTE

Airspeed and altitude data on the ISI and from ADS 3 and ADS 4 are unreliable in icing conditions.

– COMPLETE –

ADS ISI SLIPCOMP FAIL (Caution)

(1) **ADS 1 FAIL** or **ADS 2 FAIL** advisory message is also shown:

→ **Yes –** Go to (2)

→ **No –** Go to (10)

(2) ADS 1 FAIL or ADS 2 FAIL advisory message is also shown:

(3) Confirm which EICAS message is also shown:

→ **ADS 1 FAIL advisory message –** Go to (4)

→ **ADS 2 FAIL advisory message –** Go to (7)

(4) ADS 1 FAIL advisory message is also shown:

(5) XFR .....Select to right side.

ADS ISI SLIPCOMP FAIL (Caution) (Cont'd)

(6) Land at the nearest suitable airport.

NOTE

1. Use R PFD (or R HUD, if installed) for approach.
2. Minimize crosswind for approach.
3. Airspeed and altitude data on ISI and from ADS 3 and ADS 4 are degraded in sideslip.

– COMPLETE –

(7) ADS 2 FAIL advisory message is also shown:

(8) XFR ..... Select to left side.

(9) Land at the nearest suitable airport.

NOTE

1. Use L PFD (or L HUD, if installed) for approach.
2. Minimize crosswind for approach.
3. Airspeed and altitude data on ISI and from ADS 3 and ADS 4 are degraded in sideslip.

– COMPLETE –

(10) ADS 1 FAIL and ADS 2 FAIL advisory message are not shown:

NOTE

Airspeed and altitude data from ADS 3 and ADS 4 are degraded in sideslip.

– COMPLETE –

ADS-B OUT FAIL (Caution)

Description: Automatic Dependent Surveillance Broadcast (ADS-B) not capable of reporting its position due to failure of both GNSS.

(1) ATC .....Advise

– COMPLETE –

ADS-B 1 OUT FAIL (Caution)

(1) Other transponder ..... Select

– COMPLETE –

ADS-B 2 OUT FAIL (Caution)

(1) Other transponder ..... Select

– COMPLETE –

DMC 1 FAIL (Caution)

(1) CTP, XPDR/TCAS ..... Select XPDR 2

(2) FD ..... Couple to right side.

(3) ACP, SAT (if installed) ..... Select on

(4) Anti-ice system .....Operate manually in icing conditions.

(5) Affected systems .....Review

Significant systems affected:

- Hydraulic 1 quantity indication
- AFCS 1
- ADF 1
- MKP 1 (CAS and arrow keys available)
- NAV 1

DMC 1 FAIL (Caution) (Cont'd)

- COM 1
- DME 1
- GNSS 1
- HF 1
- RAD ALT 1
- TAWS
- XPDR 1
- L CTP – WX control
- L HUD (if installed)

– COMPLETE –

DMC 2 FAIL (Caution)

(1) CTP, XPDR/TCAS ..... Select XPDR 1

(2) FD .....Couple to left side.

(3) Anti-ice system .....Operate manually in icing conditions

(4) Affected systems .....Review

Significant systems affected:

- Hydraulic 2 and 3 quantity indication
- AFCS 2
- ADF 2
- COM 2
- DME 2
- GNSS 2
- HF 2
- MKP 2 (CAS and arrow keys available)
- NAV 2 and 3
- RAD ALT 2
- XPDR 2
- R CTP – WX control
- R HUD (if installed)
- Crew oxygen pressure indication

– COMPLETE –

DUAL ADS FAIL (Caution)

NOTE

The FPV red flag is shown on one of the PFD in the cases of ADS 3 and ADS 4 failure or ADS 1 and ADS 2 failure.

(1) Land at the nearest suitable airport.

(2) L and R PFD show ADS source data indication in amber:

- **Yes –** Go to (3)
- **No –** Go to (10)

(3) L and R PFD show ADS source data indication in amber:

(4) Reversion panel, L or R PFD ..... Select ADS until ADS source data indication is not amber on both PFDs.

(5) Airspeed and altitude are shown on ISI:

- **Yes –** Go to (6)
- **No –** Go to (8)

(6) Airspeed and altitude are shown on ISI:

(7) No further action required.

– COMPLETE –

(8) Airspeed and altitude are not shown on ISI:

NOTE

If ADS 3 and ADS 4 are failed, the ISI will not show airspeed and altitude.

(9) Reversion panel, ISI .....Select ADS until ISI shows airspeed and altitude.

– COMPLETE –

DUAL ADS FAIL (Caution) (Cont'd)

(10) L and R PFD show ADS source data indication not in amber:

(11) Airspeed and altitude are shown on ISI:

- **Yes –** Go to (12)
- **No –** Go to (14)

(12) Airspeed and altitude are shown on ISI:

(13) Review ADS sources shown.

NOTE

1. ISI ADS source is ADS 3 if ADSREV is not shown.
2. ISI ADS source is ADS 4 if ADSREV is shown.

– COMPLETE –

(14) Airspeed and altitude are not shown on ISI:

(15) Reversion panel, ISI .....Select ADS until ISI shows airspeed and altitude.

NOTE

If ADS 3 and ADS 4 are failed, the ISI will not show airspeed and altitude.

– COMPLETE –

EFIS COMPARATOR FAIL (Caution)

(1) Flight instruments ..... Monitor

(2) ISI .....If available, cross-check

– COMPLETE –

EFIS MISCOMPARE (Caution)

(1) IAS and/or ALT amber flag(s) shown:

- **Yes –** Go to (2)
- **No –** Go to (5)

(2) IAS and/or ALT amber flag(s) shown:

(3) Flight instruments ..... Cross-check

(4) Reversion panel, L or R PFD ..... Select ADS as required until flag(s) removed.

– COMPLETE –

(5) IAS and/or ALT amber flag(s) not shown:

(6) ROL or PIT or ATT or HDG amber flag(s) shown:

- **Yes –** Go to (7)
- **No –** Go to (10)

(7) ROL or PIT or ATT or HDG amber flag(s) shown:

(8) Flight instruments ..... Cross-check

(9) Reversion panel, L or R PFD .....Select IRS as required until flag(s) removed.

– COMPLETE –

(10) ROL or PIT or ATT or HDG amber flag(s) not shown:

(11) RAD amber flag shown:

- **Yes –** Go to (12)
- **No –** Go to (13)

EFIS MISCOMPARE (Caution) (Cont'd)

(12) RAD amber flag shown:

NOTE

Altitude call-outs may be degraded.

– COMPLETE –

(13) RAD amber flag not shown:

(14) FPV amber flag shown:

- **Yes –** Go to (15)
- **No –** Go to (17)

(15) FPV amber flag shown:

(16) Flight instruments ..... Cross-check

NOTE

FPV from one or both PFD may be degraded.

– COMPLETE –

(17) FPV amber flag not shown:

(18) VSPD amber flag shown:

- **Yes –** Go to (19)
- **No –** Go to (21)

(19) VSPD amber flag shown:

(20) FMS, PERF – DEP/ARR ..... SET VSPEEDS

– COMPLETE –

EFIS MISCOMPARE (Caution) (Cont'd)

(21) VSPD amber flag not shown:

(22) FMS or VNAV amber flag shown:

- **Yes –** Go to (23)
- **No –** Go to (25)

(23) FMS or VNAV amber flag shown:

(24) Select a different type of approach, if required.

– COMPLETE –

(25) Approach Status Annunciation (ASA) field in amber box:

(26) No further action required.

– COMPLETE –

ENG DSPL MISCOMPARE (Caution)

(1) Reversion panel, DISPLAY ..... SWAP

(2) Engine instruments ..... Monitor

– COMPLETE –

IPC 1 FAIL (Caution)

(1) SPD mode ..... MAN

NOTE

Do not re-select FMS SPD mode.

(2) **FMS 2 FAIL** or **IPC 2 FAIL** caution message is also shown:

- **Yes –** Go to (3)
- **No –** Go to (5)

IPC 1 FAIL (Caution) (Cont'd)

(3) FMS 2 FAIL or IPC 2 FAIL caution message is also shown:

(4) Dual FMS failure procedure ..... Accomplish. Refer to Navigation – Dual FMS failure.

– COMPLETE –

(5) FMS 2 FAIL or IPC 2 FAIL caution message not shown:

(6) NAV SRC .....FMS 2

(7) XFR .....Select to right side.

NOTE

1. LPV and RNP AR approaches are prohibited with single FMS operative.
2. With single FMS operation, auto tuning for a NAV to NAV transfer will not occur on the cross-side PFD. Manual tuning is required.

(8) Affected systems .....Review

Significant systems affected:

- FMS 1
- CPDLC (if installed)

(9) Go-around procedure ..... Accomplish, if required.

– COMPLETE –

IPC 2 FAIL (Caution)

(1) SPD mode ..... MAN

NOTE

Do not re-select FMS SPD mode.

IPC 2 FAIL (Caution) (Cont'd)

(2) FMS 1 FAIL or IPC 1 FAIL caution message is also shown:

➔ **Yes –** Go to (3)

➔ **No –** Go to (5)

(3) FMS 1 FAIL or IPC 1 FAIL caution message is also shown:

(4) Dual FMS failure procedure ..... Accomplish. Refer to Navigation – Dual FMS failure.

– COMPLETE –

(5) FMS 1 FAIL or IPC 1 FAIL caution message not shown:

(6) NAV SRC .....FMS 1

(7) XFR .....Select to left side.

NOTE

1. LPV and RNP AR approaches are prohibited with single FMS operative.
2. With single FMS operation, auto tuning for a NAV to NAV transfer will not occur on the cross-side PFD. Manual tuning is required.

(8) Affected systems .....Review

Significant systems affected:

- FMS 2

(9) Go-around procedure ..... Accomplish, if required.

– COMPLETE –

IPC 3 FAIL (Caution)

(1) Terrain and aircraft configuration ..... Monitor

(2) Affected systems .....Review

IPC 3 FAIL (Caution) (Cont'd)

Significant systems affected:

- TAWS
- L HUD (if installed)

– COMPLETE –

IPC 4 FAIL (Caution)

(1) Affected systems .....Review

Significant systems affected:

- R HUD (if installed)

– COMPLETE –

IRS SAME SOURCE (Caution)

(1) Flight instruments ..... Monitor

(2) Land at the nearest suitable airport.

– COMPLETE –

IRS SET HEADING (Caution)

(1) FMS, POS – IRS – SET IRS HDG .....Enter Mag heading

NOTE

IRS SET HEADING caution message stays posted and affected IRS cannot be displayed on PFD until it is aligned.

– COMPLETE –

L CTP TUNING FAIL (Caution)

(1) L CTP ..... OFF

(2) Use AVIONIC, CTP tab for L CTP functions.

(3) ACP, SAT (if installed) ..... Select on

– COMPLETE –

L-R RADIO TUNING (Caution)

(1) L CTP ..... OFF

(2) R CTP ..... OFF

(3) CCP menu .....Select CNS

(4) ACP, SAT (if installed) ..... Select on

– COMPLETE –

R CTP TUNING FAIL (Caution)

(1) R CTP ..... OFF

(2) Use AVIONIC, CTP tab for R CTP functions.

– COMPLETE –

RAD ALT FAIL (Caution)

(1) Affected systems .....Review

Significant systems affected:

- Autothrottle (retard)
- Autoland
- Category II
- TCAS
- WXR – PWS
- EFIS comparator (inoperative for RAD ALT only)

RAD ALT FAIL (Caution) (Cont'd)

- TAWS – GPWS
- TAWS – WS

– COMPLETE –

WXR ON (Caution)

(1) WX ..... Select

(2) WXR ..... STBY

– COMPLETE –

XPDR 1 FAIL (Caution)

(1) CTP, XPDR/TCAS ..... Select XPDR 2

– COMPLETE –

XPDR 2 FAIL (Caution)

(1) CTP, XPDR/TCAS ..... Select XPDR 1

– COMPLETE –

Display unit failure procedure

(1) ECL ..... If required, move to available MFW.

(2) Autopilot ..... If required, select to operative side.

Display unit failure procedure (Cont'd)

(3) Transponder ..... If required, select to operative side.

– COMPLETE –

Unreliable airspeed

(1) Autopilot ..... Disengage

(2) Autothrottle ..... Select off

(3) FD ..... Select off

NOTE

Disregard FPV.

If below safe altitude:

(Max climb)

(4) Pitch .....Set 12.5 degrees NU

(5) Thrust levers .....Advance to MAX

NOTE

A momentary exceedance of EGT can occur.

(6) SLAT/FLAP configuration .....Maintain

(7) SPOILER lever ..... RET

(8) Landing gear ..... UP

When at a safe altitude:

(Climb)

(9) Pitch .....Set 5 degrees NU

(10) Thrust levers .....Set CLB thrust

Unreliable airspeed (Cont'd)

(11) Flaps ..... Retract in stages

(12) AURAL WARN .....INHIB, if required.

CAUTION

Fly-by-wire envelope protection is not available. Minimize control inputs.

NOTE

Select the longest runway available.

(13) ADS reversion ..... Review available ADS sources.

NOTE

1. Consider airspeed unreliable until at least two ADS sources agree and have been cross-checked with the N1/thrust data that follows.
2. Stick shaker may be unreliable.
3. FPV and FD should be considered unreliable until confirmed otherwise.
4. Check all available data sources, including:
   - FMS, POS – GNSS for ground speed,
   - FMS, POS – GNSS INFORMATION for GNSS ALT (if required),
   - Acceleration cue (if available).
5. Wind vector may be unreliable.

Unreliable airspeed (Cont'd)

(14) Aircraft weight:

- **Light (less than 45359 kg [100000 lb]) –** Go to (15)
- **Mid (45359 kg [100000 lb] to 54431 kg [120000 lb]) –** Go to (29)
- **Heavy (more than 54431 kg [120000 lb]) –** Go to (43)

(15) Aircraft at light weight (less than 45359 kg [100000 lb]):

(16) Use the appropriate procedure for required phase of flight.

Cruise:

(250 KIAS / 0.7 M / FLAP 0 / landing gear up)

(17) Airspeed ..... Use N1/pitch table data

250 KIAS / 0.7 M cruise / FLAP 0 / landing gear up		
Altitude	**Cruise N1 (%) [1]**	**Pitch (degrees NU)**
30001 to 40000 ft	81	1.5
20001 to 30000 ft	74	0.5
10001 to 20000 ft	65	0.5
0 to 10000 ft	58	1.0

[1] Reduce N1 by 2% per 10°C below ISA or increase N1 by 2% per 10°C above ISA.

Descent:

(250 KIAS / 0.74 M / FLAP 0 / landing gear up)

(18) Thrust levers ..... IDLE

(19) Pitch ..... Set 3.0 degrees ND

Unreliable airspeed (Cont'd)

Level-off and slowdown:

(190 KIAS / FLAP 0-3 / landing gear up)

(20) Airspeed .....Use N1/pitch data

190 KIAS / level / FLAP 0 / landing gear up		
Altitude	**Cruise N1 (%) [1]**	**Pitch (degrees NU)**
15000 ft	53	3.5
10000 ft	49	3.5
5000 ft	46	3.5

[1] Reduce N1 by 2% per 10°C below ISA or increase N1 by 2% per 10°C above ISA.

(21) SLAT/FLAP lever .....Select in stages to achieve FLAP 3

Configure for approach:

(150 KIAS / FLAP 3 / landing gear up)

(22) Airspeed .....Use N1/pitch data

150 KIAS / level / FLAP 3 / landing gear up		
Altitude	**Cruise N1 (%) [1]**	**Pitch (degrees NU)**
15000 ft	57	2.5
10000 ft	53	2.5
5000 ft	49	2.5

[1] Reduce N1 by 2% per 10°C below ISA or increase N1 by 2% per 10°C above ISA.

Unreliable airspeed (Cont'd)

(23) SLAT/FLAP lever 4

(24) Landing gear ..... DN

(25) Airspeed ..... Use N1/pitch data to achieve 150 KIAS

Target: 150 KIAS / FLAP 4 / landing gear down	
Cruise N1 (%) [1]	**Pitch (degrees NU)**
65	1.0

[1] Reduce N1 by 2% per 10°C below ISA or increase N1 by 2% per 10°C above ISA.

Final approach descent:

NOTE

Vary N1 as required to maintain 3 degree glideslope.

(26) Thrust ..... Use data below for target $V_{REF(FLAP\ 4)}$

V_{REF} / 3 degree glideslope / FLAP 4 / landing gear down		
Altitude	**Glideslope N1 (%) [1]**	**Pitch (degrees NU)**
SL to 5000 ft	40	3.5
5001 to 10000 ft	43	3.0

[1] Reduce N1 by 2% per 10°C below ISA or increase N1 by 2% per 10°C above ISA.

(27) OLD factor ..... Multiply by 1.20

Unreliable airspeed (Cont'd)

After touch down:

(28) SPOILER lever .....FULL

– COMPLETE –

(29) Aircraft at mid weight (45359 kg [100000 lb] to 54431 kg [120000 lb]):

(30) Use the appropriate procedure for required phase of flight.

Cruise:

(250 KIAS / 0.7 M / FLAP 0 / landing gear up)

(31) Airspeed .....Use N1/pitch table data

250 KIAS / 0.7 M cruise / FLAP 0 / landing gear up		
Altitude	**Cruise N1 (%) [1]**	**Pitch (degrees NU)**
30001 to 40000 ft	85	2.0
20001 to 30000 ft	77	1.5
10001 to 20000 ft	67	1.5
0 to 10000 ft	59	1.5

[1] Reduce N1 by 2% per 10°C below ISA or increase N1 by 2% per 10°C above ISA.

Descent:

(250 KIAS / 0.74 M / FLAP 0 / landing gear up)

(32) Thrust levers ..... IDLE

(33) Pitch .....Set 2.0 degrees ND

Level-off and slowdown:

(190 KIAS / FLAP 0-3 / landing gear up)

Unreliable airspeed (Cont'd)

(34) Airspeed .....Use N1/pitch data

190 KIAS / level / FLAP 0 / landing gear up		
Altitude	**Cruise N1 (%) [1]**	**Pitch (degrees NU)**
15000 ft	57	4.5
10000 ft	53	4.5
5000 ft	49	4.5

[1] Reduce N1 by 2% per 10°C below ISA or increase N1 by 2% per 10°C above ISA.

(35) SLAT/FLAP lever .....Select in stages to achieve FLAP 3

Configure for approach:

(150 KIAS / FLAP 3 / landing gear up)

(36) Airspeed .....Use N1/pitch data

150 KIAS / level / FLAP 3 / landing gear up		
Altitude	**Cruise N1 (%) [1]**	**Pitch (degrees NU)**
15000 ft	61	4.5
10000 ft	57	4.5
5000 ft	53	4.5

[1] Reduce N1 by 2% per 10°C below ISA or increase N1 by 2% per 10°C above ISA.

(37) SLAT/FLAP lever 4

(38) Landing gear ..... DN

Unreliable airspeed (Cont'd)

(39) Airspeed ..... Use N1/pitch data to achieve 150 KIAS.

Target: 150 KIAS / FLAP 4 / landing gear down	
Cruise N1 (%) [1]	**Pitch (degrees NU)**
67	2.8

[1] Reduce N1 by 2% per 10°C below ISA or increase N1 by 2% per 10°C above ISA.

Final approach descent:

NOTE

Vary N1 as required to maintain 3 degree glideslope.

(40) Thrust ..... Use data below for target $V_{REF(FLAP\ 4)}$

V_{REF} / 3 degree glideslope / FLAP 4 / landing gear down		
Altitude	**Glideslope N1 (%) [1]**	**Pitch (degrees NU)**
SL to 5000 ft	45	3.5
5001 to 10000 ft	48	3.5

[1] Reduce N1 by 2% per 10°C below ISA or increase N1 by 2% per 10°C above ISA.

(41) OLD factor ..... Multiply by 1.20

After touch down:

(42) SPOILER lever .....FULL

– COMPLETE –

Unreliable airspeed (Cont'd)

(43) Aircraft at heavy weight (more than 54431 kg [120000 lb]):

(44) Use the appropriate procedure for required phase of flight.

Cruise:

(250 KIAS / 0.7 M / FLAP 0 / landing gear up)

(45) Airspeed .....Use N1/pitch data

250 KIAS / 0.7 M cruise / FLAP 0 / landing gear up		
Altitude	**Cruise N1 (%) [1]**	**Pitch (degrees NU)**
30001 to 40000 ft	87	3.0
20001 to 30000 ft	78	2.0
10001 to 20000 ft	68	2.0
0 to 10000 ft	60	2.5

[1] Reduce N1 by 2% per 10°C below ISA or increase N1 by 2% per 10°C above ISA.

Descent:

(250 KIAS / 0.74 M / FLAP 0 / landing gear up)

(46) Thrust levers ..... IDLE

(47) Pitch .....Set 1.0 degree ND

Level-off and slowdown:

(190 KIAS / FLAP 0-3 / landing gear up)

(48) Airspeed .....Use N1/pitch data

Unreliable airspeed (Cont'd)

190 KIAS / level / FLAP 0 / landing gear up		
Altitude	**Cruise N1 (%) [1]**	**Pitch (degrees NU)**
15000 ft	60	5.5
10000 ft	56	5.5
5000 ft	52	5.5

[1] Reduce N1 by 2% per 10°C below ISA or increase N1 by 2% per 10°C above ISA.

(49) SLAT/FLAP lever .....Select in stages to achieve FLAP 3

Configure for approach:

(150 KIAS / FLAP 3 / landing gear up)

(50) Airspeed .....Use N1/pitch data

150 KIAS / level / FLAP 3 / landing gear up		
Altitude	**Cruise N1 (%) [1]**	**Pitch (degrees NU)**
15000 ft	65	6.0
10000 ft	60	6.0
5000 ft	56	6.0

[1] Reduce N1 by 2% per 10°C below ISA or increase N1 by 2% per 10°C above ISA.

(51) SLAT/FLAP lever 4

(52) Landing gear ..... DN

Unreliable airspeed (Cont'd)

(53) Airspeed ..... Use N1/pitch data to achieve 150 KIAS.

Target: 150 KIAS / FLAP 4 / landing gear down	
Cruise N1 (%) [1]	**Pitch (degrees NU)**
69	4.5

[1] Reduce N1 by 2% per 10°C below ISA or increase N1 by 2% per 10°C above ISA.

Final approach descent:

NOTE

Vary N1 as required to maintain 3 degree glideslope.

(54) Thrust ..... Use data below for target $V_{REF(FLAP\ 4)}$

V_{REF} / 3 degree glideslope / FLAP 4 / landing gear down		
Altitude	**Glideslope N1 (%) [1]**	**Pitch (degrees NU)**
SL to 5000 ft	48	3.5
5001 to 10000 ft	52	3.5

[1] Reduce N1 by 2% per 10°C below ISA or increase N1 by 2% per 10°C above ISA.

(55) OLD factor ..... Multiply by 1.20

After touch down:

(56) SPOILER lever .....FULL

– COMPLETE –

LANDING GEAR, WHEEL, AND BRAKE SYSTEM

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BRAKE OVHT (Warning)

(1) Airspeed ..... Not more than 250 KIAS

(2) Landing gear ..... DN

(3) STATUS synoptic page ..... Select

(4) Brake temperature ..... Monitor

(5) **BRAKE OVHT** warning message goes out and brake temperature is decreasing:

- **Yes –** Go to (6)
- **No –** Go to (8)

(6) BRAKE OVHT warning message goes out and brake temperature is decreasing:

(7) Landing gear ..... As required

– COMPLETE –

(8) BRAKE OVHT warning message stays on:

(9) Land at the nearest suitable airport.

(10) Tire pressure ..... Check

(11) Tire pressure is normal or only one tire pressure is amber:

- **Yes –** Go to (12)
- **No –** Go to (14)

(12) Tire pressure is normal or only one tire pressure is amber:

(13) No further action required.

– COMPLETE –

BRAKE OVHT (Warning) (Cont'd)

(14) Tire pressure is amber for both tires on the same side:

(15) Low tire pressure landing procedure ..... Accomplish Refer to Landing gear, wheel, and brake system – Low tire pressure landing procedure.

– COMPLETE –

CONFIG BRAKE (Warning)

(1) Takeoff .....Discontinue

– COMPLETE –

GEAR (Warning)

(1) Landing gear ..... DN

– COMPLETE –

AUTOBRAKE FAIL (Caution)

(1) Manual brakes ..... Apply, as required.

(2) AUTOBRAKE ..... OFF

– COMPLETE –

BRAKE FAIL (Caution)

(1) AUTOBRAKE ..... OFF

(2) In flight:

➔ **Yes –** Go to (3)

➔ **No –** Go to (7)

BRAKE FAIL (Caution) (Cont'd)

(3) In flight:

On approach:

(4) OLD factor ..... Multiply by 2.90

(5) Thrust reversers .....After landing, apply as required.

CAUTION

Park brake may not be available.

(6) PARK BRAKE ..... Apply during landing roll.

– COMPLETE –

(7) On ground:

(8) Thrust reversers ..... Apply as required.

CAUTION

Park brake may not be available.

(9) PARK BRAKE ..... Apply as required.

– COMPLETE –

BRAKE ON (Caution)

(1) In flight:

- **Yes –** Go to (2)
- **No –** Go to (9)

BRAKE ON (Caution) (Cont'd)

(2) In flight:

(3) PARK BRAKE ..... OFF

NOTE

If message stays on in flight, uneven braking may occur during landing roll.

(4) **BRAKE ON** caution message goes out:

- **Yes –** Go to (5)
- **No –** Go to (7)

(5) BRAKE ON caution message goes out:

(6) No further action required.

– COMPLETE –

(7) BRAKE ON caution message stays on:

(8) AUTOBRAKE ..... OFF

– COMPLETE –

(9) On ground:

(10) Do not take off.

– COMPLETE –

CPLT BRAKE PEDAL FAIL (Caution)

NOTE

Braking not available with right side pedals. Left side braking available.

– COMPLETE –

GEAR DISAGREE (Caution)

(1) Landing gear lever selected UP:

- **Yes –** Go to (2)
- **No –** Go to (15)

(2) Landing gear lever selected UP:

(3) Airspeed ..... Not more than 250 KIAS

(4) Landing gear lever ..... DN

(5) **GEAR DISAGREE** caution message goes out:

- **Yes –** Go to (6)
- **No –** Go to (8)

(6) GEAR DISAGREE caution message goes out:

(7) Land at the nearest suitable airport.

– COMPLETE –

(8) GEAR DISAGREE caution message stays on:

(9) ALTN GEAR ..... DN

(10) **GEAR DISAGREE** caution message goes out:

- **Yes –** Go to (11)
- **No –** Go to (13)

(11) GEAR DISAGREE caution message goes out:

(12) Land at the nearest suitable airport.

NOTE

Gear UP selection is not available.

– COMPLETE –

GEAR DISAGREE (Caution) (Cont'd)

(13) GEAR DISAGREE caution message stays on:

(14) Gear up or unsafe landing procedure ..... Accomplish Refer to Landing gear, wheel, and brake system – Gear up or unsafe landing procedure.

– COMPLETE –

(15) Landing gear lever selected DN:

(16) ALTN GEAR ..... DN

(17) GEAR DISAGREE caution message goes out:

- **Yes –** Go to (18)
- **No –** Go to (20)

(18) GEAR DISAGREE caution message goes out:

(19) Land at the nearest suitable airport.

NOTE

Gear UP selection is not available.

– COMPLETE –

(20) GEAR DISAGREE caution message stays on:

(21) Gear up or unsafe landing procedure ..... Accomplish Refer to Landing gear, wheel, and brake system – Gear up or unsafe landing procedure.

– COMPLETE –

GEAR FAIL (Caution)

GEAR FAIL (Caution) (Cont'd)

(1) Airspeed ..... Not more than 250 KIAS

(2) Landing gear ..... DN

(3) Landing gear confirmed down and locked (three greens):

➔ **Yes –** Go to (4)

➔ **No –** Go to (7)

(4) Landing gear confirmed down and locked (three greens):

(5) Do not retract landing gear.

(6) Land at the nearest suitable airport.

– COMPLETE –

(7) Landing gear not confirmed down and locked:

(8) ALTN GEAR ..... DN

NOTE

1. Gear UP selection is not available.
2. **GEAR FAIL** caution message may stay on, even if the landing gear is down and locked.

(9) LDG LTS, TAXI ..... NARROW

(10) LDG LTS, NOSE ..... ON

(11) Landing gear confirmed down and locked (three greens):

➔ **Yes –** Go to (12)

➔ **No –** Go to (14)

(12) Landing gear confirmed down and locked (three greens):

(13) Land at the nearest suitable airport.

GEAR FAIL (Caution) (Cont'd)

NOTE

Gear UP selection is not available.

– COMPLETE –

(14) Landing gear not confirmed down and locked:

(15) Gear up or unsafe landing procedure ..... Accomplish Refer to Landing gear, wheel, and brake system – Gear up or unsafe landing procedure.

– COMPLETE –

L BRAKE FAIL (Caution)

(1) DC ESS BUS 1 or DC ESS BUS 2 caution message is also shown:

- ➔ **Yes –** Go to (2)
- ➔ **No –** Go to (4)

(2) DC ESS BUS 1 or DC ESS BUS 2 caution message is also shown:

(3) No further action required.

– COMPLETE –

(4) DC ESS BUS 1 or DC ESS BUS 2 caution message is not shown:

(5) AUTOBRAKE ..... OFF

(6) In flight:

- ➔ **Yes –** Go to (7)
- ➔ **No –** Go to (11)

L BRAKE FAIL (Caution) (Cont'd)

(7) In flight:

On approach:

(8) OLD factor ..... Multiply by 1.50

(9) Brakes .....After landing, apply with caution.

NOTE

Anti-skid may not be available on left brakes.

(10) Thrust reversers .....After landing, apply as required.

– COMPLETE –

(11) On ground:

(12) Brakes ..... Apply with caution.

NOTE

Anti-skid may not be available on left brakes.

(13) Thrust reversers ..... Apply as required.

– COMPLETE –

NORM BRAKE FAIL (Caution)

(1) ALTN BRAKE ..... ON

(2) AUTOBRAKE ..... OFF

(3) In flight:

- **Yes –** Go to (4)
- **No –** Go to (8)

NORM BRAKE FAIL (Caution) (Cont'd)

(4) In flight:

On approach:

(5) OLD factor ..... Multiply by 1.50

(6) Brakes ..... After landing, apply light to moderate braking.

CAUTION

Extreme caution is required during braking to avoid tire damage or blowout.

(7) Thrust reversers ..... After landing, apply to maximum extent.

NOTE

Park brake may not be available.

– COMPLETE –

(8) On ground:

(9) Brakes ..... Apply with caution.

CAUTION

Extreme caution is required during braking to avoid tire damage or blowout.

(10) Thrust reversers ..... Apply to maximum extent.

NORM BRAKE FAIL (Caution) (Cont'd)

NOTE

Park brake may not be available.

– COMPLETE –

NOSE STEER FAIL (Caution)

(1) In flight:

- **Yes –** Go to (2)
- **No –** Go to (16)

(2) In flight:

(3) FLT CTRL DIRECT warning or caution message also shown:

- **Yes –** Go to (4)
- **No –** Go to (6)

(4) FLT CTRL DIRECT warning or caution message also shown:

Before landing:

(5) During landing roll, use differential braking, rudder, and engine thrust as required to assist in directional control.

– COMPLETE –

(6) FLT CTRL DIRECT warning or caution message not shown:

(7) NOSE STEER ..... OFF

(8) NOSE STEER ..... Select on

(9) **NOSE STEER FAIL** caution message goes out:

- **Yes –** Go to (10)
- **No –** Go to (12)

NOSE STEER FAIL (Caution) (Cont'd)

(10) NOSE STEER FAIL caution message goes out:

(11) No further action required.

– COMPLETE –

(12) NOSE STEER FAIL caution message stays on:

(13) NOSE STEER ..... OFF

NOTE

Select the longest runway with minimal crosswind.

On approach:

(14) OLD factor ..... Multiply by 1.20

Before landing:

(15) During landing roll, use differential braking, rudder, and engine thrust as required to assist in directional control.

– COMPLETE –

(16) On ground:

(17) Stop the aircraft. Use differential braking, rudder, and engine thrust as required to assist in directional control.

(18) Nose steering tiller and rudder .....Center

(19) NOSE STEER ..... OFF

(20) NOSE STEER ..... Select on

(21) NOSE STEER FAIL caution message goes out:

- **Yes –** Go to (22)
- **No –** Go to (24)

NOSE STEER FAIL (Caution) (Cont'd)

(22) NOSE STEER FAIL caution message goes out:

(23) No further action required.

– COMPLETE –

(24) NOSE STEER FAIL caution message stays on:

(25) NOSE STEER ..... OFF

– COMPLETE –

NOSE STEER MISALIGN (Caution)

(1) Do not taxi.

(2) NOSE STEER .....Confirm OFF

NOTE

Nose landing gear realignment is required.

– COMPLETE –

NOSE TIRE LO PRESS (Caution)

(1) Use differential braking, rudder, and engine thrust as required to assist in directional control.

– COMPLETE –

PARK BRAKE FAIL (Caution)

(1) Maintain braking until wheels are chocked.

– COMPLETE –

PLT BRAKE PEDAL FAIL (Caution)

NOTE

Braking not available with left side pedals. Right side braking available.

– COMPLETE –

R BRAKE FAIL (Caution)

(1) DC ESS BUS 1 or DC ESS BUS 2 caution message is also shown:

- **Yes –** Go to (2)
- **No –** Go to (4)

(2) DC ESS BUS 1 or DC ESS BUS 2 caution message is also shown:

(3) No further action required.

– COMPLETE –

(4) DC ESS BUS 1 or DC ESS BUS 2 caution message is not shown:

(5) AUTOBRAKE ..... OFF

(6) In flight:

- **Yes –** Go to (7)
- **No –** Go to (11)

(7) In flight:

On approach:

(8) OLD factor ..... Multiply by 1.50

(9) Brakes .....After landing, apply with caution.

NOTE

Anti-skid may not be available on right brakes.

R BRAKE FAIL (Caution) (Cont'd)

(10) Thrust reversers .....After landing, apply as required.

– COMPLETE –

(11) On ground:

(12) Brakes ..... Apply with caution.

NOTE

Anti-skid may not be available on right brakes.

(13) Thrust reversers ..... Apply as required.

– COMPLETE –

WOW FAIL (Caution)

CAUTION

1. Touchdown protection is inoperative. Do not apply brakes until all landing gear are on the ground.
2. Nosewheel steering may not be available.
3. Do not land on contaminated runway.

(1) EICAS and all synoptic pages ..... Monitor

Significant systems affected:

- Autobrake
- Regulation of de-rotation braking
- Nosewheel steering may not be available
- Thrust reversers (above reverse idle may not be available)

(2) AUTOBRAKE ..... OFF

WOW FAIL (Caution) (Cont'd)

(3) OLD factor ..... Multiply by 1.30

– COMPLETE –

Gear up or unsafe landing procedure

Preparation:

(1) Cabin crew ..... Brief

(2) SEAT BELTS ..... ON

(3) TAWS, GEAR ..... INHIB

(4) Cockpit door ..... Latch open

(5) Harness ..... Tighten and lock

On approach:

(6) EMER DEPRESS ..... ON

(7) APU (if available) ..... START

(8) HYD 2B ..... ON

(9) PTU ..... ON

(10) AUTOBRAKE ..... OFF

(11) SLAT/FLAP lever 5

Gear up or unsafe landing procedure (Cont'd)

Before contact:

NOTE

If any gear is down:

Land at a normal landing attitude and minimum vertical rate.

If all gear are up:

Aim to touch down with minimum vertical rate at V_{REF}, at a lower than normal landing attitude (approximately 5 degrees).

(12) EMER LTS ..... ON

(13) PA ..... Give the brace command.

When stopped:

(14) PARK BRAKE ..... ON

(15) L ENG run ..... OFF

(16) R ENG run ..... OFF

(17) Evacuation required:

- **Yes –** Go to (18)
- **No –** Go to (20)

(18) Evacuation required:

(19) Emergency evacuation ..... Accomplish Refer to Evacuation – Emergency evacuation.

– COMPLETE –

Gear up or unsafe landing procedure (Cont'd)

(20) Evacuation not required:

WARNING

The aircraft is not in a safe condition until the gear locking pins are installed.

– COMPLETE –

Low tire pressure landing procedure

(1) Hold low pressure main gear off as long as possible.

(2) Use differential braking, rudder, and engine thrust as required to assist in directional control.

(3) OLD factor ..... Multiply by 1.30

– COMPLETE –

Tire burst on takeoff

(1) Tire burst occurs at less than 80 KIAS:

- **Yes –** Go to (2)
- **No –** Go to (4)

(2) Tire burst occurs at less than 80 KIAS:

(3) Rejected takeoff procedure ..... Accomplish, if required. Refer to Rejected takeoff.

– COMPLETE –

Tire burst on takeoff (Cont'd)

(4) Tire burst occurs at more than 80 KIAS:

If conditions permit:

(5) Takeoff ..... Continue

Before landing:

(6) Low tire pressure landing procedure .....Consult for guidance. Refer to Landing gear, wheel, and brake system – Low tire pressure landing.

– COMPLETE –

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MISCELLANEOUS SYSTEMS

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CREW OXY LO PRESS (Caution)

(1) Descent ..... 10000 feet or lowest safe altitude, whichever is higher.

– COMPLETE –

ELT ON (Caution)

(1) ELT ..... TEST/RESET

(2) ELT ..... ARM

– COMPLETE –

EMER LTS OFF (Caution)

Emergency lights required on:

(1) EMER LTS ..... ARM

– COMPLETE –

KU BAND ON (Caution) <44309202C>

(1) Discontinue deicing/anti-icing.

(2) Advise deicing operator to clear all deicing personnel from the aircraft.

– COMPLETE –

Bomb on board

There is a specific threat that a bomb is on board, suspected or confirmed.

(1) In flight:

- **Yes –** Go to (2)
- **No –** Go to (31)

Bomb on board (Cont'd)

(2) In flight:

(3) In flight and time permits:

➔ **Yes –** Go to (4)

➔ **No –** Go to (27)

(4) In flight and time permits:

(5) Land at the nearest suitable airport.

At a safe altitude:

(6) Level off.

(7) Airspeed ..... Maintain as low as practical but not lower than green dot.

(8) SEAT BELTS ..... ON

(9) Cabin ..... Advise

(10) ATC ..... Advise

(11) XPDR 7700

(12) Attempt to maintain cabin delta P at approximately 1 psi for as long as possible.

(13) AUTO PRESS ..... MAN

(14) If required, descend to a safe altitude as close as possible to cabin altitude + 2500 feet.

(15) MAN RATE ..... Adjust if required to maintain delta P at 1 psi.

Bomb on board (Cont'd)

NOTE

Detonation may affect landing gear extension. It is recommended to extend the landing gear if remaining fuel permits.

Fuel consumption may increase by 100% with landing gear extended.

(16) Remaining fuel permits:

- **Yes –** Go to (17)
- **No –** Go to (22)

(17) Remaining fuel permits:

(18) Landing gear ..... DN

(19) Airspeed ..... As required until ready for approach.

Before landing:

(20) EMER DEPRESS ..... ON

After landing:

(21) Emergency evacuation procedure ..... Accomplish, if required. Refer to Evacuation — Emergency evacuation.

– COMPLETE –

(22) Remaining fuel does not permit:

(23) Landing gear ..... UP

(24) Airspeed ..... As required until ready for approach.

Before landing:

(25) EMER DEPRESS ..... ON

Bomb on board (Cont'd)

After landing:

(26) Emergency evacuation procedure ..... Accomplish, if required. Refer to Evacuation — Emergency evacuation.

– COMPLETE –

(27) Time does not permit:

(28) Land immediately at the nearest suitable airport.

Before landing:

(29) EMER DEPRESS ..... ON

After landing:

(30) Emergency evacuation procedure ..... Accomplish, if required. Refer to Evacuation — Emergency evacuation.

– COMPLETE –

(31) On ground:

(32) Emergency evacuation procedure ..... Accomplish, if required. Refer to Evacuation — Emergency evacuation.

– COMPLETE –

Pilot incapacitation

In case of pilot incapacitation, the following are general guidelines:

- Ensure autopilot is engaged.
- Call flight attendant to flight compartment.
- Check that incapacitated pilot does not interfere with flight controls. It is preferable to have incapacitated pilot removed from flight compartment.

Pilot incapacitation (Cont'd)

- If unable to remove incapacitated pilot, instruct flight attendant to lock shoulder harness of incapacitated pilot and move seat rearwards.
- If an immediate landing is imperative, obtain advice on most suitable airport where medical assistance can be readily rendered.

– COMPLETE –

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NAVIGATION

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APPROACH NOT AVAIL (Caution)

(1) FMS, POS – GNSS ..... Select

(2) GNSS are selected:

➔ **Yes –** Go to (3)

➔ **No –** Go to (5)

(3) GNSS are selected:

(4) Select a non-GNSS type of approach, if required.

– COMPLETE –

(5) GNSS are not selected:

(6) GNSS 1 and 2 ..... Select

– COMPLETE –

FMS 1 FAIL (Caution)

(1) SPD mode ..... MAN

NOTE

Do not re-select FMS SPD mode.

(2) **FMS 2 FAIL** or **IPC 2 FAIL** caution message is also shown:

➔ **Yes –** Go to (3)

➔ **No –** Go to (5)

(3) FMS 2 FAIL or IPC 2 FAIL caution message is also shown:

(4) Dual FMS failure procedure ..... Accomplish Refer to Navigation – Dual FMS failure.

– COMPLETE –

FMS 1 FAIL (Caution) (Cont'd)

(5) FMS 2 FAIL or IPC 2 FAIL caution message not shown:

(6) NAV SRC ..... FMS 2

(7) XFR ..... Select to right side.

NOTE

1. LPV and RNP AR approaches are prohibited with single FMS operative.
2. With single FMS operation, auto tuning for a NAV to NAV transfer will not occur on the cross-side PFD. Manual tuning is required.

(8) Go-around procedure ..... Accomplish, if required.

– COMPLETE –

FMS 2 FAIL (Caution)

(1) SPD mode ..... MAN

NOTE

Do not re-select FMS SPD mode.

(2) FMS 1 FAIL or IPC 1 FAIL caution message is also shown:

➔ **Yes –** Go to (3)

➔ **No –** Go to (5)

(3) FMS 1 FAIL or IPC 1 FAIL caution message is also shown:

(4) Dual FMS failure procedure ..... Accomplish Refer to Navigation – Dual FMS failure.

– COMPLETE –

FMS 2 FAIL (Caution) (Cont'd)

(5) FMS 1 FAIL or IPC 1 FAIL caution message not shown:

(6) NAV SRC ..... FMS 1

(7) XFR ..... Select to left side.

NOTE

1. LPV and RNP AR approaches are prohibited with single FMS operative.
2. With single FMS operation, auto tuning for a NAV to NAV transfer will not occur on the cross-side PFD. Manual tuning is required.

(8) Go-around procedure ..... Accomplish, if required.

– COMPLETE –

FMS FUEL (Caution)

(1) Fuel quantity ..... Check

(2) Fuel leak suspected:

→ **Yes –** Go to (3)

→ **No –** Go to (5)

(3) Fuel leak suspected:

(4) Fuel leak suspect procedure ..... Accomplish Refer to Fuel – FUEL LEAK SUSPECT.

– COMPLETE –

(5) Fuel leak not suspected:

(6) Re-plan flight as necessary.

– COMPLETE –

FMS OEI PERF ACTIVE (Caution)

(1) Both engines operating:

➔ **Yes –** Go to (2)

➔ **No –** Go to (7)

(2) Both engines operating:

(3) Thrust levers .....Matched

(4) FMS – THRUST – OEI FMS PERF .....CNCL

(5) Autothrottle ..... Select off

(6) Autothrottle ..... Select on then as required

– COMPLETE –

(7) One engine inoperative:

(8) Determine inoperative engine:

➔ **Left engine –** Go to (9)

➔ **Right engine –** Go to (15)

(9) Left engine inoperative:

(10) Left engine shutdown procedure previously accomplished:

➔ **Yes –** Go to (11)

➔ **No –** Go to (13)

(11) Left engine shutdown procedure previously accomplished:

(12) No further action required.

– COMPLETE –

(13) Left engine shutdown procedure not previously accomplished:

(14) Shutdown – Left engine procedure .....Accomplish Refer to Power plant – Shutdown – Left engine.

– COMPLETE –

FMS OEI PERF ACTIVE (Caution) (Cont'd)

(15) Right engine inoperative:

(16) Right engine shutdown procedure previously accomplished:

- **Yes –** Go to (17)
- **No –** Go to (19)

(17) Right engine shutdown procedure previously accomplished:

(18) No further action required.

– COMPLETE –

(19) Right engine shutdown procedure not previously accomplished:

(20) Shutdown – Right engine procedure ..... Accomplish Refer to Power plant – Shutdown – Right engine.

– COMPLETE –

FMS PERF DEP CONFIG (Caution)

(1) FMS, PERF – DEP .....Review

– COMPLETE –

FMS PERF DEP VSPEEDS (Caution)

(1) FMS, PERF – DEP .....Review

NOTE

Flight plan changes may require reselecting FMS PERF DEP page data including DERATED THRUST prior to re-posting VSPEEDS.

– COMPLETE –

FMS POSITION (Caution)

(1) FMS, POS – FMS .....LOAD

– COMPLETE –

GNSS NOT AVAIL (Caution)

(1) Select a non-GNSS type of approach, if required.

NOTE

RNP AR approaches are prohibited.

– COMPLETE –

LPV NOT AVAIL (Caution)

NOTE

SBAS guidance not available. LPV minima not authorized.

(1) FMS, PERF – ARR – ARRIVAL DATA
– APPROACH MODE .....Select RNP

(2) Approach minima .....Reset

– COMPLETE –

TAWS FAIL (Caution)

NOTE

1. All TAWS alerts are not available.
2. Increased pilot awareness required.

TAWS FAIL (Caution) (Cont'd)

(1) TAWS, TERR .....INHIB

(2) TERRAIN overlay ..... De-select

(3) Terrain and aircraft configuration ..... Monitor

NOTE

RNP AR approaches are prohibited.

– COMPLETE –

TCAS FAIL (Caution)

(1) ATC .....Advise

– COMPLETE –

TCAS OFF (Caution)

(1) CTP, XPDR/TCAS ..... Select AUTO

– COMPLETE –

UNABLE RNP (Caution)

(1) ATC .....Advise

(2) Discontinue approach.

– COMPLETE –

Dual FMS failure

(1) Autopilot ..... Disengage

(2) Autothrottle ..... Select off

Dual FMS failure (Cont'd)

(3) NAV source ..... VOR or LOC

NOTE

RNP AR approaches are prohibited.

(4) SPD mode ..... MAN

(5) Autopilot ..... As required

(6) Autothrottle ..... As required

(7) ATC ..... Advise

(8) Fuel quantity ..... Monitor

(9) Affected systems ..... Review

(10) CTP, LDG ELEV – MAN ..... Enter destination elevation

On approach:

(11) Flap extension speeds ..... Use V_{FE} – 10 KIAS

(12) AVIONIC synoptic page ..... Select

(13) AVIO, VSPEEDS ..... Enter VFTO, VREF, and VAC

(14) AVIONIC synoptic page ..... Set VSPEEDS

– COMPLETE –

POWER PLANT

DUAL ENG FAIL (Warning)

(1) RAT GEN ..... ON

(2) Airspeed ..... Green dot

(3) Plan to land at the nearest suitable airport.

(4) APU (if available) ..... START

(5) Thrust levers ..... IDLE

(6) L ENG run ..... OFF

(7) R ENG run ..... OFF

(8) Relight envelope ..... Establish

Windmill envelope:

<Post-SB BD500-732002> or <Mod 732002> or <Post-SB BD500-732003> or <Mod 732003>

- Airspeed – Not less than 250 KIAS
- Altitude – Not above 27000 feet

ATS envelope:

- Use ATS envelope only if APU bleed air available.
- Start one engine at a time.
- Airspeed – Not more than 250 KIAS
- Altitude – Not above 23000 feet

(9) Windmill envelope available:

➔ **Yes –** Go to (10)

➔ **No –** Go to (35)

(10) Windmill envelope available:

(11) L ENG run ..... ON

(12) R ENG run ..... ON

DUAL ENG FAIL (Warning) (Cont'd)

(13) Monitor engine RELIGHT/START icon:

- **Both engines started –** Go to (14)
- **One engine started –** Go to (17)
- **No engine started –** Go to (25)

(14) Both engines started:

(15) Thrust levers ..... As required

(16) Land at the nearest suitable airport.

– COMPLETE –

(17) One engine started:

(18) Thrust lever (operating engine) ..... As required

(19) Autothrottle ..... Select off

(20) Determine inoperative engine:

- **Left engine –** Go to (21)
- **Right engine –** Go to (23)

(21) Left engine inoperative:

(22) Shutdown – Left engine procedure ..... Accomplish Refer to Power plant – Shutdown – Left engine.

– COMPLETE –

(23) Right engine inoperative:

(24) Shutdown – Right engine procedure ..... Accomplish Refer to Power plant – Shutdown – Right engine.

– COMPLETE –

DUAL ENG FAIL (Warning) (Cont'd)

(25) No engine started:

(26) Time and altitude permit another relight attempt:

- **Yes –** Go to (27)
- **No –** Go to (29)

(27) Time and altitude permit another relight attempt:

(28) DUAL ENG FAIL procedure ..... Repeat

– COMPLETE –

(29) Time and altitude do not permit another relight attempt:

(30) Determine forced landing or ditching:

- **Forced landing –** Go to (31)
- **Ditching –** Go to (33)

(31) Forced landing:

(32) Forced landing procedure ..... Accomplish Refer to Ditching and forced landing – Forced landing.

– COMPLETE –

(33) Ditching:

(34) Ditching procedure ..... Accomplish Refer to Ditching and forced landing – Ditching.

– COMPLETE –

(35) APU ATS envelope available:

(36) ANTI-ICE, WING ..... OFF

(37) L ENG run ..... ON

(38) Monitor engine RELIGHT/START icon.

DUAL ENG FAIL (Warning) (Cont'd)

(39) Left engine starts:

- **Yes –** Go to (40)
- **No –** Go to (53)

(40) Left engine starts:

(41) Left thrust lever ..... As required

(42) R ENG run ..... ON

(43) Monitor engine RELIGHT/START icon.

(44) Right engine starts:

- **Yes –** Go to (45)
- **No –** Go to (49)

(45) Both engines started:

(46) Thrust levers ..... As required

(47) FMS – THRUST – OEI FMS PERF ..... CNCL

(48) Land immediately at the nearest suitable airport.

– COMPLETE –

(49) Only left engine started:

(50) Left thrust lever ..... As required

(51) Autothrottle ..... Select off

(52) Shutdown – Right engine procedure ..... Accomplish Refer to Power plant – Shutdown – Right engine.

– COMPLETE –

(53) Left engine does not start:

(54) L ENG run ..... OFF

(55) R ENG run ..... ON

DUAL ENG FAIL (Warning) (Cont'd)

(56) Monitor engine RELIGHT/START icon.

(57) Right engine starts:

- **Yes –** Go to (58)
- **No –** Go to (62)

(58) Only right engine started:

(59) Right thrust lever ..... As required

(60) Autothrottle ..... Select off

(61) Shutdown – Left engine procedure ..... Accomplish Refer to Power plant – Shutdown – Left engine.

– COMPLETE –

(62) Right engine does not start (no engine started):

(63) R ENG run ..... OFF

(64) Time and altitude permit another relight attempt:

- **Yes –** Go to (65)
- **No –** Go to (67)

(65) Time and altitude permit another relight attempt:

(66) DUAL ENG FAIL procedure ..... Repeat

– COMPLETE –

(67) Time and altitude do not permit another relight attempt:

(68) Determine forced landing or ditching:

- **Forced landing –** Go to (69)
- **Ditching –** Go to (71)

DUAL ENG FAIL (Warning) (Cont'd)

(69) Forced landing:

(70) Forced landing procedure ..... Accomplish Refer to Ditching and forced landing – Forced landing.

– COMPLETE –

(71) Ditching:

(72) Ditching procedure ..... Accomplish Refer to Ditching and forced landing – Ditching.

– COMPLETE –

L ENG FIRE (Warning)

(1) In flight:

- **Yes –** Go to (2)
- **No –** Go to (26)

(2) In flight:

(3) Autothrottle ..... Select off

(4) Left thrust lever .....Confirm and IDLE

(5) L ENG run .....Confirm and OFF

(6) L ENG FIRE ..... Confirm and select

After 10 seconds:

(7) L ENG, BTL 1 ..... Select

After 30 seconds:

(8) **L ENG FIRE** warning message goes out:

- **Yes –** Go to (9)
- **No –** Go to (17)

L ENG FIRE (Warning) (Cont'd)

(9) L ENG FIRE warning message goes out:

(10) XBLEED ..... MAN CLSD

(11) L PACK ..... OFF

(12) APU BLEED ..... OFF

(13) ANTI-ICE, WING ..... OFF

(14) Leave/avoid icing conditions.

(15) Land immediately at the nearest suitable airport.

(16) Shutdown – Left engine procedure ..... Accomplish Refer to Power plant – Shutdown – Left engine.

– COMPLETE –

(17) L ENG FIRE warning message stays on:

(18) L ENG, BTL 2 ..... Select

(19) XBLEED ..... MAN CLSD

(20) L PACK ..... OFF

(21) APU BLEED ..... OFF

(22) ANTI-ICE, WING ..... OFF

(23) Leave/avoid icing conditions.

(24) Land immediately at the nearest suitable airport.

(25) Shutdown – Left engine procedure ..... Accomplish Refer to Power plant – Shutdown – Left engine.

– COMPLETE –

(26) On ground:

(27) PARK BRAKE ..... ON

(28) Thrust levers ..... IDLE

(29) L ENG run ..... OFF

L ENG FIRE (Warning) (Cont'd)

(30) R ENG run ..... OFF

(31) L ENG FIRE ..... Select

(32) L ENG, BTL 1 ..... Select

(33) L ENG, BTL 2 ..... Select

(34) Emergency evacuation procedure ..... As required Refer to Evacuation – Emergency evacuation.

– COMPLETE –

L ENG OIL PRESS (Warning)

(1) Autothrottle ..... Select off

(2) Left thrust lever ..... Confirm and reduce towards IDLE.

(3) **L ENG OIL PRESS** warning message goes out:

- **Yes –** Go to (4)
- **No –** Go to (8)

(4) L ENG OIL PRESS warning message goes out:

(5) Left thrust lever ..... As required

(6) Autothrottle ..... As required

(7) Oil pressure ..... Monitor

– COMPLETE –

(8) L ENG OIL PRESS warning message stays on:

(9) Shutdown – Left engine procedure ..... Accomplish Refer to Power plant – Shutdown – Left engine.

– COMPLETE –

R ENG FIRE (Warning)

(1) In flight:

➔ **Yes –** Go to (2)

➔ **No –** Go to (24)

(2) In flight:

(3) Autothrottle ..... Select off

(4) Right thrust lever .....Confirm and IDLE

(5) R ENG run .....Confirm and OFF

(6) R ENG FIRE ..... Confirm and select

After 10 seconds:

(7) R ENG, BTL 1 ..... Select

After 30 seconds:

(8) **R ENG FIRE** warning message goes out:

➔ **Yes –** Go to (9)

➔ **No –** Go to (16)

(9) R ENG FIRE warning message goes out:

(10) XBLEED .....MAN CLSD

(11) R PACK ..... OFF

(12) ANTI-ICE, WING ..... OFF

(13) Leave/avoid icing conditions.

(14) Land immediately at the nearest suitable airport.

(15) Shutdown – Right engine procedure .....Accomplish Refer to Power plant – Shutdown – Right engine.

– COMPLETE –

R ENG FIRE (Warning) (Cont'd)

(16) R ENG FIRE warning message stays on:

(17) R ENG, BTL 2 ..... Select

(18) XBLEED ..... MAN CLSD

(19) R PACK ..... OFF

(20) ANTI-ICE, WING ..... OFF

(21) Leave/avoid icing conditions.

(22) Land immediately at the nearest suitable airport.

(23) Shutdown – Right engine procedure ..... Accomplish Refer to Power plant – Shutdown – Right engine.

– COMPLETE –

(24) On ground:

(25) PARK BRAKE ..... ON

(26) Thrust levers ..... IDLE

(27) R ENG run ..... OFF

(28) L ENG run ..... OFF

(29) R ENG FIRE ..... Select

(30) R ENG, BTL 1 ..... Select

(31) R ENG, BTL 2 ..... Select

(32) Emergency evacuation procedure ..... As required Refer to Evacuation – Emergency evacuation.

– COMPLETE –

R ENG OIL PRESS (Warning)

(1) Autothrottle ..... Select off

R ENG OIL PRESS (Warning) (Cont'd)

(2) Right thrust lever ..... Confirm and reduce towards IDLE.

(3) **R ENG OIL PRESS** warning message goes out:

- **Yes –** Go to (4)
- **No –** Go to (8)

(4) R ENG OIL PRESS warning message goes out:

(5) Right thrust lever ..... As required

(6) Autothrottle ..... As required

(7) Oil pressure ..... Monitor

– COMPLETE –

(8) R ENG OIL PRESS warning message stays on:

(9) Shutdown – Right engine procedure ..... Accomplish Refer to Power plant – Shutdown – Right engine.

– COMPLETE –

AT RETARD INHIBIT (Caution)

Before landing:

(1) Autothrottle ..... Select off

(2) Thrust levers ..... Operate manually

– COMPLETE –

ENG OIL LO TEMP (Caution)

(1) In flight:

➔ **Yes –** Go to (2)

➔ **No –** Go to (9)

(2) In flight:

(3) Autothrottle ..... Select off

(4) Thrust lever (affected engine) ..... Confirm and reduce towards IDLE.

(5) Engine oil temperatures ..... Monitor

When ENG OIL LO TEMP caution message goes out:

(6) Thrust lever (affected engine) ..... As required

(7) Autothrottle ..... As required

(8) Engine oil temperatures ..... Monitor

– COMPLETE –

(9) On ground:

(10) Do not take off until engine oil temperature indication is in the normal range.

– COMPLETE –

ENG SETTING MISMATCH (Caution)

(1) FMS, PERF – DEP ..... Cancel FLEX.

(2) FMS, PERF – DEP, TO THRUST ..... Select as required.

(3) FMS, PERF – DEP, VSPEEDS ..... Set VSPEEDS.

(4) ENG SETTING MISMATCH caution message goes out:

➔ **YES –** Go to (5)

➔ **NO –** Go to (7)

ENG SETTING MISMATCH (Caution) (Cont'd)

(5) ENG SETTING MISMATCH caution message goes out:

(6) No further action required.

– COMPLETE –

(7) ENG SETTING MISMATCH caution message stays on:

(8) FMS, PERF – DEP, TO THRUST ..... Use TO setting.

(9) FMS, PERF – DEP, VSPEEDS ..... Set VSPEEDS.

– COMPLETE –

<Post-SB BD500-732003> or <Mod 732003>

ENG VIBRATION (Caution)

(1) Source of vibration:

- **FAN VIB readout –** Go to (2)
- **N_1 or N_2 VIB icon –** Go to (18)

(2) Source of vibration — FAN VIB readout:

(3) Airplane in icing conditions:

- **Yes –** Go to (4)
- **No –** Go to (14)

(4) Airplane in icing conditions:

(5) Autothrottle ..... Select off

(6) Thrust lever (affected engine(s)) .....Advance (not more than climb thrust).

NOTE

Vibration may increase during ice shedding.

ENG VIBRATION (Caution) (Cont'd)

(7) **ENG VIBRATION** caution message goes out:

➔ **Yes –** Go to (8)

➔ **No –** Go to (11)

(8) ENG VIBRATION caution message goes out:

(9) Thrust levers ..... As required

(10) Autothrottle ..... As required

– COMPLETE –

(11) ENG VIBRATION caution message stays on:

(12) Thrust lever (affected engine(s)) ..... Confirm and reduce towards IDLE.

(13) Leave/avoid icing conditions.

– COMPLETE –

(14) Airplane not in icing conditions:

(15) Autothrottle ..... Select off

(16) Thrust lever (affected engine(s)) ..... Confirm and reduce towards IDLE.

(17) Vibration controlled or **ENG VIBRATION** caution message goes out:

➔ **Yes –** Go to (22)

➔ **No –** Go to (26)

(18) Source of vibration — N_1 or N_2 VIB icon:

(19) Autothrottle ..... Select off

(20) Thrust lever (affected engine) ..... Confirm and reduce towards IDLE.

ENG VIBRATION (Caution) (Cont'd)

(21) Vibration controlled or ENG VIBRATION caution message goes out:

- **Yes –** Go to (22)
- **No –** Go to (26)

(22) Vibration controlled or ENG VIBRATION caution message goes out:

(23) Thrust lever (affected engine) ..... As required

(24) Autothrottle ..... As required

(25) Engine instruments ..... Monitor

– COMPLETE –

(26) Vibration not controlled or ENG VIBRATION caution message stays on:

NOTE

It is not recommended that an engine be shut down unless there is another indication of a severe engine abnormality.

(27) Other engine indications are normal:

- **Yes –** Go to (28)
- **No –** Go to (31)

(28) Other engine indications are normal:

(29) Thrust levers ..... As required

(30) Engine instruments ..... Monitor

– COMPLETE –

ENG VIBRATION (Caution) (Cont'd)

(31) Other engine indications are not normal:

(32) Select affected engine:

➔ **Left engine –** Go to (33)

➔ **Right engine –** Go to (35)

(33) Left engine affected:

(34) Shutdown – Left engine procedure ..... Accomplish Refer to Power plant – Shutdown – Left engine.

– COMPLETE –

(35) Right engine affected:

(36) Shutdown – Right engine procedure ..... Accomplish Refer to Power plant – Shutdown – Right engine.

– COMPLETE –

<Post-SB BD500-732002> or <Mod 732002> or <Post-SB BD500-732003> or <Mod 732003>

L ENG EXCEEDANCE (Caution)

(1) Left engine indications normal:

➔ **Yes –** Go to (2)

➔ **No –** Go to (4)

(2) Left engine indications normal:

(3) Left engine instruments ..... Monitor

– COMPLETE –

(4) Left engine indications not normal:

(5) Autothrottle ..... Select off

L ENG EXCEEDANCE (Caution) (Cont'd)

(6) Left thrust lever ..... Confirm and reduce towards IDLE.

(7) **L ENG EXCEEDANCE** caution message goes out:

- **Yes –** Go to (8)
- **No –** Go to (11)

(8) L ENG EXCEEDANCE caution message goes out:

(9) Left thrust lever ..... As required

(10) Left engine instruments ..... Monitor

– COMPLETE –

(11) L ENG EXCEEDANCE caution message stays on:

(12) Shutdown – Left engine procedure ..... Accomplish Refer to Power plant – Shutdown – Left engine.

– COMPLETE –

L ENG FAIL (Caution)

(1) Shutdown – Left engine procedure ..... Accomplish Refer to Power plant – Shutdown – Left engine.

– COMPLETE –

L ENG NACELLE OVHT (Caution)

(1) Autothrottle ..... Select off

(2) Left thrust lever ..... Confirm and IDLE

(3) ANTI-ICE, L COWL ..... OFF

(4) Leave/avoid icing conditions.

L ENG NACELLE OVHT (Caution) (Cont'd)

After 30 seconds:

(5) L ENG NACELLE OVHT caution message goes out:

- **Yes –** Go to (6)
- **No –** Go to (9)

(6) L ENG NACELLE OVHT caution message goes out:

(7) Left thrust lever ..... As required

(8) Autothrottle ..... As required

– COMPLETE –

(9) L ENG NACELLE OVHT caution message stays on:

(10) Shutdown – Left engine procedure ..... Accomplish Refer to Power plant – Shutdown – Left engine.

– COMPLETE –

L ENG OIL FILTER (Caution)

(1) Left engine instruments ..... Check

(2) Engine indications normal:

- **Yes –** Go to (3)
- **No –** Go to (5)

(3) Engine indications normal:

(4) Left engine instruments ..... Monitor

– COMPLETE –

(5) Engine indications not normal:

(6) Land at the nearest suitable airport.

– COMPLETE –

L ENG OPER DEGRADED (Caution)

(1) L THROTTLE FAIL caution message is also shown:

→ **Yes –** Go to (2)

→ **No –** Go to (4)

(2) L THROTTLE FAIL caution message is also shown:

(3) L THROTTLE FAIL procedure ..... Accomplish Refer to Power plant – L THROTTLE FAIL.

– COMPLETE –

(4) L THROTTLE FAIL caution message is not shown:

(5) Autothrottle ..... Select off

(6) Left thrust lever .....Avoid abrupt changes.

(7) L BLEED ..... Select auto

(8) APU BLEED ..... OFF

(9) Avoid icing conditions.

(10) Left engine instruments ..... Monitor

(11) Land at the nearest suitable airport.

NOTE

Full thrust or full reverse thrust may not be available.

– COMPLETE –

L ENG START ABORT (Caution)

(1) L ENG run ..... OFF

– COMPLETE –

L ENG STARTER FAIL ON (Caution)

(1) In flight:

➔ **Yes –** Go to (2)

➔ **No –** Go to (15)

(2) In flight:

(3) L BLEED ..... OFF

(4) L PACK ..... OFF

(5) APU BLEED ..... OFF

(6) XBLEED ..... MAN CLSD

(7) Altitude ..... Not above 31000 feet

(8) ANTI-ICE, WING ..... OFF

(9) Leave/avoid icing conditions.

(10) **L ENG STARTER FAIL ON** caution message goes out:

➔ **Yes –** Go to (11)

➔ **No –** Go to (13)

(11) L ENG STARTER FAIL ON caution message goes out:

(12) No further action required.

– COMPLETE –

(13) L ENG STARTER FAIL ON caution message stays on:

(14) Land at the nearest suitable airport.

– COMPLETE –

(15) On ground:

(16) L ENG run ..... OFF

(17) L BLEED ..... OFF

(18) APU BLEED ..... OFF

L ENG STARTER FAIL ON (Caution) (Cont'd)

(19) XBLEED .....MAN CLSD

(20) External air supply .....Remove

– COMPLETE –

L REVERSER FAIL (Caution)

NOTE

The left thrust reverser is not available.

On approach:

(1) FMS, PERF – ARR – SLAT/FLAP 4

(2) FMS, PERF – ARR – VREF .....$V_{REF(FLAP\ 4)}$

(3) OLD factor .....Multiply by value from table.

OLD factor Dry or wet runway	OLD factor Contaminated runway conditions
1.20	1.30

Before landing:

(4) SLAT/FLAP lever 4

– COMPLETE –

L REVERSER UNLOCK (Caution)

(1) Autothrottle ..... Select off

(2) Left thrust lever .....Confirm and IDLE

(3) Land immediately at the nearest suitable airport.

L REVERSER UNLOCK (Caution) (Cont'd)

NOTE

Both thrust reversers available after landing.

– COMPLETE –

L THROTTLE FAIL (Caution)

(1) Autothrottle ..... Select off

(2) Left thrust lever .....Confirm and IDLE

NOTE

The left thrust lever and thrust reverser are inoperative.

(3) Engine thrust confirmed IDLE:

- **Yes –** Go to (4)
- **No –** Go to (10)

(4) Engine thrust confirmed IDLE:

On approach:

(5) FMS, PERF – ARR – SLAT/FLAP 4

(6) FMS, PERF – ARR – VREF .....$V_{REF(FLAP\ 4)}$

(7) OLD factor .....Multiply by value from table.

OLD factor Dry or wet runway	OLD factor Contaminated runway conditions
1.20	1.30

Before landing:

(8) SLAT/FLAP lever 4

L THROTTLE FAIL (Caution) (Cont'd)

(9) Rudder trim .....Centered by 1000 feet AGL

– COMPLETE –

(10) Engine thrust not IDLE:

(11) Shutdown – Left engine procedure ..... Accomplish Refer to Power plant – Shutdown – Left engine.

– COMPLETE –

L-R ENG FUEL FILTER (Caution)

(1) Fuel flow ..... Monitor

(2) Thrust levers .....Avoid abrupt changes.

(3) Land immediately at the nearest suitable airport.

– COMPLETE –

<Post-SB BD500-732002> or <Mod 732002> or <Post-SB BD500-732003> or <Mod 732003>

R ENG EXCEEDANCE (Caution)

(1) Right engine indications normal:

➔ **Yes –** Go to (2)

➔ **No –** Go to (4)

(2) Right engine indications normal:

(3) Right engine instruments ..... Monitor

– COMPLETE –

(4) Right engine indications not normal:

(5) Autothrottle ..... Select off

(6) Right thrust lever ..... Confirm and reduce towards IDLE.

R ENG EXCEEDANCE (Caution) (Cont'd)

(7) R ENG EXCEEDANCE caution message goes out:

→ **Yes –** Go to (8)

→ **No –** Go to (11)

(8) R ENG EXCEEDANCE caution message goes out:

(9) Right thrust lever ..... As required

(10) Right engine instruments ..... Monitor

– COMPLETE –

(11) R ENG EXCEEDANCE caution message stays on:

(12) Shutdown – Right engine procedure ..... Accomplish Refer to Power plant – Shutdown – Right engine.

– COMPLETE –

R ENG FAIL (Caution)

(1) Shutdown – Right engine procedure ..... Accomplish Refer to Power plant – Shutdown – Right engine.

– COMPLETE –

R ENG NACELLE OVHT (Caution)

(1) Autothrottle ..... Select off

(2) Right thrust lever ..... Confirm and IDLE

(3) ANTI-ICE, R COWL ..... OFF

(4) Leave/avoid icing conditions.

R ENG NACELLE OVHT (Caution) (Cont'd)

After 30 seconds:

(5) **R ENG NACELLE OVHT** caution message goes out:

- **Yes –** Go to (6)
- **No –** Go to (9)

(6) R ENG NACELLE OVHT caution message goes out:

(7) Right thrust lever ..... As required

(8) Autothrottle ..... As required

– COMPLETE –

(9) R ENG NACELLE OVHT caution message stays on:

(10) Shutdown – Right engine procedure ..... Accomplish Refer to Power plant – Shutdown – Right engine.

– COMPLETE –

R ENG OIL FILTER (Caution)

(1) Right engine instruments ..... Check

(2) Engine indications normal:

- **Yes –** Go to (3)
- **No –** Go to (5)

(3) Engine indications normal:

(4) Right engine instruments ..... Monitor

– COMPLETE –

(5) Engine indications not normal:

(6) Land at the nearest suitable airport.

– COMPLETE –

R ENG OPER DEGRADED (Caution)

(1) R THROTTLE FAIL caution message is also shown:

→ **Yes –** Go to (2)

→ **No –** Go to (4)

(2) R THROTTLE FAIL caution message is also shown:

(3) R THROTTLE FAIL procedure ..... Accomplish Refer to Power plant – R THROTTLE FAIL.

– COMPLETE –

(4) R THROTTLE FAIL caution message is not shown:

(5) Autothrottle ..... Select off

(6) Right thrust lever .....Avoid abrupt changes.

(7) R BLEED ..... Select auto

(8) APU BLEED ..... OFF

(9) Avoid icing conditions.

(10) Right engine instruments ..... Monitor

(11) Land at the nearest suitable airport.

NOTE

Full thrust or full reverse thrust may not be available.

– COMPLETE –

R ENG START ABORT (Caution)

(1) R ENG run ..... OFF

– COMPLETE –

R ENG STARTER FAIL ON (Caution)

(1) In flight:

➔ **Yes –** Go to (2)

➔ **No –** Go to (14)

(2) In flight:

(3) R BLEED ..... OFF

(4) R PACK ..... OFF

(5) XBLEED ..... MAN CLSD

(6) Altitude ..... Not above 31000 feet

(7) ANTI-ICE, WING ..... OFF

(8) Leave/avoid icing conditions.

(9) **R ENG STARTER FAIL ON** caution message goes out:

➔ **Yes –** Go to (10)

➔ **No –** Go to (12)

(10) R ENG STARTER FAIL ON caution message goes out:

(11) No further action required.

– COMPLETE –

(12) R ENG STARTER FAIL ON caution message stays on:

(13) Land at the nearest suitable airport.

– COMPLETE –

(14) On ground:

(15) R ENG run ..... OFF

(16) R BLEED ..... OFF

(17) XBLEED ..... MAN CLSD

– COMPLETE –

R REVERSER FAIL (Caution)

NOTE

The right thrust reverser is not available.

On approach:

(1) FMS, PERF – ARR – SLAT/FLAP 4

(2) FMS, PERF – ARR – VREF ..... $V_{REF(FLAP\ 4)}$

(3) OLD factor ..... Multiply by value from table.

OLD factor Dry or wet runway	OLD factor Contaminated runway conditions
1.20	1.30

Before landing:

(4) SLAT/FLAP lever 4

– COMPLETE –

R REVERSER UNLOCK (Caution)

(1) Autothrottle ..... Select off

(2) Right thrust lever ..... Confirm and IDLE

(3) Land immediately at the nearest suitable airport.

NOTE

Both thrust reversers available after landing.

– COMPLETE –

R THROTTLE FAIL (Caution)

(1) Autothrottle ..... Select off

(2) Right thrust lever .....Confirm and IDLE

NOTE

The right thrust lever and thrust reverser are inoperative.

(3) Engine thrust confirmed IDLE:

➔ **Yes –** Go to (4)

➔ **No –** Go to (10)

(4) Engine thrust confirmed IDLE:

On approach:

(5) FMS, PERF – ARR – SLAT/FLAP 4

(6) FMS, PERF – ARR – VREF .....$V_{REF(FLAP\ 4)}$

(7) OLD factor .....Multiply by value from table.

OLD factor Dry or wet runway	OLD factor Contaminated runway conditions
1.20	1.30

Before landing:

(8) SLAT/FLAP lever 4

(9) Rudder trim .....Centered by 1000 feet AGL

– COMPLETE –

R THROTTLE FAIL (Caution) (Cont'd)

(10) Engine thrust not IDLE:

(11) Shutdown – Right engine procedure ..... Accomplish Refer to Power plant – Shutdown – Right engine.

– COMPLETE –

THROTTLE IN REVERSE (Caution)

(1) Thrust levers ..... Advance to IDLE or greater.

– COMPLETE –

Relight – Left engine

(1) APU (if available) ..... START

(2) Autothrottle ..... Select off

(3) Left thrust lever ..... Confirm and IDLE

(4) L ENG run ..... Confirm and OFF

(5) Relight envelope ..... Establish

ATS envelope:

- Airspeed – Not more than 250 KIAS
- Altitude – Not above 27000 feet (crossbleed) or 23000 feet (APU)

Windmill envelope:

<Post-SB BD500-732002> or <Mod 732002> or <Post-SB BD500-732003> or <Mod 732003>

- Airspeed – Not less than 250 KIAS
- Altitude – Not above 27000 feet

(6) ANTI-ICE, WING ..... OFF

Relight – Left engine (Cont'd)

CAUTION

For crossbleed relights, ensure the operating engine EGT is less than 970°C before selecting the ENG run switch to ON.

(7) L ENG run ..... ON

(8) Monitor engine RELIGHT/START icon.

(9) Engine relights:

- **Yes –** Go to (10)
- **No –** Go to (18)

(10) Engine relights:

(11) Left thrust lever ..... As required

(12) FMS – THRUST – OEI FMS PERF ..... CNCL

(13) Autothrottle ..... As required

(14) SPD mode ..... As required

(15) TCAS ..... Select AUTO

(16) ANTI-ICE, WING ..... As required

(17) Land at the nearest suitable airport.

– COMPLETE –

(18) Engine does not relight:

(19) L ENG run ..... Confirm and OFF

(20) ANTI-ICE, WING ..... AUTO

(21) Autothrottle ..... As required

(22) Altitude ..... Not above 31000 feet

Relight – Left engine (Cont'd)

(23) Land at the nearest suitable airport.

On approach:

(24) FMS, PERF – ARR – SLAT/FLAP 4

(25) FMS, PERF – ARR – VREF ..... $V_{REF(FLAP\ 4)}$

(26) OLD factor ..... Multiply by value from table.

OLD factor Dry or wet runway	OLD factor Contaminated runway conditions
1.20	1.30

Before landing:

(27) SLAT/FLAP lever 4

(28) Rudder trim ..... Centered by 1000 feet AGL

– COMPLETE –

Relight – Right engine

(1) APU (if available) ..... START

(2) Autothrottle ..... Select off

(3) Right thrust lever ..... Confirm and IDLE

(4) R ENG run ..... Confirm and OFF

(5) Relight envelope ..... Establish

ATS envelope:

- Airspeed – Not more than 250 KIAS
- Altitude – Not above 27000 feet (crossbleed) or 23000 feet (APU)

Relight – Right engine (Cont'd)

Windmill envelope:

<Post-SB BD500-732002> or <Mod 732002> or <Post-SB BD500-732003> or <Mod 732003>

- Airspeed – Not less than 250 KIAS
- Altitude – Not above 27000 feet

(6) ANTI-ICE, WING ..... OFF

CAUTION

For crossbleed relights, ensure the operating engine EGT is less than 970°C before selecting the ENG run switch to ON.

(7) R ENG run ..... ON

(8) Monitor engine RELIGHT/START icon.

(9) Engine relights:

➔ **Yes –** Go to (10)

➔ **No –** Go to (18)

(10) Engine relights:

(11) Right thrust lever ..... As required

(12) FMS – THRUST – OEI FMS PERF ..... CNCL

(13) Autothrottle ..... As required

(14) SPD mode ..... As required

(15) TCAS ..... Select AUTO

(16) ANTI-ICE, WING ..... As required

Relight – Right engine (Cont'd)

(17) Land at the nearest suitable airport.

– COMPLETE –

(18) Engine does not relight:

(19) R ENG run .....Confirm and OFF

(20) ANTI-ICE, WING ..... AUTO

(21) Autothrottle .....As required

(22) Altitude .....Not above 31000 feet

(23) Land at the nearest suitable airport.

On approach:

(24) FMS, PERF – ARR – SLAT/FLAP 4

(25) FMS, PERF – ARR – VREF .....$V_{REF(FLAP\ 4)}$

(26) OLD factor .....Multiply by value from table.

OLD factor Dry or wet runway	OLD factor Contaminated runway conditions
1.20	1.30

Before landing:

(27) SLAT/FLAP lever 4

(28) Rudder trim .....Centered by 1000 feet AGL

– COMPLETE –

Shutdown – Left engine

(1) APU (if available) .....START

(2) Autothrottle ..... Select off

(3) Left thrust lever .....Confirm and IDLE

Shutdown – Left engine (Cont'd)

(4) L ENG run .....Confirm and OFF

(5) SPD mode ..... MAN

NOTE

Do not re-select FMS SPD mode.

(6) TCAS .....TA ONLY

(7) Engine damage suspected or precautionary shutdown:

- **Yes –** Go to (8)
- **No –** Go to (17)

(8) Engine damage suspected or precautionary shutdown:

(9) Autothrottle .....As required

(10) Altitude .....Not above 31000 feet

(11) Land at the nearest suitable airport.

NOTE

Do not rely on FMS fuel predictions.

On approach:

(12) FMS, PERF – ARR – SLAT/FLAP 4

(13) FMS, PERF – ARR – VREF .....$V_{REF(FLAP\ 4)}$

(14) OLD factor .....Multiply by value from table.

OLD factor Dry or wet runway	OLD factor Contaminated runway conditions
1.20	1.30

Shutdown – Left engine (Cont'd)

Before landing:

(15) SLAT/FLAP lever 4

(16) Rudder trim .....Centered by 1000 feet AGL

– COMPLETE –

(17) Engine damage not suspected or not a precautionary shutdown:

(18) Relight – Left engine procedure .....Accomplish Refer to Power plant – Relight – Left engine.

– COMPLETE –

Shutdown – Right engine

(1) APU (if available) .....START

(2) Autothrottle ..... Select off

(3) Right thrust lever .....Confirm and IDLE

(4) R ENG run .....Confirm and OFF

(5) SPD mode ..... MAN

NOTE

Do not re-select FMS SPD mode.

(6) TCAS .....TA ONLY

(7) Engine damage suspected or precautionary shutdown:

➔ **Yes –** Go to (8)

➔ **No –** Go to (17)

(8) Engine damage suspected or precautionary shutdown:

(9) Autothrottle .....As required

Shutdown – Right engine (Cont'd)

(10) Altitude ..... Not above 31000 feet

NOTE

With the APU generator ON, the center fuel tank empty of fuel and the left engine at power, the **FUEL IMBALANCE** caution message can post repeatedly. It is acceptable to do repetitive, preemptive manual transfers to reduce the frequency of the **FUEL IMBALANCE** caution message.

(11) Land at the nearest suitable airport.

NOTE

Do not rely on FMS fuel predictions.

On approach:

(12) FMS, PERF – ARR – SLAT/FLAP 4

(13) FMS, PERF – ARR – VREF ..... $V_{REF(FLAP\ 4)}$

(14) OLD factor ..... Multiply by value from table.

OLD factor Dry or wet runway	OLD factor Contaminated runway conditions
1.20	1.30

Before landing:

(15) SLAT/FLAP lever 4

(16) Rudder trim ..... Centered by 1000 feet AGL

– COMPLETE –

Shutdown – Right engine (Cont'd)

(17) Engine damage not suspected or not a precautionary shutdown:

(18) Relight – Right engine procedure ..... Accomplish Refer to Power plant – Relight – Right engine.

– COMPLETE –

REJECTED TAKEOFF

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Rejected takeoff

(1) Thrust levers ..... IDLE

(2) Wheel brakes .....Maximum

(3) Thrust reversers ..... Maximum, consistent with directional control.

(4) ATC .....Advise

When stopped:

(5) PARK BRAKE ..... ON

(6) Evacuation required:

➔ **Yes –** Go to (7)

➔ **No –** Go to (9)

(7) Evacuation required:

(8) Emergency evacuation procedure ..... Accomplish Refer to Evacuation – Emergency evacuation.

– COMPLETE –

(9) Evacuation not required:

(10) Passengers .....Advise

– COMPLETE –

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SMOKE, FIRE AND FUMES

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Smoke/fire/fumes procedure

(1) Oxygen masks ..... If required, on, 100%, and EMERGENCY

(2) Cabin and crew communication ..... Establish

(3) Plan to land at the nearest suitable airport.

WARNING

During smoke/fire/fumes emergencies, prepare to land the aircraft without delay while conducting fire suppression and/or smoke evacuation procedures.

CAUTION

Passenger masks should not be deployed when performing smoke or fire procedures.

(4) EQUIP COOLING, INLET ..... OFF

(5) CABIN PWR ..... OFF

(6) RECIRC AIR ..... OFF

WARNING

Any time smoke/fumes becomes the greatest threat accomplish the Smoke or fumes removal procedure.

Smoke/fire/fumes procedure (Cont'd)

CAUTION

Continuing to destination is not recommended. If the decision to continue is made, the flight crew must acknowledge that the threat has been positively identified, confirmed to be extinguished, and the smoke/fumes have dissipated.

(7) Time permits and source of smoke/fire/fumes can be quickly identified and eliminated:

- **Yes –** Go to (11)
- **No –** Go to (8)

(8) Time does not permit and source of smoke/fire/fumes cannot be quickly identified:

CAUTION

The crew should consider an overweight landing, tailwind landing, ditching or off–airport landing.

(9) Land immediately at the nearest suitable airport.

Smoke/fire/fumes procedure (Cont'd)

(10) Smoke or fumes removal procedure ..... Accomplish, if required. Refer to Smoke, fire and fumes – Smoke or fumes removal.

– COMPLETE –

(11) Time permits and source of smoke/fire/fumes can be quickly identified and eliminated:

(12) Select appropriate procedure for source of smoke/fire/fumes:

- **Air-conditioning –** Go to (13)
- **Electrical –** Go to (33)
- **Cabin –** Go to (107)

(13) Source is identified as coming from air-conditioning:

NOTE

Smoke may take a considerable amount of time to dissipate.

(14) XBLEED ..... MAN CLSD

(15) APU BLEED ..... OFF

(16) L PACK ..... OFF

(17) Altitude ..... Not above 31000 feet

Smoke/fire/fumes procedure (Cont'd)

(18) Smoke/fire/fumes stops:

- **Yes –** Go to (19)
- **No –** Go to (22)

(19) Smoke/fire/fumes stops:

CAUTION

Continuing to destination is not recommended. If the decision to continue is made, the flight crew must acknowledge that the threat has been positively identified, confirmed to be extinguished, and the smoke/fumes have dissipated.

(20) Land immediately at the nearest suitable airport.

(21) Smoke or fumes removal procedure ..... Accomplish, if required. Refer to Smoke, fire and fumes – Smoke or fumes removal.

– COMPLETE –

(22) Smoke/fire/fumes does not stop:

(23) L PACK .....Select auto

(24) R PACK ..... OFF

Smoke/fire/fumes procedure (Cont'd)

(25) Smoke/fire/fumes stops:

- **Yes –** Go to (26)
- **No –** Go to (29)

(26) Smoke/fire/fumes stops:

Continuing to destination is not recommended. If the decision to continue is made, the flight crew must acknowledge that the threat has been positively identified, confirmed to be extinguished, and the smoke/fumes have dissipated.

(27) Land immediately at the nearest suitable airport.

(28) Smoke or fumes removal procedure ..... Accomplish, if required. Refer to Smoke, fire and fumes – Smoke or fumes removal.

– COMPLETE –

(29) Smoke/fire/fumes does not stop:

(30) R PACK .....Select auto

Smoke/fire/fumes procedure (Cont'd)

CAUTION

The crew should consider an overweight landing, tailwind landing, ditching, or off-airport landing.

(31) Land immediately at the nearest suitable airport.

(32) Smoke or fumes removal procedure ..... Accomplish, if required.
Refer to Smoke, fire and fumes – Smoke or fumes removal.

– COMPLETE –

(33) Source is identified as coming from electrical:

NOTE

Smoke may take a considerable amount of time to dissipate.

The series of steps that follow isolate each channel of the electrical system, one at a time.

(34) ECL ..... DU 5

(35) ELEC synoptic page .....Select

Smoke/fire/fumes procedure (Cont'd)

Channel 1 isolation:

NOTE

During this procedure DU 1, DU 3, AC BUS 1, DC BUS 1, and DC ESS BUS 1 will not be powered.

(36) BUS ISOL .....MAIN

(37) Affected generator ..... OFF

NOTE

The affected generator supplies power to AC BUS 1 on the ELEC synoptic page.

(38) BATT 1 ..... OFF

(39) CTP, XPDR/TCAS .....Select XPDR 2

(40) FD .....Couple to left side.

NOTE

1. The use of EICAS, REV compresses both PFD and allows two additional MFW.
2. To recover the use of autopilot, ensure FD is coupled to left side and re-engage autopilot if necessary.

Smoke/fire/fumes procedure (Cont'd)

(41) Smoke/fire/fumes stops:

- **Yes –** Go to (42)
- **No –** Go to (47)

(42) Smoke/fire/fumes stops:

CAUTION

1. Continuing to destination is not recommended. If the decision to continue is made, the flight crew must acknowledge that the threat has been positively identified, confirmed to be extinguished, and the smoke/fumes have dissipated.
2. Do not land on contaminated runway.

Significant systems affected:

- APU start
- APU door actuator
- PTU
- Hydraulic pump 2B
- Hydraulic 1 pressure indication
- Passenger oxygen auto deploy function
- Attendant call lights
- Flaps slower than normal
- Wheel brakes – reduced braking force
- Left thrust reverser

Smoke/fire/fumes procedure (Cont'd)

- Hydraulic 2 quantity indication
- Crew oxygen pressure indication
- Rudder trim
- Left fuel pump
- Autopilot (if FD not coupled left)
- ADSP 1
- Autothrottle
- XPDR 1
- TCAS
- TAWS
- DME 1
- VHF 3
- HF 1 (if installed)
- SATCOM (if installed)
- HUD (if installed)
- RAD ALT 3 (if installed)
- DU 1 and DU 3
- Tire pressure indication
- Left windshield wiper and heating
- Nose landing light
- Left landing light
- Left taxi light
- Left map and reading lights
- Remote cockpit door lock
- Forward lavatory smoke detection
- Toilet flush
- Navigation lights
- Seat belt signs
- Left and right cockpit power outlets
- Fuel inerting
- Trim air
- TRU 1
- ACP 3 (VHF 1 only)

Smoke/fire/fumes procedure (Cont'd)

- MKP 1 (arrow keys and ENTER available)

(43) Land immediately at the nearest suitable airport.

(44) Reversion panel, L or R PFD ..... Select ADS until ADS source data indication is not amber on both PFDs.

NOTE

RNP AR approaches are prohibited.

On approach:

(45) FMS, PERF – ARR – VREF ..... V_{REF}

(46) OLD factor .....Multiply by 1.70

– COMPLETE –

(47) Smoke/fire/fumes does not stop:

Channel 2 isolation:

NOTE

During this procedure DU 4, DU 5, AC BUS 2, DC BUS 2, and DC ESS BUS 2 will not be powered.

(48) BUS ISOL ..... Confirm MAIN

(49) BATT 1 .....AUTO

(50) Affected generator .....Select on

Smoke/fire/fumes procedure (Cont'd)

NOTE

Before Channel 1 isolation, the affected generator supplied power to AC BUS 1 on the ELEC synoptic page.

After 30 seconds:

(51) ECL ..... DU 2

(52) Affected generator ..... OFF

NOTE

The affected generator supplies power to AC BUS 2 on the ELEC synoptic page.

(53) BATT 2 ..... OFF

(54) CTP, XPDR/TCAS .....Select XPDR 1

(55) CTP 2 .....Select off

(56) CTP 1 ..... ATC on VHF 1, if required

(57) Smoke/fire/fumes stops:

- **Yes –** Go to (58)
- **No –** Go to (70)

Smoke/fire/fumes procedure (Cont'd)

(58) Smoke/fire/fumes stops:

CAUTION

1. Continuing to destination is not recommended. If the decision to continue is made, the flight crew must acknowledge that the threat has been positively identified, confirmed to be extinguished, and the smoke/fumes have dissipated.
2. Do not land on contaminated runway.

Significant systems affected:

- Hydraulic pumps 3A and 3B
- Hydraulic pump 2B (when single engine-driven generator or APU available)
- Hydraulic 2 pressure indication
- Hydraulic 3 quantity indication
- Right fuel pump
- VHF 2
- CTP 2
- MKP 2 (arrow keys and ENTER available)
- CCP 2
- Passenger oxygen auto deploy function
- Slats
- Flaps slower than normal
- Wheel brakes – reduced braking force
- Right thrust reverser

Smoke/fire/fumes procedure (Cont'd)

- XPDR 2
- TCAS
- WXR
- Wing anti–ice
- ADSP 2 and ADSP 4
- HF 2 (if installed)
- FMS 2 (LPV minimums not authorized)
- GNSS 2 (LPV minimums not authorized)
- APPR 1
- DME 2
- NAV 2
- RAD ALT 2
- DU 4 and DU 5
- R HUD (if installed)
- Right landing light
- Nose taxi light
- Right taxi light
- Right map and reading lights
- Right window heating
- Right windshield wiper and heating
- Outflow valve manual control
- Aft lavatory smoke detection
- Recirculation fan
- TRU 2

(59) Land immediately at the nearest suitable airport.

(60) Reversion panel, L or R PFD ..... Select ADS until ADS source data indication is not amber on both PFDs.

(61) Use AVIONIC, CTP tab for R CTP functions.

Smoke/fire/fumes procedure (Cont'd)

NOTE

RNP AR approaches are prohibited.

On approach:

(62) Check SLAT position:

- **SLAT position IN –** Go to (63)
- **SLAT position OUT/MID/FULL –** Go to (67)

(63) SLAT position IN:

(64) Maximum landing weight ..... Use the table to determine the value and correct for wind and slope.

Smoke/fire/fumes procedure (Cont'd)

LANDING WEIGHT KG (LB) LIMITED BY MAXIMUM BRAKE ENERGY AND TIRE SPEED							
FLIGHT CONTROL FAILURE		V_{REF}+15KT					
OAT		PRESSURE ALTITUDE (FT)					
^{0}C	^{0}F	0	2000	4000	6000	8000	10000
-20 AND BELOW	-4 AND BELOW	85230 (187900)	82680 (182300)	80010 (176400)	77380 (170600)	74750 (164800)	71840 (158400)
0	32	82280 (181400)	79690 (175700)	77060 (169900)	74430 (164100)	71840 (158400)	68990 (152100)
20	68	79600 (175500)	77010 (169800)	74380 (164000)	71800 (158300)	69260 (152700)	65540 (144500)
30	86	78330 (172700)	75740 (167000)	73160 (161300)	70530 (155500)	68030 (150000)	63140 (139200)
40 AND ABOVE	104 AND ABOVE	77110 (170000)	74520 (164300)	71930 (158600)	69350 (152900)	65770 (145000)	60910 (134300)

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Wind correction:

Tailwind: decrease landing weight by 18% per 10kts of tailwind.

Runway Slope Correction:

Downhill: decrease maximum landing weight by 2% per 1% downhill slope.

Landing weight limited by brake energy and tire speed – ΔVREF 15 kt
Figure 02–21–1

Smoke/fire/fumes procedure (Cont'd)

(65) FMS, PERF – ARR – VREF ..... V_{REF} + 15

(66) OLD factor .....Multiply by 2.05

– COMPLETE –

(67) SLAT position OUT/MID/FULL:

(68) FMS, PERF – ARR – VREF ..... V_{REF} + 5

(69) OLD factor .....Multiply by 1.85

– COMPLETE –

(70) Smoke/fire/fumes does not stop:

Channel 3 isolation:

NOTE

During this procedure DU 2, AC ESS BUS, and DC ESS BUS 3 will not be powered.

(71) HYD 3A ..... OFF

(72) BATT 2 .....AUTO

(73) Affected generator .....Select on

NOTE

Before Channel 2 isolation, the affected generator supplied power to AC BUS 2 on the ELEC synoptic page.

(74) CTP 2 .....Select on

Smoke/fire/fumes procedure (Cont'd)

After 30 seconds:

(75) ECL ..... DU 5

(76) BUS ISOL ..... ESS

(77) CTP, XPDR/TCAS .....Select XPDR 2

(78) CTP 1 .....Select off

(79) CTP 2 ..... ATC on VHF 2, if required

(80) Smoke/fire/fumes stops:

- **Yes –** Go to (81)
- **No –** Go to (88)

(81) Smoke/fire/fumes stops:

CAUTION

Continuing to destination is not recommended. If the decision to continue is made, the flight crew must acknowledge that the threat has been positively identified, confirmed to be extinguished, and the smoke/fumes have dissipated.

Significant systems affected:

- Hydraulic 1 quantity indication
- CTP 1

Smoke/fire/fumes procedure (Cont'd)

- Hydraulic 3 pressure indication
- ISI (ATT only)
- Rudder degraded
- Left fuel pump
- Gravity transfer
- ADSP 3
- VHF 1
- XPDR 1
- Wing anti-ice
- PFCC 3
- FMS 1 (LPV minimums not authorized)
- GNSS 1 (LPV minimums not authorized)
- NAV 1
- RAD ALT 1
- CCP 1 (arrow keys and ENTER available)
- Reversion panel
- DU 2
- L HUD (if installed)
- Slats/flaps slower than normal
- MFS (1 pair)
- Right stick shaker
- Alternate gear extension
- Ram air
- Equipment bay cooling
- Left window heating
- CPDLC (if installed)
- TRU 3
- OMS

(82) Land immediately at the nearest suitable airport.

(83) FD .....Couple to right side.

(84) Reversion panel, L or R PFD ..... Select ADS until ADS source data indication is not amber on both PFDs.

Smoke/fire/fumes procedure (Cont'd)

(85) Use AVIONIC, CTP tab for L CTP functions.

NOTE

RNP AR approaches are prohibited.

On approach:

(86) FMS, PERF – ARR – VREF ..... V_{REF}

(87) OLD factor .....Multiply by 1.15

– COMPLETE –

(88) Smoke/fire/fumes does not stop:

These steps will deploy the RAT:

NOTE

During this procedure DU 3, DU 4, DU 5, AC BUS 1, AC BUS 2, DC BUS 1, and DC BUS 2 will not be powered.

(89) BUS ISOL .....AUTO

(90) CTP 1 ..... Select on, ATC on VHF 1

(91) ECL ..... DU 2

(92) RAT GEN ..... ON

(93) CTP, XPDR/TCAS .....Select XPDR 1

(94) FD .....Couple to left side.

Smoke/fire/fumes procedure (Cont'd)

CAUTION

The **EMER PWR ONLY** warning message will be shown after all generators are selected off. The steps are included in this procedure and do not need to be done separately.

(95) L GEN ..... OFF

(96) R GEN ..... OFF

(97) APU GEN ..... OFF

(98) L PACK ..... Confirm auto

(99) R PACK ..... Confirm auto

(100) EQUIP COOLING, EXHAUST ..... ON

(101) Land immediately at the nearest suitable airport.

(102) Leave/avoid icing conditions.

CAUTION

1. Below 148 KIAS the RAT generator may be inoperative and the airplane will be operating on battery power only.
2. Brakes are not available when batteries are depleted.
3. Do not land on contaminated runway.

Smoke/fire/fumes procedure (Cont'd)

(103) Airspeed ..... Not less than 155 KIAS until landing assured.

NOTE

RNP AR approaches are prohibited.

Significant systems affected when operating on RAT power:

- Hydraulic pumps 2B, 3A, 3B, and PTU
- Rudder trim
- XPDR 2
- TCAS
- Right fuel pump
- ADSP 1 and ADSP 2
- Autothrottle
- NAV to NAV transfer
- ADS-B
- VHF datalink/CPDLC
- VHF 2
- HUD (if installed)
- DU 3, DU 4, and DU 5
- IRU 2
- TRU 1 and 2
- Attendant call lights
- Slats/flaps slower than normal
- Left and right thrust reversers
- Exterior lighting (landing lights, strobe lights, navigation lights, beacon lights, taxi lights)
- Left and right ice detectors (manual anti-ice control only)
- Left and right windshield heating, right window heating

Smoke/fire/fumes procedure (Cont'd)

- CCP 2 (available on DU 2 only)
- TAWS
- WXR
- HF 2 (if installed)
- SATCOM (if installed)
- GNSS 2 (LPV minimums not authorized)
- DME 1 and 2
- NAV 2 and 3
- RAD ALT 2 and 3
- Left and right windshield wipers
- Left and right map and reading lights
- Recirculation fan
- Fuel inerting
- Toilet flush
- Seat belt signs
- MKP 2

On approach:

(104) Airspeed ..... Not less than 155 KIAS until landing assured.

CAUTION

1. Below 148 KIAS the batteries may be the only source of electrical power, and last for at least 5 minutes. Batteries will recharge above 148 KIAS if go-around is required.
2. Brakes are not available when batteries are depleted.

Smoke/fire/fumes procedure (Cont'd)

(105) Approach speed ..... V_{REF}

NOTE

FMS VSPEEDS not available.

(106) OLD factor .....Multiply by 1.30

(107) Source is identified as coming from the cabin:

(108) Designated crew member .....Advise

(a) To isolate and extinguish source of smoke or fire, and to secure the area.

(b) To turn off all electrical sources via CMS.

CAUTION

Continuing to destination is not recommended. If the decision to continue is made, the flight crew must acknowledge that the threat has been positively identified, confirmed to be extinguished, and the smoke/fumes have dissipated.

(109) Land immediately at the nearest suitable airport.

Smoke/fire/fumes procedure (Cont'd)

(110) Smoke or fumes removal procedure ..... Accomplish, if required. Refer to Smoke, fire and fumes – Smoke or fumes removal.

– COMPLETE –

Smoke or fumes removal

(1) EMER DEPRESS ..... ON

(2) Descent ..... 10000 feet or lowest safe altitude, whichever is higher.

(3) PACK FLOW .....HI (if available)

(4) AUTO PRESS .....Select auto

(5) Smoke is evacuating at an acceptable rate:

- **Yes –** Go to (6)
- **No –** Go to (9)

Smoke or fumes removal (Cont'd)

(6) Smoke is evacuating at an acceptable rate:

CAUTION

Continuing to destination is not recommended. If the decision to continue is made, the flight crew must acknowledge that the threat has been positively identified, confirmed to be extinguished, and the smoke/fumes have dissipated.

(7) Land immediately at the nearest suitable airport.

(8) Smoke/fire/fumes procedure .....Continue, if required. Refer to Smoke, fire and fumes – Smoke/fire/fumes procedure.

– COMPLETE –

(9) Smoke is not evacuating at an acceptable rate:

(10) AUTO PRESS .....MAN

Smoke or fumes removal (Cont'd)

CAUTION

Continuing to destination is not recommended. If the decision to continue is made, the flight crew must acknowledge that the threat has been positively identified, confirmed to be extinguished, and the smoke/fumes have dissipated.

(11) Land immediately at the nearest suitable airport.

(12) Smoke/fire/fumes procedure .....Continue, if required. Refer to Smoke, fire and fumes – Smoke/fire/fumes procedure.

– COMPLETE –

AFT CARGO FIRE (Warning)

WARNING

During smoke/fire/fumes emergencies, prepare to land the aircraft without delay while conducting fire suppression and/or smoke evacuation procedures.

(1) CARGO, AFT FIRE .....Select

(2) RECIRC AIR ..... OFF

AFT CARGO FIRE (Warning) (Cont'd)

(3) AIR, CARGO, AFT ..... OFF

(4) CARGO BTL .....Select

(5) Land immediately at the nearest suitable airport.

– COMPLETE –

EQUIP BAY SMOKE (Warning)

WARNING

During smoke/fire/fumes emergencies, prepare to land the aircraft without delay while conducting fire suppression and/or smoke evacuation procedures.

(1) **EQUIP BAY OVHT** warning message is also shown:

- **Yes –** Go to (2)
- **No –** Go to (27)

(2) EQUIP BAY OVHT warning message is also shown:

(3) EQUIP COOLING, EXHAUST ..... ON

(4) RECIRC AIR ..... OFF

(5) CABIN PWR ..... OFF

(6) EQUIP COOLING, INLET ..... OFF

EQUIP BAY SMOKE (Warning) (Cont'd)

(7) All packs and bleeds available:

- **Yes –** Go to (8)
- **No –** Go to (10)

(8) All packs and bleeds available:

(9) Land immediately at the nearest suitable airport.

– COMPLETE –

(10) One or two pack(s) or one or two bleed(s) not available:

(11) Oxygen masks ..... If required, on, 100%

(12) EMER DEPRESS ..... ON

(13) EDM ..... ON

NOTE

When EDM mode is engaged, closely monitor airspeed and ensure that the aircraft is not going into overspeed. If the aircraft goes into overspeed, deactivate EDM and complete the emergency descent manually if required.

(14) SEAT BELTS ..... ON

(15) Cabin ..... Advise

(16) PAX OXY (if required) ..... DPLY

(17) SPOILER lever ..... FULL then MAX

EQUIP BAY SMOKE (Warning) (Cont'd)

(18) Descent ..... 10000 feet or lowest safe altitude, whichever is higher.

(19) HDG ..... As required

At a safe altitude:

(20) SPOILER lever ..... RET

(21) Oxygen masks ..... As required

(22) EDM .....Select off

(23) Transponder ..... As required

(24) FCP modes ..... As required

(25) Land immediately at the nearest suitable airport.

(26) Unpressurized flight procedure .....Accomplish Refer to Air-conditioning, bleed and pressurization – Unpressurized flight procedure.

– COMPLETE –

(27) EQUIP BAY OVHT warning message is not shown:

(28) RECIRC AIR ..... OFF

(29) CABIN PWR ..... OFF

(30) EQUIP COOLING, INLET ..... OFF

(31) EQUIP COOLING, EXHAUST ..... VLV ONLY

EQUIP BAY SMOKE (Warning) (Cont'd)

(32) All packs and bleeds available:

- **Yes –** Go to (33)
- **No –** Go to (35)

(33) All packs and bleeds available:

(34) Land immediately at the nearest suitable airport.

– COMPLETE –

(35) One or two pack(s) or one or two bleed(s) not available:

(36) Oxygen masks ..... If required, on, 100%

(37) EMER DEPRESS ..... ON

(38) EDM ..... ON

NOTE

When EDM mode is engaged, closely monitor airspeed and ensure that the aircraft is not going into overspeed. If the aircraft goes into overspeed, deactivate EDM and complete the emergency descent manually if required.

(39) SEAT BELTS ..... ON

(40) Cabin ..... Advise

(41) PAX OXY (if required) ..... DPLY

(42) SPOILER lever ..... FULL then MAX

EQUIP BAY SMOKE (Warning) (Cont'd)

(43) Descent ..... 10000 feet or lowest safe altitude, whichever is higher.

(44) HDG ..... As required

At a safe altitude:

(45) SPOILER lever ..... RET

(46) Oxygen masks ..... As required

(47) EDM .....Select off

(48) Transponder ..... As required

(49) FCP modes ..... As required

(50) Land immediately at the nearest suitable airport.

(51) Unpressurized flight procedure .....Accomplish Refer to Air-conditioning, bleed and pressurization – Unpressurized flight procedure.

– COMPLETE –

FWD CARGO FIRE (Warning)

WARNING

During smoke/fire/fumes emergencies, prepare to land the aircraft without delay while conducting fire suppression and/or smoke evacuation procedures.

(1) CARGO, FWD FIRE .....Select
(2) RECIRC AIR ..... OFF
(3) AIR, CARGO, FWD ..... OFF
(4) CARGO BTL .....Select
(5) Land immediately at the nearest suitable airport.

– COMPLETE –

LAV SMOKE (Warning)

WARNING

During smoke/fire/fumes emergencies, prepare to land the aircraft without delay while conducting fire suppression and/or smoke evacuation procedures.

(1) SEAT BELTS ..... ON
(2) Cabin crew .....Advise

LAV SMOKE (Warning) (Cont'd)

(3) Smoke or fumes removal procedure ..... Accomplish, if required. Refer to Smoke, fire and fumes – Smoke or fumes removal.

– COMPLETE –

MLG BAY OVHT (Warning)

(1) Airspeed .....Not more than 250 KIAS

(2) Landing gear .....DN

(3) **MLG BAY OVHT** warning message goes out:

- **Yes –** Go to (4)
- **No –** Go to (6)

(4) MLG BAY OVHT warning message goes out:

(5) Landing gear ..... As required

– COMPLETE –

(6) MLG BAY OVHT warning message stays on:

(7) Land at the nearest suitable airport.

(8) STATUS synoptic page .....Select

(9) Tire pressure ..... Check

MLG BAY OVHT (Warning) (Cont'd)

(10) Tire pressure is normal or only one tire pressure is amber:

- **Yes –** Go to (11)
- **No –** Go to (13)

(11) Tire pressure is normal or only one tire pressure is amber:

(12) No further action required.

– COMPLETE –

(13) Tire pressure is amber for both tires on the same side:

(14) Low tire pressure landing procedure .....Accomplish Refer to Landing gear, wheel, and brake system – Low tire pressure landing procedure.

– COMPLETE –

CHAPTER 3 – PERFORMANCE

DISPATCH DATA – PW1521G–3 <72211001D>

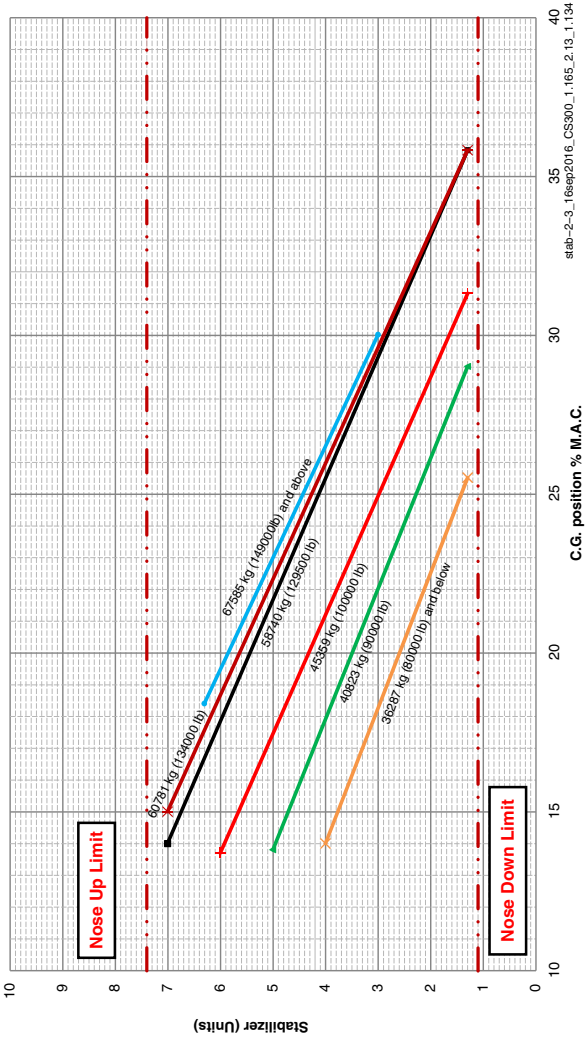
OPERATIONAL DATA – PW1521G–3 <72211001D>

List of figures

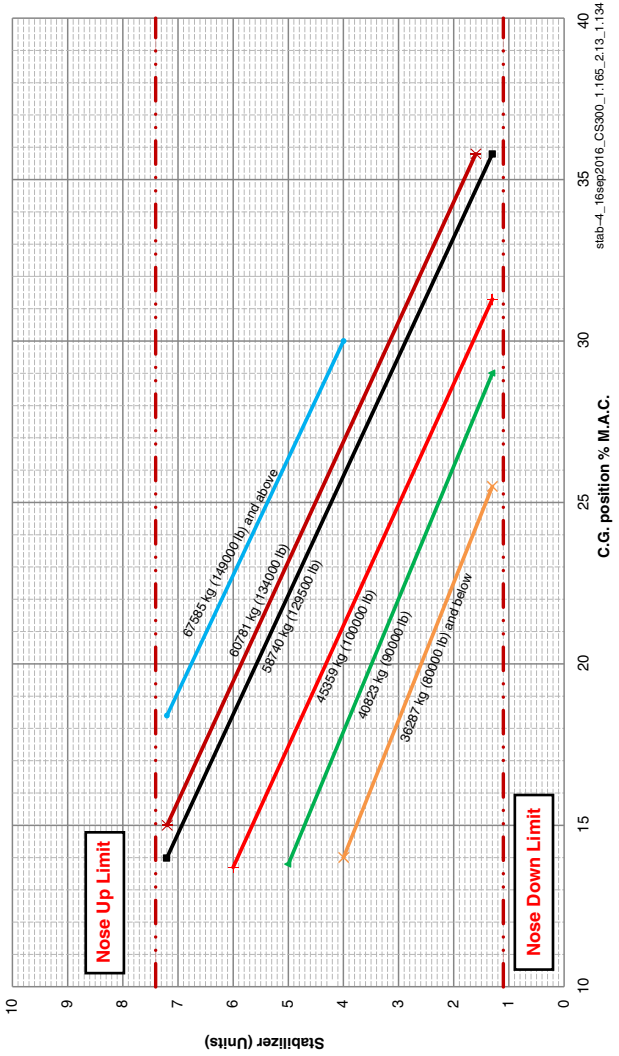
DISPATCH DATA – PW1521G–3 <72211001D>

TAKEOFF

A. Stabilizer settings



Stabilizer settings (units) – FLAP 2 and FLAP 3
Figure 03–01B–1



Stabilizer settings (units) – FLAP 4
Figure 03–01B–2

B. Maximum takeoff N1 – Static – PW1521G-3 <72211001D>

THRUST SETTING– %N1

MAXIMUM TAKEOFF – STATIC to 30 KIAS

TO (AEO)

ENGINE BLEEDS CLOSED

PW1521G–3

OAT		PRESSURE ALTITUDE (Feet)										
(°C)	(°F)	–2000	0	1000	2000	3000	4000	6000	8000	10000	12000	14500
–54	–65	73.6	75.9	76.5	77.2	77.8	78.4	79.5	80.6	81.6	82.6	83.7
–50	–58	74.2	76.6	77.2	77.9	78.5	79.1	80.3	81.3	82.4	83.3	84.4
–45	–49	75.1	77.4	78.1	78.7	79.3	79.9	81.1	82.2	83.3	84.3	85.4
–40	–40	75.9	78.2	78.9	79.6	80.2	80.8	82.0	83.1	84.2	85.2	86.3
–35	–31	76.7	79.1	79.7	80.4	81.0	81.7	82.9	84.0	85.1	86.1	87.2
–30	–22	77.4	79.9	80.6	81.2	81.9	82.5	83.7	84.9	85.9	86.9	88.1
–25	–13	78.2	80.7	81.4	82.1	82.7	83.3	84.6	85.7	86.8	87.8	89.0
–20	–4	79.0	81.5	82.2	82.9	83.5	84.2	85.4	86.6	87.7	88.7	89.8
–15	5	79.8	82.3	83.0	83.7	84.3	85.0	86.2	87.4	88.5	89.5	90.7
–10	14	80.5	83.1	83.8	84.5	85.1	85.8	87.1	88.2	89.3	90.4	91.6
–5	23	81.3	83.8	84.6	85.3	85.9	86.6	87.9	89.1	90.2	91.2	92.4
0	32	82.0	84.6	85.3	86.1	86.7	87.4	88.7	89.9	91.0	92.1	93.3
5	41	82.8	85.4	86.1	86.8	87.5	88.2	89.5	90.7	91.8	92.9	93.3
10	50	83.5	86.2	86.9	87.6	88.3	89.0	90.3	91.5	92.6	92.8	92.7
15	59	84.3	86.9	87.7	88.4	89.1	89.8	91.1	92.3	92.0	91.9	92.0
20	68	85.0	87.7	88.4	89.2	89.9	90.6	91.5	91.2	91.0	90.8	91.0
25	77	85.7	88.4	89.2	89.9	90.3	90.3	90.2	90.1	89.8	89.7	89.8
30	86	86.5	89.2	89.2	89.2	89.2	89.2	89.1	88.9	88.5	88.4	88.7
35	95	86.8	88.0	88.0	88.0	88.0	87.9	87.8	87.6	87.4	87.4	87.5
40	104	85.6	86.8	86.8	86.8	86.7	86.7	86.6	86.4	86.6	86.2	86.1
45	113	84.2	85.5	85.5	85.5	85.5	85.5	85.4	85.4	85.4	84.8	––
53	127	82.3	83.6	83.6	83.5	83.4	83.4	83.4	83.2	––	––	––

cs300_pw1521G_v05r2_status_takeoff_to_avg_000.ch16

Maximum takeoff – Static to 30 KIAS – AEO – Engine bleeds closed <72211001D>
Figure 03–01B–3

THRUST SETTING– %N1

MAXIMUM TAKEOFF – STATIC to 30 KIAS

TO (AEO)

PACKS ON, ANTI–ICE OFF

PW1521G–3

OAT		PRESSURE ALTITUDE (Feet)										
(°C)	(°F)	–2000	0	1000	2000	3000	4000	6000	8000	10000	12000	14500
–54	–65	73.6	75.9	76.6	77.2	77.8	78.4	79.6	80.7	81.7	82.7	83.7
–50	–58	74.3	76.6	77.2	77.9	78.5	79.1	80.3	81.4	82.4	83.4	84.5
–45	–49	75.1	77.4	78.1	78.8	79.4	80.0	81.2	82.3	83.3	84.3	85.4
–40	–40	75.9	78.3	78.9	79.6	80.2	80.8	82.1	83.2	84.2	85.2	86.3
–35	–31	76.7	79.1	79.8	80.4	81.1	81.7	82.9	84.0	85.1	86.1	87.2
–30	–22	77.5	79.9	80.6	81.3	81.9	82.5	83.8	84.9	86.0	87.0	88.1
–25	–13	78.3	80.7	81.4	82.1	82.7	83.4	84.6	85.8	86.8	87.9	89.0
–20	–4	79.0	81.5	82.2	82.9	83.6	84.2	85.4	86.6	87.7	88.7	89.9
–15	5	79.8	82.3	83.0	83.7	84.4	85.0	86.3	87.4	88.5	89.6	90.8
–10	14	80.6	83.1	83.8	84.5	85.2	85.8	87.1	88.3	89.4	90.4	91.6
–5	23	81.3	83.9	84.6	85.3	86.0	86.6	87.9	89.1	90.2	91.3	92.5
0	32	82.1	84.7	85.4	86.1	86.8	87.4	88.7	89.9	91.0	92.1	92.8
5	41	82.8	85.4	86.2	86.9	87.6	88.2	89.5	90.7	91.9	92.3	92.0
10	50	83.6	86.2	86.9	87.7	88.3	89.0	90.3	91.5	91.5	91.3	91.2
15	59	84.3	87.0	87.7	88.4	89.1	89.8	91.0	90.7	90.4	90.1	90.0
20	68	85.1	87.7	88.5	89.2	89.9	89.9	89.7	89.6	89.1	88.7	88.5
25	77	85.8	88.5	88.8	88.8	88.8	88.7	88.5	88.2	87.6	87.3	87.1
30	86	86.4	87.6	87.6	87.5	87.5	87.4	87.1	86.8	86.2	85.9	85.8
35	95	85.1	86.3	86.2	86.2	86.1	85.9	85.7	85.3	84.9	84.6	84.5
40	104	83.7	84.8	84.8	84.7	84.6	84.4	84.2	83.9	83.7	83.3	83.1
45	113	82.3	83.3	83.3	83.2	83.2	83.0	82.8	82.6	82.5	82.0	--
53	127	80.1	81.2	81.2	81.2	81.1	80.9	80.7	80.4	--	--	--

cs300_pw1521G_v05r2_status_takeoff_to_avg_100.ch16

Maximum takeoff – Static to 30 KIAS – AEO – Packs on, anti–ice off <72211001D>
Figure 03–01B–4

THRUST SETTING– %N1

MAXIMUM TAKEOFF – STATIC to 30 KIAS

TO (AEO)

PACKS ON, COWL ANTI–ICE ON

PW1521G–3

OAT		PRESSURE ALTITUDE (Feet)										
(°C)	(°F)	–2000	0	1000	2000	3000	4000	6000	8000	10000	12000	14500
–54	**–65**	73.6	75.9	76.6	77.2	77.8	78.4	79.6	80.7	81.7	82.7	83.8
–50	**–58**	74.3	76.6	77.3	77.9	78.5	79.1	80.3	81.4	82.4	83.4	84.6
–45	**–49**	75.1	77.5	78.1	78.8	79.4	80.0	81.2	82.3	83.3	84.4	85.5
–40	**–40**	75.9	78.3	79.0	79.6	80.2	80.9	82.1	83.2	84.2	85.3	86.4
–35	**–31**	76.7	79.1	79.8	80.5	81.1	81.7	82.9	84.1	85.1	86.2	87.3
–30	**–22**	77.5	79.9	80.6	81.3	81.9	82.6	83.8	84.9	86.0	87.1	88.2
–25	**–13**	78.3	80.8	81.4	82.1	82.8	83.4	84.7	85.8	86.9	87.9	89.1
–20	**–4**	79.1	81.6	82.2	82.9	83.6	84.2	85.5	86.7	87.7	88.8	90.0
–15	**5**	79.8	82.3	83.1	83.8	84.4	85.1	86.3	87.5	88.6	89.7	90.8
–10	**14**	80.6	83.1	83.8	84.5	85.2	85.9	87.1	88.3	89.4	90.5	91.7
–5	**23**	81.4	83.9	84.6	85.3	86.0	86.7	88.0	89.2	90.3	91.3	92.4
0	**32**	82.1	84.7	85.4	86.1	86.8	87.5	88.8	90.0	91.1	92.2	92.1
5	**41**	82.9	85.5	86.2	86.9	87.6	88.3	89.6	90.8	91.4	91.4	91.6
10	**50**	83.6	86.2	87.0	87.7	88.4	89.1	90.4	90.7	90.7	90.5	90.8

cs300_pw1521G_v05r2_status_takeoff_to_avg_110.ch16

Maximum takeoff – Static to 30 KIAS – AEO – Packs on, cowl anti–ice on <72211001D>

Figure 03–01B–5

THRUST SETTING– %N1

MAXIMUM TAKEOFF – STATIC to 30 KIAS

TO (AEO)

PACKS ON, WING AND COWL ANTI–ICE ON

PW1521G–3

OAT		PRESSURE ALTITUDE (Feet)										
(°C)	(°F)	–2000	0	1000	2000	3000	4000	6000	8000	10000	12000	14500
–54	–65	73.6	75.9	76.6	77.2	77.8	78.4	79.6	80.7	81.7	82.7	83.8
–50	–58	74.3	76.6	77.3	77.9	78.5	79.1	80.3	81.4	82.4	83.4	84.6
–45	–49	75.1	77.5	78.1	78.8	79.4	80.0	81.2	82.3	83.3	84.4	85.5
–40	–40	75.9	78.3	79.0	79.6	80.2	80.9	82.1	83.2	84.2	85.3	86.4
–35	–31	76.7	79.1	79.8	80.5	81.1	81.7	82.9	84.1	85.1	86.2	87.3
–30	–22	77.5	79.9	80.6	81.3	81.9	82.6	83.8	84.9	86.0	87.1	88.2
–25	–13	78.3	80.8	81.4	82.1	82.8	83.4	84.7	85.8	86.9	87.9	89.1
–20	–4	79.1	81.6	82.2	82.9	83.6	84.2	85.5	86.7	87.7	88.8	90.0
–15	5	79.8	82.3	83.1	83.8	84.4	85.1	86.3	87.5	88.6	89.7	90.8
–10	14	80.6	83.1	83.8	84.5	85.2	85.9	87.1	88.3	89.4	90.5	91.7
–5	23	81.4	83.9	84.6	85.3	86.0	86.7	88.0	89.2	90.3	91.3	92.1
0	32	82.1	84.7	85.4	86.1	86.8	87.5	88.8	90.0	91.1	91.4	91.8
5	41	82.9	85.5	86.2	86.9	87.6	88.3	89.6	90.6	90.7	90.8	91.2
10	50	83.6	86.2	87.0	87.7	88.4	89.1	89.8	89.8	90.0	89.8	90.3

cs300_pw1521G_v05r2_status_takeoff_to_avg_111.ch16

Maximum takeoff – Static to 30 KIAS – AEO – Packs on, wing and cowl anti–ice on <72211001D>
Figure 03–01B–6

THRUST SETTING– %N1

MAXIMUM TAKEOFF – STATIC to 30 KIAS

TO (AEO)

COWL ANTI–ICE ON

PW1521G–3

OAT		PRESSURE ALTITUDE (Feet)										
(°C)	(°F)	–2000	0	1000	2000	3000	4000	6000	8000	10000	12000	14500
–54	**–65**	73.6	75.9	76.6	77.2	77.8	78.4	79.6	80.7	81.7	82.7	83.8
–50	**–58**	74.3	76.6	77.3	77.9	78.5	79.1	80.3	81.4	82.4	83.4	84.6
–45	**–49**	75.1	77.5	78.1	78.8	79.4	80.0	81.2	82.3	83.3	84.4	85.5
–40	**–40**	75.9	78.3	79.0	79.6	80.2	80.9	82.1	83.2	84.2	85.3	86.4
–35	**–31**	76.7	79.1	79.8	80.5	81.1	81.7	82.9	84.1	85.1	86.2	87.3
–30	**–22**	77.5	79.9	80.6	81.3	81.9	82.6	83.8	84.9	86.0	87.1	88.2
–25	**–13**	78.3	80.8	81.4	82.1	82.8	83.4	84.7	85.8	86.9	87.9	89.1
–20	**–4**	79.1	81.6	82.2	82.9	83.6	84.2	85.5	86.7	87.7	88.8	90.0
–15	**5**	79.8	82.3	83.1	83.8	84.4	85.1	86.3	87.5	88.6	89.7	90.8
–10	**14**	80.6	83.1	83.8	84.5	85.2	85.9	87.1	88.3	89.4	90.5	91.7
–5	**23**	81.4	83.9	84.6	85.3	86.0	86.7	88.0	89.2	90.3	91.3	92.5
0	**32**	82.1	84.7	85.4	86.1	86.8	87.5	88.8	90.0	91.1	92.2	93.2
5	**41**	82.9	85.5	86.2	86.9	87.6	88.3	89.6	90.8	91.9	93.0	92.9
10	**50**	83.6	86.2	87.0	87.7	88.4	89.1	90.4	91.6	92.5	91.9	92.3

cs300_pw1521G_v05r2_status_takeoff_to_avg_010.ch16

Maximum takeoff – Static to 30 KIAS – AEO – Cowl anti–ice on <72211001D>
Figure 03–01B–7

THRUST SETTING– %N1

MAXIMUM TAKEOFF – STATIC to 30 KIAS

TO (AEO)

WING AND COWL ANTI–ICE ON

PW1521G–3

OAT		PRESSURE ALTITUDE (Feet)										
(°C)	(°F)	–2000	0	1000	2000	3000	4000	6000	8000	10000	12000	14500
–54	–65	73.6	75.9	76.6	77.2	77.8	78.4	79.6	80.7	81.7	82.7	83.8
–50	–58	74.3	76.6	77.3	77.9	78.5	79.1	80.3	81.4	82.4	83.4	84.6
–45	–49	75.1	77.5	78.1	78.8	79.4	80.0	81.2	82.3	83.3	84.4	85.5
–40	–40	75.9	78.3	79.0	79.6	80.2	80.9	82.1	83.2	84.2	85.3	86.4
–35	–31	76.7	79.1	79.8	80.5	81.1	81.7	82.9	84.1	85.1	86.2	87.3
–30	–22	77.5	79.9	80.6	81.3	81.9	82.6	83.8	84.9	86.0	87.1	88.2
–25	–13	78.3	80.8	81.4	82.1	82.8	83.4	84.7	85.8	86.9	87.9	89.1
–20	–4	79.1	81.6	82.2	82.9	83.6	84.2	85.5	86.7	87.7	88.8	90.0
–15	5	79.8	82.3	83.1	83.8	84.4	85.1	86.3	87.5	88.6	89.7	90.8
–10	14	80.6	83.1	83.8	84.5	85.2	85.9	87.1	88.3	89.4	90.5	91.7
–5	23	81.4	83.9	84.6	85.3	86.0	86.7	88.0	89.2	90.3	91.3	92.5
0	32	82.1	84.7	85.4	86.1	86.8	87.5	88.8	90.0	91.1	92.2	92.9
5	41	82.9	85.5	86.2	86.9	87.6	88.3	89.6	90.8	91.9	92.1	92.5
10	50	83.6	86.2	87.0	87.7	88.4	89.1	90.4	90.9	91.7	91.2	91.8

cs300_pw1521G_v05r2_status_takeoff_to_avg_011.ch16

Maximum takeoff – Static to 30 KIAS – AEO – Wing and cowl anti–ice on <72211001D>
Figure 03–01B–8

C. Maximum takeoff N1 – 140 KIAS – PW1521G-3 <72211001D>

THRUST SETTING– %N1

MAXIMUM TAKEOFF – 140 KIAS

TO (AEO or OEI) or TO–1 APR

ENGINE BLEEDS CLOSED

PW1521G–3

SAT		PRESSURE ALTITUDE (Feet)											
(°C)	(°F)	–2000	0	1000	2000	3000	4000	6000	8000	10000	12000	14500	16000
–56	–68	75.0	77.1	77.7	78.4	79.0	79.7	80.8	81.7	82.8	83.6	84.2	84.5
–50	–58	76.1	78.1	78.8	79.5	80.1	80.7	81.9	82.8	83.9	84.7	85.3	85.6
–45	–49	76.9	79.0	79.7	80.3	81.0	81.6	82.8	83.7	84.8	85.6	86.3	86.6
–40	–40	77.7	79.8	80.5	81.2	81.8	82.5	83.6	84.6	85.7	86.5	87.2	87.5
–35	–31	78.5	80.7	81.4	82.1	82.7	83.4	84.5	85.5	86.6	87.4	88.1	88.4
–30	–22	79.3	81.5	82.2	82.9	83.6	84.2	85.4	86.4	87.5	88.3	89.0	89.3
–25	–13	80.1	82.3	83.0	83.7	84.4	85.1	86.2	87.2	88.4	89.2	89.9	90.2
–20	–4	80.9	83.1	83.8	84.6	85.2	85.9	87.1	88.1	89.2	90.1	90.8	91.0
–15	5	81.7	83.9	84.7	85.4	86.1	86.8	87.9	89.0	90.1	90.9	91.6	91.9
–10	14	82.5	84.7	85.5	86.2	86.9	87.6	88.8	89.8	91.0	91.8	92.5	92.8
–5	23	83.3	85.5	86.3	87.0	87.7	88.4	89.6	90.6	91.8	92.7	93.3	93.6
0	32	84.0	86.3	87.1	87.8	88.5	89.2	90.4	91.5	92.6	93.5	94.2	94.5
5	41	84.8	87.1	87.8	88.6	89.3	90.0	91.2	92.3	93.5	94.3	94.7	94.7
10	50	85.5	87.9	88.6	89.4	90.1	90.8	92.1	93.1	94.3	94.4	94.3	94.4
15	59	86.3	88.7	89.4	90.2	90.9	91.6	92.9	93.8	93.7	93.7	93.7	93.8
20	68	87.1	89.4	90.2	90.9	91.7	92.4	93.1	93.0	93.0	92.8	92.9	93.0
25	77	87.8	90.2	91.0	91.7	92.1	92.2	92.2	92.1	91.9	91.7	91.8	92.0
30	86	88.5	90.9	91.0	91.1	91.1	91.2	91.1	91.0	90.7	90.5	90.6	91.0
35	95	88.9	89.8	89.9	89.9	90.0	90.0	90.0	89.8	89.4	89.2	89.3	––
40	104	87.7	88.7	88.7	88.8	88.8	88.9	88.9	88.6	88.2	87.9	88.0	––
45	113	86.5	87.5	87.6	87.6	87.7	87.7	87.7	87.4	86.9	86.6	––	––
53	127	84.6	85.6	85.7	85.7	85.8	85.8	85.8	85.3	––	––	––	––

cs300_pw1521G_v05r2_status_mto_140knt_avg_000.ch16

Maximum takeoff – 140 KIAS – AEO or OEI – Engine bleeds closed <72211001D>
Figure 03–01B–9

THRUST SETTING– %N1

MAXIMUM TAKEOFF – 140 KIAS

TO (AEO)

PACKS ON, ANTI–ICE OFF

PW1521G–3

SAT		PRESSURE ALTITUDE (Feet)											
(°C)	(°F)	–2000	0	1000	2000	3000	4000	6000	8000	10000	12000	14500	16000
–56	–68	75.1	77.1	77.8	78.4	79.1	79.7	80.8	81.8	82.8	83.6	84.3	84.6
–50	–58	76.1	78.2	78.8	79.5	80.2	80.8	81.9	82.9	83.9	84.8	85.4	85.7
–45	–49	76.9	79.0	79.7	80.4	81.0	81.7	82.8	83.8	84.9	85.7	86.3	86.7
–40	–40	77.8	79.9	80.6	81.2	81.9	82.6	83.7	84.7	85.8	86.6	87.3	87.6
–35	–31	78.6	80.7	81.4	82.1	82.8	83.4	84.6	85.6	86.7	87.5	88.2	88.5
–30	–22	79.4	81.6	82.2	82.9	83.6	84.3	85.5	86.4	87.6	88.4	89.1	89.4
–25	–13	80.2	82.4	83.1	83.8	84.5	85.1	86.3	87.3	88.4	89.3	90.0	90.3
–20	–4	81.0	83.2	83.9	84.6	85.3	86.0	87.2	88.2	89.3	90.2	90.8	91.1
–15	5	81.8	84.0	84.7	85.4	86.1	86.8	88.0	89.0	90.2	91.0	91.7	92.0
–10	14	82.5	84.8	85.5	86.2	86.9	87.6	88.8	89.9	91.0	91.9	92.5	92.9
–5	23	83.3	85.6	86.3	87.1	87.8	88.5	89.7	90.7	91.9	92.7	93.4	93.7
0	32	84.1	86.4	87.1	87.8	88.6	89.3	90.5	91.6	92.7	93.6	93.9	93.8
5	41	84.8	87.2	87.9	88.7	89.4	90.1	91.3	92.4	93.6	93.7	93.6	93.6
10	50	85.6	87.9	88.7	89.4	90.2	90.9	92.1	93.2	93.2	93.1	93.1	93.1
15	59	86.4	88.7	89.5	90.2	91.0	91.7	92.7	92.6	92.5	92.3	92.2	92.2
20	68	87.1	89.5	90.2	91.0	91.8	91.9	91.8	91.7	91.4	91.0	90.8	90.8
25	77	87.9	90.2	90.7	90.8	90.8	90.8	90.7	90.5	90.0	89.6	89.4	89.5
30	86	88.6	89.5	89.6	89.6	89.6	89.6	89.5	89.2	88.6	88.3	88.2	88.4
35	95	87.4	88.3	88.3	88.3	88.3	88.3	88.2	87.9	87.3	87.0	86.9	--
40	104	86.1	87.0	87.0	87.0	87.0	87.0	86.8	86.5	86.1	85.7	85.6	--
45	113	84.7	85.6	85.7	85.7	85.7	85.6	85.5	85.3	84.7	84.4	--	--
53	127	82.7	83.5	83.5	83.5	83.5	83.6	83.6	83.2	--	--	--	--

cs300_pw1521G_v05r2_status_mto_140knt_avg_100.ch16

Maximum takeoff – 140 KIAS – AEO – Packs on, anti–ice off <72211001D>
Figure 03–01B–10

THRUST SETTING– %N1

MAXIMUM TAKEOFF – 140 KIAS

TO (AEO)

PACKS ON, COWL ANTI–ICE ON

PW1521G–3

SAT		PRESSURE ALTITUDE (Feet)											
(°C)	(°F)	–2000	0	1000	2000	3000	4000	6000	8000	10000	12000	14500	16000
–56	**–68**	75.1	77.2	77.8	78.5	79.2	79.8	80.9	81.8	82.9	83.7	84.4	84.7
–50	**–58**	76.2	78.2	78.9	79.6	80.2	80.9	82.0	82.9	84.0	84.8	85.5	85.8
–45	**–49**	77.0	79.1	79.8	80.4	81.1	81.8	82.9	83.9	84.9	85.8	86.4	86.8
–40	**–40**	77.8	79.9	80.6	81.3	82.0	82.6	83.8	84.8	85.9	86.7	87.4	87.7
–35	**–31**	78.6	80.8	81.5	82.2	82.8	83.5	84.7	85.7	86.8	87.6	88.3	88.6
–30	**–22**	79.4	81.6	82.3	83.0	83.7	84.4	85.5	86.5	87.7	88.5	89.2	89.5
–25	**–13**	80.2	82.4	83.2	83.8	84.5	85.2	86.4	87.4	88.5	89.4	90.1	90.4
–20	**–4**	81.0	83.2	84.0	84.7	85.4	86.1	87.2	88.3	89.4	90.3	90.9	91.2
–15	**5**	81.8	84.1	84.8	85.5	86.2	86.9	88.1	89.1	90.3	91.1	91.8	92.1
–10	**14**	82.6	84.9	85.6	86.3	87.0	87.7	88.9	90.0	91.1	92.0	92.7	93.0
–5	**23**	83.4	85.7	86.4	87.1	87.8	88.5	89.8	90.8	92.0	92.8	93.5	93.7
0	**32**	84.1	86.4	87.2	87.9	88.6	89.3	90.6	91.6	92.8	93.6	93.7	93.6
5	**41**	84.9	87.2	88.0	88.7	89.4	90.2	91.4	92.4	93.2	93.2	93.3	93.4
10	**50**	85.7	88.0	88.8	89.5	90.2	91.0	92.2	92.6	92.5	92.6	92.8	92.8

cs300_pw1521G_v05r2_status_mto_140knt_avg_110.ch16

Maximum takeoff – 140 KIAS – AEO – Packs on, cowl anti–ice on <72211001D>

Figure 03–01B–11

THRUST SETTING– %N1

MAXIMUM TAKEOFF – 140 KIAS

TO (AEO)

PACKS ON, WING AND COWL ANTI–ICE ON

PW1521G–3

SAT		PRESSURE ALTITUDE (Feet)											
(°C)	(°F)	–2000	0	1000	2000	3000	4000	6000	8000	10000	12000	14500	16000
–56	**–68**	75.1	77.2	77.8	78.5	79.2	79.8	80.9	81.8	82.9	83.7	84.4	84.7
–50	**–58**	76.2	78.2	78.9	79.6	80.2	80.9	82.0	82.9	84.0	84.8	85.5	85.8
–45	**–49**	77.0	79.1	79.8	80.4	81.1	81.8	82.9	83.9	84.9	85.8	86.4	86.8
–40	**–40**	77.8	79.9	80.6	81.3	82.0	82.6	83.8	84.8	85.9	86.7	87.4	87.7
–35	**–31**	78.6	80.8	81.5	82.2	82.8	83.5	84.7	85.7	86.8	87.6	88.3	88.6
–30	**–22**	79.4	81.6	82.3	83.0	83.7	84.4	85.5	86.5	87.7	88.5	89.2	89.5
–25	**–13**	80.2	82.4	83.2	83.8	84.5	85.2	86.4	87.4	88.5	89.4	90.1	90.4
–20	**–4**	81.0	83.2	84.0	84.7	85.4	86.1	87.2	88.3	89.4	90.3	90.9	91.2
–15	**5**	81.8	84.1	84.8	85.5	86.2	86.9	88.1	89.1	90.3	91.1	91.8	92.1
–10	**14**	82.6	84.9	85.6	86.3	87.0	87.7	88.9	90.0	91.1	92.0	92.7	93.0
–5	**23**	83.4	85.7	86.4	87.1	87.8	88.5	89.8	90.8	92.0	92.8	93.5	93.6
0	**32**	84.1	86.4	87.2	87.9	88.6	89.3	90.6	91.6	92.8	93.3	93.4	93.4
5	**41**	84.9	87.2	88.0	88.7	89.4	90.2	91.4	92.4	92.7	92.8	93.0	93.1
10	**50**	85.7	88.0	88.8	89.5	90.2	91.0	91.9	91.9	91.8	92.1	92.4	92.5

cs300_pw1521G_v05r2_status_mto_140knt_avg_111.ch16

Maximum takeoff – 140 KIAS – AEO – Packs on, wing and cowl anti–ice on <72211001D>

Figure 03–01B–12

THRUST SETTING– %N1

MAXIMUM TAKEOFF – 140 KIAS

TO (OEI) or TO–1 APR

PACK(S) ON, ANTI–ICE OFF

PW1521G–3

SAT		PRESSURE ALTITUDE (Feet)											
(°C)	(°F)	–2000	0	1000	2000	3000	4000	6000	8000	10000	12000	14500	16000
–56	**–68**	75.1	77.1	77.8	78.5	79.1	79.7	80.8	81.8	82.8	83.7	84.3	84.6
–50	**–58**	76.1	78.2	78.9	79.5	80.2	80.8	81.9	82.9	84.0	84.8	85.4	85.8
–45	**–49**	76.9	79.1	79.7	80.4	81.1	81.7	82.8	83.8	84.9	85.7	86.4	86.7
–40	**–40**	77.8	79.9	80.6	81.3	81.9	82.6	83.7	84.7	85.8	86.6	87.3	87.6
–35	**–31**	78.6	80.7	81.4	82.1	82.8	83.4	84.6	85.6	86.7	87.5	88.2	88.5
–30	**–22**	79.4	81.6	82.3	83.0	83.6	84.3	85.5	86.5	87.6	88.4	89.1	89.4
–25	**–13**	80.2	82.4	83.1	83.8	84.5	85.2	86.3	87.3	88.5	89.3	90.0	90.3
–20	**–4**	81.0	83.2	83.9	84.6	85.3	86.0	87.2	88.2	89.3	90.2	90.9	91.2
–15	**5**	81.8	84.0	84.7	85.4	86.1	86.8	88.0	89.1	90.2	91.1	91.7	92.0
–10	**14**	82.6	84.8	85.5	86.3	87.0	87.7	88.9	89.9	91.1	91.9	92.6	92.9
–5	**23**	83.3	85.6	86.3	87.1	87.8	88.5	89.7	90.7	91.9	92.8	93.4	93.7
0	**32**	84.1	86.4	87.1	87.9	88.6	89.3	90.5	91.6	92.7	93.6	93.5	93.4
5	**41**	84.8	87.2	87.9	88.7	89.4	90.1	91.3	92.4	93.4	93.2	93.2	93.1
10	**50**	85.6	87.9	88.7	89.5	90.2	90.9	92.2	92.9	92.7	92.6	92.5	92.5
15	**59**	86.4	88.7	89.5	90.2	91.0	91.7	92.2	92.1	91.9	91.7	91.5	91.5
20	**68**	87.1	89.5	90.3	91.0	91.4	91.4	91.3	91.1	90.7	90.1	89.8	89.8
25	**77**	87.9	90.3	90.3	90.3	90.3	90.2	90.2	89.8	89.1	88.6	88.3	88.3
30	**86**	88.2	89.1	89.1	89.1	89.0	88.9	88.8	88.5	87.7	87.3	87.0	87.3
35	**95**	87.0	87.8	87.8	87.8	87.7	87.6	87.4	87.0	86.3	86.1	85.7	--
40	**104**	85.7	86.4	86.4	86.4	86.3	86.2	86.0	85.7	85.0	84.7	84.4	--
45	**113**	84.2	85.0	85.0	84.9	84.8	84.7	84.7	84.4	83.7	83.4	--	--
53	**127**	82.2	82.9	82.8	82.7	82.7	82.6	82.7	82.3	--	--	--	--

cs300_pw1521G_v05r2_status_mto_140knt_avg_300.ch16

Maximum takeoff – 140 KIAS – OEI – Pack(s) on, anti–ice off <72211001D>
Figure 03–01B–13

THRUST SETTING– %N1

MAXIMUM TAKEOFF – 140 KIAS

TO (OEI) or TO–1 APR

PACK(S) ON, COWL ANTI–ICE ON

PW1521G–3

SAT		PRESSURE ALTITUDE (Feet)											
(°C)	(°F)	–2000	0	1000	2000	3000	4000	6000	8000	10000	12000	14500	16000
–56	**–68**	75.2	77.3	78.0	78.6	79.3	79.9	81.0	81.9	83.0	83.9	84.5	84.8
–50	**–58**	76.3	78.3	79.0	79.7	80.3	81.0	82.1	83.1	84.2	85.0	85.7	86.0
–45	**–49**	77.1	79.2	79.9	80.6	81.2	81.9	83.0	84.0	85.1	85.9	86.6	86.9
–40	**–40**	77.9	80.1	80.7	81.4	82.1	82.8	83.9	84.9	86.0	86.8	87.5	87.8
–35	**–31**	78.8	80.9	81.6	82.3	82.9	83.6	84.8	85.8	86.9	87.8	88.4	88.8
–30	**–22**	79.6	81.7	82.4	83.1	83.8	84.5	85.6	86.7	87.8	88.7	89.3	89.7
–25	**–13**	80.4	82.6	83.3	84.0	84.7	85.3	86.5	87.5	88.7	89.5	90.2	90.5
–20	**–4**	81.2	83.4	84.1	84.8	85.5	86.2	87.4	88.4	89.5	90.4	91.1	91.3
–15	**5**	81.9	84.2	84.9	85.6	86.3	87.0	88.2	89.2	90.4	91.3	91.8	92.1
–10	**14**	82.7	85.0	85.7	86.4	87.1	87.8	89.0	90.1	91.2	92.1	92.7	93.0
–5	**23**	83.5	85.8	86.5	87.2	87.9	88.7	89.9	90.9	92.0	92.9	92.8	92.5
0	**32**	84.3	86.6	87.3	88.1	88.8	89.5	90.7	91.7	92.8	92.6	91.8	91.3
5	**41**	85.0	87.3	88.1	88.8	89.6	90.3	91.4	92.3	92.1	91.6	90.2	89.8
10	**50**	85.8	88.1	88.9	89.6	90.4	90.8	91.6	91.3	90.8	90.0	88.8	88.3

cs300_pw1521G_v05r2_status_mto_140knt_avg_310.ch16

Maximum takeoff – 140 KIAS – OEI – Pack(s) on, cowl anti–ice on <72211001D>

Figure 03–01B–14

THRUST SETTING– %N1

MAXIMUM TAKEOFF – 140 KIAS

TO (OEI) or TO–1 APR

PACK(S) ON, WING AND COWL ANTI–ICE ON

PW1521G–3

SAT		PRESSURE ALTITUDE (Feet)											
(°C)	(°F)	–2000	0	1000	2000	3000	4000	6000	8000	10000	12000	14500	16000
–56	**–68**	75.2	77.3	78.0	78.6	79.3	79.9	81.0	81.9	83.0	83.9	84.5	84.8
–50	**–58**	76.3	78.3	79.0	79.7	80.3	81.0	82.1	83.1	84.2	85.0	85.7	86.0
–45	**–49**	77.1	79.2	79.9	80.6	81.2	81.9	83.0	84.0	85.1	85.9	86.6	86.9
–40	**–40**	77.9	80.1	80.7	81.4	82.1	82.8	83.9	84.9	86.0	86.8	87.5	87.8
–35	**–31**	78.8	80.9	81.6	82.3	82.9	83.6	84.8	85.8	86.9	87.8	88.4	88.8
–30	**–22**	79.6	81.7	82.4	83.1	83.8	84.5	85.6	86.7	87.8	88.7	89.3	89.7
–25	**–13**	80.4	82.6	83.3	84.0	84.7	85.3	86.5	87.5	88.7	89.5	90.2	90.5
–20	**–4**	81.2	83.4	84.1	84.8	85.5	86.2	87.4	88.4	89.5	90.4	91.1	91.0
–15	**5**	81.9	84.2	84.9	85.6	86.3	87.0	88.2	89.2	90.4	91.3	91.2	90.9
–10	**14**	82.7	85.0	85.7	86.4	87.1	87.8	89.0	90.1	91.2	91.4	90.9	90.6
–5	**23**	83.5	85.8	86.5	87.2	87.9	88.7	89.9	90.9	91.2	90.8	90.4	90.0
0	**32**	84.3	86.6	87.3	88.1	88.8	89.5	90.7	90.8	90.5	90.1	89.1	88.4
5	**41**	85.0	87.3	88.1	88.8	89.6	90.3	90.3	89.9	89.4	88.5	86.9	86.1
10	**50**	85.8	88.1	88.9	89.6	89.5	89.4	89.0	88.5	87.8	86.3	84.8	83.9

cs300_pw1521G_v05r2_status_mto_140knt_avg_312.ch16

Maximum takeoff – 140 KIAS – OEI – Pack(s) on, wing and cowl anti–ice on <72211001D>

Figure 03–01B–15

THRUST SETTING– %N1

MAXIMUM TAKEOFF – 140 KIAS

TO (AEO or OEI) or TO–1 APR

COWL ANTI–ICE ON

PW1521G–3

SAT		PRESSURE ALTITUDE (Feet)											
(°C)	(°F)	–2000	0	1000	2000	3000	4000	6000	8000	10000	12000	14500	16000
–56	**–68**	75.1	77.2	77.8	78.5	79.2	79.8	80.9	81.8	82.9	83.7	84.4	84.7
–50	**–58**	76.2	78.2	78.9	79.6	80.2	80.9	82.0	82.9	84.0	84.8	85.5	85.8
–45	**–49**	77.0	79.1	79.8	80.4	81.1	81.8	82.9	83.9	84.9	85.8	86.4	86.8
–40	**–40**	77.8	79.9	80.6	81.3	82.0	82.6	83.8	84.8	85.9	86.7	87.4	87.7
–35	**–31**	78.6	80.8	81.5	82.2	82.8	83.5	84.7	85.7	86.8	87.6	88.3	88.6
–30	**–22**	79.4	81.6	82.3	83.0	83.7	84.4	85.5	86.5	87.7	88.5	89.2	89.5
–25	**–13**	80.2	82.4	83.2	83.8	84.5	85.2	86.4	87.4	88.5	89.4	90.1	90.4
–20	**–4**	81.0	83.2	84.0	84.7	85.4	86.1	87.2	88.3	89.4	90.3	90.9	91.2
–15	**5**	81.8	84.1	84.8	85.5	86.2	86.9	88.1	89.1	90.3	91.1	91.8	92.1
–10	**14**	82.6	84.9	85.6	86.3	87.0	87.7	88.9	90.0	91.1	92.0	92.7	93.0
–5	**23**	83.4	85.7	86.4	87.1	87.8	88.5	89.8	90.8	92.0	92.8	93.5	93.8
0	**32**	84.1	86.4	87.2	87.9	88.6	89.3	90.6	91.6	92.8	93.7	94.3	94.6
5	**41**	84.9	87.2	88.0	88.7	89.4	90.2	91.4	92.4	93.6	94.5	94.4	94.4
10	**50**	85.7	88.0	88.8	89.5	90.2	91.0	92.2	93.3	93.9	93.8	94.0	94.1

cs300_pw1521G_v05r2_status_mto_140knt_avg_010.ch16

Maximum takeoff – 140 KIAS – AEO or OEI – Cowl anti–ice on <72211001D>
Figure 03–01B–16

THRUST SETTING– %N1

MAXIMUM TAKEOFF – 140 KIAS

TO (AEO)

WING AND COWL ANTI–ICE ON

PW1521G–3

SAT		PRESSURE ALTITUDE (Feet)											
(°C)	(°F)	–2000	0	1000	2000	3000	4000	6000	8000	10000	12000	14500	16000
–56	**–68**	75.1	77.2	77.8	78.5	79.2	79.8	80.9	81.8	82.9	83.7	84.4	84.7
–50	**–58**	76.2	78.2	78.9	79.6	80.2	80.9	82.0	82.9	84.0	84.8	85.5	85.8
–45	**–49**	77.0	79.1	79.8	80.4	81.1	81.8	82.9	83.9	84.9	85.8	86.4	86.8
–40	**–40**	77.8	79.9	80.6	81.3	82.0	82.6	83.8	84.8	85.9	86.7	87.4	87.7
–35	**–31**	78.6	80.8	81.5	82.2	82.8	83.5	84.7	85.7	86.8	87.6	88.3	88.6
–30	**–22**	79.4	81.6	82.3	83.0	83.7	84.4	85.5	86.5	87.7	88.5	89.2	89.5
–25	**–13**	80.2	82.4	83.2	83.8	84.5	85.2	86.4	87.4	88.5	89.4	90.1	90.4
–20	**–4**	81.0	83.2	84.0	84.7	85.4	86.1	87.2	88.3	89.4	90.3	90.9	91.2
–15	**5**	81.8	84.1	84.8	85.5	86.2	86.9	88.1	89.1	90.3	91.1	91.8	92.1
–10	**14**	82.6	84.9	85.6	86.3	87.0	87.7	88.9	90.0	91.1	92.0	92.7	93.0
–5	**23**	83.4	85.7	86.4	87.1	87.8	88.5	89.8	90.8	92.0	92.8	93.5	93.8
0	**32**	84.1	86.4	87.2	87.9	88.6	89.3	90.6	91.6	92.8	93.7	94.2	94.5
5	**41**	84.9	87.2	88.0	88.7	89.4	90.2	91.4	92.4	93.6	94.2	94.1	94.2
10	**50**	85.7	88.0	88.8	89.5	90.2	91.0	92.2	92.9	93.2	93.2	93.6	93.8

cs300_pw1521G_v05r2_status_mto_140knt_avg_011.ch16

Maximum takeoff – 140 KIAS – AEO – Wing and cowl anti–ice on <72211001D>
Figure 03–01B–17

THRUST SETTING– %N1

MAXIMUM TAKEOFF – 140 KIAS

TO (OEI) or TO–1 APR

WING AND COWL ANTI–ICE ON

PW1521G–3

SAT		PRESSURE ALTITUDE (Feet)											
(°C)	(°F)	–2000	0	1000	2000	3000	4000	6000	8000	10000	12000	14500	16000
–56	**–68**	75.2	77.3	78.0	78.6	79.3	79.9	81.0	81.9	83.0	83.9	84.5	84.8
–50	**–58**	76.3	78.3	79.0	79.7	80.3	81.0	82.1	83.1	84.2	85.0	85.7	86.0
–45	**–49**	77.1	79.2	79.9	80.6	81.2	81.9	83.0	84.0	85.1	85.9	86.6	86.9
–40	**–40**	77.9	80.1	80.7	81.4	82.1	82.8	83.9	84.9	86.0	86.8	87.5	87.8
–35	**–31**	78.8	80.9	81.6	82.3	82.9	83.6	84.8	85.8	86.9	87.8	88.4	88.8
–30	**–22**	79.6	81.7	82.4	83.1	83.8	84.5	85.6	86.7	87.8	88.7	89.3	89.7
–25	**–13**	80.4	82.6	83.3	84.0	84.7	85.3	86.5	87.5	88.7	89.5	90.2	90.5
–20	**–4**	81.2	83.4	84.1	84.8	85.5	86.2	87.4	88.4	89.5	90.4	91.1	91.4
–15	**5**	81.9	84.2	84.9	85.6	86.3	87.0	88.2	89.2	90.4	91.3	92.0	92.3
–10	**14**	82.7	85.0	85.7	86.4	87.1	87.8	89.0	90.1	91.2	92.1	92.8	93.2
–5	**23**	83.5	85.8	86.5	87.2	87.9	88.7	89.9	90.9	92.1	93.0	93.4	93.3
0	**32**	84.3	86.6	87.3	88.1	88.8	89.5	90.7	91.8	92.9	93.2	93.1	93.0
5	**41**	85.0	87.3	88.1	88.8	89.6	90.3	91.5	92.6	92.5	92.6	92.4	92.3
10	**50**	85.8	88.1	88.9	89.6	90.4	91.1	91.8	91.7	91.7	91.6	91.6	91.5

cs300_pw1521G_v05r2_status_mto_140knt_avg_012.ch16

Maximum takeoff – 140 KIAS – OEI – Wing and cowl anti–ice on <72211001D>
Figure 03–01B–18

D. Derate N1 TO-1 – Static – PW1521G-3 <72211001D>

THRUST SETTING– %N1

DERATED TAKEOFF – STATIC to 30 KIAS

TO–1 (AEO)

ENGINE BLEEDS CLOSED

PW1521G–3

OAT		PRESSURE ALTITUDE (Feet)										
(°C)	(°F)	–2000	0	1000	2000	3000	4000	6000	8000	10000	12000	14500
–54	–65	70.8	73.1	73.7	74.3	74.9	75.5	76.6	77.6	78.5	79.5	80.5
–50	–58	71.4	73.7	74.3	75.0	75.6	76.2	77.3	78.3	79.2	80.2	81.2
–45	–49	72.2	74.5	75.2	75.8	76.4	77.0	78.1	79.2	80.1	81.1	82.1
–40	–40	73.0	75.3	76.0	76.6	77.2	77.8	79.0	80.0	81.0	81.9	83.0
–35	–31	73.8	76.1	76.8	77.4	78.0	78.6	79.8	80.9	81.8	82.8	83.9
–30	–22	74.5	76.9	77.6	78.2	78.8	79.4	80.6	81.7	82.7	83.6	84.7
–25	–13	75.3	77.7	78.4	79.0	79.6	80.2	81.4	82.5	83.5	84.5	85.6
–20	–4	76.0	78.5	79.1	79.8	80.4	81.1	82.2	83.3	84.3	85.3	86.5
–15	5	76.8	79.2	79.9	80.6	81.2	81.8	83.0	84.2	85.2	86.2	87.3
–10	14	77.5	80.0	80.7	81.3	82.0	82.6	83.8	84.9	86.0	87.0	88.2
–5	23	78.2	80.7	81.4	82.1	82.8	83.4	84.6	85.7	86.8	87.8	89.0
0	32	79.0	81.5	82.2	82.9	83.5	84.2	85.4	86.5	87.6	88.6	89.8
5	41	79.7	82.2	82.9	83.6	84.3	84.9	86.2	87.3	88.4	89.4	89.8
10	50	80.4	83.0	83.7	84.4	85.0	85.7	86.9	88.1	89.2	89.2	89.3
15	59	81.1	83.7	84.4	85.1	85.8	86.4	87.7	88.7	88.6	88.5	88.6
20	68	81.8	84.4	85.2	85.9	86.5	87.2	87.9	87.8	87.7	87.5	87.6
25	77	82.5	85.2	85.9	86.6	87.0	87.0	86.9	86.8	86.5	86.4	86.5
30	86	83.2	85.9	85.9	85.9	85.9	85.9	85.8	85.6	85.3	85.2	85.2
35	95	83.5	84.8	84.8	84.8	84.7	84.7	84.6	84.3	84.2	84.0	83.9
40	104	82.3	83.5	83.5	83.5	83.5	83.4	83.3	83.1	82.9	82.7	82.5
45	113	81.1	82.3	82.3	82.3	82.3	82.2	82.1	81.7	81.7	81.4	––
53	127	79.2	80.5	80.4	80.3	80.2	80.1	80.0	79.6	––	––	––

cs300_pw1521G_v05r2_status_takeoff_to1_avg_000.ch16

Derated takeoff TO–1 – Static to 30 KIAS – AEO – Engine bleeds closed <72211001D>
Figure 03–01B–19

THRUST SETTING– %N1

DERATED TAKEOFF – STATIC to 30 KIAS

TO–1 (AEO)

PACKS ON, ANTI–ICE OFF

PW1521G–3

OAT		PRESSURE ALTITUDE (Feet)										
(°C)	(°F)	–2000	0	1000	2000	3000	4000	6000	8000	10000	12000	14500
–54	–65	70.8	73.1	73.7	74.3	74.9	75.5	76.6	77.6	78.6	79.5	80.5
–50	–58	71.5	73.8	74.4	75.0	75.6	76.2	77.3	78.3	79.3	80.2	81.3
–45	–49	72.3	74.6	75.2	75.8	76.4	77.0	78.1	79.2	80.2	81.1	82.2
–40	–40	73.0	75.4	76.0	76.7	77.2	77.8	79.0	80.1	81.0	82.0	83.0
–35	–31	73.8	76.2	76.8	77.5	78.1	78.7	79.8	80.9	81.9	82.8	83.9
–30	–22	74.6	76.9	77.6	78.3	78.9	79.5	80.7	81.7	82.7	83.7	84.8
–25	–13	75.3	77.7	78.4	79.1	79.7	80.3	81.5	82.6	83.6	84.5	85.7
–20	–4	76.1	78.5	79.2	79.8	80.5	81.1	82.3	83.4	84.4	85.4	86.5
–15	5	76.8	79.3	79.9	80.6	81.2	81.9	83.1	84.2	85.2	86.2	87.3
–10	14	77.6	80.0	80.7	81.4	82.0	82.7	83.9	85.0	86.0	87.0	88.2
–5	23	78.3	80.8	81.5	82.2	82.8	83.4	84.7	85.8	86.8	87.8	89.0
0	32	79.0	81.5	82.2	82.9	83.6	84.2	85.4	86.6	87.6	88.7	89.0
5	41	79.7	82.3	83.0	83.7	84.3	85.0	86.2	87.3	88.4	88.6	88.5
10	50	80.4	83.0	83.7	84.4	85.1	85.7	87.0	88.1	88.0	87.8	87.7
15	59	81.2	83.7	84.4	85.2	85.8	86.5	87.5	87.3	87.1	86.7	86.5
20	68	81.9	84.5	85.2	85.9	86.6	86.6	86.4	86.2	85.8	85.4	85.2
25	77	82.6	85.2	85.6	85.5	85.4	85.4	85.2	84.9	84.4	84.1	83.8
30	86	83.2	84.3	84.3	84.3	84.2	84.1	83.9	83.5	83.0	82.7	82.4
35	95	81.8	83.0	83.0	82.9	82.8	82.7	82.4	82.1	81.7	81.4	81.1
40	104	80.4	81.6	81.5	81.4	81.3	81.2	80.9	80.6	80.4	80.1	79.7
45	113	79.1	80.2	80.1	80.1	79.9	79.8	79.5	79.3	79.2	78.7	--
53	127	77.0	78.1	78.0	78.0	77.8	77.6	77.3	77.1	--	--	--

cs300_pw1521G_v05r2_status_takeoff_to1_avg_100.ch16

Derated takeoff TO–1 – Static to 30 KIAS – AEO – Packs on, anti–ice off <72211001D>
Figure 03–01B–20

THRUST SETTING– %N1

DERATED TAKEOFF – STATIC to 30 KIAS

TO–1 (AEO)

PACKS ON, COWL ANTI–ICE ON

PW1521G–3

OAT		PRESSURE ALTITUDE (Feet)										
(°C)	(°F)	–2000	0	1000	2000	3000	4000	6000	8000	10000	12000	14500
–54	**–65**	70.9	73.1	73.8	74.4	74.9	75.5	76.6	77.7	78.6	79.6	80.6
–50	**–58**	71.5	73.8	74.4	75.0	75.6	76.2	77.3	78.4	79.3	80.3	81.3
–45	**–49**	72.3	74.6	75.2	75.9	76.5	77.1	78.2	79.2	80.2	81.2	82.2
–40	**–40**	73.1	75.4	76.0	76.7	77.3	77.9	79.0	80.1	81.1	82.0	83.1
–35	**–31**	73.8	76.2	76.8	77.5	78.1	78.7	79.9	80.9	81.9	82.9	84.0
–30	**–22**	74.6	77.0	77.6	78.3	78.9	79.5	80.7	81.8	82.8	83.7	84.9
–25	**–13**	75.4	77.8	78.4	79.1	79.7	80.3	81.5	82.6	83.6	84.6	85.7
–20	**–4**	76.1	78.5	79.2	79.9	80.5	81.1	82.3	83.4	84.4	85.4	86.6
–15	**5**	76.8	79.3	80.0	80.7	81.3	81.9	83.1	84.2	85.2	86.2	87.4
–10	**14**	77.6	80.1	80.7	81.4	82.1	82.7	83.9	85.0	86.1	87.1	88.3
–5	**23**	78.3	80.8	81.5	82.2	82.8	83.5	84.7	85.8	86.9	87.9	89.0
0	**32**	79.0	81.6	82.2	82.9	83.6	84.2	85.5	86.6	87.7	88.5	88.7
5	**41**	79.8	82.3	83.0	83.7	84.3	85.0	86.2	87.4	88.0	87.9	88.2
10	**50**	80.5	83.0	83.8	84.5	85.1	85.8	87.0	87.3	87.3	87.1	87.3

cs300_pw1521G_v05r2_status_takeoff_to1_avg_110.ch16

Derated takeoff TO–1 – Static to 30 KIAS – AEO – Packs on, cowl anti–ice on <72211001D>
Figure 03–01B–21

THRUST SETTING– %N1

DERATED TAKEOFF – STATIC to 30 KIAS

TO–1 (AEO)

PACKS ON, WING AND COWL ANTI–ICE ON

PW1521G–3

OAT		PRESSURE ALTITUDE (Feet)										
(°C)	(°F)	–2000	0	1000	2000	3000	4000	6000	8000	10000	12000	14500
–54	–65	70.9	73.1	73.8	74.4	74.9	75.5	76.6	77.7	78.6	79.6	80.6
–50	–58	71.5	73.8	74.4	75.0	75.6	76.2	77.3	78.4	79.3	80.3	81.3
–45	–49	72.3	74.6	75.2	75.9	76.5	77.1	78.2	79.2	80.2	81.2	82.2
–40	–40	73.1	75.4	76.0	76.7	77.3	77.9	79.0	80.1	81.1	82.0	83.1
–35	–31	73.8	76.2	76.8	77.5	78.1	78.7	79.9	80.9	81.9	82.9	84.0
–30	–22	74.6	77.0	77.6	78.3	78.9	79.5	80.7	81.8	82.8	83.7	84.9
–25	–13	75.4	77.8	78.4	79.1	79.7	80.3	81.5	82.6	83.6	84.6	85.7
–20	–4	76.1	78.5	79.2	79.9	80.5	81.1	82.3	83.4	84.4	85.4	86.6
–15	5	76.8	79.3	80.0	80.7	81.3	81.9	83.1	84.2	85.2	86.2	87.4
–10	14	77.6	80.1	80.7	81.4	82.1	82.7	83.9	85.0	86.1	87.1	88.3
–5	23	78.3	80.8	81.5	82.2	82.8	83.5	84.7	85.8	86.9	87.9	88.7
0	32	79.0	81.6	82.2	82.9	83.6	84.2	85.5	86.6	87.7	87.9	88.4
5	41	79.8	82.3	83.0	83.7	84.3	85.0	86.2	87.2	87.3	87.3	87.8
10	50	80.5	83.0	83.8	84.5	85.1	85.8	86.5	86.4	86.6	86.3	86.8

cs300_pw1521G_v05r2_status_takeoff_to1_avg_111.ch16

Derated takeoff TO–1 – Static to 30 KIAS – AEO – Packs on, wing and cowl anti–ice on <72211001D>
Figure 03–01B–22

THRUST SETTING– %N1

DERATED TAKEOFF – STATIC to 30 KIAS

TO–1 (AEO)

COWL ANTI–ICE ON

PW1521G–3

OAT		PRESSURE ALTITUDE (Feet)										
(°C)	(°F)	–2000	0	1000	2000	3000	4000	6000	8000	10000	12000	14500
–54	**–65**	70.9	73.1	73.8	74.4	74.9	75.5	76.6	77.7	78.6	79.6	80.6
–50	**–58**	71.5	73.8	74.4	75.0	75.6	76.2	77.3	78.4	79.3	80.3	81.3
–45	**–49**	72.3	74.6	75.2	75.9	76.5	77.1	78.2	79.2	80.2	81.2	82.2
–40	**–40**	73.1	75.4	76.0	76.7	77.3	77.9	79.0	80.1	81.1	82.0	83.1
–35	**–31**	73.8	76.2	76.8	77.5	78.1	78.7	79.9	80.9	81.9	82.9	84.0
–30	**–22**	74.6	77.0	77.6	78.3	78.9	79.5	80.7	81.8	82.8	83.7	84.9
–25	**–13**	75.4	77.8	78.4	79.1	79.7	80.3	81.5	82.6	83.6	84.6	85.7
–20	**–4**	76.1	78.5	79.2	79.9	80.5	81.1	82.3	83.4	84.4	85.4	86.6
–15	**5**	76.8	79.3	80.0	80.7	81.3	81.9	83.1	84.2	85.2	86.2	87.4
–10	**14**	77.6	80.1	80.7	81.4	82.1	82.7	83.9	85.0	86.1	87.1	88.3
–5	**23**	78.3	80.8	81.5	82.2	82.8	83.5	84.7	85.8	86.9	87.9	89.1
0	**32**	79.0	81.6	82.2	82.9	83.6	84.2	85.5	86.6	87.7	88.7	89.8
5	**41**	79.8	82.3	83.0	83.7	84.3	85.0	86.2	87.4	88.4	89.1	89.4
10	**50**	80.5	83.0	83.8	84.5	85.1	85.8	87.0	88.2	88.6	88.5	88.8

cs300_pw1521G_v05r2_status_takeoff_to1_avg_010.ch16

Derated takeoff TO–1 – Static to 30 KIAS – AEO – Cowl anti–ice on <72211001D>
Figure 03–01B–23

THRUST SETTING– %N1

DERATED TAKEOFF – STATIC to 30 KIAS

TO–1 (AEO)

WING AND COWL ANTI–ICE ON

PW1521G–3

OAT		PRESSURE ALTITUDE (Feet)										
(°C)	(°F)	–2000	0	1000	2000	3000	4000	6000	8000	10000	12000	14500
–54	**–65**	70.9	73.1	73.8	74.4	74.9	75.5	76.6	77.7	78.6	79.6	80.6
–50	**–58**	71.5	73.8	74.4	75.0	75.6	76.2	77.3	78.4	79.3	80.3	81.3
–45	**–49**	72.3	74.6	75.2	75.9	76.5	77.1	78.2	79.2	80.2	81.2	82.2
–40	**–40**	73.1	75.4	76.0	76.7	77.3	77.9	79.0	80.1	81.1	82.0	83.1
–35	**–31**	73.8	76.2	76.8	77.5	78.1	78.7	79.9	80.9	81.9	82.9	84.0
–30	**–22**	74.6	77.0	77.6	78.3	78.9	79.5	80.7	81.8	82.8	83.7	84.9
–25	**–13**	75.4	77.8	78.4	79.1	79.7	80.3	81.5	82.6	83.6	84.6	85.7
–20	**–4**	76.1	78.5	79.2	79.9	80.5	81.1	82.3	83.4	84.4	85.4	86.6
–15	**5**	76.8	79.3	80.0	80.7	81.3	81.9	83.1	84.2	85.2	86.2	87.4
–10	**14**	77.6	80.1	80.7	81.4	82.1	82.7	83.9	85.0	86.1	87.1	88.3
–5	**23**	78.3	80.8	81.5	82.2	82.8	83.5	84.7	85.8	86.9	87.9	89.1
0	**32**	79.0	81.6	82.2	82.9	83.6	84.2	85.5	86.6	87.7	88.7	89.5
5	**41**	79.8	82.3	83.0	83.7	84.3	85.0	86.2	87.4	88.4	88.5	89.1
10	**50**	80.5	83.0	83.8	84.5	85.1	85.8	87.0	87.6	87.9	87.7	88.4

cs300_pw1521G_v05r2_status_takeoff_to1_avg_011.ch16

Derated takeoff TO–1 – Static to 30 KIAS – AEO – Wing and cowl anti–ice on <72211001D>

Figure 03–01B–24

E. Derate N1 TO-1 – 140 KIAS – PW1521G-3 <72211001D>

THRUST SETTING– %N1

DERATED TAKEOFF – 140 KIAS

TO–1 (AEO or OEI) or TO–2 APR

ENGINE BLEEDS CLOSED

PW1521G–3

SAT		PRESSURE ALTITUDE (Feet)											
(°C)	(°F)	–2000	0	1000	2000	3000	4000	6000	8000	10000	12000	14500	16000
–56	–68	72.3	74.3	74.9	75.5	76.2	76.8	77.8	78.7	79.7	80.4	81.0	81.3
–50	–58	73.2	75.3	75.9	76.6	77.2	77.8	78.8	79.7	80.7	81.5	82.1	82.4
–45	–49	74.1	76.1	76.8	77.4	78.0	78.7	79.7	80.6	81.6	82.4	83.0	83.3
–40	–40	74.8	76.9	77.6	78.2	78.9	79.5	80.6	81.5	82.5	83.3	83.9	84.2
–35	–31	75.6	77.7	78.4	79.1	79.7	80.3	81.4	82.3	83.4	84.1	84.7	85.0
–30	–22	76.4	78.5	79.2	79.9	80.5	81.2	82.2	83.2	84.2	85.0	85.6	85.9
–25	–13	77.2	79.3	80.0	80.7	81.3	82.0	83.1	84.0	85.1	85.8	86.5	86.8
–20	–4	77.9	80.1	80.8	81.5	82.1	82.8	83.9	84.9	85.9	86.7	87.3	87.7
–15	5	78.7	80.9	81.6	82.3	82.9	83.6	84.7	85.7	86.7	87.5	88.2	88.5
–10	14	79.4	81.6	82.3	83.0	83.7	84.4	85.5	86.5	87.6	88.3	89.0	89.3
–5	23	80.2	82.4	83.1	83.8	84.5	85.2	86.3	87.3	88.4	89.2	89.8	90.2
0	32	80.9	83.2	83.9	84.6	85.3	86.0	87.1	88.1	89.2	90.0	90.7	91.0
5	41	81.7	83.9	84.6	85.4	86.1	86.7	87.9	88.9	90.0	90.8	91.2	91.2
10	50	82.4	84.7	85.4	86.1	86.8	87.5	88.7	89.7	90.8	90.8	90.8	90.8
15	59	83.1	85.4	86.2	86.9	87.6	88.3	89.5	90.4	90.3	90.2	90.3	90.3
20	68	83.9	86.2	86.9	87.7	88.3	89.0	89.7	89.7	89.6	89.5	89.6	89.6
25	77	84.6	86.9	87.7	88.4	88.8	88.9	88.9	88.8	88.6	88.5	88.4	88.6
30	86	85.3	87.6	87.7	87.8	87.8	87.9	87.8	87.7	87.5	87.2	87.2	87.6
35	95	85.6	86.6	86.6	86.7	86.7	86.8	86.7	86.6	86.2	85.9	85.9	––
40	104	84.5	85.4	85.4	85.5	85.6	85.6	85.6	85.3	84.9	84.6	84.6	––
45	113	83.3	84.3	84.3	84.4	84.5	84.4	84.4	84.1	83.6	83.2	––	––
53	127	81.4	82.4	82.5	82.5	82.5	82.5	82.4	81.9	––	––	––	––

cs300_pw1521G_v05r2_status_to–1_140knt_avg_000.ch16

Derated takeoff TO–1 – 140 KIAS – AEO or OEI – Engine bleeds closed <72211001D>
Figure 03–01B–25

THRUST SETTING– %N1

DERATED TAKEOFF – 140 KIAS

TO–1 (AEO)

PACKS ON, ANTI–ICE OFF

PW1521G–3

SAT		PRESSURE ALTITUDE (Feet)											
(°C)	(°F)	–2000	0	1000	2000	3000	4000	6000	8000	10000	12000	14500	16000
–56	–68	72.3	74.3	74.9	75.6	76.2	76.8	77.8	78.7	79.7	80.5	81.1	81.4
–50	–58	73.3	75.3	76.0	76.6	77.2	77.9	78.9	79.8	80.8	81.6	82.2	82.5
–45	–49	74.1	76.2	76.8	77.4	78.1	78.7	79.8	80.7	81.7	82.5	83.1	83.4
–40	–40	74.9	77.0	77.6	78.3	78.9	79.6	80.6	81.6	82.6	83.3	83.9	84.2
–35	–31	75.7	77.8	78.4	79.1	79.8	80.4	81.5	82.4	83.4	84.2	84.8	85.1
–30	–22	76.5	78.6	79.2	79.9	80.6	81.2	82.3	83.2	84.3	85.1	85.7	86.0
–25	–13	77.2	79.4	80.1	80.7	81.4	82.0	83.2	84.1	85.2	85.9	86.6	86.9
–20	–4	78.0	80.2	80.8	81.5	82.2	82.8	84.0	84.9	86.0	86.8	87.4	87.7
–15	5	78.8	80.9	81.6	82.3	83.0	83.7	84.8	85.8	86.8	87.6	88.3	88.6
–10	14	79.5	81.7	82.4	83.1	83.8	84.4	85.6	86.6	87.6	88.4	89.1	89.4
–5	23	80.2	82.5	83.2	83.9	84.6	85.2	86.4	87.4	88.5	89.3	89.9	90.3
0	32	81.0	83.2	83.9	84.7	85.3	86.0	87.2	88.2	89.3	90.1	90.4	90.3
5	41	81.7	84.0	84.7	85.4	86.1	86.8	88.0	89.0	90.1	90.2	90.1	90.1
10	50	82.5	84.7	85.5	86.2	86.9	87.6	88.8	89.8	89.8	89.6	89.6	89.6
15	59	83.2	85.5	86.2	86.9	87.7	88.3	89.3	89.2	89.1	88.8	88.7	88.8
20	68	83.9	86.2	87.0	87.7	88.4	88.6	88.5	88.3	88.1	87.6	87.5	87.4
25	77	84.6	87.0	87.4	87.5	87.5	87.5	87.4	87.2	86.7	86.3	86.1	86.1
30	86	85.3	86.2	86.3	86.3	86.3	86.3	86.2	85.9	85.4	85.1	84.8	85.0
35	95	84.1	85.0	85.0	85.1	85.1	85.0	84.9	84.6	84.1	83.8	83.5	––
40	104	82.8	83.7	83.7	83.8	83.7	83.7	83.5	83.2	82.8	82.4	82.2	––
45	113	81.6	82.4	82.4	82.5	82.4	82.3	82.2	81.9	81.5	81.0	––	––
53	127	79.5	80.4	80.4	80.3	80.3	80.2	80.2	79.8	––	––	––	––

cs300_pw1521G_v05r2_status_to–1_140knt_avg_100.ch16

Derated takeoff TO–1 – 140 KIAS – AEO – Packs on, anti–ice off <72211001D>
Figure 03–01B–26

THRUST SETTING– %N1

DERATED TAKEOFF – 140 KIAS

TO–1 (AEO)

PACKS ON, COWL ANTI–ICE ON

PW1521G–3

SAT		PRESSURE ALTITUDE (Feet)											
(°C)	(°F)	–2000	0	1000	2000	3000	4000	6000	8000	10000	12000	14500	16000
–56	**–68**	72.4	74.4	75.0	75.7	76.3	76.9	77.9	78.8	79.8	80.6	81.2	81.5
–50	**–58**	73.3	75.4	76.0	76.7	77.3	77.9	79.0	79.9	80.9	81.7	82.3	82.6
–45	**–49**	74.2	76.2	76.9	77.5	78.2	78.8	79.8	80.8	81.8	82.6	83.2	83.5
–40	**–40**	75.0	77.0	77.7	78.3	79.0	79.6	80.7	81.6	82.7	83.4	84.1	84.3
–35	**–31**	75.7	77.8	78.5	79.2	79.8	80.5	81.6	82.5	83.5	84.3	84.9	85.2
–30	**–22**	76.5	78.6	79.3	80.0	80.6	81.3	82.4	83.3	84.4	85.2	85.8	86.1
–25	**–13**	77.3	79.4	80.1	80.8	81.4	82.1	83.2	84.2	85.2	86.0	86.7	87.0
–20	**–4**	78.1	80.2	80.9	81.6	82.3	82.9	84.0	85.0	86.1	86.9	87.5	87.9
–15	**5**	78.8	81.0	81.7	82.4	83.1	83.7	84.9	85.8	86.9	87.7	88.4	88.7
–10	**14**	79.6	81.8	82.5	83.2	83.8	84.5	85.7	86.6	87.7	88.5	89.2	89.6
–5	**23**	80.3	82.5	83.2	83.9	84.6	85.3	86.5	87.4	88.5	89.4	90.1	90.3
0	**32**	81.1	83.3	84.0	84.7	85.4	86.1	87.3	88.2	89.3	90.2	90.2	90.2
5	**41**	81.8	84.0	84.8	85.5	86.2	86.9	88.1	89.1	89.8	89.8	89.8	89.9
10	**50**	82.5	84.8	85.5	86.3	87.0	87.7	88.8	89.2	89.1	89.1	89.2	89.3

cs300_pw1521G_v05r2_status_to–1_140knt_avg_110.ch16

Derated takeoff TO–1 – 140 KIAS – AEO – Packs on, cowl anti–ice on <72211001D>
Figure 03–01B–27

THRUST SETTING– %N1

DERATED TAKEOFF – 140 KIAS

TO–1 (AEO)

PACKS ON, WING AND COWL ANTI–ICE ON

PW1521G–3

SAT		PRESSURE ALTITUDE (Feet)											
(°C)	(°F)	–2000	0	1000	2000	3000	4000	6000	8000	10000	12000	14500	16000
–56	**–68**	72.4	74.4	75.0	75.7	76.3	76.9	77.9	78.8	79.8	80.6	81.2	81.5
–50	**–58**	73.3	75.4	76.0	76.7	77.3	77.9	79.0	79.9	80.9	81.7	82.3	82.6
–45	**–49**	74.2	76.2	76.9	77.5	78.2	78.8	79.8	80.8	81.8	82.6	83.2	83.5
–40	**–40**	75.0	77.0	77.7	78.3	79.0	79.6	80.7	81.6	82.7	83.4	84.1	84.3
–35	**–31**	75.7	77.8	78.5	79.2	79.8	80.5	81.6	82.5	83.5	84.3	84.9	85.2
–30	**–22**	76.5	78.6	79.3	80.0	80.6	81.3	82.4	83.3	84.4	85.2	85.8	86.1
–25	**–13**	77.3	79.4	80.1	80.8	81.4	82.1	83.2	84.2	85.2	86.0	86.7	87.0
–20	**–4**	78.1	80.2	80.9	81.6	82.3	82.9	84.0	85.0	86.1	86.9	87.5	87.9
–15	**5**	78.8	81.0	81.7	82.4	83.1	83.7	84.9	85.8	86.9	87.7	88.4	88.7
–10	**14**	79.6	81.8	82.5	83.2	83.8	84.5	85.7	86.6	87.7	88.5	89.2	89.6
–5	**23**	80.3	82.5	83.2	83.9	84.6	85.3	86.5	87.4	88.5	89.4	90.1	90.1
0	**32**	81.1	83.3	84.0	84.7	85.4	86.1	87.3	88.2	89.3	89.8	89.9	89.9
5	**41**	81.8	84.0	84.8	85.5	86.2	86.9	88.1	89.1	89.2	89.3	89.5	89.6
10	**50**	82.5	84.8	85.5	86.3	87.0	87.7	88.6	88.6	88.4	88.6	88.9	89.0

cs300_pw1521G_v05r2_status_to–1_140knt_avg_111.ch16

Derated takeoff TO–1 – 140 KIAS – AEO – Packs on, wing and cowl anti–ice on <72211001D>

Figure 03–01B–28

THRUST SETTING– %N1

DERATED TAKEOFF – 140 KIAS

TO–1 (OEI) or TO–2 APR

PACK(S) ON, ANTI–ICE OFF

PW1521G–3

SAT		PRESSURE ALTITUDE (Feet)											
(°C)	(°F)	–2000	0	1000	2000	3000	4000	6000	8000	10000	12000	14500	16000
–56	–68	72.3	74.3	75.0	75.6	76.2	76.8	77.9	78.8	79.8	80.5	81.1	81.4
–50	–58	73.3	75.3	76.0	76.6	77.2	77.9	78.9	79.8	80.8	81.6	82.2	82.5
–45	–49	74.1	76.2	76.8	77.5	78.1	78.7	79.8	80.7	81.7	82.5	83.1	83.4
–40	–40	74.9	77.0	77.6	78.3	78.9	79.6	80.7	81.6	82.6	83.4	84.0	84.3
–35	–31	75.7	77.8	78.5	79.1	79.8	80.4	81.5	82.4	83.5	84.2	84.8	85.2
–30	–22	76.5	78.6	79.3	79.9	80.6	81.2	82.3	83.3	84.3	85.1	85.7	86.0
–25	–13	77.2	79.4	80.1	80.7	81.4	82.1	83.2	84.1	85.2	85.9	86.6	86.9
–20	–4	78.0	80.2	80.8	81.5	82.2	82.9	84.0	84.9	86.0	86.8	87.4	87.8
–15	5	78.8	80.9	81.6	82.3	83.0	83.7	84.8	85.8	86.8	87.6	88.3	88.6
–10	14	79.5	81.7	82.4	83.1	83.8	84.5	85.6	86.6	87.7	88.5	89.1	89.5
–5	23	80.3	82.5	83.2	83.9	84.6	85.3	86.4	87.4	88.5	89.3	90.0	90.1
0	32	81.0	83.2	84.0	84.7	85.4	86.0	87.2	88.2	89.3	90.1	90.0	89.9
5	41	81.7	84.0	84.7	85.4	86.1	86.8	88.0	89.0	90.0	89.8	89.6	89.6
10	50	82.5	84.7	85.5	86.2	86.9	87.6	88.8	89.5	89.2	89.1	89.0	89.0
15	59	83.2	85.5	86.2	87.0	87.7	88.4	88.9	88.7	88.5	88.2	88.0	88.0
20	68	83.9	86.2	87.0	87.7	88.1	88.1	88.0	87.8	87.3	86.8	86.5	86.4
25	77	84.7	87.0	87.0	87.0	87.0	86.9	86.8	86.5	85.8	85.4	85.0	84.9
30	86	85.0	85.8	85.8	85.8	85.7	85.6	85.5	85.2	84.4	84.1	83.7	83.8
35	95	83.7	84.5	84.5	84.5	84.4	84.3	84.1	83.8	83.1	82.8	82.4	––
40	104	82.4	83.1	83.2	83.1	83.0	82.9	82.7	82.3	81.8	81.4	81.0	––
45	113	81.1	81.8	81.8	81.8	81.6	81.4	81.4	81.1	80.4	80.1	––	––
53	127	79.0	79.7	79.6	79.5	79.4	79.3	79.3	78.9	––	––	––	––

cs300_pw1521G_v05r2_status_to–1_140knt_avg_300.ch16

Derated takeoff TO–1 – 140 KIAS – OEI – Pack(s) on, anti–ice off <72211001D>
Figure 03–01B–29

THRUST SETTING– %N1

DERATED TAKEOFF – 140 KIAS

TO–1 (OEI) or TO–2 APR

PACK(S) ON, COWL ANTI–ICE ON

PW1521G–3

SAT		PRESSURE ALTITUDE (Feet)											
(°C)	(°F)	–2000	0	1000	2000	3000	4000	6000	8000	10000	12000	14500	16000
–56	**–68**	72.5	74.5	75.1	75.8	76.4	77.0	78.0	78.9	79.9	80.7	81.3	81.6
–50	**–58**	73.5	75.5	76.1	76.8	77.4	78.0	79.1	80.0	81.0	81.8	82.4	82.7
–45	**–49**	74.3	76.3	77.0	77.6	78.3	78.9	80.0	80.9	81.9	82.7	83.3	83.6
–40	**–40**	75.1	77.1	77.8	78.5	79.1	79.7	80.8	81.7	82.8	83.6	84.2	84.5
–35	**–31**	75.8	77.9	78.6	79.3	79.9	80.6	81.7	82.6	83.7	84.5	85.1	85.4
–30	**–22**	76.6	78.8	79.4	80.1	80.8	81.4	82.5	83.4	84.5	85.3	86.0	86.3
–25	**–13**	77.4	79.5	80.2	80.9	81.6	82.2	83.3	84.3	85.4	86.2	86.8	87.2
–20	**–4**	78.2	80.3	81.0	81.7	82.4	83.0	84.2	85.1	86.2	87.0	87.7	87.8
–15	**5**	78.9	81.1	81.8	82.5	83.2	83.8	85.0	85.9	87.0	87.9	88.0	87.6
–10	**14**	79.7	81.9	82.6	83.3	84.0	84.6	85.8	86.8	87.9	88.4	87.7	87.3
–5	**23**	80.4	82.7	83.4	84.1	84.8	85.4	86.6	87.6	88.4	87.9	87.2	86.7
0	**32**	81.2	83.4	84.1	84.8	85.5	86.2	87.4	88.4	87.9	87.2	86.0	85.2
5	**41**	81.9	84.2	84.9	85.6	86.3	87.0	88.1	87.6	86.9	85.8	83.9	82.8
10	**50**	82.6	84.9	85.7	86.4	87.1	87.6	87.1	86.4	85.5	83.8	81.8	80.7

cs300_pw1521G_v05r2_status_to–1_140knt_avg_310.ch16

Derated takeoff TO–1 – 140 KIAS – OEI – Pack(s) on, cowl anti–ice on <72211001D>

Figure 03–01B–30

THRUST SETTING– %N1

DERATED TAKEOFF – 140 KIAS

TO–1 (OEI) or TO–2 APR

PACK(S) ON, WING AND COWL ANTI–ICE ON

PW1521G–3

SAT		PRESSURE ALTITUDE (Feet)											
(°C)	(°F)	–2000	0	1000	2000	3000	4000	6000	8000	10000	12000	14500	16000
–56	**–68**	72.5	74.5	75.1	75.8	76.4	77.0	78.0	78.9	79.9	80.7	81.3	81.6
–50	**–58**	73.5	75.5	76.1	76.8	77.4	78.0	79.1	80.0	81.0	81.8	82.4	82.7
–45	**–49**	74.3	76.3	77.0	77.6	78.3	78.9	80.0	80.9	81.9	82.7	83.3	83.6
–40	**–40**	75.1	77.1	77.8	78.5	79.1	79.7	80.8	81.7	82.8	83.6	84.2	84.5
–35	**–31**	75.8	77.9	78.6	79.3	79.9	80.6	81.7	82.6	83.7	84.5	85.1	85.4
–30	**–22**	76.6	78.8	79.4	80.1	80.8	81.4	82.5	83.4	84.5	85.3	86.0	86.3
–25	**–13**	77.4	79.5	80.2	80.9	81.6	82.2	83.3	84.3	85.4	86.2	86.8	87.2
–20	**–4**	78.2	80.3	81.0	81.7	82.4	83.0	84.2	85.1	86.2	87.0	87.7	87.7
–15	**5**	78.9	81.1	81.8	82.5	83.2	83.8	85.0	85.9	87.0	87.9	87.8	87.5
–10	**14**	79.7	81.9	82.6	83.3	84.0	84.6	85.8	86.8	87.9	87.9	87.5	87.2
–5	**23**	80.4	82.7	83.4	84.1	84.8	85.4	86.6	87.6	87.8	87.4	87.0	86.5
0	**32**	81.2	83.4	84.1	84.8	85.5	86.2	87.4	87.5	87.2	86.6	85.6	84.9
5	**41**	81.9	84.2	84.9	85.6	86.3	87.0	87.0	86.6	86.0	85.0	83.4	82.6
10	**50**	82.6	84.9	85.7	86.4	86.3	86.1	85.7	85.1	84.4	82.9	81.2	80.4

cs300_pw1521G_v05r2_status_to–1_140knt_avg_312.ch16

Derated takeoff TO–1 – 140 KIAS – OEI – Pack(s) on, wing and cowl anti–ice on <72211001D>
Figure 03–01B–31

THRUST SETTING– %N1

DERATED TAKEOFF – 140 KIAS

TO–1 (AEO or OEI) or TO–2 APR

COWL ANTI–ICE ON

PW1521G–3

SAT		PRESSURE ALTITUDE (Feet)											
(°C)	(°F)	–2000	0	1000	2000	3000	4000	6000	8000	10000	12000	14500	16000
–56	**–68**	72.4	74.4	75.0	75.7	76.3	76.9	77.9	78.8	79.8	80.6	81.2	81.5
–50	**–58**	73.3	75.4	76.0	76.7	77.3	77.9	79.0	79.9	80.9	81.7	82.3	82.6
–45	**–49**	74.2	76.2	76.9	77.5	78.2	78.8	79.8	80.8	81.8	82.6	83.2	83.5
–40	**–40**	75.0	77.0	77.7	78.3	79.0	79.6	80.7	81.6	82.7	83.4	84.1	84.3
–35	**–31**	75.7	77.8	78.5	79.2	79.8	80.5	81.6	82.5	83.5	84.3	84.9	85.2
–30	**–22**	76.5	78.6	79.3	80.0	80.6	81.3	82.4	83.3	84.4	85.2	85.8	86.1
–25	**–13**	77.3	79.4	80.1	80.8	81.4	82.1	83.2	84.2	85.2	86.0	86.7	87.0
–20	**–4**	78.1	80.2	80.9	81.6	82.3	82.9	84.0	85.0	86.1	86.9	87.5	87.9
–15	**5**	78.8	81.0	81.7	82.4	83.1	83.7	84.9	85.8	86.9	87.7	88.4	88.7
–10	**14**	79.6	81.8	82.5	83.2	83.8	84.5	85.7	86.6	87.7	88.5	89.2	89.6
–5	**23**	80.3	82.5	83.2	83.9	84.6	85.3	86.5	87.4	88.5	89.4	90.1	90.4
0	**32**	81.1	83.3	84.0	84.7	85.4	86.1	87.3	88.2	89.3	90.2	90.9	91.1
5	**41**	81.8	84.0	84.8	85.5	86.2	86.9	88.1	89.1	90.2	90.7	90.8	90.9
10	**50**	82.5	84.8	85.5	86.3	87.0	87.7	88.8	89.8	90.2	90.3	90.4	90.6

cs300_pw1521G_v05r2_status_to–1_140knt_avg_010.ch16

Derated takeoff TO–1 – 140 KIAS – AEO or OEI – Cowl anti–ice on <72211001D>

Figure 03–01B–32

THRUST SETTING– %N1

DERATED TAKEOFF – 140 KIAS

TO–1 (AEO)

WING AND COWL ANTI–ICE ON

PW1521G–3

SAT		PRESSURE ALTITUDE (Feet)											
(°C)	(°F)	–2000	0	1000	2000	3000	4000	6000	8000	10000	12000	14500	16000
–56	**–68**	72.4	74.4	75.0	75.7	76.3	76.9	77.9	78.8	79.8	80.6	81.2	81.5
–50	**–58**	73.3	75.4	76.0	76.7	77.3	77.9	79.0	79.9	80.9	81.7	82.3	82.6
–45	**–49**	74.2	76.2	76.9	77.5	78.2	78.8	79.8	80.8	81.8	82.6	83.2	83.5
–40	**–40**	75.0	77.0	77.7	78.3	79.0	79.6	80.7	81.6	82.7	83.4	84.1	84.3
–35	**–31**	75.7	77.8	78.5	79.2	79.8	80.5	81.6	82.5	83.5	84.3	84.9	85.2
–30	**–22**	76.5	78.6	79.3	80.0	80.6	81.3	82.4	83.3	84.4	85.2	85.8	86.1
–25	**–13**	77.3	79.4	80.1	80.8	81.4	82.1	83.2	84.2	85.2	86.0	86.7	87.0
–20	**–4**	78.1	80.2	80.9	81.6	82.3	82.9	84.0	85.0	86.1	86.9	87.5	87.9
–15	**5**	78.8	81.0	81.7	82.4	83.1	83.7	84.9	85.8	86.9	87.7	88.4	88.7
–10	**14**	79.6	81.8	82.5	83.2	83.8	84.5	85.7	86.6	87.7	88.5	89.2	89.6
–5	**23**	80.3	82.5	83.2	83.9	84.6	85.3	86.5	87.4	88.5	89.4	90.1	90.4
0	**32**	81.1	83.3	84.0	84.7	85.4	86.1	87.3	88.2	89.3	90.2	90.8	90.8
5	**41**	81.8	84.0	84.8	85.5	86.2	86.9	88.1	89.1	90.2	90.3	90.6	90.7
10	**50**	82.5	84.8	85.5	86.3	87.0	87.7	88.8	89.6	89.5	89.8	90.1	90.3

cs300_pw1521G_v05r2_status_to–1_140knt_avg_011.ch16

Derated takeoff TO–1 – 140 KIAS – AEO – Wing and cowl anti–ice on <72211001D>
Figure 03–01B–33

THRUST SETTING– %N1

DERATED TAKEOFF – 140 KIAS

TO–1 (OEI) or TO–2 APR

WING AND COWL ANTI–ICE ON

PW1521G–3

SAT		PRESSURE ALTITUDE (Feet)											
(°C)	(°F)	–2000	0	1000	2000	3000	4000	6000	8000	10000	12000	14500	16000
–56	**–68**	72.5	74.5	75.1	75.8	76.4	77.0	78.0	78.9	79.9	80.7	81.3	81.6
–50	**–58**	73.5	75.5	76.1	76.8	77.4	78.0	79.1	80.0	81.0	81.8	82.4	82.7
–45	**–49**	74.3	76.3	77.0	77.6	78.3	78.9	80.0	80.9	81.9	82.7	83.3	83.6
–40	**–40**	75.1	77.1	77.8	78.5	79.1	79.7	80.8	81.7	82.8	83.6	84.2	84.5
–35	**–31**	75.8	77.9	78.6	79.3	79.9	80.6	81.7	82.6	83.7	84.5	85.1	85.4
–30	**–22**	76.6	78.8	79.4	80.1	80.8	81.4	82.5	83.4	84.5	85.3	86.0	86.3
–25	**–13**	77.4	79.5	80.2	80.9	81.6	82.2	83.3	84.3	85.4	86.2	86.8	87.2
–20	**–4**	78.2	80.3	81.0	81.7	82.4	83.0	84.2	85.1	86.2	87.0	87.7	88.0
–15	**5**	78.9	81.1	81.8	82.5	83.2	83.8	85.0	85.9	87.0	87.9	88.6	88.9
–10	**14**	79.7	81.9	82.6	83.3	84.0	84.6	85.8	86.8	87.9	88.7	89.4	89.7
–5	**23**	80.4	82.7	83.4	84.1	84.8	85.4	86.6	87.6	88.7	89.5	90.0	89.9
0	**32**	81.2	83.4	84.1	84.8	85.5	86.2	87.4	88.4	89.5	89.7	89.7	89.5
5	**41**	81.9	84.2	84.9	85.6	86.3	87.0	88.2	89.2	89.1	89.1	88.9	88.8
10	**50**	82.6	84.9	85.7	86.4	87.1	87.8	88.5	88.4	88.2	88.1	88.1	87.9

cs300_pw1521G_v05r2_status_to–1_140knt_avg_012.ch16

Derated takeoff TO–1 – 140 KIAS – OEI – Wing and cowl anti–ice on <72211001D>

Figure 03–01B–34

F. Derate N1 TO-2 – Static – PW1521G-3 <72211001D>

THRUST SETTING– %N1

DERATED TAKEOFF – STATIC to 30 KIAS

TO–2 (AEO)

ENGINE BLEEDS CLOSED

PW1521G–3

OAT		PRESSURE ALTITUDE (Feet)										
(°C)	(°F)	–2000	0	1000	2000	3000	4000	6000	8000	10000	12000	14500
–54	–65	68.1	70.3	70.9	71.5	72.1	72.7	73.7	74.7	75.6	76.5	77.5
–50	–58	68.7	70.9	71.6	72.2	72.7	73.3	74.4	75.4	76.3	77.2	78.2
–45	–49	69.4	71.7	72.3	73.0	73.5	74.1	75.2	76.2	77.2	78.0	79.0
–40	–40	70.2	72.5	73.1	73.8	74.3	74.9	76.0	77.0	78.0	78.9	79.9
–35	–31	70.9	73.2	73.9	74.5	75.1	75.7	76.8	77.8	78.8	79.7	80.7
–30	–22	71.7	74.0	74.7	75.3	75.9	76.5	77.6	78.7	79.6	80.5	81.6
–25	–13	72.4	74.8	75.4	76.1	76.7	77.3	78.4	79.4	80.4	81.3	82.4
–20	–4	73.1	75.5	76.2	76.8	77.4	78.0	79.2	80.2	81.2	82.1	83.2
–15	5	73.8	76.2	76.9	77.6	78.2	78.8	80.0	81.0	82.0	82.9	84.0
–10	14	74.5	77.0	77.6	78.3	78.9	79.5	80.7	81.8	82.8	83.7	84.8
–5	23	75.2	77.7	78.4	79.0	79.7	80.3	81.5	82.6	83.6	84.5	85.6
0	32	75.9	78.4	79.1	79.8	80.4	81.0	82.2	83.3	84.3	85.3	86.4
5	41	76.6	79.1	79.8	80.5	81.1	81.8	83.0	84.1	85.1	86.1	86.4
10	50	77.3	79.8	80.5	81.2	81.9	82.5	83.7	84.8	85.8	85.9	86.0
15	59	78.0	80.6	81.2	81.9	82.6	83.2	84.4	85.4	85.4	85.3	85.3
20	68	78.7	81.2	82.0	82.7	83.3	83.9	84.7	84.6	84.5	84.4	84.5
25	77	79.3	81.9	82.7	83.4	83.8	83.8	83.7	83.6	83.3	83.3	83.3
30	86	80.0	82.6	82.7	82.7	82.7	82.7	82.6	82.4	82.2	82.1	82.0
35	95	80.4	81.6	81.6	81.6	81.5	81.5	81.4	81.2	80.9	80.8	80.7
40	104	79.2	80.4	80.4	80.4	80.4	80.3	80.2	79.8	79.7	79.5	79.3
45	113	78.0	79.2	79.2	79.2	79.2	79.1	78.9	78.5	78.4	78.1	--
53	127	75.7	77.3	77.2	77.1	77.0	76.9	76.8	76.3	--	--	--

cs300_pw1521G_v05r2_status_takeoff_to2_avg_000.ch16

Derated takeoff TO–2 – Static to 30 KIAS – AEO – Engine bleeds closed <72211001D>
Figure 03–01B–35

THRUST SETTING– %N1

DERATED TAKEOFF − STATIC to 30 KIAS

TO−2 (AEO)

PACKS ON, ANTI−ICE OFF

PW1521G−3

OAT		PRESSURE ALTITUDE (Feet)										
(°C)	(°F)	−2000	0	1000	2000	3000	4000	6000	8000	10000	12000	14500
−54	−65	68.1	70.3	70.9	71.6	72.1	72.7	73.8	74.8	75.7	76.5	77.5
−50	−58	68.7	71.0	71.6	72.2	72.8	73.3	74.4	75.4	76.3	77.2	78.2
−45	−49	69.5	71.7	72.4	73.0	73.6	74.1	75.2	76.2	77.2	78.1	79.1
−40	−40	70.2	72.5	73.2	73.8	74.4	74.9	76.1	77.1	78.0	78.9	79.9
−35	−31	71.0	73.3	73.9	74.6	75.1	75.7	76.8	77.9	78.8	79.7	80.8
−30	−22	71.7	74.0	74.7	75.3	75.9	76.5	77.7	78.7	79.6	80.6	81.6
−25	−13	72.4	74.8	75.4	76.1	76.7	77.3	78.4	79.5	80.4	81.4	82.4
−20	−4	73.1	75.5	76.2	76.8	77.4	78.1	79.2	80.3	81.2	82.2	83.2
−15	5	73.8	76.3	76.9	77.6	78.2	78.8	80.0	81.1	82.0	83.0	84.1
−10	14	74.6	77.0	77.7	78.3	79.0	79.6	80.8	81.8	82.8	83.8	84.9
−5	23	75.3	77.7	78.4	79.1	79.7	80.3	81.5	82.6	83.6	84.6	85.7
0	32	75.9	78.4	79.1	79.8	80.4	81.1	82.3	83.3	84.4	85.3	85.6
5	41	76.6	79.2	79.8	80.5	81.2	81.8	83.0	84.1	85.1	85.3	85.2
10	50	77.3	79.9	80.6	81.3	81.9	82.5	83.8	84.9	84.8	84.6	84.4
15	59	78.0	80.6	81.3	82.0	82.6	83.3	84.2	84.0	83.8	83.5	83.3
20	68	78.7	81.3	82.0	82.7	83.3	83.3	83.2	83.0	82.6	82.2	82.1
25	77	79.4	82.0	82.3	82.3	82.2	82.2	82.0	81.7	81.2	81.0	80.6
30	86	80.1	81.1	81.1	81.0	81.0	80.9	80.6	80.3	79.8	79.5	79.3
35	95	78.7	79.8	79.8	79.7	79.6	79.5	79.3	78.9	78.5	78.2	77.9
40	104	77.3	78.5	78.4	78.3	78.2	78.1	77.8	77.4	77.2	76.8	76.5
45	113	76.0	77.0	77.0	76.9	76.8	76.7	76.3	76.1	75.9	75.5	−−
53	127	73.4	74.9	74.8	74.8	74.7	74.4	74.2	73.8	−−	−−	−−

cs300_pw1521G_v05r2_status_takeoff_to2_avg_100.ch16

Derated takeoff TO–2 – Static to 30 KIAS – AEO – Packs on, anti–ice off <72211001D>
Figure 03–01B–36

THRUST SETTING– %N1

DERATED TAKEOFF – STATIC to 30 KIAS

TO–2 (AEO)

PACKS ON, COWL ANTI–ICE ON

PW1521G–3

OAT		PRESSURE ALTITUDE (Feet)										
(°C)	(°F)	–2000	0	1000	2000	3000	4000	6000	8000	10000	12000	14500
–54	–65	68.1	70.4	71.0	71.6	72.2	72.7	73.8	74.8	75.7	76.6	77.6
–50	–58	68.8	71.0	71.6	72.2	72.8	73.4	74.5	75.5	76.4	77.3	78.3
–45	–49	69.5	71.8	72.4	73.0	73.6	74.2	75.3	76.3	77.2	78.1	79.2
–40	–40	70.3	72.6	73.2	73.8	74.4	75.0	76.1	77.1	78.1	79.0	80.0
–35	–31	71.0	73.3	73.9	74.6	75.2	75.8	76.9	77.9	78.9	79.8	80.8
–30	–22	71.7	74.1	74.7	75.4	75.9	76.6	77.7	78.7	79.7	80.6	81.7
–25	–13	72.4	74.8	75.5	76.1	76.7	77.3	78.5	79.5	80.5	81.4	82.5
–20	–4	73.2	75.6	76.2	76.9	77.5	78.1	79.3	80.3	81.3	82.2	83.3
–15	5	73.9	76.3	77.0	77.6	78.2	78.9	80.0	81.1	82.1	83.0	84.1
–10	14	74.6	77.0	77.7	78.4	79.0	79.6	80.8	81.9	82.9	83.8	84.9
–5	23	75.3	77.8	78.4	79.1	79.7	80.4	81.6	82.6	83.6	84.6	85.7
0	32	76.0	78.5	79.2	79.8	80.5	81.1	82.3	83.4	84.4	85.2	85.3
5	41	76.7	79.2	79.9	80.6	81.2	81.8	83.1	84.2	84.8	84.6	84.8
10	50	77.4	79.9	80.6	81.3	81.9	82.6	83.8	84.1	84.1	83.8	84.0

cs300_pw1521G_v05r2_status_takeoff_to2_avg_110.ch16

Derated takeoff TO–2 – Static to 30 KIAS – AEO – Packs on, cowl anti–ice on <72211001D>
Figure 03–01B–37

THRUST SETTING– %N1

DERATED TAKEOFF – STATIC to 30 KIAS

TO–2 (AEO)

PACKS ON, WING AND COWL ANTI–ICE ON

PW1521G–3

OAT		PRESSURE ALTITUDE (Feet)										
(°C)	(°F)	–2000	0	1000	2000	3000	4000	6000	8000	10000	12000	14500
–54	**–65**	68.1	70.4	71.0	71.6	72.2	72.7	73.8	74.8	75.7	76.6	77.6
–50	**–58**	68.8	71.0	71.6	72.2	72.8	73.4	74.5	75.5	76.4	77.3	78.3
–45	**–49**	69.5	71.8	72.4	73.0	73.6	74.2	75.3	76.3	77.2	78.1	79.2
–40	**–40**	70.3	72.6	73.2	73.8	74.4	75.0	76.1	77.1	78.1	79.0	80.0
–35	**–31**	71.0	73.3	73.9	74.6	75.2	75.8	76.9	77.9	78.9	79.8	80.8
–30	**–22**	71.7	74.1	74.7	75.4	75.9	76.6	77.7	78.7	79.7	80.6	81.7
–25	**–13**	72.4	74.8	75.5	76.1	76.7	77.3	78.5	79.5	80.5	81.4	82.5
–20	**–4**	73.2	75.6	76.2	76.9	77.5	78.1	79.3	80.3	81.3	82.2	83.3
–15	**5**	73.9	76.3	77.0	77.6	78.2	78.9	80.0	81.1	82.1	83.0	84.1
–10	**14**	74.6	77.0	77.7	78.4	79.0	79.6	80.8	81.9	82.9	83.8	84.9
–5	**23**	75.3	77.8	78.4	79.1	79.7	80.4	81.6	82.6	83.6	84.6	85.4
0	**32**	76.0	78.5	79.2	79.8	80.5	81.1	82.3	83.4	84.4	84.7	85.0
5	**41**	76.7	79.2	79.9	80.6	81.2	81.8	83.1	84.0	84.1	84.0	84.4
10	**50**	77.4	79.9	80.6	81.3	81.9	82.6	83.3	83.2	83.4	83.0	83.5

cs300_pw1521G_v05r2_status_takeoff_to2_avg_111.ch16

Derated takeoff TO–2 – Static to 30 KIAS – AEO – Packs on, wing and cowl anti–ice on <72211001D>
Figure 03–01B–38

THRUST SETTING– %N1

DERATED TAKEOFF – STATIC to 30 KIAS

TO–2 (AEO)

COWL ANTI–ICE ON

PW1521G–3

OAT		PRESSURE ALTITUDE (Feet)										
(°C)	(°F)	–2000	0	1000	2000	3000	4000	6000	8000	10000	12000	14500
–54	–65	68.1	70.4	71.0	71.6	72.2	72.7	73.8	74.8	75.7	76.6	77.6
–50	–58	68.8	71.0	71.6	72.2	72.8	73.4	74.5	75.5	76.4	77.3	78.3
–45	–49	69.5	71.8	72.4	73.0	73.6	74.2	75.3	76.3	77.2	78.1	79.2
–40	–40	70.3	72.6	73.2	73.8	74.4	75.0	76.1	77.1	78.1	79.0	80.0
–35	–31	71.0	73.3	73.9	74.6	75.2	75.8	76.9	77.9	78.9	79.8	80.8
–30	–22	71.7	74.1	74.7	75.4	75.9	76.6	77.7	78.7	79.7	80.6	81.7
–25	–13	72.4	74.8	75.5	76.1	76.7	77.3	78.5	79.5	80.5	81.4	82.5
–20	–4	73.2	75.6	76.2	76.9	77.5	78.1	79.3	80.3	81.3	82.2	83.3
–15	5	73.9	76.3	77.0	77.6	78.2	78.9	80.0	81.1	82.1	83.0	84.1
–10	14	74.6	77.0	77.7	78.4	79.0	79.6	80.8	81.9	82.9	83.8	84.9
–5	23	75.3	77.8	78.4	79.1	79.7	80.4	81.6	82.6	83.6	84.6	85.7
0	32	76.0	78.5	79.2	79.8	80.5	81.1	82.3	83.4	84.4	85.4	86.4
5	41	76.7	79.2	79.9	80.6	81.2	81.8	83.1	84.2	85.2	85.8	86.1
10	50	77.4	79.9	80.6	81.3	81.9	82.6	83.8	84.9	85.3	85.2	85.5

cs300_pw1521G_v05r2_status_takeoff_to2_avg_010.ch16

Derated takeoff TO–2 – Static to 30 KIAS – AEO – Cowl anti–ice on <72211001D>
Figure 03–01B–39

THRUST SETTING– %N1

DERATED TAKEOFF – STATIC to 30 KIAS

TO–2 (AEO)

WING AND COWL ANTI–ICE ON

PW1521G–3

OAT		PRESSURE ALTITUDE (Feet)										
(°C)	(°F)	–2000	0	1000	2000	3000	4000	6000	8000	10000	12000	14500
–54	**–65**	68.1	70.4	71.0	71.6	72.2	72.7	73.8	74.8	75.7	76.6	77.6
–50	**–58**	68.8	71.0	71.6	72.2	72.8	73.4	74.5	75.5	76.4	77.3	78.3
–45	**–49**	69.5	71.8	72.4	73.0	73.6	74.2	75.3	76.3	77.2	78.1	79.2
–40	**–40**	70.3	72.6	73.2	73.8	74.4	75.0	76.1	77.1	78.1	79.0	80.0
–35	**–31**	71.0	73.3	73.9	74.6	75.2	75.8	76.9	77.9	78.9	79.8	80.8
–30	**–22**	71.7	74.1	74.7	75.4	75.9	76.6	77.7	78.7	79.7	80.6	81.7
–25	**–13**	72.4	74.8	75.5	76.1	76.7	77.3	78.5	79.5	80.5	81.4	82.5
–20	**–4**	73.2	75.6	76.2	76.9	77.5	78.1	79.3	80.3	81.3	82.2	83.3
–15	**5**	73.9	76.3	77.0	77.6	78.2	78.9	80.0	81.1	82.1	83.0	84.1
–10	**14**	74.6	77.0	77.7	78.4	79.0	79.6	80.8	81.9	82.9	83.8	84.9
–5	**23**	75.3	77.8	78.4	79.1	79.7	80.4	81.6	82.6	83.6	84.6	85.7
0	**32**	76.0	78.5	79.2	79.8	80.5	81.1	82.3	83.4	84.4	85.4	86.1
5	**41**	76.7	79.2	79.9	80.6	81.2	81.8	83.1	84.2	85.2	85.2	85.7
10	**50**	77.4	79.9	80.6	81.3	81.9	82.6	83.8	84.4	84.6	84.4	85.1

cs300_pw1521G_v05r2_status_takeoff_to2_avg_011.ch16

Derated takeoff TO–2 – Static to 30 KIAS – AEO – Wing and cowl anti–ice on <72211001D>

Figure 03–01B–40

G. Derate N1 TO-2 – 140 KIAS – PW1521G-3 <72211001D>

THRUST SETTING– %N1

DERATED TAKEOFF – 140 KIAS

TO–2 (AEO or OEI)

ENGINE BLEEDS CLOSED

PW1521G–3

SAT		PRESSURE ALTITUDE (Feet)											
(°C)	(°F)	–2000	0	1000	2000	3000	4000	6000	8000	10000	12000	14500	16000
–56	**–68**	69.5	71.5	72.1	72.8	73.3	73.9	74.9	75.8	76.7	77.4	78.0	78.2
–50	**–58**	70.5	72.5	73.1	73.7	74.3	74.9	76.0	76.8	77.8	78.5	79.0	79.3
–45	**–49**	71.2	73.3	73.9	74.6	75.2	75.8	76.8	77.7	78.6	79.3	79.9	80.2
–40	**–40**	72.0	74.0	74.7	75.3	76.0	76.6	77.6	78.5	79.5	80.2	80.7	81.0
–35	**–31**	72.8	74.8	75.5	76.1	76.8	77.4	78.4	79.3	80.3	81.0	81.6	81.9
–30	**–22**	73.5	75.6	76.3	76.9	77.6	78.2	79.2	80.1	81.1	81.8	82.4	82.7
–25	**–13**	74.3	76.3	77.0	77.7	78.3	79.0	80.0	80.9	81.9	82.7	83.2	83.5
–20	**–4**	75.0	77.1	77.8	78.5	79.1	79.8	80.8	81.7	82.8	83.5	84.1	84.3
–15	**5**	75.7	77.9	78.6	79.2	79.9	80.5	81.6	82.5	83.6	84.3	84.9	85.1
–10	**14**	76.4	78.6	79.3	80.0	80.6	81.3	82.4	83.3	84.3	85.1	85.7	85.9
–5	**23**	77.2	79.3	80.0	80.7	81.4	82.1	83.2	84.1	85.1	85.9	86.4	86.7
0	**32**	77.9	80.1	80.8	81.5	82.2	82.8	83.9	84.9	85.9	86.7	87.2	87.5
5	**41**	78.6	80.8	81.5	82.2	82.9	83.6	84.7	85.6	86.7	87.4	87.8	87.8
10	**50**	79.3	81.5	82.2	83.0	83.6	84.3	85.4	86.4	87.5	87.5	87.5	87.5
15	**59**	80.0	82.2	83.0	83.7	84.4	85.0	86.2	87.1	87.1	87.0	87.0	87.1
20	**68**	80.7	83.0	83.7	84.4	85.1	85.8	86.5	86.4	86.4	86.3	86.4	86.4
25	**77**	81.4	83.7	84.4	85.1	85.6	85.6	85.6	85.5	85.4	85.3	85.3	85.4
30	**86**	82.1	84.4	84.5	84.5	84.6	84.6	84.6	84.5	84.2	84.0	84.0	84.3
35	**95**	82.5	83.3	83.4	83.5	83.5	83.6	83.5	83.4	83.0	82.7	82.7	--
40	**104**	81.4	82.3	82.3	82.4	82.4	82.5	82.4	82.1	81.7	81.3	81.4	--
45	**113**	80.2	81.1	81.2	81.3	81.3	81.3	81.2	80.8	80.3	79.9	--	--
53	**127**	77.9	79.2	79.3	79.3	79.3	79.3	79.2	78.6	--	--	--	--

cs300_pw1521G_v05r2_status_to–2_140knt_avg_000.ch16

Derated takeoff TO–2 – 140 KIAS – AEO or OEI – Engine bleeds closed <72211001D>
Figure 03–01B–41

THRUST SETTING– %N1

DERATED TAKEOFF – 140 KIAS

TO–2 (AEO)

PACKS ON, ANTI–ICE OFF

PW1521G–3

SAT		PRESSURE ALTITUDE (Feet)											
(°C)	(°F)	–2000	0	1000	2000	3000	4000	6000	8000	10000	12000	14500	16000
–56	–68	69.6	71.6	72.2	72.8	73.4	74.0	75.0	75.8	76.8	77.5	78.0	78.3
–50	–58	70.5	72.5	73.2	73.8	74.4	75.0	76.0	76.9	77.8	78.5	79.1	79.4
–45	–49	71.3	73.3	74.0	74.6	75.2	75.8	76.8	77.7	78.7	79.4	80.0	80.2
–40	–40	72.1	74.1	74.8	75.4	76.0	76.6	77.7	78.6	79.6	80.3	80.8	81.1
–35	–31	72.8	74.9	75.5	76.2	76.8	77.4	78.5	79.4	80.4	81.1	81.7	81.9
–30	–22	73.6	75.6	76.3	77.0	77.6	78.2	79.3	80.2	81.2	81.9	82.5	82.8
–25	–13	74.3	76.4	77.1	77.8	78.4	79.0	80.1	81.0	82.0	82.8	83.3	83.6
–20	–4	75.1	77.2	77.8	78.5	79.2	79.8	80.9	81.8	82.8	83.6	84.2	84.4
–15	5	75.8	77.9	78.6	79.3	79.9	80.6	81.7	82.6	83.6	84.4	84.9	85.2
–10	14	76.5	78.7	79.3	80.1	80.7	81.4	82.5	83.4	84.4	85.2	85.7	86.0
–5	23	77.2	79.4	80.1	80.8	81.5	82.1	83.2	84.2	85.2	86.0	86.5	86.8
0	32	77.9	80.1	80.8	81.5	82.2	82.9	84.0	84.9	86.0	86.8	87.0	86.9
5	41	78.6	80.9	81.6	82.3	83.0	83.6	84.8	85.7	86.8	86.9	86.8	86.7
10	50	79.3	81.6	82.3	83.0	83.7	84.4	85.5	86.5	86.5	86.3	86.3	86.3
15	59	80.0	82.3	83.0	83.8	84.4	85.1	86.1	85.9	85.8	85.6	85.5	85.5
20	68	80.7	83.0	83.8	84.5	85.2	85.3	85.2	85.1	84.8	84.4	84.3	84.2
25	77	81.4	83.7	84.2	84.2	84.2	84.2	84.2	83.9	83.6	83.2	82.9	82.8
30	86	82.1	83.0	83.0	83.1	83.1	83.1	82.9	82.7	82.2	81.9	81.6	81.8
35	95	81.0	81.8	81.8	81.8	81.8	81.8	81.7	81.4	80.9	80.6	80.3	––
40	104	79.8	80.6	80.6	80.6	80.6	80.6	80.4	80.0	79.5	79.2	78.9	––
45	113	78.4	79.3	79.3	79.3	79.3	79.2	79.1	78.7	78.2	77.8	––	––
53	127	75.9	77.2	77.2	77.1	77.1	77.1	77.0	76.5	––	––	––	––

cs300_pw1521G_v05r2_status_to–2_140knt_avg_100.ch16

Derated takeoff TO–2 – 140 KIAS – AEO – Packs on, anti–ice off <72211001D>
Figure 03–01B–42

THRUST SETTING– %N1

DERATED TAKEOFF – 140 KIAS

TO–2 (AEO)

PACKS ON, COWL ANTI–ICE ON

PW1521G–3

SAT		PRESSURE ALTITUDE (Feet)											
(°C)	(°F)	–2000	0	1000	2000	3000	4000	6000	8000	10000	12000	14500	16000
–56	–68	69.6	71.6	72.2	72.9	73.5	74.1	75.1	75.9	76.9	77.6	78.1	78.4
–50	–58	70.6	72.6	73.2	73.9	74.5	75.1	76.1	76.9	77.9	78.6	79.2	79.5
–45	–49	71.4	73.4	74.0	74.7	75.3	75.9	76.9	77.8	78.8	79.5	80.1	80.3
–40	–40	72.1	74.2	74.8	75.5	76.1	76.7	77.8	78.6	79.6	80.3	80.9	81.2
–35	–31	72.9	74.9	75.6	76.3	76.9	77.5	78.6	79.5	80.5	81.2	81.8	82.1
–30	–22	73.6	75.7	76.4	77.0	77.7	78.3	79.4	80.3	81.3	82.0	82.6	82.9
–25	–13	74.4	76.5	77.2	77.8	78.5	79.1	80.2	81.1	82.1	82.8	83.4	83.7
–20	–4	75.1	77.2	77.9	78.6	79.2	79.9	81.0	81.9	82.9	83.7	84.3	84.5
–15	5	75.8	78.0	78.7	79.4	80.0	80.7	81.8	82.7	83.7	84.5	85.1	85.3
–10	14	76.6	78.7	79.4	80.1	80.8	81.4	82.5	83.5	84.5	85.3	85.8	86.2
–5	23	77.3	79.5	80.2	80.9	81.5	82.2	83.3	84.2	85.3	86.1	86.6	86.9
0	32	78.0	80.2	80.9	81.6	82.3	82.9	84.1	85.0	86.1	86.8	86.8	86.7
5	41	78.7	80.9	81.6	82.4	83.0	83.7	84.8	85.8	86.6	86.4	86.4	86.5
10	50	79.4	81.7	82.4	83.1	83.8	84.4	85.6	86.0	85.8	85.8	85.9	86.0

cs300_pw1521G_v05r2_status_to–2_140knt_avg_110.ch16

Derated takeoff TO–2 – 140 KIAS – AEO – Packs on, cowl anti–ice on <72211001D>
Figure 03–01B–43

THRUST SETTING– %N1

DERATED TAKEOFF – 140 KIAS

TO–2 (AEO)

PACKS ON, WING AND COWL ANTI–ICE ON

PW1521G–3

SAT		PRESSURE ALTITUDE (Feet)											
(°C)	(°F)	–2000	0	1000	2000	3000	4000	6000	8000	10000	12000	14500	16000
–56	**–68**	69.6	71.6	72.2	72.9	73.5	74.1	75.1	75.9	76.9	77.6	78.1	78.4
–50	**–58**	70.6	72.6	73.2	73.9	74.5	75.1	76.1	76.9	77.9	78.6	79.2	79.5
–45	**–49**	71.4	73.4	74.0	74.7	75.3	75.9	76.9	77.8	78.8	79.5	80.1	80.3
–40	**–40**	72.1	74.2	74.8	75.5	76.1	76.7	77.8	78.6	79.6	80.3	80.9	81.2
–35	**–31**	72.9	74.9	75.6	76.3	76.9	77.5	78.6	79.5	80.5	81.2	81.8	82.1
–30	**–22**	73.6	75.7	76.4	77.0	77.7	78.3	79.4	80.3	81.3	82.0	82.6	82.9
–25	**–13**	74.4	76.5	77.2	77.8	78.5	79.1	80.2	81.1	82.1	82.8	83.4	83.7
–20	**–4**	75.1	77.2	77.9	78.6	79.2	79.9	81.0	81.9	82.9	83.7	84.3	84.5
–15	**5**	75.8	78.0	78.7	79.4	80.0	80.7	81.8	82.7	83.7	84.5	85.1	85.3
–10	**14**	76.6	78.7	79.4	80.1	80.8	81.4	82.5	83.5	84.5	85.3	85.8	86.2
–5	**23**	77.3	79.5	80.2	80.9	81.5	82.2	83.3	84.2	85.3	86.1	86.6	86.7
0	**32**	78.0	80.2	80.9	81.6	82.3	82.9	84.1	85.0	86.1	86.5	86.5	86.5
5	**41**	78.7	80.9	81.6	82.4	83.0	83.7	84.8	85.8	86.0	86.0	86.1	86.2
10	**50**	79.4	81.7	82.4	83.1	83.8	84.4	85.4	85.3	85.1	85.3	85.6	85.7

cs300_pw1521G_v05r2_status_to–2_140knt_avg_111.ch16

Derated takeoff TO–2 – 140 KIAS – AEO – Packs on, wing and cowl anti–ice on <72211001D>

Figure 03–01B–44

THRUST SETTING– %N1

DERATED TAKEOFF – 140 KIAS

TO–2 (OEI)

PACK(S) ON, ANTI–ICE OFF

PW1521G–3

SAT		PRESSURE ALTITUDE (Feet)											
(°C)	(°F)	–2000	0	1000	2000	3000	4000	6000	8000	10000	12000	14500	16000
–56	–68	69.6	71.6	72.2	72.8	73.4	74.0	75.0	75.9	76.8	77.5	78.1	78.3
–50	–58	70.5	72.5	73.2	73.8	74.4	75.0	76.0	76.9	77.9	78.6	79.1	79.4
–45	–49	71.3	73.3	74.0	74.6	75.2	75.8	76.9	77.7	78.7	79.4	80.0	80.3
–40	–40	72.1	74.1	74.8	75.4	76.0	76.7	77.7	78.6	79.6	80.3	80.8	81.1
–35	–31	72.8	74.9	75.6	76.2	76.8	77.5	78.5	79.4	80.4	81.1	81.7	82.0
–30	–22	73.6	75.7	76.3	77.0	77.6	78.2	79.3	80.2	81.2	81.9	82.5	82.8
–25	–13	74.3	76.4	77.1	77.8	78.4	79.1	80.1	81.0	82.0	82.8	83.4	83.6
–20	–4	75.1	77.2	77.9	78.5	79.2	79.8	80.9	81.8	82.8	83.6	84.2	84.4
–15	5	75.8	77.9	78.6	79.3	80.0	80.6	81.7	82.6	83.7	84.4	85.0	85.2
–10	14	76.5	78.7	79.4	80.1	80.7	81.4	82.5	83.4	84.4	85.2	85.8	86.1
–5	23	77.2	79.4	80.1	80.8	81.5	82.1	83.2	84.2	85.2	86.0	86.6	86.7
0	32	77.9	80.1	80.8	81.6	82.2	82.9	84.0	85.0	86.0	86.8	86.6	86.5
5	41	78.7	80.9	81.6	82.3	83.0	83.6	84.8	85.7	86.7	86.4	86.3	86.2
10	50	79.3	81.6	82.3	83.0	83.7	84.4	85.5	86.2	86.0	85.8	85.7	85.7
15	59	80.1	82.3	83.1	83.8	84.4	85.1	85.7	85.4	85.3	85.0	84.8	84.8
20	68	80.8	83.0	83.8	84.5	84.9	84.8	84.8	84.5	84.1	83.6	83.3	83.2
25	77	81.4	83.8	83.8	83.8	83.7	83.7	83.6	83.3	82.7	82.2	81.8	81.7
30	86	81.8	82.5	82.5	82.5	82.5	82.4	82.3	81.9	81.2	80.9	80.5	80.6
35	95	80.6	81.3	81.3	81.3	81.2	81.1	80.9	80.6	79.8	79.6	79.1	––
40	104	79.3	80.0	80.0	80.0	79.9	79.8	79.6	79.1	78.5	78.2	77.8	––
45	113	77.9	78.7	78.7	78.6	78.5	78.3	78.2	77.8	77.2	76.8	––	––
53	127	75.4	76.5	76.4	76.3	76.2	76.1	76.2	75.6	––	––	––	––

cs300_pw1521G_v05r2_status_to–2_140knt_avg_300.ch16

Derated takeoff TO–2 – 140 KIAS – OEI – Pack(s) on, anti–ice off <72211001D>
Figure 03–01B–45

THRUST SETTING– %N1

DERATED TAKEOFF – 140 KIAS

TO–2 (OEI)

PACK(S) ON, COWL ANTI–ICE ON

PW1521G–3

SAT		PRESSURE ALTITUDE (Feet)											
(°C)	(°F)	–2000	0	1000	2000	3000	4000	6000	8000	10000	12000	14500	16000
–56	**–68**	69.8	71.7	72.3	73.0	73.6	74.2	75.2	76.0	77.0	77.7	78.3	78.6
–50	**–58**	70.7	72.7	73.3	74.0	74.6	75.2	76.2	77.1	78.1	78.8	79.3	79.6
–45	**–49**	71.5	73.5	74.1	74.8	75.4	76.0	77.0	77.9	78.9	79.7	80.2	80.5
–40	**–40**	72.2	74.3	74.9	75.6	76.2	76.8	77.9	78.8	79.8	80.5	81.1	81.4
–35	**–31**	73.0	75.1	75.7	76.4	77.0	77.6	78.7	79.6	80.6	81.3	81.9	82.2
–30	**–22**	73.8	75.8	76.5	77.2	77.8	78.4	79.5	80.4	81.4	82.2	82.8	83.1
–25	**–13**	74.5	76.6	77.3	77.9	78.6	79.2	80.3	81.2	82.2	83.0	83.6	83.9
–20	**–4**	75.2	77.3	78.0	78.7	79.4	80.0	81.1	82.0	83.0	83.8	84.4	84.4
–15	**5**	75.9	78.1	78.8	79.5	80.1	80.8	81.9	82.8	83.8	84.6	84.7	84.2
–10	**14**	76.7	78.8	79.5	80.2	80.9	81.6	82.7	83.6	84.6	85.1	84.3	84.0
–5	**23**	77.4	79.6	80.3	81.0	81.7	82.3	83.4	84.4	85.2	84.6	83.9	83.3
0	**32**	78.1	80.3	81.0	81.7	82.4	83.1	84.2	85.2	84.7	83.9	82.6	81.8
5	**41**	78.8	81.0	81.8	82.5	83.2	83.8	84.9	84.4	83.6	82.4	80.5	79.5
10	**50**	79.5	81.8	82.5	83.2	83.9	84.4	83.8	83.1	82.2	80.6	78.5	77.4

cs300_pw1521G_v05r2_status_to–2_140knt_avg_310.ch16

Derated takeoff TO–2 – 140 KIAS – OEI – Pack(s) on, cowl anti–ice on <72211001D>

Figure 03–01B–46

THRUST SETTING– %N1

DERATED TAKEOFF – 140 KIAS

TO–2 (OEI)

PACK(S) ON, WING AND COWL ANTI–ICE ON

PW1521G–3

SAT		PRESSURE ALTITUDE (Feet)											
(°C)	(°F)	–2000	0	1000	2000	3000	4000	6000	8000	10000	12000	14500	16000
–56	**–68**	69.8	71.7	72.3	73.0	73.6	74.2	75.2	76.0	77.0	77.7	78.3	78.6
–50	**–58**	70.7	72.7	73.3	74.0	74.6	75.2	76.2	77.1	78.1	78.8	79.3	79.6
–45	**–49**	71.5	73.5	74.1	74.8	75.4	76.0	77.0	77.9	78.9	79.7	80.2	80.5
–40	**–40**	72.2	74.3	74.9	75.6	76.2	76.8	77.9	78.8	79.8	80.5	81.1	81.4
–35	**–31**	73.0	75.1	75.7	76.4	77.0	77.6	78.7	79.6	80.6	81.3	81.9	82.2
–30	**–22**	73.8	75.8	76.5	77.2	77.8	78.4	79.5	80.4	81.4	82.2	82.8	83.1
–25	**–13**	74.5	76.6	77.3	77.9	78.6	79.2	80.3	81.2	82.2	83.0	83.6	83.9
–20	**–4**	75.2	77.3	78.0	78.7	79.4	80.0	81.1	82.0	83.0	83.8	84.4	84.3
–15	**5**	75.9	78.1	78.8	79.5	80.1	80.8	81.9	82.8	83.8	84.6	84.5	84.1
–10	**14**	76.7	78.8	79.5	80.2	80.9	81.6	82.7	83.6	84.6	84.7	84.1	83.8
–5	**23**	77.4	79.6	80.3	81.0	81.7	82.3	83.4	84.4	84.7	84.1	83.6	83.1
0	**32**	78.1	80.3	81.0	81.7	82.4	83.1	84.2	84.3	83.9	83.3	82.2	81.5
5	**41**	78.8	81.0	81.8	82.5	83.2	83.8	83.8	83.4	82.7	81.7	80.0	79.2
10	**50**	79.5	81.8	82.5	83.2	83.1	83.0	82.5	81.9	81.1	79.6	77.9	77.1

cs300_pw1521G_v05r2_status_to–2_140knt_avg_312.ch16

Derated takeoff TO–2 – 140 KIAS – OEI – Pack(s) on, wing and cowl anti–ice on <72211001D>
Figure 03–01B–47

THRUST SETTING– %N1

DERATED TAKEOFF – 140 KIAS

TO–2 (AEO or OEI)

COWL ANTI–ICE ON

PW1521G–3

SAT		PRESSURE ALTITUDE (Feet)											
(°C)	(°F)	–2000	0	1000	2000	3000	4000	6000	8000	10000	12000	14500	16000
–56	**–68**	69.6	71.6	72.2	72.9	73.5	74.1	75.1	75.9	76.9	77.6	78.1	78.4
–50	**–58**	70.6	72.6	73.2	73.9	74.5	75.1	76.1	76.9	77.9	78.6	79.2	79.5
–45	**–49**	71.4	73.4	74.0	74.7	75.3	75.9	76.9	77.8	78.8	79.5	80.1	80.3
–40	**–40**	72.1	74.2	74.8	75.5	76.1	76.7	77.8	78.6	79.6	80.3	80.9	81.2
–35	**–31**	72.9	74.9	75.6	76.3	76.9	77.5	78.6	79.5	80.5	81.2	81.8	82.1
–30	**–22**	73.6	75.7	76.4	77.0	77.7	78.3	79.4	80.3	81.3	82.0	82.6	82.9
–25	**–13**	74.4	76.5	77.2	77.8	78.5	79.1	80.2	81.1	82.1	82.8	83.4	83.7
–20	**–4**	75.1	77.2	77.9	78.6	79.2	79.9	81.0	81.9	82.9	83.7	84.3	84.5
–15	**5**	75.8	78.0	78.7	79.4	80.0	80.7	81.8	82.7	83.7	84.5	85.1	85.3
–10	**14**	76.6	78.7	79.4	80.1	80.8	81.4	82.5	83.5	84.5	85.3	85.8	86.2
–5	**23**	77.3	79.5	80.2	80.9	81.5	82.2	83.3	84.2	85.3	86.1	86.6	86.9
0	**32**	78.0	80.2	80.9	81.6	82.3	82.9	84.1	85.0	86.1	86.8	87.4	87.6
5	**41**	78.7	80.9	81.6	82.4	83.0	83.7	84.8	85.8	86.9	87.4	87.5	87.5
10	**50**	79.4	81.7	82.4	83.1	83.8	84.4	85.6	86.6	86.9	87.0	87.1	87.2

cs300_pw1521G_v05r2_status_to–2_140knt_avg_010.ch16

Derated takeoff TO–2 – 140 KIAS – AEO or OEI – Cowl anti–ice on <72211001D>
Figure 03–01B–48

THRUST SETTING– %N1

DERATED TAKEOFF – 140 KIAS

TO–2 (AEO)

WING AND COWL ANTI–ICE ON

PW1521G–3

SAT		PRESSURE ALTITUDE (Feet)											
(°C)	(°F)	–2000	0	1000	2000	3000	4000	6000	8000	10000	12000	14500	16000
–56	**–68**	69.6	71.6	72.2	72.9	73.5	74.1	75.1	75.9	76.9	77.6	78.1	78.4
–50	**–58**	70.6	72.6	73.2	73.9	74.5	75.1	76.1	76.9	77.9	78.6	79.2	79.5
–45	**–49**	71.4	73.4	74.0	74.7	75.3	75.9	76.9	77.8	78.8	79.5	80.1	80.3
–40	**–40**	72.1	74.2	74.8	75.5	76.1	76.7	77.8	78.6	79.6	80.3	80.9	81.2
–35	**–31**	72.9	74.9	75.6	76.3	76.9	77.5	78.6	79.5	80.5	81.2	81.8	82.1
–30	**–22**	73.6	75.7	76.4	77.0	77.7	78.3	79.4	80.3	81.3	82.0	82.6	82.9
–25	**–13**	74.4	76.5	77.2	77.8	78.5	79.1	80.2	81.1	82.1	82.8	83.4	83.7
–20	**–4**	75.1	77.2	77.9	78.6	79.2	79.9	81.0	81.9	82.9	83.7	84.3	84.5
–15	**5**	75.8	78.0	78.7	79.4	80.0	80.7	81.8	82.7	83.7	84.5	85.1	85.3
–10	**14**	76.6	78.7	79.4	80.1	80.8	81.4	82.5	83.5	84.5	85.3	85.8	86.2
–5	**23**	77.3	79.5	80.2	80.9	81.5	82.2	83.3	84.2	85.3	86.1	86.6	86.9
0	**32**	78.0	80.2	80.9	81.6	82.3	82.9	84.1	85.0	86.1	86.8	87.4	87.4
5	**41**	78.7	80.9	81.6	82.4	83.0	83.7	84.8	85.8	86.9	87.0	87.2	87.3
10	**50**	79.4	81.7	82.4	83.1	83.8	84.4	85.6	86.3	86.2	86.5	86.8	87.0

cs300_pw1521G_v05r2_status_to–2_140knt_avg_011.ch16

Derated takeoff TO–2 – 140 KIAS – AEO – Wing and cowl anti–ice on <72211001D>
Figure 03–01B–49

THRUST SETTING– %N1

DERATED TAKEOFF – 140 KIAS

TO–2 (OEI)

WING AND COWL ANTI–ICE ON

PW1521G–3

SAT		PRESSURE ALTITUDE (Feet)											
(°C)	(°F)	–2000	0	1000	2000	3000	4000	6000	8000	10000	12000	14500	16000
–56	**–68**	69.8	71.7	72.3	73.0	73.6	74.2	75.2	76.0	77.0	77.7	78.3	78.6
–50	**–58**	70.7	72.7	73.3	74.0	74.6	75.2	76.2	77.1	78.1	78.8	79.3	79.6
–45	**–49**	71.5	73.5	74.1	74.8	75.4	76.0	77.0	77.9	78.9	79.7	80.2	80.5
–40	**–40**	72.2	74.3	74.9	75.6	76.2	76.8	77.9	78.8	79.8	80.5	81.1	81.4
–35	**–31**	73.0	75.1	75.7	76.4	77.0	77.6	78.7	79.6	80.6	81.3	81.9	82.2
–30	**–22**	73.8	75.8	76.5	77.2	77.8	78.4	79.5	80.4	81.4	82.2	82.8	83.1
–25	**–13**	74.5	76.6	77.3	77.9	78.6	79.2	80.3	81.2	82.2	83.0	83.6	83.9
–20	**–4**	75.2	77.3	78.0	78.7	79.4	80.0	81.1	82.0	83.0	83.8	84.4	84.7
–15	**5**	75.9	78.1	78.8	79.5	80.1	80.8	81.9	82.8	83.8	84.6	85.2	85.5
–10	**14**	76.7	78.8	79.5	80.2	80.9	81.6	82.7	83.6	84.6	85.4	86.0	86.3
–5	**23**	77.4	79.6	80.3	81.0	81.7	82.3	83.4	84.4	85.4	86.2	86.6	86.5
0	**32**	78.1	80.3	81.0	81.7	82.4	83.1	84.2	85.2	86.2	86.4	86.2	86.1
5	**41**	78.8	81.0	81.8	82.5	83.2	83.8	85.0	85.9	85.9	85.7	85.5	85.4
10	**50**	79.5	81.8	82.5	83.2	83.9	84.6	85.3	85.1	85.0	84.8	84.8	84.6

cs300_pw1521G_v05r2_status_to–2_140knt_avg_012.ch16

Derated takeoff TO–2 – 140 KIAS – OEI – Wing and cowl anti–ice on <72211001D>

Figure 03–01B–50

H. Flexible N1 – TO FLEX – Engine bleeds closed – PW1521G-3 <72211001D>

THRUST SETTING – %N1

REDUCED THRUST TAKEOFF – STATIC to 30 KIAS

TO FLEX, ENGINE BLEEDS CLOSED

PRESSURE ALTITUDE = –2000 FT

PW1521G–3

OAT	ASSUMED TEMPERATURE (°C)						
(°C)	34	44	54	64	74	84	94
–54	73.5	70.2	67.2	64.4	63.8	63.8	63.8
–50	74.2	70.9	67.8	65.0	64.4	64.4	64.4
–45	75.0	71.7	68.6	65.7	65.1	65.1	65.1
–40	75.8	72.5	69.3	66.4	65.8	65.8	65.8
–35	76.6	73.2	70.1	67.1	66.5	66.5	66.5
–30	77.4	74.0	70.8	67.8	67.1	67.1	67.1
–25	78.2	74.7	71.5	68.5	67.8	67.8	67.8
–20	79.0	75.5	72.2	69.2	68.5	68.5	68.5
–15	79.8	76.2	73.0	69.9	69.1	69.1	69.1
–10	80.5	77.0	73.7	70.5	69.8	69.8	69.8
–5	81.3	77.7	74.4	71.2	70.5	70.5	70.5
0	82.0	78.4	75.0	71.9	71.1	71.1	71.1
5	82.8	79.1	75.7	72.5	71.8	71.8	71.8
10	83.5	79.8	76.4	73.2	72.4	72.4	72.4
15	84.2	80.5	77.1	73.8	73.0	73.0	73.0
20	85.0	81.2	77.7	74.4	73.7	73.7	73.7
25	85.7	81.9	78.4	75.1	74.3	74.3	74.3
30	86.4	82.6	79.1	75.7	74.9	74.9	74.9
35	–	83.3	79.7	76.3	75.3	75.3	75.3
40	–	84.0	80.3	76.9	74.0	74.0	74.0
45	–	–	81.0	77.5	74.1	72.7	72.7
53	–	–	82.0	78.5	75.0	71.5	70.9

/data/engperf/CSeries/Docs/QRH_FCOM_CS300_1521g–3/derivation/pw1524g_ba_v05r2_status/FLEX/60000/60000_–2000FT_qrh_n1.ps

TO FLEX – Engine bleeds closed – Pressure altitude –2000 ft <72211001D>
Figure 03–01B–51

THRUST SETTING – %N1

REDUCED THRUST TAKEOFF – STATIC to 30 KIAS

TO FLEX, ENGINE BLEEDS CLOSED

PRESSURE ALTITUDE = Sea Level

PW1521G–3

OAT	ASSUMED TEMPERATURE (°C)						
(°C)	30	40	50	60	70	80	90
–54	75.8	72.6	69.4	66.5	66.1	66.1	66.1
–50	76.5	73.2	70.0	67.2	66.7	66.7	66.7
–45	77.3	74.0	70.8	67.9	67.4	67.4	67.4
–40	78.2	74.9	71.5	68.6	68.1	68.1	68.1
–35	79.0	75.7	72.3	69.4	68.8	68.8	68.8
–30	79.8	76.5	73.1	70.1	69.5	69.5	69.5
–25	80.7	77.2	73.8	70.8	70.2	70.2	70.2
–20	81.5	78.0	74.5	71.5	70.9	70.9	70.9
–15	82.3	78.8	75.3	72.2	71.6	71.6	71.6
–10	83.0	79.5	76.0	72.9	72.3	72.3	72.3
–5	83.8	80.3	76.7	73.6	73.0	73.0	73.0
0	84.6	81.0	77.4	74.3	73.7	73.7	73.7
5	85.4	81.8	78.1	75.0	74.3	74.3	74.3
10	86.1	82.5	78.8	75.6	75.0	75.0	75.0
15	86.9	83.2	79.5	76.3	75.7	75.7	75.7
20	87.7	83.9	80.2	77.0	76.3	76.3	76.3
25	88.4	84.7	80.9	77.6	77.0	77.0	77.0
30	89.2	85.4	81.6	78.3	77.6	77.6	77.6
35	–	86.1	82.2	78.9	76.5	76.5	76.5
40	–	86.8	82.9	79.5	76.2	75.2	75.2
45	–	–	83.6	80.2	76.8	74.0	74.0
53	–	–	–	81.2	77.7	74.3	71.8

/data/engperf/CSeries/Docs/QRH_FCOM_CS300_1521g–3/derivation/pw1524g_ba_v05r2_status/FLEX/60000/60000_SL_qrh_n1.ps

TO FLEX – Engine bleeds closed – Pressure altitude Sea level <72211001D>
Figure 03–01B–52

THRUST SETTING – %N1

REDUCED THRUST TAKEOFF – STATIC to 30 KIAS

TO FLEX, ENGINE BLEEDS CLOSED

PRESSURE ALTITUDE = 1000 FT

PW1521G–3

OAT	ASSUMED TEMPERATURE (°C)						
(°C)	28	38	48	58	68	78	88
–54	76.4	73.2	70.0	67.0	66.7	66.7	66.7
–50	77.1	73.9	70.6	67.6	67.3	67.3	67.3
–45	78.0	74.7	71.4	68.4	68.0	68.0	68.0
–40	78.8	75.5	72.2	69.1	68.7	68.7	68.7
–35	79.7	76.3	73.0	69.8	69.5	69.5	69.5
–30	80.5	77.1	73.7	70.6	70.2	70.2	70.2
–25	81.3	77.9	74.5	71.3	70.9	70.9	70.9
–20	82.2	78.7	75.2	72.0	71.6	71.6	71.6
–15	83.0	79.5	76.0	72.7	72.3	72.3	72.3
–10	83.8	80.2	76.7	73.4	73.0	73.0	73.0
–5	84.5	81.0	77.4	74.1	73.7	73.7	73.7
0	85.3	81.7	78.2	74.8	74.3	74.3	74.3
5	86.1	82.5	78.9	75.5	75.0	75.0	75.0
10	86.9	83.2	79.6	76.2	75.7	75.7	75.7
15	87.6	84.0	80.3	76.8	76.4	76.4	76.4
20	88.4	84.7	81.0	77.5	77.0	77.0	77.0
25	89.2	85.4	81.7	78.1	77.7	77.7	77.7
30	–	86.1	82.3	78.8	77.7	77.7	77.7
35	–	86.8	83.0	79.4	76.5	76.5	76.5
40	–	–	83.7	80.1	76.5	75.2	75.2
45	–	–	84.3	80.7	77.1	74.0	74.0
53	–	–	–	81.7	78.1	74.4	71.8

/data/engperf/CSeries/Docs/QRH_FCOM_CS300_1521g–3/derivation/pw1524g_ba_v05r2_status/FLEX/60000/60000_1000FT_qrh_n1.ps

TO FLEX – Engine bleeds closed – Pressure altitude 1000 ft <72211001D>
Figure 03–01B–53

THRUST SETTING – %N1

REDUCED THRUST TAKEOFF – STATIC to 30 KIAS

TO FLEX, ENGINE BLEEDS CLOSED

PRESSURE ALTITUDE = 2000 FT

PW1521G–3

OAT	ASSUMED TEMPERATURE (°C)						
(°C)	26	36	46	56	66	76	86
–54	77.1	73.9	70.6	67.5	67.3	67.3	67.3
–50	77.8	74.5	71.3	68.1	67.9	67.9	67.9
–45	78.7	75.4	72.1	68.8	68.6	68.6	68.6
–40	79.5	76.2	72.9	69.6	69.3	69.3	69.3
–35	80.3	77.0	73.6	70.3	70.1	70.1	70.1
–30	81.2	77.8	74.4	71.0	70.8	70.8	70.8
–25	82.0	78.6	75.2	71.8	71.5	71.5	71.5
–20	82.8	79.4	75.9	72.5	72.2	72.2	72.2
–15	83.7	80.2	76.7	73.2	72.9	72.9	72.9
–10	84.5	80.9	77.4	73.9	73.6	73.6	73.6
–5	85.2	81.7	78.1	74.6	74.3	74.3	74.3
0	86.0	82.5	78.9	75.3	75.0	75.0	75.0
5	86.8	83.2	79.6	76.0	75.7	75.7	75.7
10	87.6	84.0	80.3	76.7	76.4	76.4	76.4
15	88.4	84.7	81.0	77.3	77.0	77.0	77.0
20	89.1	85.4	81.7	78.0	77.7	77.7	77.7
25	89.9	86.2	82.4	78.7	78.4	78.4	78.4
30	–	86.9	83.1	79.3	77.7	77.7	77.7
35	–	87.6	83.8	80.0	76.5	76.5	76.5
40	–	–	84.5	80.6	76.8	75.2	75.2
45	–	–	85.1	81.3	77.4	74.0	74.0
53	–	–	–	82.3	78.4	74.5	71.6

/data/engperf/CSeries/Docs/QRH_FCOM_CS300_1521g–3/derivation/pw1524g_ba_v05r2_status/FLEX/60000/60000_2000FT_qrh_n1.ps

TO FLEX – Engine bleeds closed – Pressure altitude 2000 ft <72211001D>
Figure 03–01B–54

THRUST SETTING – %N1

REDUCED THRUST TAKEOFF – STATIC to 30 KIAS

TO FLEX, ENGINE BLEEDS CLOSED

PRESSURE ALTITUDE = 3000 FT

PW1521G–3

OAT	ASSUMED TEMPERATURE (°C)						
(°C)	24	34	44	54	64	74	84
–54	77.7	74.5	71.2	68.0	67.8	67.8	67.8
–50	78.4	75.2	71.9	68.7	68.4	68.4	68.4
–45	79.2	76.0	72.7	69.4	69.2	69.2	69.2
–40	80.1	76.8	73.5	70.2	69.9	69.9	69.9
–35	81.0	77.7	74.3	70.9	70.6	70.6	70.6
–30	81.8	78.5	75.0	71.7	71.3	71.3	71.3
–25	82.7	79.3	75.8	72.4	72.1	72.1	72.1
–20	83.5	80.1	76.6	73.1	72.8	72.8	72.8
–15	84.3	80.8	77.3	73.8	73.5	73.5	73.5
–10	85.1	81.6	78.1	74.5	74.2	74.2	74.2
–5	85.9	82.4	78.8	75.3	74.9	74.9	74.9
0	86.7	83.2	79.5	76.0	75.6	75.6	75.6
5	87.5	83.9	80.3	76.7	76.3	76.3	76.3
10	88.3	84.7	81.0	77.3	77.0	77.0	77.0
15	89.1	85.4	81.7	78.0	77.6	77.6	77.6
20	89.8	86.2	82.4	78.7	78.3	78.3	78.3
25	–	86.9	83.1	79.4	78.8	78.8	78.8
30	–	87.6	83.8	80.0	77.7	77.7	77.7
35	–	–	84.5	80.7	76.9	76.5	76.5
40	–	–	85.2	81.3	77.5	75.2	75.2
45	–	–	–	82.0	78.1	74.2	73.9
53	–	–	–	83.0	79.1	75.2	71.6

/data/engperf/CSeries/Docs/QRH_FCOM_CS300_1521g–3/derivation/pw1524g_ba_v05r2_status/FLEX/60000/60000_3000FT_qrh_n1.ps

TO FLEX – Engine bleeds closed – Pressure altitude 3000 ft <72211001D>
Figure 03–01B–55

THRUST SETTING – %N1

REDUCED THRUST TAKEOFF – STATIC to 30 KIAS

TO FLEX, ENGINE BLEEDS CLOSED

PRESSURE ALTITUDE = 4000 FT

PW1521G–3

OAT	ASSUMED TEMPERATURE (°C)						
(°C)	22	32	42	52	62	72	82
–54	78.3	75.1	71.9	68.6	68.3	68.3	68.3
–50	79.0	75.8	72.5	69.2	68.9	68.9	68.9
–45	79.9	76.6	73.3	70.0	69.7	69.7	69.7
–40	80.7	77.5	74.1	70.8	70.4	70.4	70.4
–35	81.6	78.3	74.9	71.5	71.2	71.2	71.2
–30	82.5	79.1	75.7	72.3	71.9	71.9	71.9
–25	83.3	79.9	76.5	73.0	72.6	72.6	72.6
–20	84.1	80.7	77.2	73.8	73.3	73.3	73.3
–15	85.0	81.5	78.0	74.5	74.1	74.1	74.1
–10	85.8	82.3	78.7	75.2	74.8	74.8	74.8
–5	86.6	83.1	79.5	75.9	75.5	75.5	75.5
0	87.4	83.9	80.2	76.6	76.2	76.2	76.2
5	88.2	84.6	81.0	77.3	76.9	76.9	76.9
10	89.0	85.4	81.7	78.0	77.6	77.6	77.6
15	89.8	86.1	82.4	78.7	78.2	78.2	78.2
20	90.5	86.9	83.1	79.4	78.9	78.9	78.9
25	–	87.6	83.8	80.0	78.8	78.8	78.8
30	–	88.3	84.5	80.7	77.7	77.7	77.7
35	–	–	85.2	81.4	77.5	76.4	76.4
40	–	–	85.9	82.0	78.2	75.2	75.2
45	–	–	–	82.7	78.8	74.9	73.8
53	–	–	–	–	79.8	75.8	71.9

/data/engperf/CSeries/Docs/QRH_FCOM_CS300_1521g–3/derivation/pw1524g_ba_v05r2_status/FLEX/60000/60000_4000FT_qrh_n1.ps

TO FLEX – Engine bleeds closed – Pressure altitude 4000 ft <72211001D>
Figure 03–01B–56

THRUST SETTING – %N1

REDUCED THRUST TAKEOFF – STATIC to 30 KIAS

TO FLEX, ENGINE BLEEDS CLOSED

PRESSURE ALTITUDE = 5000 FT

PW1521G–3

OAT	ASSUMED TEMPERATURE (°C)						
(°C)	20	30	40	50	60	70	80
–54	78.8	75.7	72.4	69.2	68.8	68.8	68.8
–50	79.6	76.4	73.1	69.9	69.5	69.5	69.5
–45	80.5	77.2	73.9	70.7	70.2	70.2	70.2
–40	81.3	78.1	74.7	71.4	71.0	71.0	71.0
–35	82.2	78.9	75.5	72.2	71.7	71.7	71.7
–30	83.1	79.8	76.3	72.9	72.5	72.5	72.5
–25	83.9	80.6	77.1	73.7	73.2	73.2	73.2
–20	84.8	81.4	77.9	74.4	73.9	73.9	73.9
–15	85.6	82.2	78.6	75.2	74.6	74.6	74.6
–10	86.4	83.0	79.4	75.9	75.3	75.3	75.3
–5	87.2	83.8	80.1	76.6	76.0	76.0	76.0
0	88.0	84.5	80.9	77.3	76.8	76.8	76.8
5	88.8	85.3	81.6	78.0	77.5	77.5	77.5
10	89.6	86.1	82.3	78.7	78.2	78.2	78.2
15	90.4	86.8	83.1	79.4	78.8	78.8	78.8
20	91.2	87.6	83.8	80.1	79.5	79.5	79.5
25	–	88.3	84.5	80.8	78.8	78.8	78.8
30	–	89.0	85.2	81.4	77.7	77.6	77.6
35	–	–	85.9	82.1	78.3	76.3	76.3
40	–	–	86.6	82.8	79.0	75.1	75.1
45	–	–	–	83.4	79.6	75.7	73.8
53	–	–	–	–	80.6	76.7	72.8

/data/engperf/CSeries/Docs/QRH_FCOM_CS300_1521g-3/derivation/pw1524g_ba_v05r2_status/FLEX/60000/60000_5000FT_qrh_n1.ps

TO FLEX – Engine bleeds closed – Pressure altitude 5000 ft <72211001D>
Figure 03–01B–57

THRUST SETTING – %N1

REDUCED THRUST TAKEOFF – STATIC to 30 KIAS

TO FLEX, ENGINE BLEEDS CLOSED

PRESSURE ALTITUDE = 6000 FT

PW1521G–3

OAT	ASSUMED TEMPERATURE (°C)						
(°C)	18	28	38	48	58	68	78
–54	79.4	76.3	73.0	69.9	69.3	69.3	69.3
–50	80.1	77.0	73.7	70.5	70.0	70.0	70.0
–45	81.0	77.9	74.5	71.3	70.7	70.7	70.7
–40	81.9	78.7	75.3	72.1	71.5	71.5	71.5
–35	82.8	79.6	76.2	72.8	72.2	72.2	72.2
–30	83.7	80.4	77.0	73.6	73.0	73.0	73.0
–25	84.5	81.2	77.7	74.3	73.7	73.7	73.7
–20	85.3	82.0	78.5	75.1	74.5	74.5	74.5
–15	86.2	82.8	79.3	75.8	75.2	75.2	75.2
–10	87.0	83.6	80.0	76.6	75.9	75.9	75.9
–5	87.8	84.4	80.8	77.3	76.6	76.6	76.6
0	88.7	85.2	81.5	78.0	77.3	77.3	77.3
5	89.5	86.0	82.3	78.7	78.0	78.0	78.0
10	90.3	86.8	83.0	79.4	78.7	78.7	78.7
15	91.1	87.5	83.8	80.1	79.4	79.4	79.4
20	–	88.3	84.5	80.8	79.7	79.7	79.7
25	–	89.0	85.2	81.5	78.8	78.8	78.8
30	–	–	85.9	82.2	78.4	77.6	77.6
35	–	–	86.6	82.8	79.1	76.3	76.3
40	–	–	–	83.5	79.7	75.9	75.1
45	–	–	–	84.2	80.3	76.5	73.7
53	–	–	–	–	81.3	77.5	73.6

/data/engperf/CSeries/Docs/QRH_FCOM_CS300_1521g–3/derivation/pw1524g_ba_v05r2_status/FLEX/60000/60000_6000FT_qrh_n1.ps

TO FLEX – Engine bleeds closed – Pressure altitude 6000 ft <72211001D>
Figure 03–01B–58

THRUST SETTING – %N1

REDUCED THRUST TAKEOFF – STATIC to 30 KIAS

TO FLEX, ENGINE BLEEDS CLOSED

PRESSURE ALTITUDE = 8000 FT

PW1521G–3

OAT	ASSUMED TEMPERATURE (°C)						
(°C)	14	24	34	44	54	64	74
–54	80.5	77.5	74.1	70.8	70.2	70.2	70.2
–50	81.2	78.2	74.8	71.5	70.8	70.8	70.8
–45	82.1	79.1	75.7	72.3	71.6	71.6	71.6
–40	83.0	80.0	76.5	73.1	72.4	72.4	72.4
–35	83.9	80.8	77.3	73.8	73.1	73.1	73.1
–30	84.8	81.7	78.1	74.6	73.9	73.9	73.9
–25	85.6	82.5	78.9	75.4	74.7	74.7	74.7
–20	86.5	83.3	79.7	76.1	75.4	75.4	75.4
–15	87.3	84.1	80.5	76.9	76.1	76.1	76.1
–10	88.2	84.9	81.2	77.6	76.8	76.8	76.8
–5	89.0	85.7	82.0	78.4	77.6	77.6	77.6
0	89.8	86.5	82.8	79.1	78.3	78.3	78.3
5	90.7	87.3	83.5	79.8	79.0	79.0	79.0
10	91.5	88.1	84.3	80.5	79.7	79.7	79.7
15	–	88.9	85.0	81.2	80.4	80.4	80.4
20	–	89.7	85.8	81.9	79.7	79.7	79.7
25	–	–	86.5	82.6	78.8	78.7	78.7
30	–	–	87.2	83.3	79.5	77.4	77.4
35	–	–	–	84.0	80.1	76.2	76.1
40	–	–	–	84.7	80.8	76.8	74.6
45	–	–	–	–	81.4	77.4	73.5
53	–	–	–	–	82.4	78.4	74.4

/data/engperf/CSeries/Docs/QRH_FCOM_CS300_1521g-3/derivation/pw1524g_ba_v05r2_status/FLEX/60000/60000_8000FT_qrh_n1.ps

TO FLEX – Engine bleeds closed – Pressure altitude 8000 ft <72211001D>
Figure 03–01B–59

THRUST SETTING – %N1

REDUCED THRUST TAKEOFF – STATIC to 30 KIAS

TO FLEX, ENGINE BLEEDS CLOSED

PRESSURE ALTITUDE = 10000 FT

PW1521G–3

OAT	ASSUMED TEMPERATURE (°C)						
(°C)	10	20	30	40	50	60	70
–54	81.5	78.6	75.2	72.0	71.0	71.0	71.0
–50	82.2	79.3	75.9	72.7	71.6	71.6	71.6
–45	83.1	80.2	76.7	73.5	72.4	72.4	72.4
–40	84.0	81.1	77.6	74.3	73.2	73.2	73.2
–35	84.9	81.9	78.4	75.1	73.9	73.9	73.9
–30	85.8	82.8	79.2	75.9	74.7	74.7	74.7
–25	86.7	83.6	80.0	76.6	75.5	75.5	75.5
–20	87.6	84.5	80.8	77.4	76.2	76.2	76.2
–15	88.4	85.3	81.6	78.2	77.0	77.0	77.0
–10	89.3	86.1	82.4	78.9	77.7	77.7	77.7
–5	90.1	87.0	83.2	79.7	78.4	78.4	78.4
0	91.0	87.8	84.0	80.4	79.2	79.2	79.2
5	91.8	88.5	84.7	81.1	79.9	79.9	79.9
10	92.6	89.3	85.5	81.9	80.6	80.6	80.6
15	–	90.1	86.2	82.6	80.4	80.4	80.4
20	–	90.9	87.0	83.3	79.6	79.5	79.5
25	–	–	87.7	84.0	80.3	78.4	78.4
30	–	–	88.4	84.7	81.0	77.2	77.1
35	–	–	–	85.4	81.6	77.8	75.7
40	–	–	–	86.1	82.3	78.5	74.7
45	–	–	–	–	82.9	79.1	75.3
53	–	–	–	–	–	80.1	76.2

/data/engperf/CSeries/Docs/QRH_FCOM_CS300_1521g–3/derivation/pw1524g_ba_v05r2_status/FLEX/60000/60000_10000FT_qrh_n1.ps

TO FLEX – Engine bleeds closed – Pressure altitude 10000 ft <72211001D>
Figure 03–01B–60

THRUST SETTING – %N1

REDUCED THRUST TAKEOFF – STATIC to 30 KIAS

TO FLEX, ENGINE BLEEDS CLOSED

PRESSURE ALTITUDE = 12000 FT

PW1521G–3

OAT	ASSUMED TEMPERATURE (°C)						
(°C)	6	16	26	36	46	56	66
–54	82.5	79.8	76.4	73.1	71.7	71.7	71.7
–50	83.2	80.5	77.1	73.8	72.3	72.3	72.3
–45	84.1	81.4	78.0	74.6	73.2	73.2	73.2
–40	85.0	82.3	78.8	75.4	74.0	74.0	74.0
–35	86.0	83.2	79.7	76.2	74.7	74.7	74.7
–30	86.8	84.0	80.5	77.0	75.5	75.5	75.5
–25	87.7	84.9	81.3	77.8	76.3	76.3	76.3
–20	88.6	85.8	82.1	78.6	77.0	77.0	77.0
–15	89.5	86.6	83.0	79.4	77.8	77.8	77.8
–10	90.4	87.4	83.8	80.2	78.5	78.5	78.5
–5	91.2	88.3	84.5	80.9	79.3	79.3	79.3
0	92.1	89.1	85.3	81.7	80.0	80.0	80.0
5	92.9	89.9	86.1	82.4	80.7	80.7	80.7
10	–	90.7	86.9	83.1	80.9	80.9	80.9
15	–	91.5	87.6	83.9	80.3	80.3	80.3
20	–	–	88.4	84.6	80.8	79.3	79.3
25	–	–	89.1	85.3	81.5	78.2	78.2
30	–	–	–	86.0	82.2	78.3	76.9
35	–	–	–	86.7	82.8	78.9	75.4
40	–	–	–	–	83.5	79.6	75.7
45	–	–	–	–	84.2	80.2	76.3
53	–	–	–	–	–	81.2	77.2

/data/engperf/CSeries/Docs/QRH_FCOM_CS300_1521g–3/derivation/pw1524g_ba_v05r2_status/FLEX/60000/60000_12000FT_qrh_n1.ps

TO FLEX – Engine bleeds closed – Pressure altitude 12000 ft <72211001D>
Figure 03–01B–61

THRUST SETTING – %N1

REDUCED THRUST TAKEOFF – STATIC to 30 KIAS

TO FLEX, ENGINE BLEEDS CLOSED

PRESSURE ALTITUDE = 14500 FT

PW1521G–3

OAT	ASSUMED TEMPERATURE (°C)						
(°C)	1	11	21	31	41	51	61
–54	83.6	81.3	78.2	74.8	72.5	72.5	72.5
–50	84.3	82.0	78.9	75.5	73.2	73.2	73.2
–45	85.3	82.9	79.8	76.3	74.0	74.0	74.0
–40	86.2	83.8	80.7	77.2	74.8	74.8	74.8
–35	87.1	84.7	81.5	78.0	75.6	75.6	75.6
–30	88.0	85.6	82.4	78.8	76.4	76.4	76.4
–25	88.9	86.5	83.2	79.6	77.1	77.1	77.1
–20	89.8	87.3	84.1	80.4	77.9	77.9	77.9
–15	90.7	88.2	84.9	81.2	78.6	78.6	78.6
–10	91.5	89.0	85.7	82.0	79.4	79.4	79.4
–5	92.4	89.9	86.5	82.8	80.2	80.2	80.2
0	93.2	90.7	87.3	83.5	80.9	80.9	80.9
5	–	91.5	88.1	84.3	81.2	81.2	81.2
10	–	92.4	88.9	85.0	81.2	80.9	80.9
15	–	–	89.7	85.8	81.9	80.4	80.4
20	–	–	90.5	86.5	82.6	79.5	79.5
25	–	–	–	87.3	83.3	79.4	78.2
30	–	–	–	88.0	84.0	80.0	76.7
35	–	–	–	–	84.7	80.7	76.7
40	–	–	–	–	85.4	81.3	77.3
45	–	–	–	–	–	82.0	77.9
53	–	–	–	–	–	–	78.9

/data/engperf/CSeries/Docs/QRH_FCOM_CS300_1521g–3/derivation/pw1524g_ba_v05r2_status/FLEX/60000/60000_14500FT_qrh_n1.ps

TO FLEX – Engine bleeds closed – Pressure altitude 14500 ft <72211001D>
Figure 03–01B–62

I. Flexible N1 – TO FLEX – Packs on, anti-ice off – PW1521G-3 <72211001D>

THRUST SETTING – %N1

REDUCED THRUST TAKEOFF – STATIC to 30 KIAS

TO FLEX, PACKS ON, ANTI–ICE OFF

PRESSURE ALTITUDE = –2000 FT

PW1521G–3

OAT	ASSUMED TEMPERATURE (°C)						
(°C)	34	44	54	64	74	84	94
–54	72.1	68.6	65.3	63.8	63.8	63.8	63.8
–50	72.8	69.2	65.9	64.4	64.4	64.4	64.4
–45	73.6	70.0	66.7	65.1	65.1	65.1	65.1
–40	74.4	70.8	67.4	65.8	65.8	65.8	65.8
–35	75.2	71.5	68.1	66.5	66.5	66.5	66.5
–30	76.0	72.2	68.8	67.2	67.2	67.2	67.2
–25	76.7	73.0	69.5	67.8	67.8	67.8	67.8
–20	77.5	73.7	70.2	68.5	68.5	68.5	68.5
–15	78.3	74.5	70.9	69.2	69.2	69.2	69.2
–10	79.0	75.2	71.6	69.8	69.8	69.8	69.8
–5	79.8	75.9	72.3	70.5	70.5	70.5	70.5
0	80.5	76.6	73.0	71.2	71.2	71.2	71.2
5	81.2	77.3	73.6	71.8	71.8	71.8	71.8
10	82.0	78.0	74.3	72.4	72.4	72.4	72.4
15	82.7	78.7	74.9	73.1	73.1	73.1	73.1
20	83.4	79.3	75.6	73.7	73.7	73.7	73.7
25	84.1	80.0	76.2	74.4	74.4	74.4	74.4
30	84.8	80.7	76.8	75.0	75.0	75.0	75.0
35	–	81.3	77.5	73.6	73.5	73.5	73.5
40	–	82.0	78.1	74.2	72.1	72.1	72.1
45	–	–	78.7	74.8	71.4	70.6	70.6
53	–	–	79.7	75.8	72.3	68.8	68.8

/data/engperf/CSeries/Docs/QRH_FCOM_CS300_1521g–3/derivation/pw1524g_ba_v05r2_status/FLEX/60100/60100_–2000FT_qrh_n1.ps

TO FLEX – Packs on, anti–ice off – Pressure altitude –2000 ft <72211001D>
Figure 03–01B–63

THRUST SETTING – %N1

REDUCED THRUST TAKEOFF – STATIC to 30 KIAS

TO FLEX, PACKS ON, ANTI–ICE OFF

PRESSURE ALTITUDE = Sea Level

PW1521G–3

OAT	ASSUMED TEMPERATURE (°C)						
(°C)	30	40	50	60	70	80	90
–54	74.5	71.0	67.6	66.1	66.1	66.1	66.1
–50	75.1	71.6	68.2	66.7	66.7	66.7	66.7
–45	76.0	72.4	69.0	67.4	67.4	67.4	67.4
–40	76.8	73.2	69.7	68.2	68.2	68.2	68.2
–35	77.6	74.0	70.5	68.9	68.9	68.9	68.9
–30	78.4	74.8	71.2	69.6	69.6	69.6	69.6
–25	79.2	75.5	71.9	70.3	70.3	70.3	70.3
–20	80.0	76.3	72.7	71.0	71.0	71.0	71.0
–15	80.8	77.0	73.4	71.7	71.7	71.7	71.7
–10	81.6	77.8	74.1	72.4	72.4	72.4	72.4
–5	82.3	78.5	74.8	73.0	73.0	73.0	73.0
0	83.1	79.2	75.5	73.7	73.7	73.7	73.7
5	83.9	80.0	76.2	74.4	74.4	74.4	74.4
10	84.6	80.7	76.8	75.0	75.0	75.0	75.0
15	85.4	81.4	77.5	75.7	75.7	75.7	75.7
20	86.1	82.1	78.2	76.4	76.4	76.4	76.4
25	86.8	82.8	78.9	77.0	77.0	77.0	77.0
30	87.6	83.5	79.5	76.0	76.0	76.0	76.0
35	–	84.2	80.2	76.4	74.6	74.6	74.6
40	–	84.8	80.8	77.0	73.7	73.3	73.3
45	–	–	81.5	77.6	74.2	71.7	71.7
53	–	–	–	78.6	75.2	71.7	69.5

/data/engperf/CSeries/Docs/QRH_FCOM_CS300_1521g–3/derivation/pw1524g_ba_v05r2_status/FLEX/60100/60100_SL_qrh_n1.ps

TO FLEX – Packs on, anti–ice off – Pressure altitude Sea level <72211001D>
Figure 03–01B–64

THRUST SETTING – %N1

REDUCED THRUST TAKEOFF – STATIC to 30 KIAS

TO FLEX, PACKS ON, ANTI–ICE OFF

PRESSURE ALTITUDE = 1000 FT

PW1521G–3

OAT	ASSUMED TEMPERATURE (°C)						
(°C)	28	38	48	58	68	78	88
–54	75.1	71.6	68.2	66.7	66.7	66.7	66.7
–50	75.8	72.3	68.8	67.3	67.3	67.3	67.3
–45	76.6	73.1	69.5	68.0	68.0	68.0	68.0
–40	77.5	73.9	70.3	68.8	68.8	68.8	68.8
–35	78.3	74.7	71.1	69.5	69.5	69.5	69.5
–30	79.1	75.5	71.8	70.2	70.2	70.2	70.2
–25	79.9	76.2	72.5	70.9	70.9	70.9	70.9
–20	80.7	77.0	73.3	71.6	71.6	71.6	71.6
–15	81.5	77.8	74.0	72.3	72.3	72.3	72.3
–10	82.3	78.5	74.7	73.0	73.0	73.0	73.0
–5	83.1	79.2	75.4	73.7	73.7	73.7	73.7
0	83.8	80.0	76.1	74.4	74.4	74.4	74.4
5	84.6	80.7	76.8	75.0	75.0	75.0	75.0
10	85.4	81.4	77.5	75.7	75.7	75.7	75.7
15	86.1	82.1	78.2	76.4	76.4	76.4	76.4
20	86.9	82.8	78.8	77.1	77.1	77.1	77.1
25	87.6	83.6	79.5	77.3	77.3	77.3	77.3
30	–	84.2	80.2	76.5	76.0	76.0	76.0
35	–	84.9	80.8	77.1	74.6	74.6	74.6
40	–	–	81.5	77.7	74.1	73.2	73.2
45	–	–	82.1	78.3	74.7	71.7	71.7
53	–	–	–	79.3	75.7	72.0	69.4

/data/engperf/CSeries/Docs/QRH_FCOM_CS300_1521g–3/derivation/pw1524g_ba_v05r2_status/FLEX/60100/60100_1000FT_qrh_n1.ps

TO FLEX – Packs on, anti–ice off – Pressure altitude 1000 ft <72211001D>
Figure 03–01B–65

THRUST SETTING – %N1

REDUCED THRUST TAKEOFF – STATIC to 30 KIAS

TO FLEX, PACKS ON, ANTI–ICE OFF

PRESSURE ALTITUDE = 2000 FT

PW1521G–3

OAT	ASSUMED TEMPERATURE (°C)						
(°C)	26	36	46	56	66	76	86
–54	75.8	72.3	68.7	67.3	67.3	67.3	67.3
–50	76.5	73.0	69.3	67.9	67.9	67.9	67.9
–45	77.3	73.8	70.1	68.6	68.6	68.6	68.6
–40	78.2	74.6	70.9	69.4	69.4	69.4	69.4
–35	79.0	75.4	71.6	70.1	70.1	70.1	70.1
–30	79.8	76.2	72.4	70.8	70.8	70.8	70.8
–25	80.6	76.9	73.1	71.5	71.5	71.5	71.5
–20	81.4	77.7	73.9	72.2	72.2	72.2	72.2
–15	82.2	78.5	74.6	73.0	73.0	73.0	73.0
–10	83.0	79.2	75.3	73.7	73.7	73.7	73.7
–5	83.8	80.0	76.0	74.3	74.3	74.3	74.3
0	84.6	80.7	76.7	75.0	75.0	75.0	75.0
5	85.4	81.5	77.4	75.7	75.7	75.7	75.7
10	86.1	82.2	78.1	76.4	76.4	76.4	76.4
15	86.9	82.9	78.8	77.1	77.1	77.1	77.1
20	87.6	83.6	79.5	77.7	77.7	77.7	77.7
25	88.4	84.3	80.2	77.3	77.3	77.3	77.3
30	–	85.0	80.8	77.2	75.9	75.9	75.9
35	–	85.7	81.5	77.8	74.5	74.5	74.5
40	–	–	82.2	78.4	74.6	73.1	73.1
45	–	–	82.8	79.0	75.2	71.6	71.6
53	–	–	–	80.0	76.1	72.2	69.2

/data/engperf/CSeries/Docs/QRH_FCOM_CS300_1521g–3/derivation/pw1524g_ba_v05r2_status/FLEX/60100/60100_2000FT_qrh_n1.ps

TO FLEX – Packs on, anti–ice off – Pressure altitude 2000 ft <72211001D>
Figure 03–01B–66

THRUST SETTING – %N1

REDUCED THRUST TAKEOFF – STATIC to 30 KIAS

TO FLEX, PACKS ON, ANTI–ICE OFF

PRESSURE ALTITUDE = 3000 FT

PW1521G–3

OAT	ASSUMED TEMPERATURE (°C)						
(°C)	24	34	44	54	64	74	84
–54	76.4	72.9	69.3	67.8	67.8	67.8	67.8
–50	77.1	73.6	69.9	68.4	68.4	68.4	68.4
–45	78.0	74.4	70.7	69.2	69.2	69.2	69.2
–40	78.8	75.2	71.5	69.9	69.9	69.9	69.9
–35	79.6	76.0	72.2	70.7	70.7	70.7	70.7
–30	80.5	76.8	73.0	71.4	71.4	71.4	71.4
–25	81.3	77.6	73.7	72.1	72.1	72.1	72.1
–20	82.1	78.4	74.5	72.8	72.8	72.8	72.8
–15	82.9	79.1	75.2	73.5	73.5	73.5	73.5
–10	83.7	79.9	75.9	74.2	74.2	74.2	74.2
–5	84.5	80.7	76.7	74.9	74.9	74.9	74.9
0	85.3	81.4	77.4	75.6	75.6	75.6	75.6
5	86.1	82.2	78.1	76.3	76.3	76.3	76.3
10	86.8	82.9	78.8	77.0	77.0	77.0	77.0
15	87.6	83.6	79.5	77.7	77.7	77.7	77.7
20	88.3	84.3	80.1	78.3	78.3	78.3	78.3
25	–	85.0	80.8	77.2	77.2	77.2	77.2
30	–	85.8	81.5	77.7	75.8	75.8	75.8
35	–	–	82.2	78.4	74.6	74.4	74.4
40	–	–	82.8	79.0	75.2	73.0	73.0
45	–	–	–	79.6	75.8	71.9	71.4
53	–	–	–	80.6	76.7	72.8	69.0

/data/engperf/CSeries/Docs/QRH_FCOM_CS300_1521g–3/derivation/pw1524g_ba_v05r2_status/FLEX/60100/60100_3000FT_qrh_n1.ps

TO FLEX – Packs on, anti–ice off – Pressure altitude 3000 ft <72211001D>
Figure 03–01B–67

THRUST SETTING – %N1

REDUCED THRUST TAKEOFF – STATIC to 30 KIAS

TO FLEX, PACKS ON, ANTI–ICE OFF

PRESSURE ALTITUDE = 4000 FT

PW1521G–3

OAT	ASSUMED TEMPERATURE (°C)						
(°C)	22	32	42	52	62	72	82
–54	77.0	73.5	69.9	68.3	68.3	68.3	68.3
–50	77.7	74.2	70.5	69.0	69.0	69.0	69.0
–45	78.6	75.0	71.3	69.7	69.7	69.7	69.7
–40	79.5	75.8	72.1	70.5	70.5	70.5	70.5
–35	80.3	76.7	72.8	71.2	71.2	71.2	71.2
–30	81.1	77.5	73.6	71.9	71.9	71.9	71.9
–25	82.0	78.2	74.3	72.7	72.7	72.7	72.7
–20	82.8	79.0	75.1	73.4	73.4	73.4	73.4
–15	83.6	79.8	75.8	74.1	74.1	74.1	74.1
–10	84.4	80.6	76.5	74.8	74.8	74.8	74.8
–5	85.2	81.3	77.3	75.5	75.5	75.5	75.5
0	86.0	82.1	78.0	76.2	76.2	76.2	76.2
5	86.8	82.8	78.7	76.9	76.9	76.9	76.9
10	87.5	83.6	79.4	77.6	77.6	77.6	77.6
15	88.3	84.3	80.1	78.3	78.3	78.3	78.3
20	89.1	85.0	80.8	78.3	78.3	78.3	78.3
25	–	85.8	81.5	77.7	77.1	77.1	77.1
30	–	86.5	82.2	78.3	75.7	75.7	75.7
35	–	–	82.8	79.0	75.1	74.3	74.3
40	–	–	83.5	79.6	75.7	72.8	72.8
45	–	–	–	80.2	76.3	72.5	71.3
53	–	–	–	–	77.3	73.3	69.4

/data/engperf/CSeries/Docs/QRH_FCOM_CS300_1521g–3/derivation/pw1524g_ba_v05r2_status/FLEX/60100/60100_4000FT_qrh_n1.ps

TO FLEX – Packs on, anti–ice off – Pressure altitude 4000 ft <72211001D>
Figure 03–01B–68

THRUST SETTING – %N1

REDUCED THRUST TAKEOFF – STATIC to 30 KIAS

TO FLEX, PACKS ON, ANTI–ICE OFF

PRESSURE ALTITUDE = 5000 FT

PW1521G–3

OAT	ASSUMED TEMPERATURE (°C)						
(°C)	20	30	40	50	60	70	80
–54	77.6	74.1	70.5	68.9	68.9	68.9	68.9
–50	78.3	74.8	71.1	69.5	69.5	69.5	69.5
–45	79.2	75.7	71.9	70.2	70.2	70.2	70.2
–40	80.1	76.5	72.7	71.0	71.0	71.0	71.0
–35	80.9	77.3	73.5	71.8	71.8	71.8	71.8
–30	81.8	78.1	74.2	72.5	72.5	72.5	72.5
–25	82.6	78.9	75.0	73.2	73.2	73.2	73.2
–20	83.4	79.7	75.8	74.0	74.0	74.0	74.0
–15	84.2	80.5	76.5	74.7	74.7	74.7	74.7
–10	85.1	81.2	77.2	75.4	75.4	75.4	75.4
–5	85.9	82.0	78.0	76.1	76.1	76.1	76.1
0	86.7	82.8	78.7	76.8	76.8	76.8	76.8
5	87.5	83.5	79.4	77.5	77.5	77.5	77.5
10	88.2	84.3	80.1	78.2	78.2	78.2	78.2
15	89.0	85.0	80.8	78.9	78.9	78.9	78.9
20	89.8	85.8	81.5	78.2	78.2	78.2	78.2
25	–	86.5	82.2	78.3	77.0	77.0	77.0
30	–	87.2	82.9	79.0	75.6	75.6	75.6
35	–	–	83.6	79.6	75.8	74.2	74.2
40	–	–	84.2	80.3	76.4	72.8	72.8
45	–	–	–	80.9	77.0	73.2	71.1
53	–	–	–	–	78.0	74.1	70.2

/data/engperf/CSeries/Docs/QRH_FCOM_CS300_1521g–3/derivation/pw1524g_ba_v05r2_status/FLEX/60100/60100_5000FT_qrh_n1.ps

TO FLEX – Packs on, anti–ice off – Pressure altitude 5000 ft <72211001D>
Figure 03–01B–69

THRUST SETTING – %N1

REDUCED THRUST TAKEOFF – STATIC to 30 KIAS

TO FLEX, PACKS ON, ANTI–ICE OFF

PRESSURE ALTITUDE = 6000 FT

PW1521G–3

OAT	ASSUMED TEMPERATURE (°C)						
(°C)	18	28	38	48	58	68	78
–54	78.2	74.7	71.1	69.4	69.4	69.4	69.4
–50	78.9	75.4	71.8	70.0	70.0	70.0	70.0
–45	79.8	76.2	72.6	70.8	70.8	70.8	70.8
–40	80.7	77.1	73.3	71.5	71.5	71.5	71.5
–35	81.5	77.9	74.1	72.3	72.3	72.3	72.3
–30	82.4	78.7	74.9	73.0	73.0	73.0	73.0
–25	83.2	79.5	75.7	73.8	73.8	73.8	73.8
–20	84.1	80.3	76.4	74.5	74.5	74.5	74.5
–15	84.9	81.1	77.2	75.2	75.2	75.2	75.2
–10	85.7	81.9	77.9	76.0	76.0	76.0	76.0
–5	86.5	82.7	78.7	76.7	76.7	76.7	76.7
0	87.3	83.4	79.4	77.4	77.4	77.4	77.4
5	88.1	84.2	80.1	78.1	78.1	78.1	78.1
10	88.9	84.9	80.8	78.8	78.8	78.8	78.8
15	89.7	85.7	81.5	79.2	79.2	79.2	79.2
20	–	86.4	82.2	78.3	78.1	78.1	78.1
25	–	87.2	83.0	79.0	76.9	76.9	76.9
30	–	–	83.6	79.6	75.9	75.5	75.5
35	–	–	84.3	80.3	76.5	74.0	74.0
40	–	–	–	80.9	77.1	73.3	72.6
45	–	–	–	81.6	77.7	73.9	71.0
53	–	–	–	–	78.7	74.8	70.9

/data/engperf/CSeries/Docs/QRH_FCOM_CS300_1521g–3/derivation/pw1524g_ba_v05r2_status/FLEX/60100/60100_6000FT_qrh_n1.ps

TO FLEX – Packs on, anti–ice off – Pressure altitude 6000 ft <72211001D>
Figure 03–01B–70

THRUST SETTING – %N1

REDUCED THRUST TAKEOFF – STATIC to 30 KIAS

TO FLEX, PACKS ON, ANTI–ICE OFF

PRESSURE ALTITUDE = 8000 FT

PW1521G–3

OAT	ASSUMED TEMPERATURE (°C)						
(°C)	14	24	34	44	54	64	74
–54	79.3	75.9	72.2	70.2	70.2	70.2	70.2
–50	80.0	76.6	72.9	70.9	70.9	70.9	70.9
–45	80.9	77.5	73.7	71.6	71.6	71.6	71.6
–40	81.8	78.3	74.5	72.4	72.4	72.4	72.4
–35	82.7	79.2	75.3	73.2	73.2	73.2	73.2
–30	83.5	80.0	76.1	73.9	73.9	73.9	73.9
–25	84.4	80.8	76.9	74.7	74.7	74.7	74.7
–20	85.2	81.6	77.7	75.4	75.4	75.4	75.4
–15	86.1	82.4	78.4	76.2	76.2	76.2	76.2
–10	86.9	83.2	79.2	76.9	76.9	76.9	76.9
–5	87.7	84.0	79.9	77.6	77.6	77.6	77.6
0	88.5	84.8	80.7	78.3	78.3	78.3	78.3
5	89.4	85.5	81.4	79.1	79.1	79.1	79.1
10	90.2	86.3	82.1	79.8	79.8	79.8	79.8
15	–	87.1	82.8	78.9	78.9	78.9	78.9
20	–	87.8	83.5	79.6	77.9	77.9	77.9
25	–	–	84.3	80.3	76.6	76.6	76.6
30	–	–	85.0	80.9	77.1	75.1	75.1
35	–	–	–	81.6	77.7	73.8	73.6
40	–	–	–	82.3	78.3	74.4	72.0
45	–	–	–	–	78.9	75.0	71.0
53	–	–	–	–	79.9	75.9	71.9

/data/engperf/CSeries/Docs/QRH_FCOM_CS300_1521g–3/derivation/pw1524g_ba_v05r2_status/FLEX/60100/60100_8000FT_qrh_n1.ps

TO FLEX – Packs on, anti–ice off – Pressure altitude 8000 ft <72211001D>
Figure 03–01B–71

THRUST SETTING – %N1

REDUCED THRUST TAKEOFF – STATIC to 30 KIAS

TO FLEX, PACKS ON, ANTI–ICE OFF

PRESSURE ALTITUDE = 10000 FT

PW1521G–3

OAT	ASSUMED TEMPERATURE (°C)						
(°C)	10	20	30	40	50	60	70
–54	80.4	76.9	73.2	71.0	71.0	71.0	71.0
–50	81.1	77.6	73.9	71.6	71.6	71.6	71.6
–45	82.0	78.5	74.7	72.4	72.4	72.4	72.4
–40	82.9	79.4	75.5	73.2	73.2	73.2	73.2
–35	83.8	80.2	76.3	74.0	74.0	74.0	74.0
–30	84.7	81.0	77.1	74.8	74.8	74.8	74.8
–25	85.5	81.9	77.9	75.5	75.5	75.5	75.5
–20	86.4	82.7	78.7	76.3	76.3	76.3	76.3
–15	87.2	83.5	79.5	77.0	77.0	77.0	77.0
–10	88.1	84.3	80.2	77.7	77.7	77.7	77.7
–5	88.9	85.1	81.0	78.5	78.5	78.5	78.5
0	89.8	85.9	81.7	79.2	79.2	79.2	79.2
5	90.6	86.7	82.5	79.9	79.9	79.9	79.9
10	91.4	87.5	83.2	79.5	79.5	79.5	79.5
15	–	88.2	84.0	80.2	78.7	78.7	78.7
20	–	89.0	84.7	80.9	77.5	77.5	77.5
25	–	–	85.4	81.6	77.9	76.0	76.0
30	–	–	86.1	82.2	78.5	74.8	74.6
35	–	–	–	82.9	79.2	75.4	73.0
40	–	–	–	83.6	79.8	76.0	72.2
45	–	–	–	–	80.4	76.6	72.8
53	–	–	–	–	–	77.5	73.7

/data/engperf/CSeries/Docs/QRH_FCOM_CS300_1521g–3/derivation/pw1524g_ba_v05r2_status/FLEX/60100/60100_10000FT_qrh_n1.ps

TO FLEX – Packs on, anti–ice off – Pressure altitude 10000 ft <72211001D>
Figure 03–01B–72

THRUST SETTING – %N1

REDUCED THRUST TAKEOFF – STATIC to 30 KIAS

TO FLEX, PACKS ON, ANTI–ICE OFF

PRESSURE ALTITUDE = 12000 FT

PW1521G–3

OAT	ASSUMED TEMPERATURE (°C)						
(°C)	6	16	26	36	46	56	66
–54	81.4	78.1	74.4	71.8	71.8	71.8	71.8
–50	82.1	78.8	75.1	72.4	72.4	72.4	72.4
–45	83.0	79.7	75.9	73.2	73.2	73.2	73.2
–40	83.9	80.6	76.8	74.0	74.0	74.0	74.0
–35	84.8	81.4	77.6	74.8	74.8	74.8	74.8
–30	85.7	82.3	78.4	75.6	75.6	75.6	75.6
–25	86.6	83.1	79.2	76.3	76.3	76.3	76.3
–20	87.5	84.0	80.0	77.1	77.1	77.1	77.1
–15	88.3	84.8	80.8	77.8	77.8	77.8	77.8
–10	89.2	85.6	81.6	78.6	78.6	78.6	78.6
–5	90.0	86.4	82.3	79.3	79.3	79.3	79.3
0	90.8	87.2	83.1	80.0	80.0	80.0	80.0
5	91.7	88.0	83.8	79.9	79.9	79.9	79.9
10	–	88.8	84.6	80.7	79.3	79.3	79.3
15	–	89.6	85.3	81.4	78.4	78.4	78.4
20	–	–	86.1	82.1	78.3	77.0	77.0
25	–	–	86.8	82.8	78.9	75.7	75.7
30	–	–	–	83.5	79.6	75.7	74.1
35	–	–	–	84.1	80.2	76.3	72.6
40	–	–	–	–	80.9	77.0	73.0
45	–	–	–	–	81.5	77.6	73.6
53	–	–	–	–	–	78.5	74.5

/data/engperf/CSeries/Docs/QRH_FCOM_CS300_1521g–3/derivation/pw1524g_ba_v05r2_status/FLEX/60100/60100_12000FT_qrh_n1.ps

TO FLEX – Packs on, anti–ice off – Pressure altitude 12000 ft <72211001D>
Figure 03–01B–73

THRUST SETTING – %N1

REDUCED THRUST TAKEOFF – STATIC to 30 KIAS

TO FLEX, PACKS ON, ANTI–ICE OFF

PRESSURE ALTITUDE = 14500 FT

PW1521G–3

OAT	ASSUMED TEMPERATURE (°C)						
(°C)	1	11	21	31	41	51	61
–54	82.5	79.8	76.0	72.6	72.6	72.6	72.6
–50	83.3	80.6	76.7	73.2	73.2	73.2	73.2
–45	84.2	81.5	77.6	74.0	74.0	74.0	74.0
–40	85.1	82.3	78.4	74.8	74.8	74.8	74.8
–35	86.0	83.2	79.3	75.6	75.6	75.6	75.6
–30	86.9	84.1	80.1	76.4	76.4	76.4	76.4
–25	87.8	85.0	80.9	77.2	77.2	77.2	77.2
–20	88.7	85.8	81.7	78.0	78.0	78.0	78.0
–15	89.6	86.7	82.5	78.7	78.7	78.7	78.7
–10	90.4	87.5	83.3	79.5	79.5	79.5	79.5
–5	91.3	88.3	84.1	80.2	80.2	80.2	80.2
0	92.2	89.1	84.9	80.9	80.2	80.2	80.2
5	–	89.9	85.7	81.7	79.8	79.8	79.8
10	–	90.8	86.4	82.4	79.2	79.2	79.2
15	–	–	87.2	83.1	79.2	78.2	78.2
20	–	–	87.9	83.8	79.9	76.8	76.8
25	–	–	–	84.5	80.6	76.6	75.2
30	–	–	–	85.2	81.3	77.3	73.7
35	–	–	–	–	81.9	77.9	73.9
40	–	–	–	–	82.6	78.5	74.5
45	–	–	–	–	–	79.2	75.1
53	–	–	–	–	–	–	76.0

/data/engperf/CSeries/Docs/QRH_FCOM_CS300_1521g–3/derivation/pw1524g_ba_v05r2_status/FLEX/60100/60100_14500FT_qrh_n1.ps

TO FLEX – Packs on, anti–ice off – Pressure altitude 14500 ft <72211001D>
Figure 03–01B–74

J. Flexible N1 – TO-1 FLEX – Engine bleeds closed – PW1521G-3 <72211001D>

THRUST SETTING – %N1

REDUCED THRUST TAKEOFF – STATIC to 30 KIAS

TO–1 FLEX, ENGINE BLEEDS CLOSED

PRESSURE ALTITUDE = –2000 FT

PW1521G–3

OAT	ASSUMED TEMPERATURE (°C)						
(°C)	34	44	54	64	74	84	94
–54	70.7	67.6	64.6	63.8	63.8	63.8	63.8
–50	71.4	68.2	65.2	64.4	64.4	64.4	64.4
–45	72.2	69.0	66.0	65.1	65.1	65.1	65.1
–40	73.0	69.8	66.7	65.8	65.8	65.8	65.8
–35	73.8	70.5	67.4	66.5	66.5	66.5	66.5
–30	74.5	71.2	68.1	67.1	67.1	67.1	67.1
–25	75.3	72.0	68.8	67.8	67.8	67.8	67.8
–20	76.0	72.7	69.5	68.5	68.5	68.5	68.5
–15	76.8	73.4	70.2	69.1	69.1	69.1	69.1
–10	77.5	74.1	70.8	69.8	69.8	69.8	69.8
–5	78.2	74.8	71.5	70.5	70.5	70.5	70.5
0	79.0	75.5	72.2	71.1	71.1	71.1	71.1
5	79.7	76.2	72.8	71.8	71.8	71.8	71.8
10	80.4	76.9	73.5	72.4	72.4	72.4	72.4
15	81.1	77.5	74.1	73.0	73.0	73.0	73.0
20	81.8	78.2	74.8	73.7	73.7	73.7	73.7
25	82.5	78.9	75.4	74.3	74.3	74.3	74.3
30	83.2	79.5	76.0	74.9	74.9	74.9	74.9
35	–	80.2	76.6	75.3	75.3	75.3	75.3
40	–	80.8	77.3	74.0	74.0	74.0	74.0
45	–	–	77.9	74.4	72.7	72.7	72.7
53	–	–	78.8	75.4	71.9	70.9	70.9

/data/engperf/CSeries/Docs/QRH_FCOM_CS300_1521g–3/derivation/pw1524g_ba_v05r2_status/FLEX/61000/61000_–2000FT_qrh_n1.ps

TO–1 FLEX – Engine bleeds closed – Pressure altitude –2000 ft <72211001D>
Figure 03–01B–75

THRUST SETTING – %N1

REDUCED THRUST TAKEOFF – STATIC to 30 KIAS

TO–1 FLEX, ENGINE BLEEDS CLOSED

PRESSURE ALTITUDE = Sea Level

PW1521G–3

OAT	ASSUMED TEMPERATURE (°C)						
(°C)	30	40	50	60	70	80	90
–54	73.0	69.8	66.8	66.1	66.1	66.1	66.1
–50	73.7	70.5	67.4	66.7	66.7	66.7	66.7
–45	74.5	71.2	68.2	67.4	67.4	67.4	67.4
–40	75.3	72.0	68.9	68.1	68.1	68.1	68.1
–35	76.1	72.8	69.6	68.8	68.8	68.8	68.8
–30	76.9	73.6	70.3	69.5	69.5	69.5	69.5
–25	77.7	74.3	71.1	70.2	70.2	70.2	70.2
–20	78.5	75.0	71.8	70.9	70.9	70.9	70.9
–15	79.2	75.8	72.5	71.6	71.6	71.6	71.6
–10	80.0	76.5	73.2	72.3	72.3	72.3	72.3
–5	80.7	77.2	73.9	73.0	73.0	73.0	73.0
0	81.5	78.0	74.6	73.7	73.7	73.7	73.7
5	82.2	78.7	75.2	74.3	74.3	74.3	74.3
10	82.9	79.4	75.9	75.0	75.0	75.0	75.0
15	83.7	80.1	76.6	75.7	75.7	75.7	75.7
20	84.4	80.8	77.2	76.3	76.3	76.3	76.3
25	85.1	81.5	77.9	77.0	77.0	77.0	77.0
30	85.9	82.1	78.5	77.6	77.6	77.6	77.6
35	–	82.8	79.2	76.5	76.5	76.5	76.5
40	–	83.5	79.8	76.5	75.2	75.2	75.2
45	–	–	80.5	77.1	74.0	74.0	74.0
53	–	–	–	78.0	74.6	71.8	71.8

/data/engperf/CSeries/Docs/QRH_FCOM_CS300_1521g–3/derivation/pw1524g_ba_v05r2_status/FLEX/61000/61000_SL_qrh_n1.ps

TO–1 FLEX – Engine bleeds closed – Pressure altitude Sea level <72211001D>
Figure 03–01B–76

THRUST SETTING – %N1

REDUCED THRUST TAKEOFF – STATIC to 30 KIAS

TO–1 FLEX, ENGINE BLEEDS CLOSED

PRESSURE ALTITUDE = 1000 FT

PW1521G–3

OAT	ASSUMED TEMPERATURE (°C)						
(°C)	28	38	48	58	68	78	88
–54	73.7	70.5	67.4	66.7	66.7	66.7	66.7
–50	74.3	71.1	68.0	67.3	67.3	67.3	67.3
–45	75.2	71.9	68.8	68.0	68.0	68.0	68.0
–40	76.0	72.7	69.5	68.7	68.7	68.7	68.7
–35	76.8	73.5	70.3	69.5	69.5	69.5	69.5
–30	77.5	74.2	71.0	70.2	70.2	70.2	70.2
–25	78.3	75.0	71.7	70.9	70.9	70.9	70.9
–20	79.1	75.7	72.5	71.6	71.6	71.6	71.6
–15	79.9	76.5	73.2	72.3	72.3	72.3	72.3
–10	80.7	77.2	73.9	73.0	73.0	73.0	73.0
–5	81.4	78.0	74.6	73.7	73.7	73.7	73.7
0	82.2	78.7	75.3	74.3	74.3	74.3	74.3
5	82.9	79.4	75.9	75.0	75.0	75.0	75.0
10	83.7	80.1	76.6	75.7	75.7	75.7	75.7
15	84.4	80.8	77.3	76.4	76.4	76.4	76.4
20	85.1	81.5	78.0	77.0	77.0	77.0	77.0
25	85.9	82.2	78.6	77.7	77.7	77.7	77.7
30	–	82.9	79.3	77.7	77.7	77.7	77.7
35	–	83.6	79.9	76.5	76.5	76.5	76.5
40	–	–	80.6	77.0	75.2	75.2	75.2
45	–	–	81.2	77.6	74.0	74.0	74.0
53	–	–	–	78.6	74.9	71.8	71.8

/data/engperf/CSeries/Docs/QRH_FCOM_CS300_1521g–3/derivation/pw1524g_ba_v05r2_status/FLEX/61000/61000_1000FT_qrh_n1.ps

TO–1 FLEX – Engine bleeds closed – Pressure altitude 1000 ft <72211001D>
Figure 03–01B–77

THRUST SETTING – %N1

REDUCED THRUST TAKEOFF – STATIC to 30 KIAS

TO–1 FLEX, ENGINE BLEEDS CLOSED

PRESSURE ALTITUDE = 2000 FT

PW1521G–3

OAT	ASSUMED TEMPERATURE (°C)						
(°C)	26	36	46	56	66	76	86
–54	74.3	71.1	68.0	67.3	67.3	67.3	67.3
–50	74.9	71.8	68.7	67.9	67.9	67.9	67.9
–45	75.8	72.6	69.4	68.6	68.6	68.6	68.6
–40	76.6	73.3	70.2	69.3	69.3	69.3	69.3
–35	77.4	74.1	70.9	70.1	70.1	70.1	70.1
–30	78.2	74.9	71.7	70.8	70.8	70.8	70.8
–25	79.0	75.7	72.4	71.5	71.5	71.5	71.5
–20	79.8	76.4	73.1	72.2	72.2	72.2	72.2
–15	80.6	77.2	73.8	72.9	72.9	72.9	72.9
–10	81.3	77.9	74.5	73.6	73.6	73.6	73.6
–5	82.1	78.7	75.2	74.3	74.3	74.3	74.3
0	82.9	79.4	76.0	75.0	75.0	75.0	75.0
5	83.6	80.1	76.6	75.7	75.7	75.7	75.7
10	84.4	80.8	77.3	76.4	76.4	76.4	76.4
15	85.1	81.5	78.0	77.0	77.0	77.0	77.0
20	85.9	82.2	78.7	77.7	77.7	77.7	77.7
25	86.6	83.0	79.3	78.4	78.4	78.4	78.4
30	–	83.6	80.0	77.7	77.7	77.7	77.7
35	–	84.3	80.7	76.9	76.5	76.5	76.5
40	–	–	81.3	77.5	75.2	75.2	75.2
45	–	–	82.0	78.1	74.3	74.0	74.0
53	–	–	–	79.1	75.2	71.6	71.6

/data/engperf/CSeries/Docs/QRH_FCOM_CS300_1521g–3/derivation/pw1524g_ba_v05r2_status/FLEX/61000/61000_2000FT_qrh_n1.ps

TO–1 FLEX – Engine bleeds closed – Pressure altitude 2000 ft <72211001D>
Figure 03–01B–78

THRUST SETTING – %N1

REDUCED THRUST TAKEOFF – STATIC to 30 KIAS

TO–1 FLEX, ENGINE BLEEDS CLOSED

PRESSURE ALTITUDE = 3000 FT

PW1521G–3

OAT	ASSUMED TEMPERATURE (°C)						
(°C)	24	34	44	54	64	74	84
–54	74.8	71.7	68.6	67.8	67.8	67.8	67.8
–50	75.5	72.4	69.2	68.4	68.4	68.4	68.4
–45	76.4	73.2	70.0	69.2	69.2	69.2	69.2
–40	77.2	74.0	70.7	69.9	69.9	69.9	69.9
–35	78.0	74.8	71.5	70.6	70.6	70.6	70.6
–30	78.8	75.6	72.2	71.3	71.3	71.3	71.3
–25	79.6	76.3	73.0	72.1	72.1	72.1	72.1
–20	80.4	77.1	73.7	72.8	72.8	72.8	72.8
–15	81.2	77.8	74.4	73.5	73.5	73.5	73.5
–10	82.0	78.6	75.2	74.2	74.2	74.2	74.2
–5	82.7	79.3	75.9	74.9	74.9	74.9	74.9
0	83.5	80.1	76.6	75.6	75.6	75.6	75.6
5	84.3	80.8	77.3	76.3	76.3	76.3	76.3
10	85.0	81.5	78.0	77.0	77.0	77.0	77.0
15	85.8	82.2	78.7	77.6	77.6	77.6	77.6
20	86.5	83.0	79.3	78.3	78.3	78.3	78.3
25	–	83.7	80.0	78.8	78.8	78.8	78.8
30	–	84.4	80.7	77.7	77.7	77.7	77.7
35	–	–	81.3	77.5	76.5	76.5	76.5
40	–	–	82.0	78.1	75.2	75.2	75.2
45	–	–	–	78.8	74.9	73.9	73.9
53	–	–	–	79.8	75.8	71.9	71.6

/data/engperf/CSeries/Docs/QRH_FCOM_CS300_1521g–3/derivation/pw1524g_ba_v05r2_status/FLEX/61000/61000_3000FT_qrh_n1.ps

TO–1 FLEX – Engine bleeds closed – Pressure altitude 3000 ft <72211001D>
Figure 03–01B–79

THRUST SETTING – %N1

REDUCED THRUST TAKEOFF – STATIC to 30 KIAS

TO–1 FLEX, ENGINE BLEEDS CLOSED

PRESSURE ALTITUDE = 4000 FT

PW1521G–3

OAT	ASSUMED TEMPERATURE (°C)						
(°C)	22	32	42	52	62	72	82
–54	75.4	72.3	69.2	68.3	68.3	68.3	68.3
–50	76.1	73.0	69.8	68.9	68.9	68.9	68.9
–45	77.0	73.8	70.5	69.7	69.7	69.7	69.7
–40	77.8	74.6	71.3	70.4	70.4	70.4	70.4
–35	78.6	75.4	72.1	71.2	71.2	71.2	71.2
–30	79.4	76.2	72.8	71.9	71.9	71.9	71.9
–25	80.2	77.0	73.6	72.6	72.6	72.6	72.6
–20	81.0	77.8	74.3	73.3	73.3	73.3	73.3
–15	81.8	78.5	75.0	74.1	74.1	74.1	74.1
–10	82.6	79.3	75.8	74.8	74.8	74.8	74.8
–5	83.4	80.0	76.5	75.5	75.5	75.5	75.5
0	84.2	80.8	77.2	76.2	76.2	76.2	76.2
5	84.9	81.5	77.9	76.9	76.9	76.9	76.9
10	85.7	82.2	78.6	77.6	77.6	77.6	77.6
15	86.4	83.0	79.3	78.2	78.2	78.2	78.2
20	87.2	83.7	80.0	78.9	78.9	78.9	78.9
25	–	84.4	80.7	78.8	78.8	78.8	78.8
30	–	85.1	81.3	77.7	77.7	77.7	77.7
35	–	–	82.0	78.2	76.4	76.4	76.4
40	–	–	82.7	78.8	75.2	75.2	75.2
45	–	–	–	79.4	75.5	73.8	73.8
53	–	–	–	–	76.5	72.5	71.5

/data/engperf/CSeries/Docs/QRH_FCOM_CS300_1521g–3/derivation/pw1524g_ba_v05r2_status/FLEX/61000/61000_4000FT_qrh_n1.ps

TO–1 FLEX – Engine bleeds closed – Pressure altitude 4000 ft <72211001D>
Figure 03–01B–80

THRUST SETTING – %N1

REDUCED THRUST TAKEOFF – STATIC to 30 KIAS

TO–1 FLEX, ENGINE BLEEDS CLOSED

PRESSURE ALTITUDE = 5000 FT

PW1521G–3

OAT	ASSUMED TEMPERATURE (°C)						
(°C)	20	30	40	50	60	70	80
–54	76.0	72.9	69.7	68.8	68.8	68.8	68.8
–50	76.7	73.6	70.3	69.5	69.5	69.5	69.5
–45	77.5	74.4	71.1	70.2	70.2	70.2	70.2
–40	78.4	75.2	71.9	71.0	71.0	71.0	71.0
–35	79.2	76.0	72.7	71.7	71.7	71.7	71.7
–30	80.0	76.8	73.4	72.5	72.5	72.5	72.5
–25	80.8	77.6	74.2	73.2	73.2	73.2	73.2
–20	81.6	78.4	74.9	73.9	73.9	73.9	73.9
–15	82.4	79.2	75.7	74.6	74.6	74.6	74.6
–10	83.2	79.9	76.4	75.3	75.3	75.3	75.3
–5	84.0	80.7	77.1	76.0	76.0	76.0	76.0
0	84.8	81.4	77.8	76.8	76.8	76.8	76.8
5	85.5	82.2	78.5	77.5	77.5	77.5	77.5
10	86.3	82.9	79.2	78.2	78.2	78.2	78.2
15	87.1	83.6	79.9	78.8	78.8	78.8	78.8
20	87.8	84.4	80.6	79.5	79.5	79.5	79.5
25	–	85.1	81.3	78.8	78.8	78.8	78.8
30	–	85.8	82.0	78.2	77.6	77.6	77.6
35	–	–	82.7	78.9	76.3	76.3	76.3
40	–	–	83.3	79.5	75.7	75.1	75.1
45	–	–	–	80.1	76.3	73.8	73.8
53	–	–	–	–	77.2	73.3	71.6

/data/engperf/CSeries/Docs/QRH_FCOM_CS300_1521g–3/derivation/pw1524g_ba_v05r2_status/FLEX/61000/61000_5000FT_qrh_n1.ps

TO–1 FLEX – Engine bleeds closed – Pressure altitude 5000 ft <72211001D>
Figure 03–01B–81

THRUST SETTING – %N1

REDUCED THRUST TAKEOFF – STATIC to 30 KIAS

TO–1 FLEX, ENGINE BLEEDS CLOSED

PRESSURE ALTITUDE = 6000 FT

PW1521G–3

OAT	ASSUMED TEMPERATURE (°C)						
(°C)	18	28	38	48	58	68	78
–54	76.5	73.5	70.3	69.3	69.3	69.3	69.3
–50	77.2	74.2	70.9	70.0	70.0	70.0	70.0
–45	78.1	75.0	71.7	70.7	70.7	70.7	70.7
–40	78.9	75.8	72.5	71.5	71.5	71.5	71.5
–35	79.8	76.7	73.3	72.2	72.2	72.2	72.2
–30	80.6	77.5	74.0	73.0	73.0	73.0	73.0
–25	81.4	78.2	74.8	73.7	73.7	73.7	73.7
–20	82.2	79.0	75.6	74.5	74.5	74.5	74.5
–15	83.0	79.8	76.3	75.2	75.2	75.2	75.2
–10	83.8	80.6	77.0	75.9	75.9	75.9	75.9
–5	84.6	81.3	77.8	76.6	76.6	76.6	76.6
0	85.4	82.1	78.5	77.3	77.3	77.3	77.3
5	86.2	82.8	79.2	78.0	78.0	78.0	78.0
10	86.9	83.6	79.9	78.7	78.7	78.7	78.7
15	87.7	84.3	80.6	79.4	79.4	79.4	79.4
20	–	85.0	81.3	79.7	79.7	79.7	79.7
25	–	85.8	82.0	78.8	78.8	78.8	78.8
30	–	–	82.7	78.9	77.6	77.6	77.6
35	–	–	83.4	79.6	76.3	76.3	76.3
40	–	–	–	80.2	76.4	75.1	75.1
45	–	–	–	80.9	77.0	73.7	73.7
53	–	–	–	–	78.0	74.1	71.5

/data/engperf/CSeries/Docs/QRH_FCOM_CS300_1521g–3/derivation/pw1524g_ba_v05r2_status/FLEX/61000/61000_6000FT_qrh_n1.ps

TO–1 FLEX – Engine bleeds closed – Pressure altitude 6000 ft <72211001D>
Figure 03–01B–82

THRUST SETTING – %N1

REDUCED THRUST TAKEOFF – STATIC to 30 KIAS

TO–1 FLEX, ENGINE BLEEDS CLOSED

PRESSURE ALTITUDE = 8000 FT

PW1521G–3

OAT	ASSUMED TEMPERATURE (°C)						
(°C)	14	24	34	44	54	64	74
–54	77.5	74.7	71.4	70.2	70.2	70.2	70.2
–50	78.2	75.4	72.0	70.8	70.8	70.8	70.8
–45	79.1	76.2	72.8	71.6	71.6	71.6	71.6
–40	80.0	77.0	73.6	72.4	72.4	72.4	72.4
–35	80.8	77.9	74.4	73.1	73.1	73.1	73.1
–30	81.7	78.7	75.2	73.9	73.9	73.9	73.9
–25	82.5	79.5	76.0	74.7	74.7	74.7	74.7
–20	83.3	80.3	76.7	75.4	75.4	75.4	75.4
–15	84.1	81.1	77.5	76.1	76.1	76.1	76.1
–10	84.9	81.8	78.2	76.8	76.8	76.8	76.8
–5	85.7	82.6	79.0	77.6	77.6	77.6	77.6
0	86.5	83.4	79.7	78.3	78.3	78.3	78.3
5	87.3	84.1	80.4	79.0	79.0	79.0	79.0
10	88.1	84.9	81.2	79.7	79.7	79.7	79.7
15	–	85.6	81.9	80.4	80.4	80.4	80.4
20	–	86.4	82.6	79.7	79.7	79.7	79.7
25	–	–	83.3	79.4	78.7	78.7	78.7
30	–	–	84.0	80.1	77.4	77.4	77.4
35	–	–	–	80.8	76.8	76.1	76.1
40	–	–	–	81.4	77.5	74.6	74.6
45	–	–	–	–	78.1	74.1	73.1
53	–	–	–	–	79.1	75.0	71.0

/data/engperf/CSeries/Docs/QRH_FCOM_CS300_1521g–3/derivation/pw1524g_ba_v05r2_status/FLEX/61000/61000_8000FT_qrh_n1.ps

TO–1 FLEX – Engine bleeds closed – Pressure altitude 8000 ft <72211001D>
Figure 03–01B–83

THRUST SETTING – %N1

REDUCED THRUST TAKEOFF – STATIC to 30 KIAS

TO–1 FLEX, ENGINE BLEEDS CLOSED

PRESSURE ALTITUDE = 10000 FT

PW1521G–3

OAT	ASSUMED TEMPERATURE (°C)						
(°C)	10	20	30	40	50	60	70
–54	78.5	75.7	72.5	71.0	71.0	71.0	71.0
–50	79.2	76.4	73.2	71.6	71.6	71.6	71.6
–45	80.1	77.3	74.0	72.4	72.4	72.4	72.4
–40	81.0	78.1	74.8	73.2	73.2	73.2	73.2
–35	81.8	79.0	75.6	73.9	73.9	73.9	73.9
–30	82.7	79.8	76.4	74.7	74.7	74.7	74.7
–25	83.5	80.6	77.1	75.5	75.5	75.5	75.5
–20	84.3	81.4	77.9	76.2	76.2	76.2	76.2
–15	85.1	82.2	78.7	77.0	77.0	77.0	77.0
–10	86.0	83.0	79.4	77.7	77.7	77.7	77.7
–5	86.8	83.8	80.2	78.4	78.4	78.4	78.4
0	87.5	84.5	80.9	79.2	79.2	79.2	79.2
5	88.3	85.3	81.7	79.9	79.9	79.9	79.9
10	89.1	86.1	82.4	80.6	80.6	80.6	80.6
15	–	86.8	83.1	80.4	80.4	80.4	80.4
20	–	87.6	83.8	80.2	79.5	79.5	79.5
25	–	–	84.5	80.8	78.4	78.4	78.4
30	–	–	85.3	81.5	77.8	77.1	77.1
35	–	–	–	82.2	78.4	75.7	75.7
40	–	–	–	82.8	79.0	75.2	74.3
45	–	–	–	–	79.7	75.8	72.9
53	–	–	–	–	–	76.8	72.9

/data/engperf/CSeries/Docs/QRH_FCOM_CS300_1521g–3/derivation/pw1524g_ba_v05r2_status/FLEX/61000/61000_10000FT_qrh_n1.ps

TO–1 FLEX – Engine bleeds closed – Pressure altitude 10000 ft <72211001D>
Figure 03–01B–84

THRUST SETTING – %N1

REDUCED THRUST TAKEOFF – STATIC to 30 KIAS

TO–1 FLEX, ENGINE BLEEDS CLOSED

PRESSURE ALTITUDE = 12000 FT

PW1521G–3

OAT	ASSUMED TEMPERATURE (°C)						
(°C)	6	16	26	36	46	56	66
–54	79.4	76.8	73.7	71.7	71.7	71.7	71.7
–50	80.1	77.5	74.4	72.3	72.3	72.3	72.3
–45	81.0	78.4	75.2	73.2	73.2	73.2	73.2
–40	81.9	79.2	76.0	74.0	74.0	74.0	74.0
–35	82.8	80.1	76.8	74.7	74.7	74.7	74.7
–30	83.6	80.9	77.6	75.5	75.5	75.5	75.5
–25	84.5	81.7	78.4	76.3	76.3	76.3	76.3
–20	85.3	82.5	79.2	77.0	77.0	77.0	77.0
–15	86.1	83.4	80.0	77.8	77.8	77.8	77.8
–10	87.0	84.2	80.8	78.5	78.5	78.5	78.5
–5	87.8	85.0	81.5	79.3	79.3	79.3	79.3
0	88.6	85.8	82.3	80.0	80.0	80.0	80.0
5	89.4	86.5	83.0	80.7	80.7	80.7	80.7
10	–	87.3	83.8	80.9	80.9	80.9	80.9
15	–	88.1	84.5	80.7	80.3	80.3	80.3
20	–	–	85.2	81.4	79.3	79.3	79.3
25	–	–	86.0	82.1	78.3	78.2	78.2
30	–	–	–	82.8	79.0	76.9	76.9
35	–	–	–	83.5	79.6	75.7	75.4
40	–	–	–	–	80.2	76.3	73.9
45	–	–	–	–	80.9	76.9	73.0
53	–	–	–	–	–	77.9	73.9

/data/engperf/CSeries/Docs/QRH_FCOM_CS300_1521g–3/derivation/pw1524g_ba_v05r2_status/FLEX/61000/61000_12000FT_qrh_n1.ps

TO–1 FLEX – Engine bleeds closed – Pressure altitude 12000 ft <72211001D>
Figure 03–01B–85

THRUST SETTING – %N1

REDUCED THRUST TAKEOFF – STATIC to 30 KIAS

TO–1 FLEX, ENGINE BLEEDS CLOSED

PRESSURE ALTITUDE = 14500 FT

PW1521G–3

OAT	ASSUMED TEMPERATURE (°C)						
(°C)	1	11	21	31	41	51	61
–54	80.5	78.2	75.4	72.5	72.5	72.5	72.5
–50	81.2	78.9	76.1	73.2	73.2	73.2	73.2
–45	82.1	79.8	76.9	74.0	74.0	74.0	74.0
–40	83.0	80.7	77.8	74.8	74.8	74.8	74.8
–35	83.8	81.5	78.6	75.6	75.6	75.6	75.6
–30	84.7	82.4	79.4	76.4	76.4	76.4	76.4
–25	85.6	83.2	80.2	77.1	77.1	77.1	77.1
–20	86.4	84.0	81.0	77.9	77.9	77.9	77.9
–15	87.3	84.9	81.8	78.6	78.6	78.6	78.6
–10	88.1	85.7	82.6	79.4	79.4	79.4	79.4
–5	89.0	86.5	83.4	80.2	80.2	80.2	80.2
0	89.8	87.3	84.2	80.9	80.9	80.9	80.9
5	–	88.1	84.9	81.2	81.2	81.2	81.2
10	–	88.9	85.7	81.8	80.9	80.9	80.9
15	–	–	86.4	82.5	80.4	80.4	80.4
20	–	–	87.2	83.3	79.5	79.5	79.5
25	–	–	–	84.0	80.0	78.2	78.2
30	–	–	–	84.7	80.7	76.7	76.7
35	–	–	–	–	81.3	77.3	75.2
40	–	–	–	–	82.0	78.0	73.9
45	–	–	–	–	–	78.6	74.5
53	–	–	–	–	–	–	75.4

/data/engperf/CSeries/Docs/QRH_FCOM_CS300_1521g–3/derivation/pw1524g_ba_v05r2_status/FLEX/61000/61000_14500FT_qrh_n1.ps

TO–1 FLEX – Engine bleeds closed – Pressure altitude 14500 ft <72211001D>
Figure 03–01B–86

K. Flexible N1 – TO-1 FLEX – Packs on, anti-ice off – PW1521G-3 <72211001D>

THRUST SETTING – %N1

REDUCED THRUST TAKEOFF – STATIC to 30 KIAS

TO–1 FLEX, PACKS ON, ANTI–ICE OFF

PRESSURE ALTITUDE = –2000 FT

PW1521G–3

OAT	ASSUMED TEMPERATURE (°C)						
(°C)	34	44	54	64	74	84	94
–54	69.4	66.0	63.8	63.8	63.8	63.8	63.8
–50	70.0	66.6	64.4	64.4	64.4	64.4	64.4
–45	70.8	67.3	65.1	65.1	65.1	65.1	65.1
–40	71.5	68.1	65.8	65.8	65.8	65.8	65.8
–35	72.3	68.8	66.5	66.5	66.5	66.5	66.5
–30	73.1	69.5	67.2	67.2	67.2	67.2	67.2
–25	73.8	70.2	67.8	67.8	67.8	67.8	67.8
–20	74.5	70.9	68.5	68.5	68.5	68.5	68.5
–15	75.3	71.6	69.2	69.2	69.2	69.2	69.2
–10	76.0	72.3	69.8	69.8	69.8	69.8	69.8
–5	76.7	73.0	70.5	70.5	70.5	70.5	70.5
0	77.4	73.7	71.2	71.2	71.2	71.2	71.2
5	78.2	74.3	71.8	71.8	71.8	71.8	71.8
10	78.8	75.0	72.4	72.4	72.4	72.4	72.4
15	79.5	75.7	73.1	73.1	73.1	73.1	73.1
20	80.2	76.3	73.7	73.7	73.7	73.7	73.7
25	80.9	77.0	74.4	74.4	74.4	74.4	74.4
30	81.6	77.6	75.0	75.0	75.0	75.0	75.0
35	–	78.2	74.4	73.5	73.5	73.5	73.5
40	–	78.9	75.0	72.1	72.1	72.1	72.1
45	–	–	75.6	71.7	70.6	70.6	70.6
53	–	–	76.6	72.6	69.1	68.8	68.8

/data/engperf/CSeries/Docs/QRH_FCOM_CS300_1521g-3/derivation/pw1524g_ba_v05r2_status/FLEX/61100/61100_-2000FT_qrh_n1.ps

TO–1 FLEX – Packs on, anti–ice off – Pressure altitude –2000 ft <72211001D>
Figure 03–01B–87

THRUST SETTING – %N1

REDUCED THRUST TAKEOFF – STATIC to 30 KIAS

TO–1 FLEX, PACKS ON, ANTI–ICE OFF

PRESSURE ALTITUDE = Sea Level

PW1521G–3

OAT	ASSUMED TEMPERATURE (°C)						
(°C)	30	40	50	60	70	80	90
–54	71.7	68.2	66.1	66.1	66.1	66.1	66.1
–50	72.3	68.8	66.7	66.7	66.7	66.7	66.7
–45	73.1	69.6	67.4	67.4	67.4	67.4	67.4
–40	73.9	70.4	68.2	68.2	68.2	68.2	68.2
–35	74.7	71.1	68.9	68.9	68.9	68.9	68.9
–30	75.5	71.9	69.6	69.6	69.6	69.6	69.6
–25	76.3	72.6	70.3	70.3	70.3	70.3	70.3
–20	77.0	73.3	71.0	71.0	71.0	71.0	71.0
–15	77.8	74.0	71.7	71.7	71.7	71.7	71.7
–10	78.5	74.8	72.4	72.4	72.4	72.4	72.4
–5	79.3	75.5	73.0	73.0	73.0	73.0	73.0
0	80.0	76.2	73.7	73.7	73.7	73.7	73.7
5	80.8	76.9	74.4	74.4	74.4	74.4	74.4
10	81.5	77.5	75.0	75.0	75.0	75.0	75.0
15	82.2	78.2	75.7	75.7	75.7	75.7	75.7
20	82.9	78.9	76.4	76.4	76.4	76.4	76.4
25	83.6	79.6	77.0	77.0	77.0	77.0	77.0
30	84.3	80.2	76.5	76.0	76.0	76.0	76.0
35	–	80.9	77.1	74.6	74.6	74.6	74.6
40	–	81.5	77.7	74.0	73.3	73.3	73.3
45	–	–	78.4	74.5	71.7	71.7	71.7
53	–	–	–	75.5	72.0	69.5	69.5

/data/engperf/CSeries/Docs/QRH_FCOM_CS300_1521g–3/derivation/pw1524g_ba_v05r2_status/FLEX/61100/61100_SL_qrh_n1.ps

TO–1 FLEX – Packs on, anti–ice off – Pressure altitude Sea level <72211001D>
Figure 03–01B–88

THRUST SETTING – %N1

REDUCED THRUST TAKEOFF – STATIC to 30 KIAS

TO–1 FLEX, PACKS ON, ANTI–ICE OFF

PRESSURE ALTITUDE = 1000 FT

PW1521G–3

OAT	ASSUMED TEMPERATURE (°C)						
(°C)	28	38	48	58	68	78	88
–54	72.3	68.9	66.7	66.7	66.7	66.7	66.7
–50	73.0	69.5	67.3	67.3	67.3	67.3	67.3
–45	73.8	70.3	68.0	68.0	68.0	68.0	68.0
–40	74.6	71.1	68.8	68.8	68.8	68.8	68.8
–35	75.4	71.8	69.5	69.5	69.5	69.5	69.5
–30	76.2	72.6	70.2	70.2	70.2	70.2	70.2
–25	77.0	73.3	70.9	70.9	70.9	70.9	70.9
–20	77.7	74.0	71.6	71.6	71.6	71.6	71.6
–15	78.5	74.8	72.3	72.3	72.3	72.3	72.3
–10	79.2	75.5	73.0	73.0	73.0	73.0	73.0
–5	80.0	76.2	73.7	73.7	73.7	73.7	73.7
0	80.7	76.9	74.4	74.4	74.4	74.4	74.4
5	81.5	77.6	75.0	75.0	75.0	75.0	75.0
10	82.2	78.3	75.7	75.7	75.7	75.7	75.7
15	82.9	79.0	76.4	76.4	76.4	76.4	76.4
20	83.6	79.7	77.1	77.1	77.1	77.1	77.1
25	84.3	80.3	77.3	77.3	77.3	77.3	77.3
30	–	81.0	77.1	76.0	76.0	76.0	76.0
35	–	81.7	77.8	74.6	74.6	74.6	74.6
40	–	–	78.4	74.6	73.2	73.2	73.2
45	–	–	79.0	75.2	71.7	71.7	71.7
53	–	–	–	76.2	72.5	69.4	69.4

/data/engperf/CSeries/Docs/QRH_FCOM_CS300_1521g–3/derivation/pw1524g_ba_v05r2_status/FLEX/61100/61100_1000FT_qrh_n1.ps

TO–1 FLEX – Packs on, anti–ice off – Pressure altitude 1000 ft <72211001D>
Figure 03–01B–89

THRUST SETTING – %N1

REDUCED THRUST TAKEOFF – STATIC to 30 KIAS

TO–1 FLEX, PACKS ON, ANTI–ICE OFF

PRESSURE ALTITUDE = 2000 FT

PW1521G–3

OAT	ASSUMED TEMPERATURE (°C)						
(°C)	26	36	46	56	66	76	86
–54	73.0	69.6	67.3	67.3	67.3	67.3	67.3
–50	73.6	70.2	67.9	67.9	67.9	67.9	67.9
–45	74.4	71.0	68.6	68.6	68.6	68.6	68.6
–40	75.2	71.7	69.4	69.4	69.4	69.4	69.4
–35	76.0	72.5	70.1	70.1	70.1	70.1	70.1
–30	76.8	73.3	70.8	70.8	70.8	70.8	70.8
–25	77.6	74.0	71.5	71.5	71.5	71.5	71.5
–20	78.4	74.8	72.2	72.2	72.2	72.2	72.2
–15	79.2	75.5	73.0	73.0	73.0	73.0	73.0
–10	79.9	76.2	73.7	73.7	73.7	73.7	73.7
–5	80.7	76.9	74.3	74.3	74.3	74.3	74.3
0	81.4	77.7	75.0	75.0	75.0	75.0	75.0
5	82.2	78.4	75.7	75.7	75.7	75.7	75.7
10	82.9	79.1	76.4	76.4	76.4	76.4	76.4
15	83.7	79.8	77.1	77.1	77.1	77.1	77.1
20	84.4	80.5	77.7	77.7	77.7	77.7	77.7
25	85.1	81.1	77.3	77.3	77.3	77.3	77.3
30	–	81.8	77.8	75.9	75.9	75.9	75.9
35	–	82.5	78.4	74.7	74.5	74.5	74.5
40	–	–	79.0	75.3	73.1	73.1	73.1
45	–	–	79.7	75.9	72.0	71.6	71.6
53	–	–	–	76.8	72.9	69.2	69.2

/data/engperf/CSeries/Docs/QRH_FCOM_CS300_1521g–3/derivation/pw1524g_ba_v05r2_status/FLEX/61100/61100_2000FT_qrh_n1.ps

TO–1 FLEX – Packs on, anti–ice off – Pressure altitude 2000 ft <72211001D>
Figure 03–01B–90

THRUST SETTING – %N1

REDUCED THRUST TAKEOFF – STATIC to 30 KIAS

TO–1 FLEX, PACKS ON, ANTI–ICE OFF

PRESSURE ALTITUDE = 3000 FT

PW1521G–3

OAT	ASSUMED TEMPERATURE (°C)						
(°C)	24	34	44	54	64	74	84
–54	73.6	70.2	67.8	67.8	67.8	67.8	67.8
–50	74.2	70.8	68.4	68.4	68.4	68.4	68.4
–45	75.0	71.6	69.2	69.2	69.2	69.2	69.2
–40	75.9	72.4	69.9	69.9	69.9	69.9	69.9
–35	76.7	73.1	70.7	70.7	70.7	70.7	70.7
–30	77.5	73.9	71.4	71.4	71.4	71.4	71.4
–25	78.3	74.7	72.1	72.1	72.1	72.1	72.1
–20	79.1	75.4	72.8	72.8	72.8	72.8	72.8
–15	79.8	76.2	73.5	73.5	73.5	73.5	73.5
–10	80.6	76.9	74.2	74.2	74.2	74.2	74.2
–5	81.4	77.6	74.9	74.9	74.9	74.9	74.9
0	82.1	78.3	75.6	75.6	75.6	75.6	75.6
5	82.9	79.0	76.3	76.3	76.3	76.3	76.3
10	83.6	79.8	77.0	77.0	77.0	77.0	77.0
15	84.3	80.5	77.7	77.7	77.7	77.7	77.7
20	85.1	81.2	78.3	78.3	78.3	78.3	78.3
25	–	81.8	77.7	77.2	77.2	77.2	77.2
30	–	82.5	78.4	75.8	75.8	75.8	75.8
35	–	–	79.0	75.2	74.4	74.4	74.4
40	–	–	79.7	75.8	73.0	73.0	73.0
45	–	–	–	76.4	72.6	71.4	71.4
53	–	–	–	77.4	73.5	69.5	69.0

/data/engperf/CSeries/Docs/QRH_FCOM_CS300_1521g–3/derivation/pw1524g_ba_v05r2_status/FLEX/61100/61100_3000FT_qrh_n1.ps

TO–1 FLEX – Packs on, anti–ice off – Pressure altitude 3000 ft <72211001D>
Figure 03–01B–91

THRUST SETTING – %N1

REDUCED THRUST TAKEOFF – STATIC to 30 KIAS

TO–1 FLEX, PACKS ON, ANTI–ICE OFF

PRESSURE ALTITUDE = 4000 FT

PW1521G–3

OAT	ASSUMED TEMPERATURE (°C)						
(°C)	22	32	42	52	62	72	82
–54	74.2	70.8	68.3	68.3	68.3	68.3	68.3
–50	74.8	71.4	69.0	69.0	69.0	69.0	69.0
–45	75.7	72.2	69.7	69.7	69.7	69.7	69.7
–40	76.5	73.0	70.5	70.5	70.5	70.5	70.5
–35	77.3	73.8	71.2	71.2	71.2	71.2	71.2
–30	78.1	74.5	71.9	71.9	71.9	71.9	71.9
–25	78.9	75.3	72.7	72.7	72.7	72.7	72.7
–20	79.7	76.1	73.4	73.4	73.4	73.4	73.4
–15	80.5	76.8	74.1	74.1	74.1	74.1	74.1
–10	81.3	77.5	74.8	74.8	74.8	74.8	74.8
–5	82.0	78.3	75.5	75.5	75.5	75.5	75.5
0	82.8	79.0	76.2	76.2	76.2	76.2	76.2
5	83.6	79.7	76.9	76.9	76.9	76.9	76.9
10	84.3	80.4	77.6	77.6	77.6	77.6	77.6
15	85.0	81.2	78.3	78.3	78.3	78.3	78.3
20	85.8	81.8	78.3	78.3	78.3	78.3	78.3
25	–	82.5	78.3	77.1	77.1	77.1	77.1
30	–	83.2	79.0	75.7	75.7	75.7	75.7
35	–	–	79.6	75.8	74.3	74.3	74.3
40	–	–	80.3	76.4	72.8	72.8	72.8
45	–	–	–	77.0	73.1	71.3	71.3
53	–	–	–	–	74.0	70.0	68.9

/data/engperf/CSeries/Docs/QRH_FCOM_CS300_1521g–3/derivation/pw1524g_ba_v05r2_status/FLEX/61100/61100_4000FT_qrh_n1.ps

TO–1 FLEX – Packs on, anti–ice off – Pressure altitude 4000 ft <72211001D>
Figure 03–01B–92

THRUST SETTING – %N1

REDUCED THRUST TAKEOFF – STATIC to 30 KIAS

TO–1 FLEX, PACKS ON, ANTI–ICE OFF

PRESSURE ALTITUDE = 5000 FT

PW1521G–3

OAT	ASSUMED TEMPERATURE (°C)						
(°C)	20	30	40	50	60	70	80
–54	74.7	71.4	68.9	68.9	68.9	68.9	68.9
–50	75.4	72.0	69.5	69.5	69.5	69.5	69.5
–45	76.3	72.8	70.2	70.2	70.2	70.2	70.2
–40	77.1	73.6	71.0	71.0	71.0	71.0	71.0
–35	77.9	74.4	71.8	71.8	71.8	71.8	71.8
–30	78.7	75.2	72.5	72.5	72.5	72.5	72.5
–25	79.5	75.9	73.2	73.2	73.2	73.2	73.2
–20	80.3	76.7	74.0	74.0	74.0	74.0	74.0
–15	81.1	77.5	74.7	74.7	74.7	74.7	74.7
–10	81.9	78.2	75.4	75.4	75.4	75.4	75.4
–5	82.7	78.9	76.1	76.1	76.1	76.1	76.1
0	83.4	79.7	76.8	76.8	76.8	76.8	76.8
5	84.2	80.4	77.5	77.5	77.5	77.5	77.5
10	85.0	81.1	78.2	78.2	78.2	78.2	78.2
15	85.7	81.8	78.9	78.9	78.9	78.9	78.9
20	86.4	82.5	78.3	78.2	78.2	78.2	78.2
25	–	83.2	79.0	77.0	77.0	77.0	77.0
30	–	83.9	79.7	75.8	75.6	75.6	75.6
35	–	–	80.3	76.4	74.2	74.2	74.2
40	–	–	81.0	77.0	73.2	72.8	72.8
45	–	–	–	77.6	73.8	71.1	71.1
53	–	–	–	–	74.7	70.8	68.8

/data/engperf/CSeries/Docs/QRH_FCOM_CS300_1521g–3/derivation/pw1524g_ba_v05r2_status/FLEX/61100/61100_5000FT_qrh_n1.ps

TO–1 FLEX – Packs on, anti–ice off – Pressure altitude 5000 ft <72211001D>
Figure 03–01B–93

THRUST SETTING – %N1

REDUCED THRUST TAKEOFF – STATIC to 30 KIAS

TO–1 FLEX, PACKS ON, ANTI–ICE OFF

PRESSURE ALTITUDE = 6000 FT

PW1521G–3

OAT	ASSUMED TEMPERATURE (°C)						
(°C)	18	28	38	48	58	68	78
–54	75.3	71.9	69.4	69.4	69.4	69.4	69.4
–50	76.0	72.6	70.0	70.0	70.0	70.0	70.0
–45	76.8	73.4	70.8	70.8	70.8	70.8	70.8
–40	77.7	74.2	71.5	71.5	71.5	71.5	71.5
–35	78.5	75.0	72.3	72.3	72.3	72.3	72.3
–30	79.3	75.8	73.0	73.0	73.0	73.0	73.0
–25	80.1	76.5	73.8	73.8	73.8	73.8	73.8
–20	80.9	77.3	74.5	74.5	74.5	74.5	74.5
–15	81.7	78.1	75.2	75.2	75.2	75.2	75.2
–10	82.5	78.8	76.0	76.0	76.0	76.0	76.0
–5	83.3	79.6	76.7	76.7	76.7	76.7	76.7
0	84.1	80.3	77.4	77.4	77.4	77.4	77.4
5	84.8	81.0	78.1	78.1	78.1	78.1	78.1
10	85.6	81.8	78.8	78.8	78.8	78.8	78.8
15	86.3	82.5	79.2	79.2	79.2	79.2	79.2
20	–	83.2	79.1	78.1	78.1	78.1	78.1
25	–	83.9	79.7	76.9	76.9	76.9	76.9
30	–	–	80.4	76.4	75.5	75.5	75.5
35	–	–	81.1	77.0	74.0	74.0	74.0
40	–	–	–	77.6	73.8	72.6	72.6
45	–	–	–	78.2	74.4	71.0	71.0
53	–	–	–	–	75.3	71.5	68.7

/data/engperf/CSeries/Docs/QRH_FCOM_CS300_1521g–3/derivation/pw1524g_ba_v05r2_status/FLEX/61100/61100_6000FT_qrh_n1.ps

TO–1 FLEX – Packs on, anti–ice off – Pressure altitude 6000 ft <72211001D>
Figure 03–01B–94

THRUST SETTING – %N1

REDUCED THRUST TAKEOFF – STATIC to 30 KIAS

TO–1 FLEX, PACKS ON, ANTI–ICE OFF

PRESSURE ALTITUDE = 8000 FT

PW1521G–3

OAT	ASSUMED TEMPERATURE (°C)						
(°C)	14	24	34	44	54	64	74
–54	76.4	73.1	70.2	70.2	70.2	70.2	70.2
–50	77.1	73.8	70.9	70.9	70.9	70.9	70.9
–45	77.9	74.6	71.6	71.6	71.6	71.6	71.6
–40	78.8	75.4	72.4	72.4	72.4	72.4	72.4
–35	79.6	76.2	73.2	73.2	73.2	73.2	73.2
–30	80.4	77.0	73.9	73.9	73.9	73.9	73.9
–25	81.3	77.8	74.7	74.7	74.7	74.7	74.7
–20	82.1	78.6	75.4	75.4	75.4	75.4	75.4
–15	82.9	79.3	76.2	76.2	76.2	76.2	76.2
–10	83.7	80.1	76.9	76.9	76.9	76.9	76.9
–5	84.5	80.9	77.6	77.6	77.6	77.6	77.6
0	85.3	81.6	78.3	78.3	78.3	78.3	78.3
5	86.0	82.4	79.1	79.1	79.1	79.1	79.1
10	86.8	83.1	79.8	79.8	79.8	79.8	79.8
15	–	83.8	79.7	78.9	78.9	78.9	78.9
20	–	84.5	80.4	77.9	77.9	77.9	77.9
25	–	–	81.1	77.1	76.6	76.6	76.6
30	–	–	81.7	77.7	75.1	75.1	75.1
35	–	–	–	78.3	74.4	73.6	73.6
40	–	–	–	79.0	75.0	72.0	72.0
45	–	–	–	–	75.6	71.7	70.5
53	–	–	–	–	76.6	72.6	68.5

/data/engperf/CSeries/Docs/QRH_FCOM_CS300_1521g–3/derivation/pw1524g_ba_v05r2_status/FLEX/61100/61100_8000FT_qrh_n1.ps

TO–1 FLEX – Packs on, anti–ice off – Pressure altitude 8000 ft <72211001D>
Figure 03–01B–95

THRUST SETTING – %N1

REDUCED THRUST TAKEOFF – STATIC to 30 KIAS

TO–1 FLEX, PACKS ON, ANTI–ICE OFF

PRESSURE ALTITUDE = 10000 FT

PW1521G–3

OAT	ASSUMED TEMPERATURE (°C)						
(°C)	10	20	30	40	50	60	70
–54	77.4	74.1	71.0	71.0	71.0	71.0	71.0
–50	78.1	74.8	71.6	71.6	71.6	71.6	71.6
–45	79.0	75.6	72.4	72.4	72.4	72.4	72.4
–40	79.8	76.4	73.2	73.2	73.2	73.2	73.2
–35	80.7	77.2	74.0	74.0	74.0	74.0	74.0
–30	81.5	78.0	74.8	74.8	74.8	74.8	74.8
–25	82.3	78.8	75.5	75.5	75.5	75.5	75.5
–20	83.2	79.6	76.3	76.3	76.3	76.3	76.3
–15	84.0	80.4	77.0	77.0	77.0	77.0	77.0
–10	84.8	81.2	77.7	77.7	77.7	77.7	77.7
–5	85.6	81.9	78.5	78.5	78.5	78.5	78.5
0	86.4	82.7	79.2	79.2	79.2	79.2	79.2
5	87.2	83.5	79.9	79.9	79.9	79.9	79.9
10	88.0	84.2	80.1	79.5	79.5	79.5	79.5
15	–	84.9	80.8	78.7	78.7	78.7	78.7
20	–	85.7	81.5	77.8	77.5	77.5	77.5
25	–	–	82.2	78.4	76.0	76.0	76.0
30	–	–	82.9	79.1	75.3	74.6	74.6
35	–	–	–	79.7	76.0	73.0	73.0
40	–	–	–	80.4	76.6	72.8	71.6
45	–	–	–	–	77.2	73.3	70.1
53	–	–	–	–	–	74.2	70.4

/data/engperf/CSeries/Docs/QRH_FCOM_CS300_1521g–3/derivation/pw1524g_ba_v05r2_status/FLEX/61100/61100_10000FT_qrh_n1.ps

TO–1 FLEX – Packs on, anti–ice off – Pressure altitude 10000 ft <72211001D>
Figure 03–01B–96

THRUST SETTING – %N1

REDUCED THRUST TAKEOFF – STATIC to 30 KIAS

TO–1 FLEX, PACKS ON, ANTI–ICE OFF

PRESSURE ALTITUDE = 12000 FT

PW1521G–3

OAT	ASSUMED TEMPERATURE (°C)						
(°C)	6	16	26	36	46	56	66
–54	78.3	75.1	71.8	71.8	71.8	71.8	71.8
–50	79.0	75.8	72.4	72.4	72.4	72.4	72.4
–45	79.9	76.7	73.2	73.2	73.2	73.2	73.2
–40	80.8	77.5	74.0	74.0	74.0	74.0	74.0
–35	81.6	78.3	74.8	74.8	74.8	74.8	74.8
–30	82.5	79.2	75.6	75.6	75.6	75.6	75.6
–25	83.3	80.0	76.3	76.3	76.3	76.3	76.3
–20	84.2	80.8	77.1	77.1	77.1	77.1	77.1
–15	85.0	81.5	77.8	77.8	77.8	77.8	77.8
–10	85.8	82.3	78.6	78.6	78.6	78.6	78.6
–5	86.6	83.1	79.3	79.3	79.3	79.3	79.3
0	87.4	83.9	80.0	80.0	80.0	80.0	80.0
5	88.2	84.7	80.8	79.9	79.9	79.9	79.9
10	–	85.4	81.5	79.3	79.3	79.3	79.3
15	–	86.2	82.2	78.4	78.4	78.4	78.4
20	–	–	82.9	78.9	77.0	77.0	77.0
25	–	–	83.6	79.6	75.7	75.7	75.7
30	–	–	–	80.2	76.4	74.1	74.1
35	–	–	–	80.9	77.0	73.1	72.6
40	–	–	–	–	77.6	73.7	71.0
45	–	–	–	–	78.2	74.3	70.3
53	–	–	–	–	–	75.2	71.2

/data/engperf/CSeries/Docs/QRH_FCOM_CS300_1521g–3/derivation/pw1524g_ba_v05r2_status/FLEX/61100/61100_12000FT_qrh_n1.ps

TO–1 FLEX – Packs on, anti–ice off – Pressure altitude 12000 ft <72211001D>
Figure 03–01B–97

THRUST SETTING – %N1

REDUCED THRUST TAKEOFF – STATIC to 30 KIAS

TO–1 FLEX, PACKS ON, ANTI–ICE OFF

PRESSURE ALTITUDE = 14500 FT

PW1521G–3

OAT	ASSUMED TEMPERATURE (°C)						
(°C)	1	11	21	31	41	51	61
–54	79.5	76.8	73.2	72.6	72.6	72.6	72.6
–50	80.2	77.5	73.9	73.2	73.2	73.2	73.2
–45	81.1	78.3	74.7	74.0	74.0	74.0	74.0
–40	82.0	79.2	75.5	74.8	74.8	74.8	74.8
–35	82.8	80.0	76.3	75.6	75.6	75.6	75.6
–30	83.7	80.9	77.1	76.4	76.4	76.4	76.4
–25	84.5	81.7	77.9	77.2	77.2	77.2	77.2
–20	85.4	82.5	78.7	78.0	78.0	78.0	78.0
–15	86.2	83.3	79.5	78.7	78.7	78.7	78.7
–10	87.1	84.1	80.2	79.5	79.5	79.5	79.5
–5	87.9	84.9	81.0	80.2	80.2	80.2	80.2
0	88.7	85.7	81.7	80.2	80.2	80.2	80.2
5	–	86.5	82.5	79.8	79.8	79.8	79.8
10	–	87.3	83.2	79.2	79.2	79.2	79.2
15	–	–	83.9	79.9	78.2	78.2	78.2
20	–	–	84.7	80.5	76.8	76.8	76.8
25	–	–	–	81.2	77.3	75.2	75.2
30	–	–	–	81.9	77.9	73.9	73.7
35	–	–	–	–	78.6	74.5	72.2
40	–	–	–	–	79.2	75.2	71.1
45	–	–	–	–	–	75.8	71.7
53	–	–	–	–	–	–	72.5

/data/engperf/CSeries/Docs/QRH_FCOM_CS300_1521g–3/derivation/pw1524g_ba_v05r2_status/FLEX/61100/61100_14500FT_qrh_n1.ps

TO–1 FLEX – Packs on, anti–ice off – Pressure altitude 14500 ft <72211001D>
Figure 03–01B–98

L. Flexible N1 – TO-2 FLEX – Engine bleeds closed – PW1521G-3 <72211001D>

THRUST SETTING – %N1

REDUCED THRUST TAKEOFF – STATIC to 30 KIAS

TO–2 FLEX, ENGINE BLEEDS CLOSED

PRESSURE ALTITUDE = –2000 FT

PW1521G–3

OAT	ASSUMED TEMPERATURE (°C)						
(°C)	34	44	54	64	74	84	94
–54	68.1	65.0	63.8	63.8	63.8	63.8	63.8
–50	68.7	65.6	64.4	64.4	64.4	64.4	64.4
–45	69.4	66.3	65.1	65.1	65.1	65.1	65.1
–40	70.2	67.1	65.8	65.8	65.8	65.8	65.8
–35	70.9	67.8	66.5	66.5	66.5	66.5	66.5
–30	71.7	68.5	67.1	67.1	67.1	67.1	67.1
–25	72.4	69.2	67.8	67.8	67.8	67.8	67.8
–20	73.1	69.9	68.5	68.5	68.5	68.5	68.5
–15	73.8	70.6	69.1	69.1	69.1	69.1	69.1
–10	74.5	71.2	69.8	69.8	69.8	69.8	69.8
–5	75.2	71.9	70.5	70.5	70.5	70.5	70.5
0	75.9	72.6	71.1	71.1	71.1	71.1	71.1
5	76.6	73.2	71.8	71.8	71.8	71.8	71.8
10	77.3	73.9	72.4	72.4	72.4	72.4	72.4
15	78.0	74.6	73.0	73.0	73.0	73.0	73.0
20	78.7	75.2	73.7	73.7	73.7	73.7	73.7
25	79.3	75.8	74.3	74.3	74.3	74.3	74.3
30	80.0	76.5	74.9	74.9	74.9	74.9	74.9
35	–	77.1	75.3	75.3	75.3	75.3	75.3
40	–	77.7	74.0	74.0	74.0	74.0	74.0
45	–	–	74.3	72.7	72.7	72.7	72.7
53	–	–	75.2	71.8	70.9	70.9	70.9

/data/engperf/CSeries/Docs/QRH_FCOM_CS300_1521g–3/derivation/pw1524g_ba_v05r2_status/FLEX/62000/62000_–2000FT_qrh_n1.ps

TO–2 FLEX – Engine bleeds closed – Pressure altitude –2000 ft <72211001D>
Figure 03–01B–99

THRUST SETTING – %N1

REDUCED THRUST TAKEOFF – STATIC to 30 KIAS

TO–2 FLEX, ENGINE BLEEDS CLOSED

PRESSURE ALTITUDE = Sea Level

PW1521G–3

OAT	ASSUMED TEMPERATURE (°C)						
(°C)	30	40	50	60	70	80	90
–54	70.3	67.2	66.1	66.1	66.1	66.1	66.1
–50	70.9	67.9	66.7	66.7	66.7	66.7	66.7
–45	71.7	68.6	67.4	67.4	67.4	67.4	67.4
–40	72.5	69.4	68.1	68.1	68.1	68.1	68.1
–35	73.2	70.1	68.8	68.8	68.8	68.8	68.8
–30	74.0	70.8	69.5	69.5	69.5	69.5	69.5
–25	74.7	71.6	70.2	70.2	70.2	70.2	70.2
–20	75.5	72.3	70.9	70.9	70.9	70.9	70.9
–15	76.2	73.0	71.6	71.6	71.6	71.6	71.6
–10	76.9	73.7	72.3	72.3	72.3	72.3	72.3
–5	77.7	74.4	73.0	73.0	73.0	73.0	73.0
0	78.4	75.1	73.7	73.7	73.7	73.7	73.7
5	79.1	75.8	74.3	74.3	74.3	74.3	74.3
10	79.8	76.4	75.0	75.0	75.0	75.0	75.0
15	80.5	77.1	75.7	75.7	75.7	75.7	75.7
20	81.2	77.8	76.3	76.3	76.3	76.3	76.3
25	81.9	78.4	77.0	77.0	77.0	77.0	77.0
30	82.6	79.1	77.6	77.6	77.6	77.6	77.6
35	–	79.7	76.5	76.5	76.5	76.5	76.5
40	–	80.4	76.7	75.2	75.2	75.2	75.2
45	–	–	77.3	74.0	74.0	74.0	74.0
53	–	–	–	74.9	71.8	71.8	71.8

/data/engperf/CSeries/Docs/QRH_FCOM_CS300_1521g–3/derivation/pw1524g_ba_v05r2_status/FLEX/62000/62000_SL_qrh_n1.ps

TO–2 FLEX – Engine bleeds closed – Pressure altitude Sea level <72211001D>
Figure 03–01B–100

THRUST SETTING – %N1

REDUCED THRUST TAKEOFF – STATIC to 30 KIAS

TO–2 FLEX, ENGINE BLEEDS CLOSED

PRESSURE ALTITUDE = 1000 FT

PW1521G–3

OAT	ASSUMED TEMPERATURE (°C)						
(°C)	28	38	48	58	68	78	88
–54	70.9	67.8	66.7	66.7	66.7	66.7	66.7
–50	71.5	68.5	67.3	67.3	67.3	67.3	67.3
–45	72.3	69.2	68.0	68.0	68.0	68.0	68.0
–40	73.1	70.0	68.7	68.7	68.7	68.7	68.7
–35	73.9	70.7	69.5	69.5	69.5	69.5	69.5
–30	74.6	71.5	70.2	70.2	70.2	70.2	70.2
–25	75.4	72.2	70.9	70.9	70.9	70.9	70.9
–20	76.1	72.9	71.6	71.6	71.6	71.6	71.6
–15	76.9	73.6	72.3	72.3	72.3	72.3	72.3
–10	77.6	74.3	73.0	73.0	73.0	73.0	73.0
–5	78.3	75.0	73.7	73.7	73.7	73.7	73.7
0	79.1	75.7	74.3	74.3	74.3	74.3	74.3
5	79.8	76.4	75.0	75.0	75.0	75.0	75.0
10	80.5	77.1	75.7	75.7	75.7	75.7	75.7
15	81.2	77.8	76.4	76.4	76.4	76.4	76.4
20	81.9	78.5	77.0	77.0	77.0	77.0	77.0
25	82.6	79.1	77.7	77.7	77.7	77.7	77.7
30	–	79.8	77.7	77.7	77.7	77.7	77.7
35	–	80.5	76.8	76.5	76.5	76.5	76.5
40	–	–	77.5	75.2	75.2	75.2	75.2
45	–	–	78.1	74.5	74.0	74.0	74.0
53	–	–	–	75.4	71.8	71.8	71.8

/data/engperf/CSeries/Docs/QRH_FCOM_CS300_1521g–3/derivation/pw1524g_ba_v05r2_status/FLEX/62000/62000_1000FT_qrh_n1.ps

TO–2 FLEX – Engine bleeds closed – Pressure altitude 1000 ft <72211001D>
Figure 03–01B–101

THRUST SETTING – %N1

REDUCED THRUST TAKEOFF – STATIC to 30 KIAS

TO–2 FLEX, ENGINE BLEEDS CLOSED

PRESSURE ALTITUDE = 2000 FT

PW1521G–3

OAT	ASSUMED TEMPERATURE (°C)						
(°C)	26	36	46	56	66	76	86
–54	71.5	68.4	67.3	67.3	67.3	67.3	67.3
–50	72.2	69.1	67.9	67.9	67.9	67.9	67.9
–45	73.0	69.8	68.6	68.6	68.6	68.6	68.6
–40	73.7	70.6	69.3	69.3	69.3	69.3	69.3
–35	74.5	71.3	70.1	70.1	70.1	70.1	70.1
–30	75.3	72.1	70.8	70.8	70.8	70.8	70.8
–25	76.0	72.8	71.5	71.5	71.5	71.5	71.5
–20	76.8	73.6	72.2	72.2	72.2	72.2	72.2
–15	77.5	74.3	72.9	72.9	72.9	72.9	72.9
–10	78.3	75.0	73.6	73.6	73.6	73.6	73.6
–5	79.0	75.7	74.3	74.3	74.3	74.3	74.3
0	79.8	76.4	75.0	75.0	75.0	75.0	75.0
5	80.5	77.1	75.7	75.7	75.7	75.7	75.7
10	81.2	77.8	76.4	76.4	76.4	76.4	76.4
15	81.9	78.5	77.0	77.0	77.0	77.0	77.0
20	82.7	79.2	77.7	77.7	77.7	77.7	77.7
25	83.3	79.8	78.4	78.4	78.4	78.4	78.4
30	–	80.5	77.7	77.7	77.7	77.7	77.7
35	–	81.2	77.6	76.5	76.5	76.5	76.5
40	–	–	78.2	75.2	75.2	75.2	75.2
45	–	–	78.8	75.0	74.0	74.0	74.0
53	–	–	–	75.9	72.0	71.6	71.6

/data/engperf/CSeries/Docs/QRH_FCOM_CS300_1521g–3/derivation/pw1524g_ba_v05r2_status/FLEX/62000/62000_2000FT_qrh_n1.ps

TO–2 FLEX – Engine bleeds closed – Pressure altitude 2000 ft <72211001D>
Figure 03–01B–102

THRUST SETTING – %N1

REDUCED THRUST TAKEOFF – STATIC to 30 KIAS

TO–2 FLEX, ENGINE BLEEDS CLOSED

PRESSURE ALTITUDE = 3000 FT

PW1521G–3

OAT	ASSUMED TEMPERATURE (°C)						
(°C)	24	34	44	54	64	74	84
–54	72.1	69.0	67.8	67.8	67.8	67.8	67.8
–50	72.7	69.7	68.4	68.4	68.4	68.4	68.4
–45	73.5	70.4	69.2	69.2	69.2	69.2	69.2
–40	74.3	71.2	69.9	69.9	69.9	69.9	69.9
–35	75.1	72.0	70.6	70.6	70.6	70.6	70.6
–30	75.9	72.7	71.3	71.3	71.3	71.3	71.3
–25	76.6	73.5	72.1	72.1	72.1	72.1	72.1
–20	77.4	74.2	72.8	72.8	72.8	72.8	72.8
–15	78.2	74.9	73.5	73.5	73.5	73.5	73.5
–10	78.9	75.6	74.2	74.2	74.2	74.2	74.2
–5	79.7	76.3	74.9	74.9	74.9	74.9	74.9
0	80.4	77.1	75.6	75.6	75.6	75.6	75.6
5	81.1	77.8	76.3	76.3	76.3	76.3	76.3
10	81.8	78.5	77.0	77.0	77.0	77.0	77.0
15	82.6	79.2	77.6	77.6	77.6	77.6	77.6
20	83.3	79.8	78.3	78.3	78.3	78.3	78.3
25	–	80.5	78.8	78.8	78.8	78.8	78.8
30	–	81.2	77.7	77.7	77.7	77.7	77.7
35	–	–	78.2	76.5	76.5	76.5	76.5
40	–	–	78.9	75.2	75.2	75.2	75.2
45	–	–	–	75.6	73.9	73.9	73.9
53	–	–	–	76.6	72.7	71.6	71.6

/data/engperf/CSeries/Docs/QRH_FCOM_CS300_1521g–3/derivation/pw1524g_ba_v05r2_status/FLEX/62000/62000_3000FT_qrh_n1.ps

TO–2 FLEX – Engine bleeds closed – Pressure altitude 3000 ft <72211001D>
Figure 03–01B–103

THRUST SETTING – %N1

REDUCED THRUST TAKEOFF – STATIC to 30 KIAS

TO–2 FLEX, ENGINE BLEEDS CLOSED

PRESSURE ALTITUDE = 4000 FT

PW1521G–3

OAT	ASSUMED TEMPERATURE (°C)						
(°C)	22	32	42	52	62	72	82
–54	72.6	69.6	68.3	68.3	68.3	68.3	68.3
–50	73.3	70.2	68.9	68.9	68.9	68.9	68.9
–45	74.1	71.0	69.7	69.7	69.7	69.7	69.7
–40	74.9	71.8	70.4	70.4	70.4	70.4	70.4
–35	75.7	72.6	71.2	71.2	71.2	71.2	71.2
–30	76.5	73.3	71.9	71.9	71.9	71.9	71.9
–25	77.2	74.1	72.6	72.6	72.6	72.6	72.6
–20	78.0	74.8	73.3	73.3	73.3	73.3	73.3
–15	78.8	75.5	74.1	74.1	74.1	74.1	74.1
–10	79.5	76.3	74.8	74.8	74.8	74.8	74.8
–5	80.3	77.0	75.5	75.5	75.5	75.5	75.5
0	81.0	77.7	76.2	76.2	76.2	76.2	76.2
5	81.8	78.4	76.9	76.9	76.9	76.9	76.9
10	82.5	79.1	77.6	77.6	77.6	77.6	77.6
15	83.2	79.8	78.2	78.2	78.2	78.2	78.2
20	83.9	80.5	78.9	78.9	78.9	78.9	78.9
25	–	81.2	78.8	78.8	78.8	78.8	78.8
30	–	81.9	78.3	77.7	77.7	77.7	77.7
35	–	–	78.9	76.4	76.4	76.4	76.4
40	–	–	79.6	75.7	75.2	75.2	75.2
45	–	–	–	76.3	73.8	73.8	73.8
53	–	–	–	–	73.3	71.5	71.5

/data/engperf/CSeries/Docs/QRH_FCOM_CS300_1521g–3/derivation/pw1524g_ba_v05r2_status/FLEX/62000/62000_4000FT_qrh_n1.ps

TO–2 FLEX – Engine bleeds closed – Pressure altitude 4000 ft <72211001D>
Figure 03–01B–104

THRUST SETTING – %N1

REDUCED THRUST TAKEOFF – STATIC to 30 KIAS

TO–2 FLEX, ENGINE BLEEDS CLOSED

PRESSURE ALTITUDE = 5000 FT

PW1521G–3

OAT	ASSUMED TEMPERATURE (°C)						
(°C)	20	30	40	50	60	70	80
–54	73.2	70.2	68.8	68.8	68.8	68.8	68.8
–50	73.8	70.8	69.5	69.5	69.5	69.5	69.5
–45	74.7	71.6	70.2	70.2	70.2	70.2	70.2
–40	75.5	72.4	71.0	71.0	71.0	71.0	71.0
–35	76.3	73.2	71.7	71.7	71.7	71.7	71.7
–30	77.0	73.9	72.5	72.5	72.5	72.5	72.5
–25	77.8	74.7	73.2	73.2	73.2	73.2	73.2
–20	78.6	75.4	73.9	73.9	73.9	73.9	73.9
–15	79.4	76.2	74.6	74.6	74.6	74.6	74.6
–10	80.1	76.9	75.3	75.3	75.3	75.3	75.3
–5	80.9	77.6	76.0	76.0	76.0	76.0	76.0
0	81.6	78.4	76.8	76.8	76.8	76.8	76.8
5	82.4	79.1	77.5	77.5	77.5	77.5	77.5
10	83.1	79.8	78.2	78.2	78.2	78.2	78.2
15	83.8	80.5	78.8	78.8	78.8	78.8	78.8
20	84.6	81.2	79.5	79.5	79.5	79.5	79.5
25	–	81.9	78.8	78.8	78.8	78.8	78.8
30	–	82.5	79.0	77.6	77.6	77.6	77.6
35	–	–	79.6	76.3	76.3	76.3	76.3
40	–	–	80.2	76.4	75.1	75.1	75.1
45	–	–	–	77.0	73.8	73.8	73.8
53	–	–	–	–	74.1	71.6	71.6

/data/engperf/CSeries/Docs/QRH_FCOM_CS300_1521g–3/derivation/pw1524g_ba_v05r2_status/FLEX/62000/62000_5000FT_qrh_n1.ps

TO–2 FLEX – Engine bleeds closed – Pressure altitude 5000 ft <72211001D>
Figure 03–01B–105

THRUST SETTING – %N1

REDUCED THRUST TAKEOFF – STATIC to 30 KIAS

TO–2 FLEX, ENGINE BLEEDS CLOSED

PRESSURE ALTITUDE = 6000 FT

PW1521G–3

OAT	ASSUMED TEMPERATURE (°C)						
(°C)	18	28	38	48	58	68	78
–54	73.7	70.8	69.3	69.3	69.3	69.3	69.3
–50	74.4	71.4	70.0	70.0	70.0	70.0	70.0
–45	75.2	72.2	70.7	70.7	70.7	70.7	70.7
–40	76.0	73.0	71.5	71.5	71.5	71.5	71.5
–35	76.8	73.8	72.2	72.2	72.2	72.2	72.2
–30	77.6	74.6	73.0	73.0	73.0	73.0	73.0
–25	78.4	75.3	73.7	73.7	73.7	73.7	73.7
–20	79.2	76.1	74.5	74.5	74.5	74.5	74.5
–15	79.9	76.8	75.2	75.2	75.2	75.2	75.2
–10	80.7	77.6	75.9	75.9	75.9	75.9	75.9
–5	81.5	78.3	76.6	76.6	76.6	76.6	76.6
0	82.2	79.0	77.3	77.3	77.3	77.3	77.3
5	83.0	79.7	78.0	78.0	78.0	78.0	78.0
10	83.7	80.5	78.7	78.7	78.7	78.7	78.7
15	84.4	81.2	79.4	79.4	79.4	79.4	79.4
20	–	81.9	79.7	79.7	79.7	79.7	79.7
25	–	82.6	79.0	78.8	78.8	78.8	78.8
30	–	–	79.6	77.6	77.6	77.6	77.6
35	–	–	80.3	76.5	76.3	76.3	76.3
40	–	–	–	77.1	75.1	75.1	75.1
45	–	–	–	77.7	73.9	73.7	73.7
53	–	–	–	–	74.8	71.5	71.5

/data/engperf/CSeries/Docs/QRH_FCOM_CS300_1521g–3/derivation/pw1524g_ba_v05r2_status/FLEX/62000/62000_6000FT_qrh_n1.ps

TO–2 FLEX – Engine bleeds closed – Pressure altitude 6000 ft <72211001D>
Figure 03–01B–106

THRUST SETTING – %N1

REDUCED THRUST TAKEOFF – STATIC to 30 KIAS

TO–2 FLEX, ENGINE BLEEDS CLOSED

PRESSURE ALTITUDE = 8000 FT

PW1521G–3

OAT	ASSUMED TEMPERATURE (°C)						
(°C)	14	24	34	44	54	64	74
–54	74.7	71.9	70.2	70.2	70.2	70.2	70.2
–50	75.4	72.6	70.8	70.8	70.8	70.8	70.8
–45	76.2	73.4	71.6	71.6	71.6	71.6	71.6
–40	77.0	74.2	72.4	72.4	72.4	72.4	72.4
–35	77.8	75.0	73.1	73.1	73.1	73.1	73.1
–30	78.6	75.8	73.9	73.9	73.9	73.9	73.9
–25	79.4	76.5	74.7	74.7	74.7	74.7	74.7
–20	80.2	77.3	75.4	75.4	75.4	75.4	75.4
–15	81.0	78.1	76.1	76.1	76.1	76.1	76.1
–10	81.8	78.8	76.8	76.8	76.8	76.8	76.8
–5	82.5	79.6	77.6	77.6	77.6	77.6	77.6
0	83.3	80.3	78.3	78.3	78.3	78.3	78.3
5	84.0	81.0	79.0	79.0	79.0	79.0	79.0
10	84.8	81.8	79.7	79.7	79.7	79.7	79.7
15	–	82.5	80.4	80.4	80.4	80.4	80.4
20	–	83.2	79.7	79.7	79.7	79.7	79.7
25	–	–	80.1	78.7	78.7	78.7	78.7
30	–	–	80.8	77.4	77.4	77.4	77.4
35	–	–	–	77.6	76.1	76.1	76.1
40	–	–	–	78.2	74.6	74.6	74.6
45	–	–	–	–	74.8	73.1	73.1
53	–	–	–	–	75.8	71.8	70.7

/data/engperf/CSeries/Docs/QRH_FCOM_CS300_1521g–3/derivation/pw1524g_ba_v05r2_status/FLEX/62000/62000_8000FT_qrh_n1.ps

TO–2 FLEX – Engine bleeds closed – Pressure altitude 8000 ft <72211001D>
Figure 03–01B–107

THRUST SETTING – %N1

REDUCED THRUST TAKEOFF – STATIC to 30 KIAS

TO–2 FLEX, ENGINE BLEEDS CLOSED

PRESSURE ALTITUDE = 10000 FT

PW1521G–3

OAT	ASSUMED TEMPERATURE (°C)						
(°C)	10	20	30	40	50	60	70
–54	75.6	73.0	71.0	71.0	71.0	71.0	71.0
–50	76.3	73.6	71.6	71.6	71.6	71.6	71.6
–45	77.1	74.5	72.4	72.4	72.4	72.4	72.4
–40	78.0	75.3	73.2	73.2	73.2	73.2	73.2
–35	78.8	76.1	73.9	73.9	73.9	73.9	73.9
–30	79.6	76.9	74.7	74.7	74.7	74.7	74.7
–25	80.4	77.7	75.5	75.5	75.5	75.5	75.5
–20	81.2	78.4	76.2	76.2	76.2	76.2	76.2
–15	82.0	79.2	77.0	77.0	77.0	77.0	77.0
–10	82.8	80.0	77.7	77.7	77.7	77.7	77.7
–5	83.5	80.7	78.4	78.4	78.4	78.4	78.4
0	84.3	81.5	79.2	79.2	79.2	79.2	79.2
5	85.1	82.2	79.9	79.9	79.9	79.9	79.9
10	85.8	82.9	80.6	80.6	80.6	80.6	80.6
15	–	83.7	80.4	80.4	80.4	80.4	80.4
20	–	84.4	80.7	79.5	79.5	79.5	79.5
25	–	–	81.4	78.4	78.4	78.4	78.4
30	–	–	82.1	78.3	77.1	77.1	77.1
35	–	–	–	79.0	75.7	75.7	75.7
40	–	–	–	79.6	75.8	74.3	74.3
45	–	–	–	–	76.4	72.9	72.9
53	–	–	–	–	–	73.5	70.5

/data/engperf/CSeries/Docs/QRH_FCOM_CS300_1521g–3/derivation/pw1524g_ba_v05r2_status/FLEX/62000/62000_10000FT_qrh_n1.ps

TO–2 FLEX – Engine bleeds closed – Pressure altitude 10000 ft <72211001D>
Figure 03–01B–108

THRUST SETTING – %N1

REDUCED THRUST TAKEOFF – STATIC to 30 KIAS

TO–2 FLEX, ENGINE BLEEDS CLOSED

PRESSURE ALTITUDE = 12000 FT

PW1521G–3

OAT	ASSUMED TEMPERATURE (°C)						
(°C)	6	16	26	36	46	56	66
–54	76.5	74.0	71.7	71.7	71.7	71.7	71.7
–50	77.1	74.7	72.3	72.3	72.3	72.3	72.3
–45	78.0	75.5	73.2	73.2	73.2	73.2	73.2
–40	78.8	76.4	74.0	74.0	74.0	74.0	74.0
–35	79.7	77.2	74.7	74.7	74.7	74.7	74.7
–30	80.5	78.0	75.5	75.5	75.5	75.5	75.5
–25	81.3	78.8	76.3	76.3	76.3	76.3	76.3
–20	82.1	79.6	77.0	77.0	77.0	77.0	77.0
–15	82.9	80.3	77.8	77.8	77.8	77.8	77.8
–10	83.7	81.1	78.5	78.5	78.5	78.5	78.5
–5	84.5	81.9	79.3	79.3	79.3	79.3	79.3
0	85.3	82.7	80.0	80.0	80.0	80.0	80.0
5	86.0	83.4	80.7	80.7	80.7	80.7	80.7
10	–	84.2	80.9	80.9	80.9	80.9	80.9
15	–	84.9	81.4	80.3	80.3	80.3	80.3
20	–	–	82.1	79.3	79.3	79.3	79.3
25	–	–	82.8	79.0	78.2	78.2	78.2
30	–	–	–	79.6	76.9	76.9	76.9
35	–	–	–	80.3	76.4	75.4	75.4
40	–	–	–	–	77.0	73.9	73.9
45	–	–	–	–	77.6	73.7	72.3
53	–	–	–	–	–	74.6	70.6

/data/engperf/CSeries/Docs/QRH_FCOM_CS300_1521g–3/derivation/pw1524g_ba_v05r2_status/FLEX/62000/62000_12000FT_qrh_n1.ps

TO–2 FLEX – Engine bleeds closed – Pressure altitude 12000 ft <72211001D>
Figure 03–01B–109

THRUST SETTING – %N1

REDUCED THRUST TAKEOFF – STATIC to 30 KIAS

TO–2 FLEX, ENGINE BLEEDS CLOSED

PRESSURE ALTITUDE = 14500 FT

PW1521G–3

OAT	ASSUMED TEMPERATURE (°C)						
(°C)	1	11	21	31	41	51	61
–54	77.4	75.3	72.7	72.5	72.5	72.5	72.5
–50	78.2	76.0	73.3	73.2	73.2	73.2	73.2
–45	79.0	76.9	74.2	74.0	74.0	74.0	74.0
–40	79.9	77.7	75.0	74.8	74.8	74.8	74.8
–35	80.7	78.5	75.8	75.6	75.6	75.6	75.6
–30	81.5	79.3	76.6	76.4	76.4	76.4	76.4
–25	82.4	80.2	77.3	77.1	77.1	77.1	77.1
–20	83.2	81.0	78.1	77.9	77.9	77.9	77.9
–15	84.0	81.8	78.9	78.6	78.6	78.6	78.6
–10	84.8	82.5	79.6	79.4	79.4	79.4	79.4
–5	85.6	83.3	80.4	80.2	80.2	80.2	80.2
0	86.4	84.1	81.1	80.9	80.9	80.9	80.9
5	–	84.9	81.9	81.2	81.2	81.2	81.2
10	–	85.6	82.6	80.9	80.9	80.9	80.9
15	–	–	83.3	80.4	80.4	80.4	80.4
20	–	–	84.1	80.1	79.5	79.5	79.5
25	–	–	–	80.8	78.2	78.2	78.2
30	–	–	–	81.5	77.5	76.7	76.7
35	–	–	–	–	78.1	75.2	75.2
40	–	–	–	–	78.8	74.7	73.7
45	–	–	–	–	–	75.3	72.2
53	–	–	–	–	–	–	72.1

/data/engperf/CSeries/Docs/QRH_FCOM_CS300_1521g–3/derivation/pw1524g_ba_v05r2_status/FLEX/62000/62000_14500FT_qrh_n1.ps

TO–2 FLEX – Engine bleeds closed – Pressure altitude 14500 ft <72211001D>
Figure 03–01B–110

M. Flexible N1 – TO-2 FLEX – Packs on, anti-ice off – PW1521G-3 <72211001D>

THRUST SETTING – %N1

REDUCED THRUST TAKEOFF – STATIC to 30 KIAS

TO–2 FLEX, PACKS ON, ANTI–ICE OFF

PRESSURE ALTITUDE = –2000 FT

PW1521G–3

OAT	ASSUMED TEMPERATURE (°C)						
(°C)	34	44	54	64	74	84	94
–54	66.7	63.8	63.8	63.8	63.8	63.8	63.8
–50	67.3	64.4	64.4	64.4	64.4	64.4	64.4
–45	68.1	65.1	65.1	65.1	65.1	65.1	65.1
–40	68.8	65.8	65.8	65.8	65.8	65.8	65.8
–35	69.5	66.5	66.5	66.5	66.5	66.5	66.5
–30	70.3	67.2	67.2	67.2	67.2	67.2	67.2
–25	71.0	67.8	67.8	67.8	67.8	67.8	67.8
–20	71.7	68.5	68.5	68.5	68.5	68.5	68.5
–15	72.4	69.2	69.2	69.2	69.2	69.2	69.2
–10	73.1	69.8	69.8	69.8	69.8	69.8	69.8
–5	73.8	70.5	70.5	70.5	70.5	70.5	70.5
0	74.5	71.2	71.2	71.2	71.2	71.2	71.2
5	75.2	71.8	71.8	71.8	71.8	71.8	71.8
10	75.8	72.4	72.4	72.4	72.4	72.4	72.4
15	76.5	73.1	73.1	73.1	73.1	73.1	73.1
20	77.2	73.7	73.7	73.7	73.7	73.7	73.7
25	77.8	74.4	74.4	74.4	74.4	74.4	74.4
30	78.5	75.0	75.0	75.0	75.0	75.0	75.0
35	–	75.2	73.5	73.5	73.5	73.5	73.5
40	–	75.8	72.1	72.1	72.1	72.1	72.1
45	–	–	72.0	70.6	70.6	70.6	70.6
53	–	–	72.9	69.0	68.8	68.8	68.8

/data/engperf/CSeries/Docs/QRH_FCOM_CS300_1521g–3/derivation/pw1524g_ba_v05r2_status/FLEX/62100/62100_–2000FT_qrh_n1.ps

TO–2 FLEX – Packs on, anti–ice off – Pressure altitude –2000 ft <72211001D>
Figure 03–01B–111

THRUST SETTING – %N1

REDUCED THRUST TAKEOFF – STATIC to 30 KIAS

TO–2 FLEX, PACKS ON, ANTI–ICE OFF

PRESSURE ALTITUDE = Sea Level

PW1521G–3

OAT	ASSUMED TEMPERATURE (°C)						
(°C)	30	40	50	60	70	80	90
–54	68.9	66.1	66.1	66.1	66.1	66.1	66.1
–50	69.6	66.7	66.7	66.7	66.7	66.7	66.7
–45	70.3	67.4	67.4	67.4	67.4	67.4	67.4
–40	71.1	68.2	68.2	68.2	68.2	68.2	68.2
–35	71.9	68.9	68.9	68.9	68.9	68.9	68.9
–30	72.6	69.6	69.6	69.6	69.6	69.6	69.6
–25	73.3	70.3	70.3	70.3	70.3	70.3	70.3
–20	74.1	71.0	71.0	71.0	71.0	71.0	71.0
–15	74.8	71.7	71.7	71.7	71.7	71.7	71.7
–10	75.5	72.4	72.4	72.4	72.4	72.4	72.4
–5	76.2	73.0	73.0	73.0	73.0	73.0	73.0
0	77.0	73.7	73.7	73.7	73.7	73.7	73.7
5	77.7	74.4	74.4	74.4	74.4	74.4	74.4
10	78.3	75.0	75.0	75.0	75.0	75.0	75.0
15	79.0	75.7	75.7	75.7	75.7	75.7	75.7
20	79.7	76.4	76.4	76.4	76.4	76.4	76.4
25	80.4	77.0	77.0	77.0	77.0	77.0	77.0
30	81.1	77.2	76.0	76.0	76.0	76.0	76.0
35	–	77.8	74.6	74.6	74.6	74.6	74.6
40	–	78.5	74.6	73.3	73.3	73.3	73.3
45	–	–	75.2	71.7	71.7	71.7	71.7
53	–	–	–	72.3	69.5	69.5	69.5

/data/engperf/CSeries/Docs/QRH_FCOM_CS300_1521g-3/derivation/pw1524g_ba_v05r2_status/FLEX/62100/62100_SL_qrh_n1.ps

TO–2 FLEX – Packs on, anti–ice off – Pressure altitude Sea level <72211001D>
Figure 03–01B–112

THRUST SETTING – %N1

REDUCED THRUST TAKEOFF – STATIC to 30 KIAS

TO–2 FLEX, PACKS ON, ANTI–ICE OFF

PRESSURE ALTITUDE = 1000 FT

PW1521G–3

OAT	ASSUMED TEMPERATURE (°C)						
(°C)	28	38	48	58	68	78	88
–54	69.6	66.7	66.7	66.7	66.7	66.7	66.7
–50	70.2	67.3	67.3	67.3	67.3	67.3	67.3
–45	71.0	68.0	68.0	68.0	68.0	68.0	68.0
–40	71.8	68.8	68.8	68.8	68.8	68.8	68.8
–35	72.5	69.5	69.5	69.5	69.5	69.5	69.5
–30	73.3	70.2	70.2	70.2	70.2	70.2	70.2
–25	74.0	70.9	70.9	70.9	70.9	70.9	70.9
–20	74.8	71.6	71.6	71.6	71.6	71.6	71.6
–15	75.5	72.3	72.3	72.3	72.3	72.3	72.3
–10	76.2	73.0	73.0	73.0	73.0	73.0	73.0
–5	76.9	73.7	73.7	73.7	73.7	73.7	73.7
0	77.7	74.4	74.4	74.4	74.4	74.4	74.4
5	78.4	75.0	75.0	75.0	75.0	75.0	75.0
10	79.1	75.7	75.7	75.7	75.7	75.7	75.7
15	79.8	76.4	76.4	76.4	76.4	76.4	76.4
20	80.5	77.1	77.1	77.1	77.1	77.1	77.1
25	81.1	77.3	77.3	77.3	77.3	77.3	77.3
30	–	77.9	76.0	76.0	76.0	76.0	76.0
35	–	78.6	74.7	74.6	74.6	74.6	74.6
40	–	–	75.3	73.2	73.2	73.2	73.2
45	–	–	75.9	72.1	71.7	71.7	71.7
53	–	–	–	73.0	69.4	69.4	69.4

/data/engperf/CSeries/Docs/QRH_FCOM_CS300_1521g-3/derivation/pw1524g_ba_v05r2_status/FLEX/62100/62100_1000FT_qrh_n1.ps

TO–2 FLEX – Packs on, anti–ice off – Pressure altitude 1000 ft <72211001D>
Figure 03–01B–113

THRUST SETTING – %N1

REDUCED THRUST TAKEOFF – STATIC to 30 KIAS

TO–2 FLEX, PACKS ON, ANTI–ICE OFF

PRESSURE ALTITUDE = 2000 FT

PW1521G–3

OAT	ASSUMED TEMPERATURE (°C)						
(°C)	26	36	46	56	66	76	86
–54	70.2	67.3	67.3	67.3	67.3	67.3	67.3
–50	70.8	67.9	67.9	67.9	67.9	67.9	67.9
–45	71.6	68.6	68.6	68.6	68.6	68.6	68.6
–40	72.4	69.4	69.4	69.4	69.4	69.4	69.4
–35	73.2	70.1	70.1	70.1	70.1	70.1	70.1
–30	73.9	70.8	70.8	70.8	70.8	70.8	70.8
–25	74.7	71.5	71.5	71.5	71.5	71.5	71.5
–20	75.4	72.2	72.2	72.2	72.2	72.2	72.2
–15	76.2	73.0	73.0	73.0	73.0	73.0	73.0
–10	76.9	73.7	73.7	73.7	73.7	73.7	73.7
–5	77.6	74.3	74.3	74.3	74.3	74.3	74.3
0	78.4	75.0	75.0	75.0	75.0	75.0	75.0
5	79.1	75.7	75.7	75.7	75.7	75.7	75.7
10	79.8	76.4	76.4	76.4	76.4	76.4	76.4
15	80.5	77.1	77.1	77.1	77.1	77.1	77.1
20	81.2	77.7	77.7	77.7	77.7	77.7	77.7
25	81.9	78.0	77.3	77.3	77.3	77.3	77.3
30	–	78.7	75.9	75.9	75.9	75.9	75.9
35	–	79.3	75.3	74.5	74.5	74.5	74.5
40	–	–	75.9	73.1	73.1	73.1	73.1
45	–	–	76.5	72.7	71.6	71.6	71.6
53	–	–	–	73.6	69.8	69.2	69.2

/data/engperf/CSerles/Docs/QRH_FCOM_CS300_1521g–3/derlvatlon/pw1524g_ba_v05r2_status/FLEX/62100/62100_2000FT_qrh_n1.ps

TO–2 FLEX – Packs on, anti–ice off – Pressure altitude 2000 ft <72211001D>
Figure 03–01B–114

THRUST SETTING – %N1

REDUCED THRUST TAKEOFF – STATIC to 30 KIAS

TO–2 FLEX, PACKS ON, ANTI–ICE OFF

PRESSURE ALTITUDE = 3000 FT

PW1521G–3

OAT	ASSUMED TEMPERATURE (°C)						
(°C)	24	34	44	54	64	74	84
–54	70.8	67.8	67.8	67.8	67.8	67.8	67.8
–50	71.4	68.4	68.4	68.4	68.4	68.4	68.4
–45	72.2	69.2	69.2	69.2	69.2	69.2	69.2
–40	73.0	69.9	69.9	69.9	69.9	69.9	69.9
–35	73.8	70.7	70.7	70.7	70.7	70.7	70.7
–30	74.6	71.4	71.4	71.4	71.4	71.4	71.4
–25	75.3	72.1	72.1	72.1	72.1	72.1	72.1
–20	76.1	72.8	72.8	72.8	72.8	72.8	72.8
–15	76.8	73.5	73.5	73.5	73.5	73.5	73.5
–10	77.6	74.2	74.2	74.2	74.2	74.2	74.2
–5	78.3	74.9	74.9	74.9	74.9	74.9	74.9
0	79.0	75.6	75.6	75.6	75.6	75.6	75.6
5	79.8	76.3	76.3	76.3	76.3	76.3	76.3
10	80.5	77.0	77.0	77.0	77.0	77.0	77.0
15	81.2	77.7	77.7	77.7	77.7	77.7	77.7
20	81.9	78.3	78.3	78.3	78.3	78.3	78.3
25	–	78.7	77.2	77.2	77.2	77.2	77.2
30	–	79.3	75.8	75.8	75.8	75.8	75.8
35	–	–	75.9	74.4	74.4	74.4	74.4
40	–	–	76.5	73.0	73.0	73.0	73.0
45	–	–	–	73.3	71.4	71.4	71.4
53	–	–	–	74.2	70.3	69.0	69.0

/data/engperf/CSeries/Docs/QRH_FCOM_CS300_1521g–3/derivation/pw1524g_ba_v05r2_status/FLEX/62100/62100_3000FT_qrh_n1.ps

TO–2 FLEX – Packs on, anti–ice off – Pressure altitude 3000 ft <72211001D>
Figure 03–01B–115

THRUST SETTING – %N1

REDUCED THRUST TAKEOFF – STATIC to 30 KIAS

TO–2 FLEX, PACKS ON, ANTI–ICE OFF

PRESSURE ALTITUDE = 4000 FT

PW1521G–3

OAT	ASSUMED TEMPERATURE (°C)						
(°C)	22	32	42	52	62	72	82
–54	71.4	68.3	68.3	68.3	68.3	68.3	68.3
–50	72.0	69.0	69.0	69.0	69.0	69.0	69.0
–45	72.8	69.7	69.7	69.7	69.7	69.7	69.7
–40	73.6	70.5	70.5	70.5	70.5	70.5	70.5
–35	74.4	71.2	71.2	71.2	71.2	71.2	71.2
–30	75.2	71.9	71.9	71.9	71.9	71.9	71.9
–25	76.0	72.7	72.7	72.7	72.7	72.7	72.7
–20	76.7	73.4	73.4	73.4	73.4	73.4	73.4
–15	77.5	74.1	74.1	74.1	74.1	74.1	74.1
–10	78.2	74.8	74.8	74.8	74.8	74.8	74.8
–5	79.0	75.5	75.5	75.5	75.5	75.5	75.5
0	79.7	76.2	76.2	76.2	76.2	76.2	76.2
5	80.4	76.9	76.9	76.9	76.9	76.9	76.9
10	81.2	77.6	77.6	77.6	77.6	77.6	77.6
15	81.9	78.3	78.3	78.3	78.3	78.3	78.3
20	82.6	78.7	78.3	78.3	78.3	78.3	78.3
25	–	79.3	77.1	77.1	77.1	77.1	77.1
30	–	80.0	75.9	75.7	75.7	75.7	75.7
35	–	–	76.6	74.3	74.3	74.3	74.3
40	–	–	77.2	73.3	72.8	72.8	72.8
45	–	–	–	73.9	71.3	71.3	71.3
53	–	–	–	–	70.8	68.9	68.9

/data/engperf/CSeries/Docs/QRH_FCOM_CS300_1521g-3/derivation/pw1524g_ba_v05r2_status/FLEX/62100/62100_4000FT_qrh_n1.ps

TO–2 FLEX – Packs on, anti–ice off – Pressure altitude 4000 ft <72211001D>
Figure 03–01B–116

THRUST SETTING – %N1

REDUCED THRUST TAKEOFF – STATIC to 30 KIAS

TO–2 FLEX, PACKS ON, ANTI–ICE OFF

PRESSURE ALTITUDE = 5000 FT

PW1521G–3

OAT	ASSUMED TEMPERATURE (°C)						
(°C)	20	30	40	50	60	70	80
–54	72.0	68.9	68.9	68.9	68.9	68.9	68.9
–50	72.6	69.5	69.5	69.5	69.5	69.5	69.5
–45	73.4	70.2	70.2	70.2	70.2	70.2	70.2
–40	74.2	71.0	71.0	71.0	71.0	71.0	71.0
–35	75.0	71.8	71.8	71.8	71.8	71.8	71.8
–30	75.8	72.5	72.5	72.5	72.5	72.5	72.5
–25	76.6	73.2	73.2	73.2	73.2	73.2	73.2
–20	77.3	74.0	74.0	74.0	74.0	74.0	74.0
–15	78.1	74.7	74.7	74.7	74.7	74.7	74.7
–10	78.8	75.4	75.4	75.4	75.4	75.4	75.4
–5	79.6	76.1	76.1	76.1	76.1	76.1	76.1
0	80.3	76.8	76.8	76.8	76.8	76.8	76.8
5	81.1	77.5	77.5	77.5	77.5	77.5	77.5
10	81.8	78.2	78.2	78.2	78.2	78.2	78.2
15	82.5	78.9	78.9	78.9	78.9	78.9	78.9
20	83.2	79.4	78.2	78.2	78.2	78.2	78.2
25	–	80.0	77.0	77.0	77.0	77.0	77.0
30	–	80.7	76.6	75.6	75.6	75.6	75.6
35	–	–	77.3	74.2	74.2	74.2	74.2
40	–	–	77.9	73.9	72.8	72.8	72.8
45	–	–	–	74.5	71.1	71.1	71.1
53	–	–	–	–	71.5	68.8	68.8

/data/engperf/CSeries/Docs/QRH_FCOM_CS300_1521g–3/derivation/pw1524g_ba_v05r2_status/FLEX/62100/62100_5000FT_qrh_n1.ps

TO–2 FLEX – Packs on, anti–ice off – Pressure altitude 5000 ft <72211001D>
Figure 03–01B–117

THRUST SETTING – %N1

REDUCED THRUST TAKEOFF – STATIC to 30 KIAS

TO–2 FLEX, PACKS ON, ANTI–ICE OFF

PRESSURE ALTITUDE = 6000 FT

PW1521G–3

OAT	ASSUMED TEMPERATURE (°C)						
(°C)	18	28	38	48	58	68	78
–54	72.5	69.4	69.4	69.4	69.4	69.4	69.4
–50	73.2	70.0	70.0	70.0	70.0	70.0	70.0
–45	74.0	70.8	70.8	70.8	70.8	70.8	70.8
–40	74.8	71.5	71.5	71.5	71.5	71.5	71.5
–35	75.6	72.3	72.3	72.3	72.3	72.3	72.3
–30	76.4	73.0	73.0	73.0	73.0	73.0	73.0
–25	77.1	73.8	73.8	73.8	73.8	73.8	73.8
–20	77.9	74.5	74.5	74.5	74.5	74.5	74.5
–15	78.7	75.2	75.2	75.2	75.2	75.2	75.2
–10	79.4	76.0	76.0	76.0	76.0	76.0	76.0
–5	80.2	76.7	76.7	76.7	76.7	76.7	76.7
0	80.9	77.4	77.4	77.4	77.4	77.4	77.4
5	81.7	78.1	78.1	78.1	78.1	78.1	78.1
10	82.4	78.8	78.8	78.8	78.8	78.8	78.8
15	83.1	79.3	79.2	79.2	79.2	79.2	79.2
20	–	80.0	78.1	78.1	78.1	78.1	78.1
25	–	80.7	76.9	76.9	76.9	76.9	76.9
30	–	–	77.3	75.5	75.5	75.5	75.5
35	–	–	78.0	74.0	74.0	74.0	74.0
40	–	–	–	74.5	72.6	72.6	72.6
45	–	–	–	75.1	71.3	71.0	71.0
53	–	–	–	–	72.2	68.7	68.7

/data/engperf/CSeries/Docs/QRH_FCOM_CS300_1521g–3/derivation/pw1524g_ba_v05r2_status/FLEX/62100/62100_6000FT_qrh_n1.ps

TO–2 FLEX – Packs on, anti–ice off – Pressure altitude 6000 ft <72211001D>
Figure 03–01B–118

THRUST SETTING – %N1

REDUCED THRUST TAKEOFF – STATIC to 30 KIAS

TO–2 FLEX, PACKS ON, ANTI–ICE OFF

PRESSURE ALTITUDE = 8000 FT

PW1521G–3

OAT	ASSUMED TEMPERATURE (°C)						
(°C)	14	24	34	44	54	64	74
–54	73.5	70.3	70.2	70.2	70.2	70.2	70.2
–50	74.2	71.0	70.9	70.9	70.9	70.9	70.9
–45	75.0	71.8	71.6	71.6	71.6	71.6	71.6
–40	75.8	72.5	72.4	72.4	72.4	72.4	72.4
–35	76.7	73.3	73.2	73.2	73.2	73.2	73.2
–30	77.5	74.1	73.9	73.9	73.9	73.9	73.9
–25	78.2	74.8	74.7	74.7	74.7	74.7	74.7
–20	79.0	75.6	75.4	75.4	75.4	75.4	75.4
–15	79.8	76.3	76.2	76.2	76.2	76.2	76.2
–10	80.6	77.1	76.9	76.9	76.9	76.9	76.9
–5	81.3	77.8	77.6	77.6	77.6	77.6	77.6
0	82.1	78.5	78.3	78.3	78.3	78.3	78.3
5	82.8	79.2	79.1	79.1	79.1	79.1	79.1
10	83.6	80.0	79.8	79.8	79.8	79.8	79.8
15	–	80.7	78.9	78.9	78.9	78.9	78.9
20	–	81.3	77.9	77.9	77.9	77.9	77.9
25	–	–	77.9	76.6	76.6	76.6	76.6
30	–	–	78.6	75.1	75.1	75.1	75.1
35	–	–	–	75.2	73.6	73.6	73.6
40	–	–	–	75.8	72.0	72.0	72.0
45	–	–	–	–	72.4	70.5	70.5
53	–	–	–	–	73.3	69.3	68.0

/data/engperf/CSeries/Docs/QRH_FCOM_CS300_1521g–3/derivation/pw1524g_ba_v05r2_status/FLEX/62100/62100_8000FT_qrh_n1.ps

TO–2 FLEX – Packs on, anti–ice off – Pressure altitude 8000 ft <72211001D>
Figure 03–01B–119

THRUST SETTING – %N1

REDUCED THRUST TAKEOFF – STATIC to 30 KIAS

TO–2 FLEX, PACKS ON, ANTI–ICE OFF

PRESSURE ALTITUDE = 10000 FT

PW1521G–3

OAT	ASSUMED TEMPERATURE (°C)						
(°C)	10	20	30	40	50	60	70
–54	74.5	71.3	71.0	71.0	71.0	71.0	71.0
–50	75.2	72.0	71.6	71.6	71.6	71.6	71.6
–45	76.0	72.8	72.4	72.4	72.4	72.4	72.4
–40	76.9	73.5	73.2	73.2	73.2	73.2	73.2
–35	77.7	74.3	74.0	74.0	74.0	74.0	74.0
–30	78.5	75.1	74.8	74.8	74.8	74.8	74.8
–25	79.3	75.9	75.5	75.5	75.5	75.5	75.5
–20	80.1	76.6	76.3	76.3	76.3	76.3	76.3
–15	80.9	77.4	77.0	77.0	77.0	77.0	77.0
–10	81.7	78.1	77.7	77.7	77.7	77.7	77.7
–5	82.4	78.9	78.5	78.5	78.5	78.5	78.5
0	83.2	79.6	79.2	79.2	79.2	79.2	79.2
5	84.0	80.3	79.9	79.9	79.9	79.9	79.9
10	84.7	81.1	79.5	79.5	79.5	79.5	79.5
15	–	81.8	78.7	78.7	78.7	78.7	78.7
20	–	82.5	78.4	77.5	77.5	77.5	77.5
25	–	–	79.1	76.0	76.0	76.0	76.0
30	–	–	79.7	75.9	74.6	74.6	74.6
35	–	–	–	76.5	73.0	73.0	73.0
40	–	–	–	77.1	73.3	71.6	71.6
45	–	–	–	–	73.9	70.1	70.1
53	–	–	–	–	–	70.9	67.7

/data/engperf/CSeries/Docs/QRH_FCOM_CS300_1521g–3/derivation/pw1524g_ba_v05r2_status/FLEX/62100/62100_10000FT_qrh_n1.ps

TO–2 FLEX – Packs on, anti–ice off – Pressure altitude 10000 ft <72211001D>
Figure 03–01B–120

THRUST SETTING – %N1

REDUCED THRUST TAKEOFF – STATIC to 30 KIAS

TO–2 FLEX, PACKS ON, ANTI–ICE OFF

PRESSURE ALTITUDE = 12000 FT

PW1521G–3

OAT	ASSUMED TEMPERATURE (°C)						
(°C)	6	16	26	36	46	56	66
–54	75.4	72.4	71.8	71.8	71.8	71.8	71.8
–50	76.0	73.0	72.4	72.4	72.4	72.4	72.4
–45	76.9	73.8	73.2	73.2	73.2	73.2	73.2
–40	77.7	74.6	74.0	74.0	74.0	74.0	74.0
–35	78.6	75.4	74.8	74.8	74.8	74.8	74.8
–30	79.4	76.2	75.6	75.6	75.6	75.6	75.6
–25	80.2	77.0	76.3	76.3	76.3	76.3	76.3
–20	81.0	77.8	77.1	77.1	77.1	77.1	77.1
–15	81.8	78.5	77.8	77.8	77.8	77.8	77.8
–10	82.6	79.3	78.6	78.6	78.6	78.6	78.6
–5	83.4	80.0	79.3	79.3	79.3	79.3	79.3
0	84.1	80.8	80.0	80.0	80.0	80.0	80.0
5	84.9	81.5	79.9	79.9	79.9	79.9	79.9
10	–	82.2	79.3	79.3	79.3	79.3	79.3
15	–	83.0	79.1	78.4	78.4	78.4	78.4
20	–	–	79.8	77.0	77.0	77.0	77.0
25	–	–	80.5	76.4	75.7	75.7	75.7
30	–	–	–	77.1	74.1	74.1	74.1
35	–	–	–	77.7	73.8	72.6	72.6
40	–	–	–	–	74.4	71.0	71.0
45	–	–	–	–	75.0	71.0	69.5
53	–	–	–	–	–	71.9	67.9

/data/engperf/CSeries/Docs/QRH_FCOM_CS300_1521g–3/derivation/pw1524g_ba_v05r2_status/FLEX/62100/62100_12000FT_qrh_n1.ps

TO–2 FLEX – Packs on, anti–ice off – Pressure altitude 12000 ft <72211001D>
Figure 03–01B–121

THRUST SETTING – %N1

REDUCED THRUST TAKEOFF – STATIC to 30 KIAS

TO–2 FLEX, PACKS ON, ANTI–ICE OFF

PRESSURE ALTITUDE = 14500 FT

PW1521G–3

OAT	ASSUMED TEMPERATURE (°C)						
(°C)	1	11	21	31	41	51	61
–54	76.4	73.9	72.6	72.6	72.6	72.6	72.6
–50	77.1	74.6	73.2	73.2	73.2	73.2	73.2
–45	78.0	75.4	74.0	74.0	74.0	74.0	74.0
–40	78.8	76.2	74.8	74.8	74.8	74.8	74.8
–35	79.7	77.0	75.6	75.6	75.6	75.6	75.6
–30	80.5	77.8	76.4	76.4	76.4	76.4	76.4
–25	81.3	78.7	77.2	77.2	77.2	77.2	77.2
–20	82.1	79.4	78.0	78.0	78.0	78.0	78.0
–15	82.9	80.2	78.7	78.7	78.7	78.7	78.7
–10	83.7	81.0	79.5	79.5	79.5	79.5	79.5
–5	84.5	81.8	80.2	80.2	80.2	80.2	80.2
0	85.3	82.5	80.2	80.2	80.2	80.2	80.2
5	–	83.3	79.8	79.8	79.8	79.8	79.8
10	–	84.0	80.1	79.2	79.2	79.2	79.2
15	–	–	80.8	78.2	78.2	78.2	78.2
20	–	–	81.5	77.4	76.8	76.8	76.8
25	–	–	–	78.1	75.2	75.2	75.2
30	–	–	–	78.7	74.8	73.7	73.7
35	–	–	–	–	75.4	72.2	72.2
40	–	–	–	–	76.0	71.9	70.6
45	–	–	–	–	–	72.5	69.0
53	–	–	–	–	–	–	69.3

/data/engperf/CSerIes/Docs/QRH_FCOM_CS300_1521g–3/derIvatIon/pw1524g_ba_v05r2_status/FLEX/62100/62100_14500FT_qrh_n1.ps

TO–2 FLEX – Packs on, anti–ice off – Pressure altitude 14500 ft <72211001D>
Figure 03–01B–122

ENROUTE – ALL ENGINES OPERATING

A. Green dot speed – AEO

GREEN DOT - AEO							
ALL ENGINES OPERATIVE CLEAN CONFIGURATION						GREEN DOT (KIAS)	
PRESS. ALT. (FT)	WEIGHT (1000 KG)						
	40	45	50	55	60	65	69
10000	177	189	200	210	220	230	237
15000	179	191	202	212	222	231	238
17000	180	191	202	213	223	232	239
19000	180	192	203	213	223	232	239
21000	181	192	204	214	223	233	240
23000	181	193	204	214	224	233	240
25000	182	193	204	215	224	233	241
27000	183	194	205	215	225	234	242
29000	183	194	205	215	225	235	243
31000	183	195	205	216	226	236	244
33000	184	195	206	217	228	238	244
35000	184	196	207	218	229	237	241
37000	184	197	208	219	227	233	237
39000	185	198	209	217	223	--	--
41000	186	199	207	213	--	--	--

CS300_ALL_NAMEPLATES_FCOM_MET_v01_AEO_GD

Green dot speed – AEO <Metric>
Figure 03–02B–1

B. Climb N1 – PW1521G-3 <72211001D>

THRUST SETTING– %N1

MAXIMUM CLIMB – 250 KIAS

CLB (ALL ENGINE OPERATIVE)

ENGINE BLEEDS CLOSED

PW1521G–3

SAT		PRESSURE ALTITUDE (Feet)											
(°C)	(°F)	–2000	0	1000	2000	3000	4000	5000	6000	7000	8000	9000	10000
–55	–67	73.2	75.0	75.6	76.2	76.9	77.5	78.2	78.9	79.6	80.3	81.0	81.7
–50	–58	74.1	75.8	76.5	77.1	77.7	78.4	79.1	79.8	80.5	81.2	81.9	82.6
–45	–49	74.9	76.7	77.3	77.9	78.6	79.3	80.0	80.7	81.4	82.1	82.8	83.5
–40	–40	75.7	77.5	78.2	78.8	79.4	80.1	80.8	81.6	82.3	83.0	83.7	84.4
–35	–31	76.5	78.3	79.0	79.6	80.3	81.0	81.7	82.4	83.1	83.9	84.6	85.3
–30	–22	77.2	79.1	79.8	80.4	81.1	81.8	82.5	83.2	84.0	84.7	85.5	86.2
–25	–13	78.0	79.9	80.6	81.2	81.9	82.6	83.3	84.1	84.8	85.6	86.3	87.1
–20	–4	78.8	80.7	81.4	82.1	82.7	83.4	84.2	84.9	85.7	86.4	87.2	87.9
–15	5	79.6	81.5	82.2	82.8	83.5	84.2	85.0	85.8	86.5	87.3	88.0	88.8
–10	14	80.3	82.3	83.0	83.6	84.3	85.1	85.8	86.6	87.3	88.1	88.8	89.6
–5	23	81.1	83.1	83.7	84.4	85.1	85.8	86.6	87.4	88.2	88.9	89.7	90.4
0	32	81.8	83.8	84.5	85.2	85.9	86.7	87.4	88.2	89.0	89.7	90.5	91.3
5	41	82.6	84.6	85.3	86.0	86.7	87.4	88.2	89.0	89.8	90.6	91.3	92.1
10	50	83.3	85.3	86.1	86.8	87.5	88.2	89.0	89.8	90.6	91.0	90.9	90.9
15	59	84.1	86.1	86.8	87.5	88.2	89.0	89.8	89.8	89.7	89.7	89.6	89.5
20	68	84.8	86.8	87.6	88.3	88.6	88.5	88.5	88.4	88.4	88.3	88.2	88.1
25	77	85.5	87.6	87.5	87.3	87.2	87.2	87.2	87.0	87.0	86.9	86.8	86.7
30	86	85.8	86.2	86.1	85.9	85.8	85.7	85.6	85.5	85.4	85.4	85.3	85.2
35	95	84.4	84.8	84.6	84.5	84.3	84.2	84.1	84.1	84.0	83.9	83.8	83.7
40	104	83.1	83.3	83.2	83.1	82.9	82.8	82.7	82.7	82.6	82.5	82.4	82.3
45	113	81.7	82.0	81.9	81.8	81.7	81.6	81.5	81.4	81.3	81.2	81.0	80.8
50	122	80.4	80.8	80.7	80.5	80.4	80.3	80.2	80.1	79.9	79.8	79.6	79.4
53	127	79.7	80.0	79.9	79.8	79.7	79.5	79.4	79.2	79.1	78.9	––	––

cs300_pw1521G_v05r2_status_mcl_avg_000_1.ch16

Maximum climb – 250 KIAS – Engine bleeds closed <72211001D>
Figure 03–02B–2

THRUST SETTING– %N1

MAXIMUM CLIMB – 275 KIAS / M0.78

CLB (ALL ENGINE OPERATIVE)

ENGINE BLEEDS CLOSED

PW1521G–3

SAT		PRESSURE ALTITUDE (Feet)							
(°C)	(°F)	10000	15000	20000	25000	30000	33275	35000	41000
–70	–94	––	––	84.6	85.9	90.9	92.4	93.0	92.4
–65	–85	79.8	83.0	85.6	86.9	92.0	93.4	94.1	93.4
–60	–76	80.8	83.9	86.5	87.9	93.0	94.4	95.1	94.5
–55	–67	81.7	84.9	87.5	88.9	94.0	95.4	96.1	95.5
–50	–58	82.6	85.8	88.5	89.9	94.9	96.4	97.0	96.5
–45	–49	83.5	86.8	89.4	90.9	95.9	97.3	98.0	96.9
–40	–40	84.4	87.7	90.3	91.8	96.9	98.0	97.6	96.4
–35	–31	85.3	88.6	91.2	92.8	97.8	97.5	97.1	95.9
–30	–22	86.2	89.5	92.1	93.7	97.5	97.1	96.7	95.4
–25	–13	87.0	90.4	92.9	94.6	97.2	96.6	96.2	94.7
–20	–4	87.9	91.3	93.8	94.1	96.8	96.1	95.6	93.7
–15	5	88.7	92.1	94.7	93.2	96.2	95.2	94.6	––
–10	14	89.6	93.0	94.1	92.1	95.4	94.2	93.8	––
–5	23	90.4	93.8	93.0	90.9	94.3	93.3	93.0	––
0	32	91.2	92.8	91.9	89.8	93.4	––	––	––
5	41	92.1	91.5	90.8	88.7	92.4	––	––	––
10	50	90.9	90.1	89.7	87.6	––	––	––	––
15	59	89.5	88.8	88.6	86.5	––	––	––	––
20	68	88.1	87.4	87.5	––	––	––	––	––
25	77	86.8	86.2	86.5	––	––	––	––	––
30	86	85.3	85.0	––	––	––	––	––	––
35	95	83.9	83.7	––	––	––	––	––	––
40	104	82.5	––	––	––	––	––	––	––
45	113	81.2	––	––	––	––	––	––	––
50	122	79.8	––	––	––	––	––	––	––

cs300_pw1521G_v05r2_status_mcl_avg_000_23.ch16

Maximum climb – 275 KIAS/M0.78 – Engine bleeds closed <72211001D>
Figure 03–02B–3

THRUST SETTING– %N1

MAXIMUM CLIMB – 250 KIAS

CLB (ALL ENGINE OPERATIVE)

PACKS ON, ANTI–ICE OFF

PW1521G–3

SAT		PRESSURE ALTITUDE (Feet)											
(°C)	(°F)	–2000	0	1000	2000	3000	4000	5000	6000	7000	8000	9000	10000
–55	–67	73.2	75.0	75.6	76.2	76.9	77.5	78.2	78.9	79.6	80.3	81.0	81.7
–50	–58	74.1	75.8	76.5	77.1	77.7	78.4	79.1	79.8	80.5	81.2	81.9	82.6
–45	–49	74.9	76.7	77.3	77.9	78.6	79.3	80.0	80.7	81.4	82.1	82.8	83.5
–40	–40	75.7	77.5	78.2	78.8	79.4	80.1	80.8	81.6	82.3	83.0	83.7	84.4
–35	–31	76.5	78.3	79.0	79.6	80.3	81.0	81.7	82.4	83.1	83.9	84.6	85.3
–30	–22	77.2	79.1	79.8	80.4	81.1	81.8	82.5	83.2	84.0	84.7	85.5	86.2
–25	–13	78.0	79.9	80.6	81.2	81.9	82.6	83.3	84.1	84.8	85.6	86.3	87.1
–20	–4	78.8	80.7	81.4	82.1	82.7	83.4	84.2	84.9	85.7	86.4	87.2	87.9
–15	5	79.6	81.5	82.2	82.8	83.5	84.2	85.0	85.8	86.5	87.3	88.0	88.8
–10	14	80.3	82.3	83.0	83.6	84.3	85.1	85.8	86.6	87.3	88.1	88.8	89.6
–5	23	81.1	83.1	83.7	84.4	85.1	85.8	86.6	87.4	88.2	88.9	89.7	90.4
0	32	81.8	83.8	84.5	85.2	85.9	86.7	87.4	88.2	89.0	89.7	90.5	91.3
5	41	82.6	84.6	85.3	86.0	86.7	87.4	88.2	89.0	89.8	90.6	91.3	92.1
10	50	83.3	85.3	86.1	86.8	87.5	88.2	89.0	89.8	90.6	91.0	90.9	90.9
15	59	84.1	86.1	86.8	87.5	88.2	89.0	89.8	89.8	89.7	89.7	89.6	89.5
20	68	84.8	86.8	87.6	88.3	88.6	88.5	88.5	88.4	88.4	88.3	88.2	88.1
25	77	85.5	87.6	87.5	87.3	87.2	87.2	87.2	87.0	87.0	86.9	86.8	86.7
30	86	85.8	86.2	86.1	85.9	85.8	85.7	85.6	85.5	85.4	85.4	85.3	85.2
35	95	84.4	84.8	84.6	84.5	84.3	84.2	84.1	84.1	84.0	83.9	83.8	83.7
40	104	83.1	83.3	83.2	83.1	82.9	82.8	82.7	82.7	82.6	82.5	82.4	82.3
45	113	81.7	82.0	81.9	81.8	81.7	81.6	81.5	81.4	81.3	81.2	81.0	80.8
50	122	80.4	80.8	80.7	80.5	80.4	80.3	80.2	80.1	79.9	79.8	79.6	79.4
53	127	79.7	80.0	79.9	79.8	79.7	79.5	79.4	79.2	79.1	78.9	––	––

cs300_pw1521G_v05r2_status_mcl_avg_100_1.ch16

Maximum climb – 250 KIAS – Packs on, anti–ice off <72211001D>
Figure 03–02B–4

THRUST SETTING– %N1

MAXIMUM CLIMB – 275 KIAS / M0.78

CLB (ALL ENGINE OPERATIVE)

PACKS ON, ANTI–ICE OFF

PW1521G–3

SAT		PRESSURE ALTITUDE (Feet)							
(°C)	(°F)	10000	15000	20000	25000	30000	33275	35000	41000
–70	–94	––	––	84.6	85.9	90.9	92.4	93.0	92.4
–65	–85	79.8	83.0	85.6	86.9	92.0	93.4	94.1	93.4
–60	–76	80.8	83.9	86.5	87.9	93.0	94.4	95.1	94.5
–55	–67	81.7	84.9	87.5	88.9	94.0	95.4	96.1	95.5
–50	–58	82.6	85.8	88.5	89.9	94.9	96.4	97.0	96.5
–45	–49	83.5	86.8	89.4	90.9	95.9	97.3	98.0	96.9
–40	–40	84.4	87.7	90.3	91.8	96.9	98.0	97.6	96.4
–35	–31	85.3	88.6	91.2	92.8	97.8	97.5	97.1	95.9
–30	–22	86.2	89.5	92.1	93.7	97.5	97.1	96.7	95.4
–25	–13	87.0	90.4	92.9	94.6	97.2	96.6	96.2	94.7
–20	–4	87.9	91.3	93.8	94.1	96.8	96.1	95.6	93.7
–15	5	88.7	92.1	94.7	93.2	96.2	95.2	94.6	––
–10	14	89.6	93.0	94.1	92.1	95.4	94.2	93.8	––
–5	23	90.4	93.8	93.0	90.9	94.3	93.3	93.0	––
0	32	91.2	92.8	91.9	89.8	93.4	––	––	––
5	41	92.1	91.5	90.8	88.7	92.4	––	––	––
10	50	90.9	90.1	89.7	87.6	––	––	––	––
15	59	89.5	88.8	88.6	86.5	––	––	––	––
20	68	88.1	87.4	87.5	––	––	––	––	––
25	77	86.8	86.2	86.5	––	––	––	––	––
30	86	85.3	85.0	––	––	––	––	––	––
35	95	83.9	83.7	––	––	––	––	––	––
40	104	82.5	––	––	––	––	––	––	––
45	113	81.2	––	––	––	––	––	––	––
50	122	79.8	––	––	––	––	––	––	––

cs300_pw1521G_v05r2_status_mcl_avg_100_23.ch16

Maximum climb – 275 KIAS/M0.78 – Packs on, anti–ice off <72211001D>
Figure 03–02B–5

THRUST SETTING– %N1

MAXIMUM CLIMB – 250 KIAS

CLB (ALL ENGINE OPERATIVE)

PACKS ON, COWL ANTI–ICE ON

PW1521G–3

SAT		PRESSURE ALTITUDE (Feet)											
(°C)	(°F)	–2000	0	1000	2000	3000	4000	5000	6000	7000	8000	9000	10000
–55	**–67**	73.3	75.1	75.7	76.3	77.0	77.6	78.3	79.0	79.7	80.4	81.1	81.8
–50	**–58**	74.1	75.9	76.6	77.2	77.8	78.5	79.2	79.9	80.6	81.3	82.0	82.8
–45	**–49**	74.9	76.8	77.4	78.1	78.7	79.4	80.1	80.8	81.5	82.2	82.9	83.7
–40	**–40**	75.8	77.6	78.2	78.9	79.5	80.2	80.9	81.7	82.4	83.1	83.8	84.6
–35	**–31**	76.6	78.4	79.1	79.7	80.4	81.1	81.8	82.5	83.2	84.0	84.7	85.4
–30	**–22**	77.3	79.2	79.9	80.5	81.2	81.9	82.6	83.3	84.1	84.8	85.6	86.3
–25	**–13**	78.1	80.0	80.7	81.3	82.0	82.7	83.4	84.2	84.9	85.7	86.4	87.2
–20	**–4**	78.9	80.8	81.5	82.2	82.8	83.5	84.3	85.0	85.8	86.5	87.3	88.0
–15	**5**	79.7	81.6	82.3	82.9	83.6	84.3	85.1	85.9	86.6	87.4	88.1	88.9
–10	**14**	80.4	82.4	83.1	83.7	84.4	85.2	85.9	86.7	87.4	88.2	89.0	89.7
–5	**23**	81.2	83.2	83.8	84.5	85.2	85.9	86.7	87.5	88.3	89.0	89.8	90.6
0	**32**	81.9	83.9	84.6	85.3	86.0	86.8	87.5	88.3	89.1	89.9	90.6	91.4
5	**41**	82.7	84.7	85.4	86.1	86.8	87.5	88.3	89.1	89.9	90.7	90.7	90.6
10	**50**	83.4	85.4	86.2	86.9	87.6	88.3	89.1	89.5	89.5	89.4	89.3	89.2

cs300_pw1521G_v05r2_status_mcl_avg_110_1.ch16

Maximum climb – 250 KIAS – Packs on, cowl anti–ice on <72211001D>
Figure 03–02B–6

THRUST SETTING– %N1

MAXIMUM CLIMB – 275 KIAS / M0.78

CLB (ALL ENGINE OPERATIVE)

PACKS ON, COWL ANTI–ICE ON

PW1521G–3

SAT		PRESSURE ALTITUDE (Feet)							
(°C)	(°F)	10000	15000	20000	25000	30000	33275	35000	41000
–70	–94	––	––	84.7	86.1	91.3	92.8	93.6	93.1
–65	–85	79.9	83.1	85.7	87.1	92.3	93.9	94.7	94.2
–60	–76	80.9	84.1	86.7	88.1	93.3	94.9	95.7	95.2
–55	–67	81.8	85.0	87.6	89.1	94.3	95.9	96.7	96.2
–50	–58	82.7	86.0	88.6	90.1	95.3	96.9	97.6	95.8
–45	–49	83.6	86.9	89.6	91.0	96.3	97.4	96.7	94.8
–40	–40	84.5	87.8	90.5	92.0	97.2	96.5	96.0	94.3
–35	–31	85.4	88.8	91.3	92.9	96.6	96.0	95.6	93.9
–30	–22	86.3	89.7	92.2	93.8	96.3	95.7	95.3	93.4
–25	–13	87.2	90.6	93.1	93.5	96.1	95.3	94.8	92.5
–20	–4	88.0	91.4	94.0	92.6	95.7	94.6	93.9	91.1
–15	5	88.9	92.3	93.4	91.4	95.0	93.5	92.7	––
–10	14	89.7	93.1	92.5	90.2	94.0	92.3	91.9	––
–5	23	90.5	92.5	91.2	88.9	92.7	91.5	91.1	––
0	32	91.4	91.2	90.0	87.8	91.7	––	––	––
5	41	90.7	89.7	88.7	86.6	90.8	––	––	––
10	50	89.2	88.2	87.6	85.5	––	––	––	––

cs300_pw1521G_v05r2_status_mcl_avg_110_23.ch16

Maximum climb – 275 KIAS/M0.78 – Packs, cowl anti–ice on <72211001D>
Figure 03–02B–7

THRUST SETTING– %N1

MAXIMUM CLIMB – 250 KIAS

CLB (ALL ENGINE OPERATIVE)

PACKS ON, WING AND COWL ANTI–ICE ON

PW1521G–3

SAT		PRESSURE ALTITUDE (Feet)											
(°C)	(°F)	–2000	0	1000	2000	3000	4000	5000	6000	7000	8000	9000	10000
–55	**–67**	73.3	75.1	75.7	76.3	77.0	77.6	78.3	79.0	79.7	80.4	81.1	81.8
–50	**–58**	74.1	75.9	76.6	77.2	77.8	78.5	79.2	79.9	80.6	81.3	82.0	82.8
–45	**–49**	74.9	76.8	77.4	78.1	78.7	79.4	80.1	80.8	81.5	82.2	82.9	83.7
–40	**–40**	75.8	77.6	78.2	78.9	79.5	80.2	80.9	81.7	82.4	83.1	83.8	84.6
–35	**–31**	76.6	78.4	79.1	79.7	80.4	81.1	81.8	82.5	83.2	84.0	84.7	85.4
–30	**–22**	77.3	79.2	79.9	80.5	81.2	81.9	82.6	83.3	84.1	84.8	85.6	86.3
–25	**–13**	78.1	80.0	80.7	81.3	82.0	82.7	83.4	84.2	84.9	85.7	86.4	87.2
–20	**–4**	78.9	80.8	81.5	82.2	82.8	83.5	84.3	85.0	85.8	86.5	87.3	88.0
–15	**5**	79.7	81.6	82.3	82.9	83.6	84.3	85.1	85.9	86.6	87.4	88.1	88.9
–10	**14**	80.4	82.4	83.1	83.7	84.4	85.2	85.9	86.7	87.4	88.2	89.0	89.7
–5	**23**	81.2	83.2	83.8	84.5	85.2	85.9	86.7	87.5	88.3	89.0	89.8	90.6
0	**32**	81.9	83.9	84.6	85.3	86.0	86.8	87.5	88.3	89.1	89.9	90.6	90.5
5	**41**	82.7	84.7	85.4	86.1	86.8	87.5	88.3	89.1	89.4	89.3	89.2	89.1
10	**50**	83.4	85.4	86.2	86.9	87.6	88.1	88.1	88.0	87.9	87.8	87.7	87.5

cs300_pw1521G_v05r2_status_mcl_avg_111_1.ch16

Maximum climb – 250 KIAS – Packs on, wing and cowl anti–ice on <72211001D>
Figure 03–02B–8

THRUST SETTING– %N1

MAXIMUM CLIMB – 275 KIAS / M0.78

CLB (ALL ENGINE OPERATIVE)

PACKS ON, WING AND COWL ANTI–ICE ON

PW1521G–3

SAT		PRESSURE ALTITUDE (Feet)						
(°C)	(°F)	10000	15000	20000	25000	30000	33275	35000
–70	–94	––	––	84.7	86.1	91.3	92.8	93.6
–65	–85	79.9	83.1	85.7	87.1	92.3	93.9	94.7
–60	–76	80.9	84.1	86.7	88.1	93.3	94.9	95.7
–55	–67	81.8	85.0	87.6	89.1	94.3	95.9	96.7
–50	–58	82.7	86.0	88.6	90.1	95.3	96.9	96.5
–45	–49	83.6	86.9	89.6	91.0	96.3	96.1	95.1
–40	–40	84.5	87.8	90.5	92.0	96.2	95.1	94.4
–35	–31	85.4	88.8	91.3	92.9	95.2	94.6	94.1
–30	–22	86.3	89.7	92.2	92.6	95.1	94.4	93.9
–25	–13	87.2	90.6	93.1	92.2	95.0	93.9	93.3
–20	–4	88.0	91.4	92.9	91.2	94.6	93.1	92.3
–15	5	88.9	92.3	92.1	89.7	93.8	91.9	90.8
–10	14	89.7	92.4	90.9	88.3	92.6	90.5	89.9
–5	23	90.5	91.1	89.3	87.0	91.1	89.6	89.1
0	32	90.6	89.6	88.0	85.8	90.1	––	––
5	41	89.2	88.0	86.6	84.5	89.1	––	––
10	50	87.6	86.3	85.6	83.4	––	––	––

cs300_pw1521G_v05r2_status_mcl_avg_111_23.ch16

Maximum climb – 275 KIAS/M0.78 – Packs on, wing and cowl anti–ice on <72211001D>
Figure 03–02B–9

C. Derated climb N1 – CLB-1 – PW1521G-3 <72211001D>

THRUST SETTING– %N1

DERATED CLIMB – 250 KIAS

CLB–1 (ALL ENGINE OPERATIVE)

ENGINE BLEEDS CLOSED

PW1521G–3

SAT		PRESSURE ALTITUDE (Feet)											
(°C)	(°F)	–2000	0	1000	2000	3000	4000	5000	6000	7000	8000	9000	10000
–55	–67	71.9	73.7	74.3	74.9	75.6	76.2	76.9	77.6	78.3	79.0	79.7	80.4
–50	–58	72.7	74.5	75.2	75.8	76.4	77.1	77.7	78.4	79.2	79.9	80.6	81.3
–45	–49	73.5	75.3	76.0	76.6	77.2	77.9	78.6	79.3	80.0	80.7	81.4	82.2
–40	–40	74.3	76.2	76.8	77.4	78.1	78.8	79.4	80.2	80.9	81.6	82.3	83.0
–35	–31	75.1	77.0	77.6	78.2	78.9	79.6	80.3	81.0	81.7	82.5	83.2	83.9
–30	–22	75.9	77.8	78.4	79.1	79.7	80.4	81.1	81.8	82.6	83.3	84.0	84.8
–25	–13	76.6	78.5	79.2	79.8	80.5	81.2	81.9	82.7	83.4	84.2	84.9	85.6
–20	–4	77.4	79.3	80.0	80.6	81.3	82.0	82.7	83.5	84.2	85.0	85.7	86.5
–15	5	78.2	80.1	80.8	81.4	82.1	82.8	83.5	84.3	85.1	85.8	86.6	87.3
–10	14	78.9	80.8	81.5	82.2	82.9	83.6	84.3	85.1	85.9	86.6	87.4	88.1
–5	23	79.6	81.6	82.3	83.0	83.7	84.4	85.1	85.9	86.7	87.4	88.2	89.0
0	32	80.4	82.4	83.1	83.7	84.4	85.2	85.9	86.7	87.5	88.2	89.0	89.8
5	41	81.1	83.1	83.8	84.5	85.2	85.9	86.7	87.5	88.3	89.0	89.8	90.6
10	50	81.8	83.9	84.6	85.3	86.0	86.7	87.5	88.3	89.1	89.5	89.4	89.4
15	59	82.6	84.6	85.3	86.0	86.7	87.5	88.2	88.3	88.2	88.2	88.2	88.1
20	68	83.3	85.3	86.1	86.8	87.1	87.0	87.0	87.0	86.9	86.8	86.8	86.7
25	77	84.0	86.1	85.9	85.8	85.7	85.7	85.7	85.6	85.5	85.4	85.3	85.3
30	86	84.3	84.7	84.6	84.5	84.3	84.2	84.1	84.1	84.0	83.9	83.9	83.8
35	95	82.9	83.3	83.2	83.0	82.9	82.8	82.7	82.6	82.5	82.5	82.4	82.3
40	104	81.6	81.9	81.8	81.6	81.5	81.4	81.3	81.3	81.2	81.1	81.0	80.8
45	113	80.2	80.6	80.5	80.4	80.2	80.1	80.2	80.0	79.9	79.7	79.6	79.4
50	122	79.0	79.4	79.2	79.0	78.9	78.9	78.8	78.7	78.5	78.3	78.1	77.9
53	127	78.3	78.5	78.3	78.2	78.2	78.1	78.0	77.8	77.7	77.5	––	––

cs300_pw1521G_v05r2_status_cl1_avg_000_1.ch16

Derated climb – CLB–1 – 250 KIAS – Engine bleeds closed <72211001D>
Figure 03–02B–10

THRUST SETTING– %N1

DERATED CLIMB – 275 KIAS / M0.78

CLB–1 (ALL ENGINE OPERATIVE)

ENGINE BLEEDS CLOSED

PW1521G–3

SAT		PRESSURE ALTITUDE (Feet)							
(°C)	(°F)	10000	15000	20000	25000	30000	33275	35000	41000
–70	–94	––	––	83.2	84.5	90.9	92.4	93.0	92.4
–65	–85	78.5	81.6	84.2	85.5	92.0	93.4	94.1	93.4
–60	–76	79.4	82.6	85.2	86.5	93.0	94.4	95.1	94.5
–55	–67	80.3	83.5	86.1	87.5	94.0	95.4	96.1	95.5
–50	–58	81.2	84.4	87.1	88.5	94.9	96.4	97.0	96.5
–45	–49	82.1	85.4	88.0	89.5	95.9	97.3	98.0	96.9
–40	–40	83.0	86.3	88.9	90.4	96.9	98.0	97.6	96.4
–35	–31	83.9	87.2	89.8	91.3	97.8	97.5	97.1	95.9
–30	–22	84.7	88.1	90.6	92.2	97.5	97.1	96.7	95.4
–25	–13	85.6	88.9	91.4	93.2	97.2	96.6	96.2	94.7
–20	–4	86.4	89.8	92.3	92.9	96.8	96.1	95.6	93.7
–15	5	87.3	90.7	93.2	93.1	96.2	95.2	94.6	––
–10	14	88.1	91.5	92.5	92.1	95.4	94.2	93.8	––
–5	23	88.9	92.3	91.6	90.9	94.3	93.3	93.0	––
0	32	89.7	91.3	90.8	89.8	93.4	––	––	––
5	41	90.5	90.1	90.7	88.7	92.4	––	––	––
10	50	89.4	88.7	89.7	87.6	––	––	––	––
15	59	88.0	87.4	88.6	86.5	––	––	––	––
20	68	86.7	86.3	87.5	––	––	––	––	––
25	77	85.3	86.1	86.5	––	––	––	––	––
30	86	83.9	85.0	––	––	––	––	––	––
35	95	82.4	83.7	––	––	––	––	––	––
40	104	81.1	––	––	––	––	––	––	––
45	113	79.7	––	––	––	––	––	––	––
50	122	78.3	––	––	––	––	––	––	––

cs300_pw1521G_v05r2_status_cl1_avg_000_23.ch16

Derated climb – CLB–1 – 275 KIAS/M0.78 – Engine bleeds closed <72211001D>
Figure 03–02B–11

THRUST SETTING– %N1

DERATED CLIMB – 250 KIAS

CLB–1 (ALL ENGINE OPERATIVE)

PACKS ON, ANTI–ICE OFF

PW1521G–3

SAT		PRESSURE ALTITUDE (Feet)											
(°C)	(°F)	–2000	0	1000	2000	3000	4000	5000	6000	7000	8000	9000	10000
–55	–67	71.9	73.7	74.3	74.9	75.6	76.2	76.9	77.6	78.3	79.0	79.7	80.4
–50	–58	72.7	74.5	75.2	75.8	76.4	77.1	77.7	78.4	79.2	79.9	80.6	81.3
–45	–49	73.5	75.3	76.0	76.6	77.2	77.9	78.6	79.3	80.0	80.7	81.4	82.2
–40	–40	74.3	76.2	76.8	77.4	78.1	78.8	79.4	80.2	80.9	81.6	82.3	83.0
–35	–31	75.1	77.0	77.6	78.2	78.9	79.6	80.3	81.0	81.7	82.5	83.2	83.9
–30	–22	75.9	77.8	78.4	79.1	79.7	80.4	81.1	81.8	82.6	83.3	84.0	84.8
–25	–13	76.6	78.5	79.2	79.8	80.5	81.2	81.9	82.7	83.4	84.2	84.9	85.6
–20	–4	77.4	79.3	80.0	80.6	81.3	82.0	82.7	83.5	84.2	85.0	85.7	86.5
–15	5	78.2	80.1	80.8	81.4	82.1	82.8	83.5	84.3	85.1	85.8	86.6	87.3
–10	14	78.9	80.8	81.5	82.2	82.9	83.6	84.3	85.1	85.9	86.6	87.4	88.1
–5	23	79.6	81.6	82.3	83.0	83.7	84.4	85.1	85.9	86.7	87.4	88.2	89.0
0	32	80.4	82.4	83.1	83.7	84.4	85.2	85.9	86.7	87.5	88.2	89.0	89.8
5	41	81.1	83.1	83.8	84.5	85.2	85.9	86.7	87.5	88.3	89.0	89.8	90.6
10	50	81.8	83.9	84.6	85.3	86.0	86.7	87.5	88.3	89.1	89.5	89.4	89.4
15	59	82.6	84.6	85.3	86.0	86.7	87.5	88.2	88.3	88.2	88.2	88.2	88.1
20	68	83.3	85.3	86.1	86.8	87.1	87.0	87.0	87.0	86.9	86.8	86.8	86.7
25	77	84.0	86.1	85.9	85.8	85.7	85.7	85.7	85.6	85.5	85.4	85.3	85.3
30	86	84.3	84.7	84.6	84.5	84.3	84.2	84.1	84.1	84.0	83.9	83.9	83.8
35	95	82.9	83.3	83.2	83.0	82.9	82.8	82.7	82.6	82.5	82.5	82.4	82.3
40	104	81.6	81.9	81.8	81.6	81.5	81.4	81.3	81.3	81.2	81.1	81.0	80.8
45	113	80.2	80.6	80.5	80.4	80.2	80.1	80.2	80.0	79.9	79.7	79.6	79.4
50	122	79.0	79.4	79.2	79.0	78.9	78.9	78.8	78.7	78.5	78.3	78.1	77.9
53	127	78.3	78.5	78.3	78.2	78.2	78.1	78.0	77.8	77.7	77.5	––	––

cs300_pw1521G_v05r2_status_cl1_avg_100_1.ch16

Derated climb – CLB–1 – 250 KIAS – Packs on, anti–ice off <72211001D>
Figure 03–02B–12

THRUST SETTING– %N1

DERATED CLIMB – 275 KIAS / M0.78

CLB–1 (ALL ENGINE OPERATIVE)

PACKS ON, ANTI–ICE OFF

PW1521G–3

SAT		PRESSURE ALTITUDE (Feet)							
(°C)	(°F)	10000	15000	20000	25000	30000	33275	35000	41000
–70	**–94**	––	––	83.2	84.5	90.9	92.4	93.0	92.4
–65	**–85**	78.5	81.6	84.2	85.5	92.0	93.4	94.1	93.4
–60	**–76**	79.4	82.6	85.2	86.5	93.0	94.4	95.1	94.5
–55	**–67**	80.3	83.5	86.1	87.5	94.0	95.4	96.1	95.5
–50	**–58**	81.2	84.4	87.1	88.5	94.9	96.4	97.0	96.5
–45	**–49**	82.1	85.4	88.0	89.5	95.9	97.3	98.0	96.9
–40	**–40**	83.0	86.3	88.9	90.4	96.9	98.0	97.6	96.4
–35	**–31**	83.9	87.2	89.8	91.3	97.8	97.5	97.1	95.9
–30	**–22**	84.7	88.1	90.6	92.2	97.5	97.1	96.7	95.4
–25	**–13**	85.6	88.9	91.4	93.2	97.2	96.6	96.2	94.7
–20	**–4**	86.4	89.8	92.3	92.9	96.8	96.1	95.6	93.7
–15	**5**	87.3	90.7	93.2	93.1	96.2	95.2	94.6	––
–10	**14**	88.1	91.5	92.5	92.1	95.4	94.2	93.8	––
–5	**23**	88.9	92.3	91.6	90.9	94.3	93.3	93.0	**––**
0	**32**	89.7	91.3	90.8	89.8	93.4	––	––	––
5	**41**	90.5	90.1	90.7	88.7	92.4	––	––	––
10	**50**	89.4	88.7	89.7	87.6	––	––	––	––
15	**59**	88.0	87.4	88.6	86.5	––	––	––	––
20	**68**	86.7	86.3	87.5	––	––	––	––	––
25	**77**	85.3	86.1	86.5	**––**	**––**	**––**	**––**	**––**
30	**86**	83.9	85.0	––	––	––	––	––	––
35	**95**	82.4	83.7	––	––	––	––	––	––
40	**104**	81.1	––	––	––	––	––	––	––
45	**113**	79.7	––	––	––	––	––	––	––
50	**122**	78.3	––	––	––	––	––	––	––

cs300_pw1521G_v05r2_status_cl1_avg_100_23.ch16

Derated climb – CLB–1 – 275 KIAS/M0.78 – Packs on, anti–ice off <72211001D>

Figure 03–02B–13

THRUST SETTING– %N1

DERATED CLIMB – 250 KIAS

CLB–1 (ALL ENGINE OPERATIVE)

PACKS ON, COWL ANTI–ICE ON

PW1521G–3

SAT		PRESSURE ALTITUDE (Feet)											
(°C)	(°F)	–2000	0	1000	2000	3000	4000	5000	6000	7000	8000	9000	10000
–55	**–67**	72.0	73.8	74.4	75.0	75.6	76.3	77.0	77.7	78.4	79.1	79.8	80.5
–50	**–58**	72.8	74.6	75.2	75.9	76.5	77.2	77.8	78.6	79.3	80.0	80.7	81.4
–45	**–49**	73.6	75.4	76.1	76.7	77.3	78.0	78.7	79.4	80.1	80.8	81.6	82.3
–40	**–40**	74.4	76.3	76.9	77.5	78.2	78.8	79.5	80.3	81.0	81.7	82.4	83.2
–35	**–31**	75.2	77.1	77.7	78.3	79.0	79.7	80.4	81.1	81.8	82.6	83.3	84.0
–30	**–22**	76.0	77.8	78.5	79.2	79.8	80.5	81.2	81.9	82.7	83.4	84.2	84.9
–25	**–13**	76.7	78.6	79.3	79.9	80.6	81.3	82.0	82.8	83.5	84.3	85.0	85.8
–20	**–4**	77.5	79.4	80.1	80.7	81.4	82.1	82.8	83.6	84.3	85.1	85.8	86.6
–15	**5**	78.2	80.2	80.8	81.5	82.2	82.9	83.6	84.4	85.2	85.9	86.7	87.4
–10	**14**	79.0	80.9	81.6	82.3	83.0	83.7	84.4	85.2	86.0	86.7	87.5	88.3
–5	**23**	79.7	81.7	82.4	83.1	83.8	84.5	85.2	86.0	86.8	87.6	88.3	89.1
0	**32**	80.5	82.5	83.2	83.8	84.5	85.3	86.0	86.8	87.6	88.4	89.1	89.9
5	**41**	81.2	83.2	83.9	84.6	85.3	86.0	86.8	87.6	88.4	89.2	89.2	89.1
10	**50**	81.9	84.0	84.7	85.4	86.1	86.8	87.6	88.0	87.9	87.9	87.8	87.7

cs300_pw1521G_v05r2_status_cl1_avg_110_1.ch16

Derated climb – CLB–1 – 250 KIAS – Packs on, cowl anti–ice on <72211001D>
Figure 03–02B–14

THRUST SETTING– %N1

DERATED CLIMB – 275 KIAS / M0.78

CLB–1 (ALL ENGINE OPERATIVE)

PACKS ON, COWL ANTI–ICE ON

PW1521G–3

SAT		PRESSURE ALTITUDE (Feet)							
(°C)	(°F)	10000	15000	20000	25000	30000	33275	35000	41000
–70	**–94**	––	––	83.3	84.7	91.3	92.8	93.6	93.1
–65	**–85**	78.6	81.8	84.3	85.7	92.3	93.9	94.7	94.2
–60	**–76**	79.5	82.7	85.3	86.7	93.3	94.9	95.7	95.2
–55	**–67**	80.4	83.7	86.2	87.7	94.3	95.9	96.7	96.2
–50	**–58**	81.3	84.6	87.2	88.7	95.3	96.9	97.6	95.8
–45	**–49**	82.2	85.5	88.1	89.6	96.3	97.4	96.7	94.8
–40	**–40**	83.1	86.4	89.0	90.6	97.2	96.5	96.0	94.3
–35	**–31**	84.0	87.3	89.9	91.5	96.6	96.0	95.6	93.9
–30	**–22**	84.9	88.2	90.7	92.4	96.3	95.7	95.3	93.4
–25	**–13**	85.7	89.1	91.6	92.0	96.1	95.3	94.8	92.5
–20	**–4**	86.6	90.0	92.4	91.4	95.7	94.6	93.9	91.1
–15	**5**	87.4	90.8	91.9	91.3	95.0	93.5	92.7	––
–10	**14**	88.2	91.6	90.9	90.2	94.0	92.3	91.9	––
–5	**23**	89.1	91.0	89.7	88.9	92.7	91.5	91.1	––
0	**32**	89.9	89.8	88.9	87.8	91.7	––	––	––
5	**41**	89.1	88.3	88.6	86.6	90.8	––	––	––
10	**50**	87.7	86.9	87.6	85.5	––	––	––	––

cs300_pw1521G_v05r2_status_cl1_avg_110_23.ch16

Derated climb – CLB–1 – 275 KIAS/M0.78 – Packs on, cowl anti–ice on <72211001D>

Figure 03–02B–15

THRUST SETTING– %N1

DERATED CLIMB – 250 KIAS

CLB–1 (ALL ENGINE OPERATIVE)

PACKS ON, WING AND COWL ANTI–ICE ON

PW1521G–3

SAT		PRESSURE ALTITUDE (Feet)											
(°C)	(°F)	–2000	0	1000	2000	3000	4000	5000	6000	7000	8000	9000	10000
–55	–67	72.0	73.8	74.4	75.0	75.6	76.3	77.0	77.7	78.4	79.1	79.8	80.5
–50	–58	72.8	74.6	75.2	75.9	76.5	77.2	77.8	78.6	79.3	80.0	80.7	81.4
–45	–49	73.6	75.4	76.1	76.7	77.3	78.0	78.7	79.4	80.1	80.8	81.6	82.3
–40	–40	74.4	76.3	76.9	77.5	78.2	78.8	79.5	80.3	81.0	81.7	82.4	83.2
–35	–31	75.2	77.1	77.7	78.3	79.0	79.7	80.4	81.1	81.8	82.6	83.3	84.0
–30	–22	76.0	77.8	78.5	79.2	79.8	80.5	81.2	81.9	82.7	83.4	84.2	84.9
–25	–13	76.7	78.6	79.3	79.9	80.6	81.3	82.0	82.8	83.5	84.3	85.0	85.8
–20	–4	77.5	79.4	80.1	80.7	81.4	82.1	82.8	83.6	84.3	85.1	85.8	86.6
–15	5	78.2	80.2	80.8	81.5	82.2	82.9	83.6	84.4	85.2	85.9	86.7	87.4
–10	14	79.0	80.9	81.6	82.3	83.0	83.7	84.4	85.2	86.0	86.7	87.5	88.3
–5	23	79.7	81.7	82.4	83.1	83.8	84.5	85.2	86.0	86.8	87.6	88.3	89.1
0	32	80.5	82.5	83.2	83.8	84.5	85.3	86.0	86.8	87.6	88.4	89.1	89.0
5	41	81.2	83.2	83.9	84.6	85.3	86.0	86.8	87.6	87.9	87.8	87.7	87.6
10	50	81.9	84.0	84.7	85.4	86.1	86.6	86.5	86.5	86.4	86.3	86.2	86.0

cs300_pw1521G_v05r2_status_cl1_avg_111_1.ch16

Derated climb – CLB–1 – 250 KIAS – Packs on, wing and cowl anti–ice on <72211001D>
Figure 03–02B–16

THRUST SETTING– %N1

DERATED CLIMB – 275 KIAS / M0.78

CLB–1 (ALL ENGINE OPERATIVE)

PACKS ON, WING AND COWL ANTI–ICE ON

PW1521G–3

SAT		PRESSURE ALTITUDE (Feet)						
(°C)	(°F)	10000	15000	20000	25000	30000	33275	35000
–70	**–94**	––	––	83.3	84.7	91.3	92.8	93.6
–65	**–85**	78.6	81.8	84.3	85.7	92.3	93.9	94.7
–60	**–76**	79.5	82.7	85.3	86.7	93.3	94.9	95.7
–55	**–67**	80.4	83.7	86.2	87.7	94.3	95.9	96.7
–50	**–58**	81.3	84.6	87.2	88.7	95.3	96.9	96.5
–45	**–49**	82.2	85.5	88.1	89.6	96.3	96.1	95.1
–40	**–40**	83.1	86.4	89.0	90.6	96.2	95.1	94.4
–35	**–31**	84.0	87.3	89.9	91.5	95.2	94.6	94.1
–30	**–22**	84.9	88.2	90.7	91.2	95.1	94.4	93.9
–25	**–13**	85.7	89.1	91.6	90.7	95.0	93.9	93.3
–20	**–4**	86.6	90.0	91.4	89.9	94.6	93.1	92.3
–15	**5**	87.4	90.8	90.5	89.6	93.8	91.9	90.8
–10	**14**	88.2	90.9	89.4	88.3	92.6	90.5	89.9
–5	**23**	89.1	89.6	87.8	87.0	91.1	89.6	89.1
0	**32**	89.1	88.2	86.9	85.8	90.1	––	––
5	**41**	87.7	86.6	86.5	84.5	89.1	––	––
10	**50**	86.1	85.0	85.6	83.4	––	––	––

cs300_pw1521G_v05r2_status_cl1_avg_111_23.ch16

Derated climb – CLB–1 – 275 KIAS/M0.78 – Packs on, wing and cowl anti–ice on <72211001D>
Figure 03–02B–17

D. Derated climb N1 – CLB-2 – PW1521G-3 <72211001D>

THRUST SETTING– %N1

DERATED CLIMB – 250 KIAS

CLB–2 (ALL ENGINE OPERATIVE)

ENGINE BLEEDS CLOSED

PW1521G–3

SAT		PRESSURE ALTITUDE (Feet)											
(°C)	(°F)	–2000	0	1000	2000	3000	4000	5000	6000	7000	8000	9000	10000
–55	–67	70.6	72.4	73.0	73.6	74.2	74.9	75.6	76.2	76.9	77.6	78.3	79.0
–50	–58	71.4	73.2	73.8	74.4	75.1	75.7	76.4	77.1	77.8	78.5	79.2	79.9
–45	–49	72.2	74.0	74.6	75.2	75.9	76.5	77.2	77.9	78.6	79.3	80.0	80.7
–40	–40	72.9	74.8	75.4	76.1	76.7	77.4	78.1	78.8	79.5	80.2	80.9	81.6
–35	–31	73.7	75.6	76.2	76.8	77.5	78.2	78.9	79.6	80.3	81.0	81.8	82.5
–30	–22	74.5	76.3	77.0	77.6	78.3	79.0	79.7	80.4	81.1	81.9	82.6	83.3
–25	–13	75.2	77.1	77.8	78.4	79.1	79.8	80.5	81.2	82.0	82.7	83.4	84.2
–20	–4	76.0	77.9	78.5	79.2	79.9	80.6	81.3	82.0	82.8	83.5	84.2	85.0
–15	5	76.7	78.6	79.3	80.0	80.6	81.4	82.1	82.8	83.6	84.3	85.1	85.8
–10	14	77.4	79.4	80.1	80.7	81.4	82.1	82.9	83.6	84.4	85.1	85.9	86.6
–5	23	78.2	80.1	80.8	81.5	82.2	82.9	83.7	84.4	85.2	85.9	86.7	87.4
0	32	78.9	80.9	81.6	82.2	82.9	83.7	84.4	85.2	86.0	86.7	87.5	88.2
5	41	79.6	81.6	82.3	83.0	83.7	84.4	85.2	86.0	86.7	87.5	88.3	89.0
10	50	80.3	82.3	83.0	83.7	84.4	85.2	86.0	86.7	87.5	87.9	87.9	87.8
15	59	81.0	83.1	83.8	84.5	85.2	85.9	86.7	86.7	86.7	86.6	86.6	86.5
20	68	81.7	83.8	84.5	85.2	85.5	85.5	85.5	85.4	85.3	85.3	85.2	85.2
25	77	82.4	84.5	84.4	84.3	84.2	84.2	84.1	84.0	84.0	83.9	83.8	83.8
30	86	82.7	83.1	83.0	82.9	82.8	82.7	82.6	82.6	82.4	82.4	82.4	82.3
35	95	81.3	81.7	81.6	81.5	81.3	81.3	81.1	81.1	81.1	81.0	80.9	80.8
40	104	80.0	80.4	80.3	80.2	80.0	79.9	79.9	79.8	79.8	79.7	79.5	79.4
45	113	78.7	79.1	79.0	78.8	78.7	78.6	78.7	78.6	78.4	78.3	78.1	77.9
50	122	77.5	77.8	77.5	77.3	77.2	77.3	77.3	77.2	77.0	76.8	76.7	76.4
53	127	76.6	76.6	76.4	76.5	76.5	76.5	76.5	76.4	76.2	76.0	––	––

cs300_pw1521G_v05r2_status_cl2_avg_000_1.ch16

Derated climb – CLB–2 – 250 KIAS – Engine bleeds closed <72211001D>
Figure 03–02B–18

THRUST SETTING– %N1

DERATED CLIMB – 275 KIAS / M0.78

CLB–2 (ALL ENGINE OPERATIVE)

ENGINE BLEEDS CLOSED

PW1521G–3

SAT		PRESSURE ALTITUDE (Feet)							
(°C)	(°F)	10000	15000	20000	25000	30000	33275	35000	41000
–70	–94	––	––	81.8	83.1	90.9	92.4	93.0	92.4
–65	–85	77.1	80.2	82.8	84.1	92.0	93.4	94.1	93.4
–60	–76	78.0	81.2	83.7	85.1	93.0	94.4	95.1	94.5
–55	–67	78.9	82.1	84.7	86.0	94.0	95.4	96.1	95.5
–50	–58	79.8	83.0	85.6	87.0	94.9	96.4	97.0	96.5
–45	–49	80.7	83.9	86.5	87.9	95.9	97.3	98.0	96.9
–40	–40	81.6	84.8	87.4	88.8	96.9	98.0	97.6	96.4
–35	–31	82.4	85.7	88.2	89.8	97.8	97.5	97.1	95.9
–30	–22	83.3	86.6	89.0	90.7	97.5	97.1	96.7	95.4
–25	–13	84.1	87.4	89.8	91.6	97.2	96.6	96.2	94.7
–20	–4	84.9	88.3	90.7	92.7	96.8	96.1	95.6	93.7
–15	5	85.8	89.2	91.6	93.1	96.2	95.2	94.6	––
–10	14	86.6	90.0	91.0	92.1	95.4	94.2	93.8	––
–5	23	87.4	90.8	90.7	90.9	94.3	93.3	93.0	––
0	32	88.2	89.8	90.8	89.8	93.4	––	––	––
5	41	89.0	88.6	90.7	88.7	92.4	––	––	––
10	50	87.8	87.3	89.7	87.6	––	––	––	––
15	59	86.5	86.0	88.6	86.5	––	––	––	––
20	68	85.2	86.3	87.5	––	––	––	––	––
25	77	83.8	86.1	86.5	––	––	––	––	––
30	86	82.4	85.0	––	––	––	––	––	––
35	95	81.0	83.7	––	––	––	––	––	––
40	104	79.6	––	––	––	––	––	––	––
45	113	78.2	––	––	––	––	––	––	––
50	122	76.8	––	––	––	––	––	––	––

cs300_pw1521G_v05r2_status_cl2_avg_000_23.ch16

Derated climb – CLB–2 – 275 KIAS/M0.78 – Engine bleeds closed <72211001D>
Figure 03–02B–19

THRUST SETTING– %N1

DERATED CLIMB – 250 KIAS

CLB–2 (ALL ENGINE OPERATIVE)

PACKS ON, ANTI–ICE OFF

PW1521G–3

SAT		PRESSURE ALTITUDE (Feet)											
(°C)	(°F)	–2000	0	1000	2000	3000	4000	5000	6000	7000	8000	9000	10000
–55	–67	70.6	72.4	73.0	73.6	74.2	74.9	75.6	76.2	76.9	77.6	78.3	79.0
–50	–58	71.4	73.2	73.8	74.4	75.1	75.7	76.4	77.1	77.8	78.5	79.2	79.9
–45	–49	72.2	74.0	74.6	75.2	75.9	76.5	77.2	77.9	78.6	79.3	80.0	80.7
–40	–40	72.9	74.8	75.4	76.1	76.7	77.4	78.1	78.8	79.5	80.2	80.9	81.6
–35	–31	73.7	75.6	76.2	76.8	77.5	78.2	78.9	79.6	80.3	81.0	81.8	82.5
–30	–22	74.5	76.3	77.0	77.6	78.3	79.0	79.7	80.4	81.1	81.9	82.6	83.3
–25	–13	75.2	77.1	77.8	78.4	79.1	79.8	80.5	81.2	82.0	82.7	83.4	84.2
–20	–4	76.0	77.9	78.5	79.2	79.9	80.6	81.3	82.0	82.8	83.5	84.2	85.0
–15	5	76.7	78.6	79.3	80.0	80.6	81.4	82.1	82.8	83.6	84.3	85.1	85.8
–10	14	77.4	79.4	80.1	80.7	81.4	82.1	82.9	83.6	84.4	85.1	85.9	86.6
–5	23	78.2	80.1	80.8	81.5	82.2	82.9	83.7	84.4	85.2	85.9	86.7	87.4
0	32	78.9	80.9	81.6	82.2	82.9	83.7	84.4	85.2	86.0	86.7	87.5	88.2
5	41	79.6	81.6	82.3	83.0	83.7	84.4	85.2	86.0	86.7	87.5	88.3	89.0
10	50	80.3	82.3	83.0	83.7	84.4	85.2	86.0	86.7	87.5	87.9	87.9	87.8
15	59	81.0	83.1	83.8	84.5	85.2	85.9	86.7	86.7	86.7	86.6	86.6	86.5
20	68	81.7	83.8	84.5	85.2	85.5	85.5	85.5	85.4	85.3	85.3	85.2	85.2
25	77	82.4	84.5	84.4	84.3	84.2	84.2	84.1	84.0	84.0	83.9	83.8	83.8
30	86	82.7	83.1	83.0	82.9	82.8	82.7	82.6	82.6	82.4	82.4	82.4	82.3
35	95	81.3	81.7	81.6	81.5	81.3	81.3	81.1	81.1	81.1	81.0	80.9	80.8
40	104	80.0	80.4	80.3	80.2	80.0	79.9	79.9	79.8	79.8	79.7	79.5	79.4
45	113	78.7	79.1	79.0	78.8	78.7	78.6	78.7	78.6	78.4	78.3	78.1	77.9
50	122	77.5	77.8	77.5	77.3	77.2	77.3	77.3	77.2	77.0	76.8	76.7	76.4
53	127	76.6	76.6	76.4	76.5	76.5	76.5	76.5	76.4	76.2	76.0	––	––

cs300_pw1521G_v05r2_status_cl2_avg_100_1.ch16

Derated climb – CLB–2 – 250 KIAS – Packs on, anti–ice off <72211001D>
Figure 03–02B–20

THRUST SETTING– %N1

DERATED CLIMB − 275 KIAS / M0.78

CLB−2 (ALL ENGINE OPERATIVE)

PACKS ON, ANTI−ICE OFF

PW1521G−3

SAT		PRESSURE ALTITUDE (Feet)							
(°C)	(°F)	10000	15000	20000	25000	30000	33275	35000	41000
−70	−94	––	––	81.8	83.1	90.9	92.4	93.0	92.4
−65	−85	77.1	80.2	82.8	84.1	92.0	93.4	94.1	93.4
−60	−76	78.0	81.2	83.7	85.1	93.0	94.4	95.1	94.5
−55	−67	78.9	82.1	84.7	86.0	94.0	95.4	96.1	95.5
−50	−58	79.8	83.0	85.6	87.0	94.9	96.4	97.0	96.5
−45	−49	80.7	83.9	86.5	87.9	95.9	97.3	98.0	96.9
−40	−40	81.6	84.8	87.4	88.8	96.9	98.0	97.6	96.4
−35	−31	82.4	85.7	88.2	89.8	97.8	97.5	97.1	95.9
−30	−22	83.3	86.6	89.0	90.7	97.5	97.1	96.7	95.4
−25	−13	84.1	87.4	89.8	91.6	97.2	96.6	96.2	94.7
−20	−4	84.9	88.3	90.7	92.7	96.8	96.1	95.6	93.7
−15	5	85.8	89.2	91.6	93.1	96.2	95.2	94.6	––
−10	14	86.6	90.0	91.0	92.1	95.4	94.2	93.8	––
−5	23	87.4	90.8	90.7	90.9	94.3	93.3	93.0	––
0	32	88.2	89.8	90.8	89.8	93.4	––	––	––
5	41	89.0	88.6	90.7	88.7	92.4	––	––	––
10	50	87.8	87.3	89.7	87.6	––	––	––	––
15	59	86.5	86.0	88.6	86.5	––	––	––	––
20	68	85.2	86.3	87.5	––	––	––	––	––
25	77	83.8	86.1	86.5	––	––	––	––	––
30	86	82.4	85.0	––	––	––	––	––	––
35	95	81.0	83.7	––	––	––	––	––	––
40	104	79.6	––	––	––	––	––	––	––
45	113	78.2	––	––	––	––	––	––	––
50	122	76.8	––	––	––	––	––	––	––

cs300_pw1521G_v05r2_status_cl2_avg_100_23.ch16

Derated climb – CLB–2 – 275 KIAS/M0.78 – Packs on, anti–ice off <72211001D>
Figure 03–02B–21

THRUST SETTING– %N1

DERATED CLIMB – 250 KIAS

CLB–2 (ALL ENGINE OPERATIVE)

PACKS ON, COWL ANTI–ICE ON

PW1521G–3

SAT		PRESSURE ALTITUDE (Feet)											
(°C)	(°F)	–2000	0	1000	2000	3000	4000	5000	6000	7000	8000	9000	10000
–55	**–67**	70.7	72.5	73.1	73.7	74.3	75.0	75.6	76.3	77.0	77.7	78.4	79.1
–50	**–58**	71.5	73.3	73.9	74.5	75.1	75.8	76.5	77.2	77.9	78.6	79.3	80.0
–45	**–49**	72.3	74.1	74.7	75.3	76.0	76.6	77.3	78.0	78.8	79.4	80.2	80.9
–40	**–40**	73.0	74.9	75.5	76.1	76.8	77.5	78.2	78.9	79.6	80.3	81.0	81.7
–35	**–31**	73.8	75.7	76.3	76.9	77.6	78.3	79.0	79.7	80.4	81.2	81.9	82.6
–30	**–22**	74.6	76.4	77.1	77.7	78.4	79.1	79.8	80.5	81.3	82.0	82.7	83.4
–25	**–13**	75.3	77.2	77.9	78.5	79.2	79.9	80.6	81.3	82.1	82.8	83.5	84.3
–20	**–4**	76.1	78.0	78.6	79.3	80.0	80.7	81.4	82.1	82.9	83.6	84.4	85.1
–15	**5**	76.8	78.7	79.4	80.1	80.7	81.4	82.2	82.9	83.7	84.4	85.2	85.9
–10	**14**	77.5	79.5	80.2	80.8	81.5	82.2	83.0	83.7	84.5	85.2	86.0	86.7
–5	**23**	78.3	80.2	80.9	81.6	82.3	83.0	83.8	84.5	85.3	86.1	86.8	87.6
0	**32**	79.0	81.0	81.7	82.3	83.0	83.8	84.5	85.3	86.1	86.8	87.6	88.4
5	**41**	79.7	81.7	82.4	83.1	83.8	84.5	85.3	86.1	86.9	87.6	87.6	87.6
10	**50**	80.4	82.4	83.2	83.8	84.6	85.3	86.1	86.5	86.4	86.3	86.2	86.2

cs300_pw1521G_v05r2_status_cl2_avg_110_1.ch16

Derated climb – CLB–2 – 250 KIAS – Packs on, cowl anti–ice on <72211001D>
Figure 03–02B–22

THRUST SETTING– %N1

DERATED CLIMB – 275 KIAS / M0.78

CLB–2 (ALL ENGINE OPERATIVE)

PACKS ON, COWL ANTI–ICE ON

PW1521G–3

SAT		PRESSURE ALTITUDE (Feet)							
(°C)	(°F)	10000	15000	20000	25000	30000	33275	35000	41000
–70	**–94**	––	––	81.9	83.3	91.3	92.8	93.6	93.1
–65	**–85**	77.3	80.4	82.9	84.3	92.3	93.9	94.7	94.2
–60	**–76**	78.2	81.3	83.8	85.2	93.3	94.9	95.7	95.2
–55	**–67**	79.1	82.2	84.8	86.2	94.3	95.9	96.7	96.2
–50	**–58**	79.9	83.2	85.7	87.2	95.3	96.9	97.6	95.8
–45	**–49**	80.8	84.1	86.7	88.1	96.3	97.4	96.7	94.8
–40	**–40**	81.7	85.0	87.5	89.0	97.2	96.5	96.0	94.3
–35	**–31**	82.5	85.9	88.3	89.9	96.6	96.0	95.6	93.9
–30	**–22**	83.4	86.7	89.1	90.8	96.3	95.7	95.3	93.4
–25	**–13**	84.2	87.6	89.9	90.4	96.1	95.3	94.8	92.5
–20	**–4**	85.1	88.5	90.8	91.2	95.7	94.6	93.9	91.1
–15	**5**	85.9	89.3	90.3	91.3	95.0	93.5	92.7	––
–10	**14**	86.7	90.1	89.4	90.2	94.0	92.3	91.9	––
–5	**23**	87.5	89.5	88.8	88.9	92.7	91.5	91.1	––
0	**32**	88.3	88.3	88.8	87.8	91.7	––	––	––
5	**41**	87.6	86.9	88.6	86.6	90.8	––	––	––
10	**50**	86.2	85.4	87.6	85.5	––	––	––	––

cs300_pw1521G_v05r2_status_cl2_avg_110_23.ch16

Derated climb – CLB–2 – 275 KIAS/M0.78 – Packs on, cowl anti–ice on <72211001D>

Figure 03–02B–23

THRUST SETTING– %N1

DERATED CLIMB – 250 KIAS

CLB–2 (ALL ENGINE OPERATIVE)

PACKS ON, WING AND COWL ANTI–ICE ON

PW1521G–3

SAT		PRESSURE ALTITUDE (Feet)											
(°C)	(°F)	–2000	0	1000	2000	3000	4000	5000	6000	7000	8000	9000	10000
–55	**–67**	70.7	72.5	73.1	73.7	74.3	75.0	75.6	76.3	77.0	77.7	78.4	79.1
–50	**–58**	71.5	73.3	73.9	74.5	75.1	75.8	76.5	77.2	77.9	78.6	79.3	80.0
–45	**–49**	72.3	74.1	74.7	75.3	76.0	76.6	77.3	78.0	78.8	79.4	80.2	80.9
–40	**–40**	73.0	74.9	75.5	76.1	76.8	77.5	78.2	78.9	79.6	80.3	81.0	81.7
–35	**–31**	73.8	75.7	76.3	76.9	77.6	78.3	79.0	79.7	80.4	81.2	81.9	82.6
–30	**–22**	74.6	76.4	77.1	77.7	78.4	79.1	79.8	80.5	81.3	82.0	82.7	83.4
–25	**–13**	75.3	77.2	77.9	78.5	79.2	79.9	80.6	81.3	82.1	82.8	83.5	84.3
–20	**–4**	76.1	78.0	78.6	79.3	80.0	80.7	81.4	82.1	82.9	83.6	84.4	85.1
–15	**5**	76.8	78.7	79.4	80.1	80.7	81.4	82.2	82.9	83.7	84.4	85.2	85.9
–10	**14**	77.5	79.5	80.2	80.8	81.5	82.2	83.0	83.7	84.5	85.2	86.0	86.7
–5	**23**	78.3	80.2	80.9	81.6	82.3	83.0	83.8	84.5	85.3	86.1	86.8	87.6
0	**32**	79.0	81.0	81.7	82.3	83.0	83.8	84.5	85.3	86.1	86.8	87.5	87.4
5	**41**	79.7	81.7	82.4	83.1	83.8	84.5	85.3	86.1	86.3	86.2	86.1	86.1
10	**50**	80.4	82.4	83.2	83.8	84.6	85.1	85.0	84.9	84.8	84.7	84.6	84.5

cs300_pw1521G_v05r2_status_cl2_avg_111_1.ch16

Derated climb – CLB–2 – 250 KIAS – Packs on, wing and cowl anti–ice on <72211001D>
Figure 03–02B–24

THRUST SETTING– %N1

DERATED CLIMB – 275 KIAS / M0.78

CLB–2 (ALL ENGINE OPERATIVE)

PACKS ON, WING AND COWL ANTI–ICE ON

PW1521G–3

SAT		PRESSURE ALTITUDE (Feet)						
(°C)	(°F)	10000	15000	20000	25000	30000	33275	35000
–70	**–94**	––	––	81.9	83.3	91.3	92.8	93.6
–65	**–85**	77.3	80.4	82.9	84.3	92.3	93.9	94.7
–60	**–76**	78.2	81.3	83.8	85.2	93.3	94.9	95.7
–55	**–67**	79.1	82.2	84.8	86.2	94.3	95.9	96.7
–50	**–58**	79.9	83.2	85.7	87.2	95.3	96.9	96.5
–45	**–49**	80.8	84.1	86.7	88.1	96.3	96.1	95.1
–40	**–40**	81.7	85.0	87.5	89.0	96.2	95.1	94.4
–35	**–31**	82.5	85.9	88.3	89.9	95.2	94.6	94.1
–30	**–22**	83.4	86.7	89.1	89.6	95.1	94.4	93.9
–25	**–13**	84.2	87.6	89.9	89.1	95.0	93.9	93.3
–20	**–4**	85.1	88.5	89.8	89.8	94.6	93.1	92.3
–15	**5**	85.9	89.3	88.9	89.6	93.8	91.9	90.8
–10	**14**	86.7	89.4	87.8	88.3	92.6	90.5	89.9
–5	**23**	87.5	88.1	86.9	87.0	91.1	89.6	89.1
0	**32**	87.5	86.7	86.9	85.8	90.1	––	––
5	**41**	86.1	85.1	86.5	84.5	89.1	––	––
10	**50**	84.5	83.5	85.6	83.4	––	––	––

cs300_pw1521G_v05r2_status_cl2_avg_111_23.ch16

Derated climb – CLB–2 – 275 KIAS/M0.78 – Packs on, wing and cowl anti–ice on <72211001D>
Figure 03–02B–25

E. In cruise quick check

IN CRUISE QUICK CHECK - AEO								
ALL ENGINES OPERATIVE CLEAN CONFIGURATION ENGINE BLEED: PACKS ON, A/I OFF APU OFF				ISA CG 27% MAC		FUEL (KG) TIME (MIN)		
CRUISE SPEED				DESCENT SCHEDULE				
0.78M				0.78M / 275KIAS / 250KIAS				
WEIGHT (KG)	FL	AIR DISTANCE (NM)						
		400	600	800	1000	1200	1400	1600
40000	290	1783	2744	–	--	–	–	–
		60	86	–	--	–	–	–
	350	1438	2214	2988	--	–	--	–
		61	88	114	--	–	--	–
	390	1273	1960	2644	--	–	--	--
		61	88	115	--	–	--	--
44000	290	1781	2752	3721	4688	5653	6615	--
		60	86	112	138	164	190	--
	350	1448	2239	3027	3812	4594	5373	6150
		61	88	115	141	168	195	221
	390	1293	2003	2709	3410	4109	4803	5493
		61	88	115	142	169	195	222
48000	290	1782	2763	3742	4718	5693	6665	7634
		60	86	112	138	164	190	216
	350	1464	2274	3080	3882	4680	5475	6266
		61	88	115	141	168	195	221
	390	1315	2048	2776	3500	4220	4936	5648
		61	88	115	142	169	196	222
52000	290	1788	2782	3772	4759	5744	6726	7705
		60	86	112	138	164	190	216
	350	1485	2317	3144	3966	4785	5598	6408
		61	88	115	141	168	195	221
	390	1351	2114	2871	3621	4366	5105	5839
		61	88	115	142	169	196	222

CS300_ALL_NAMEPLATES_QRH_MET_v01_In_cruise_AEO_p1

In cruise quick check – 0.78M – page 1 <Metric>
Figure 03–02B–26

IN CRUISE QUICK CHECK - AEO								
ALL ENGINES OPERATIVE CLEAN CONFIGURATION ENGINE BLEED: PACKS ON, A/I OFF APU OFF				ISA CG 27% MAC			FUEL (KG) TIME (MIN)	
CRUISE SPEED				DESCENT SCHEDULE				
0.78M				0.78M / 275KIAS / 250KIAS				
WEIGHT (KG)	FL	AIR DISTANCE (NM)						
		1800	2000	2200	2400	2600	2800	3000
40000	290	--	--	--	--	--	--	--
		--	--	--	--	--	--	--
	350	--	--	--	--	--	--	--
		--	--	--	--	--	--	--
	390	--	--	--	--	--	--	--
		--	--	--	--	--	--	--
44000	290	--	--	--	--	--	--	--
		--	--	--	--	--	--	--
	350	6924	--	--	--	--	--	--
		248	--	--	--	--	--	--
	390	6179	6861	--	--	--	--	--
		249	276	--	--	--	--	--
48000	290	8601	9566	10529	--	--	--	--
		242	268	294	--	--	--	--
	350	7054	7839	8621	9400	10177	10951	--
		248	275	301	328	355	381	--
	390	6356	7060	7760	8456	9148	9836	10520
		249	276	303	330	356	383	410
52000	290	8682	9656	10628	11597	12565	13530	14492
		242	268	294	320	346	372	398
	350	7213	8014	8812	9606	10397	11185	11969
		248	275	301	328	355	381	408
	390	6569	7294	8015	8732	9445	10154	10860
		249	276	303	330	356	383	410

CS300_ALL_NAMEPLATES_QRH_MET_v01_In_cruise_AEO_p2

In cruise quick check – 0.78M – page 2 <Metric>
Figure 03–02B–27

IN CRUISE QUICK CHECK - AEO								
ALL ENGINES OPERATIVE CLEAN CONFIGURATION ENGINE BLEED: PACKS ON, A/I OFF APU OFF				ISA CG 27% MAC		FUEL (KG) TIME (MIN)		
CRUISE SPEED				DESCENT SCHEDULE				
0.78M				0.78M / 275KIAS / 250KIAS				
WEIGHT (KG)	FL	AIR DISTANCE (NM)						
		400	600	800	1000	1200	1400	1600
56000	290	1799	2807	3810	4810	5807	6801	7792
		60	86	112	138	164	190	216
	350	1506	2360	3209	4053	4892	5728	6558
		61	88	115	141	168	195	221
	390	1397	2197	2989	3774	4551	5321	6085
		62	88	115	142	169	196	222
60000	290	1815	2840	3859	4874	5886	6893	7897
		60	86	112	138	164	190	216
	350	1537	2415	3288	4154	5015	5871	6723
		61	88	115	141	168	195	221
	390	1467	2315	3150	3974	4789	5595	6394
		62	88	115	142	169	196	222
64000	290	1836	2880	3918	4951	5979	7003	8022
		60	86	112	138	164	190	216
	350	1578	2489	3393	4288	5176	6058	6932
		61	88	115	141	168	195	221
	390	–	–	–	–	–	–	–
		–	–	–	–	–	–	–

CS300_ALL_NAMEPLATES_QRH_MET_v01_In_cruise_AEO_p3

In cruise quick check – 0.78M – page 3 <Metric>
Figure 03–02B–28

IN CRUISE QUICK CHECK - AEO								
ALL ENGINES OPERATIVE CLEAN CONFIGURATION ENGINE BLEED: PACKS ON, A/I OFF APU OFF				ISA CG 27% MAC		FUEL (KG) TIME (MIN)		
CRUISE SPEED				DESCENT SCHEDULE				
0.78M				0.78M / 275KIAS / 250KIAS				
WEIGHT (KG)	FL	AIR DISTANCE (NM)						
		1800	2000	2200	2400	2600	2800	3000
56000	290	8779	9763	10745	11724	12701	13675	14647
		242	268	294	320	346	372	398
	350	7384	8206	9023	9835	10643	11447	12248
		248	275	301	328	355	381	408
	390	6842	7592	8337	9076	9811	10540	11266
		249	276	303	330	356	383	410
60000	290	8896	9893	10887	11877	12864	13848	14829
		242	268	294	320	346	372	398
	350	7570	8412	9250	10083	10911	11735	12555
		248	275	301	328	355	382	408
	390	7184	7967	8742	9511	10272	11028	11777
		249	276	303	330	357	383	410
64000	290	9037	10047	11054	12057	13056	14052	15045
		242	268	294	320	346	372	398
	350	7801	8664	9522	10376	11225	12069	12908
		248	275	302	328	355	382	408
	390	--	--	--	--	--	--	--
		--	--	--	--	--	--	--

CS300_ALL_NAMEPLATES_QRH_MET_v01_In_cruise_AEO_p4

In cruise quick check – 0.78M – page 4 <Metric>
Figure 03–02B–29

F. In cruise quick check – ETOPS <10109100C>

IN CRUISE QUICK CHECK - AEO (ETOPS)							
ALL ENGINES OPERATIVE CLEAN CONFIGURATION ENGINE BLEED: PACKS ON, A/I OFF APU OFF			ISA CG 27% MAC			LRC (KIAS) TIME (MIN) FUEL (KG)	
CRUISE SPEED			DESCENT SCHEDULE				
LRC			VMO / 250KIAS				
WEIGHT (KG)	FL	AIR DISTANCE (NM)					
		400	600	800	1000	1200	1400	1600
40000	100	224	--	–	--	--	–	–
		97	--	–	--	--	–	–
		2240	--	–	--	--	–	–
	140	224	--	–	--	--	–	–
		91	--	–	--	--	–	–
		2055	--	–	--	--	–	–
44000	100	233	231	230	229	228	–	–
		94	139	185	231	278	–	–
		2311	3450	4577	5692	6797	–	–
	140	231	230	229	229	228	–	–
		89	132	175	219	262	–	–
		2125	3174	4213	5240	6258	–	–
48000	100	240	239	238	237	236	234	233
		91	135	179	224	269	315	361
		2388	3570	4738	5894	7037	8168	9287
	140	243	241	240	238	237	236	236
		85	126	168	210	253	296	339
		2197	3290	4372	5441	6498	7543	8577
52000	100	251	249	248	247	246	245	244
		87	130	173	216	260	304	348
		2469	3697	4910	6109	7293	8464	9623
	140	253	251	250	248	246	245	243
		82	121	161	201	242	283	325
		2263	3399	4525	5637	6737	7824	8899

CORRECTION	PER 10°C BELOW ISA	PER 10°C ABOVE ISA	ALL A/I ON	APU ON
FUEL	-0.5%	1.1%	12.2%	6.0%

CS300_21K_FCOM_MET_v01–In cruise_AEO – ETOPS – p1

ETOPS – In cruise quick check – AEO – page 1 <Metric> and <72211001D>
Figure 03–02B–30

IN CRUISE QUICK CHECK - AEO (ETOPS)								
ALL ENGINES OPERATIVE CLEAN CONFIGURATION ENGINE BLEED: PACKS ON, A/I OFF APU OFF				ISA CG 27% MAC			LRC (KIAS) TIME (MIN) FUEL (KG)	
CRUISE SPEED				DESCENT SCHEDULE				
LRC				VMO / 250KIAS				
WEIGHT (KG)	FL	AIR DISTANCE (NM)						
		1800	2000	2200	2400	2600	2800	3000
40000	100	--	--	--	--	--	--	--
		--	--	--	--	--	--	--
		--	--	--	--	--	--	--
	140	--	--	--	--	--	--	--
		--	--	--	--	--	--	--
		--	--	--	--	--	--	--
44000	100	--	--	--	--	--	--	--
		--	--	--	--	--	--	--
		--	--	--	--	--	--	--
	140	--	--	--	--	--	--	--
		--	--	--	--	--	--	--
		--	--	--	--	--	--	--
48000	100	232	–	–	--	--	--	--
		408	–	–	--	--	--	--
		10396	–	–	--	--	--	--
	140	235	235	–	--	--	--	--
		383	426	–	--	--	--	--
		9601	10616	–	--	--	--	--
52000	100	242	241	239	239	--	--	--
		393	439	485	532	--	--	--
		10769	11903	13025	14136	--	--	--
	140	242	241	240	239	239	--	--
		368	411	454	498	541	--	--
		9962	11013	12053	13082	14101	--	--
CORRECTION	PER 10°C BELOW ISA		PER 10°C ABOVE ISA		ALL A/I ON		APU ON	
FUEL	-0.5%		0.9%		8.9%		5.6%	

CS300_21K_FCOM_MET_v01-In cruise_AEO - ETOPS - p2

ETOPS – In cruise quick check – AEO – page 2 <Metric> and <72211001D>
Figure 03–02B–31

IN CRUISE QUICK CHECK - AEO (ETOPS)							
ALL ENGINES OPERATIVE CLEAN CONFIGURATION ENGINE BLEED: PACKS ON, A/I OFF APU OFF			ISA CG 27% MAC			LRC (KIAS) TIME (MIN) FUEL (KG)	
CRUISE SPEED			DESCENT SCHEDULE				
LRC			VMO / 250KIAS				
WEIGHT (KG)	FL	AIR DISTANCE (NM)					
		400	600	800	1000	1200	1400	1600
56000	100	263	261	259	257	255	254	253
		83.7	124	165	207	249	292	335
		2549	3822	5080	6324	7553	8768	9968
	140	260	259	258	257	256	254	253
		80	118	157	195	234	274	314
		2321	3493	4656	5807	6948	8078	9196
60000	100	271	270	268	266	264	262	260
		82	121	160	200	240	281	322
		2618	3933	5237	6525	7798	9057	10301
	140	267	266	265	264	262	261	260
		78	115	153	190	228	267	306
		2375	3581	4778	5964	7140	8306	9460
64000	100	277	276	275	274	273	271	269
		80	118	156	195	234	273	313
		2681	4033	5374	6702	8017	9319	10606
	140	274	273	272	271	271	269	268
		76	112	149	186	223	260	298
		2431	3671	4901	6120	7329	8527	9716
CORRECTION	PER 10°C BELOW ISA		PER 10°C ABOVE ISA		ALL A/I ON		APU ON	
FUEL	-0.6%		0.8%		5.6%		5.3%	

CS300_21K_FCOM_MET_v01-In cruise_AEO - ETOPS - p3

ETOPS – In cruise quick check – AEO – page 3 <Metric> and <72211001D>
Figure 03–02B–32

IN CRUISE QUICK CHECK - AEO (ETOPS)								
ALL ENGINES OPERATIVE CLEAN CONFIGURATION ENGINE BLEED: PACKS ON, A/I OFF APU OFF			ISA CG 27% MAC				LRC (KIAS) TIME (MIN) FUEL (KG)	
CRUISE SPEED			DESCENT SCHEDULE					
LRC			VMO / 250KIAS					
WEIGHT (KG)	FL	AIR DISTANCE (NM)						
		1800	2000	2200	2400	2600	2800	3000
56000	100	252	251	249	248	246	245	--
		378.8	423	467	512	558	604	--
		11154	12327	13487	14634	15770	16893	--
	140	251	249	247	246	245	244	244
		355	396	437	480	523	566	609
		10301	11393	12473	13541	14596	15640	16674
60000	100	258	257	256	255	254	--	--
		365	408	451	495	539	--	--
		11531	12746	13946	15132	16305	--	--
	140	259	258	256	255	253	251	--
		345	384	424	464	505	547	--
		10605	11738	12860	13968	15064	16148	--
64000	100	267	265	263	261	260	--	--
		353	394	436	478	521	--	--
		11878	13136	14379	15608	16822	--	--
	140	267	266	265	264	263	261	--
		336	374	413	452	491	531	--
		10894	12062	13219	14365	15501	16625	--
CORRECTION	PER 10°C BELOW ISA		PER 10°C ABOVE ISA		ALL A/I ON		APU ON	
FUEL	-0.6%		0.8%		6.9%		5.3%	

CS300_21K_FCOM_MET_v01-In cruise_AEO - ETOPS - p4

ETOPS – In cruise quick check – AEO – page 4 <Metric> and <72211001D>
Figure 03–02B–33

G. Holding (GDAEO)

HOLDING - AEO						
ALL ENGINES OPERATIVE CLEAN CONFIGURATION ENGINE BLEED: PACKS ON RACETRACK PATTERN			ISA CG 27% MAC		HOLDING SPEED (KIAS) TOTAL FUEL FLOW (KG/MIN)	
FL	GROSS WEIGHT (KG)					
	40000	45000	50000	55000	60000	65000
15	185 23	196 25	207 27	218 30	229 32	239 35
50	185 22	197 24	209 27	220 29	230 32	240 34
100	187 22	199 24	211 26	222 29	232 31	242 34
150	189 21	201 23	212 26	223 28	233 30	243 33
200	190 21	202 23	214 25	224 28	235 30	245 33
250	192 21	204 23	215 25	226 28	236 30	246 33
300	193 21	205 23	216 26	227 28	238 31	249 34
CORRECTION	COWL A/I ON			ALL A/I ON		
TOTAL FUEL FLOW	6%			14%		

CS300_ALL_NAMEPLATES_FCOM_MET_v01_AEO_Holding

NOTE

In a linear holding reduce the Fuel Flow by 5%

Holding – AEO <Metric>
Figure 03–02B–34

ENROUTE – ONE ENGINE INOPERATIVE

A. Green dot speed – OEI

GREEN DOT - OEI							
ONE ENGINE INOPERATIVE CLEAN CONFIGURATION						GREEN DOT (KIAS)	
PRESS. ALT. (FT)	WEIGHT (1000 KG)						
	40	45	50	55	60	65	69
1500	165	176	187	197	207	216	223
5000	166	178	189	200	209	218	225
10000	169	181	192	203	213	222	229
15000	172	184	195	206	216	226	233
17000	173	185	197	208	218	227	234
19000	174	186	198	209	219	228	235
21000	175	188	200	210	220	229	236
23000	177	189	201	211	221	230	238
25000	178	190	202	213	222	232	238
27000	179	191	203	214	223	232	239
29000	180	192	204	215	224	233	241
31000	181	194	205	216	225	234	242
33000	182	195	206	217	226	236	243
35000	184	195	207	218	228	237	--
37000	184	196	208	219	231	--	--

CS300_ALL_NAMEPLATES_FCOM_MET_v01_OEI_GD

Green dot speed – OEI <Metric>
Figure 03–02B–35

B. Maximum Continuous Thrust (MCT) N1 – PW1521G-3 <72211001D>

THRUST SETTING– %N1

MAXIMUM CONTINUOUS THRUST– 160 KIAS

MCT (ONE ENGINE INOPERATIVE)

ENGINE BLEEDS CLOSED

PW1521G–3

SAT		PRESSURE ALTITUDE (Feet)									
(°C)	(°F)	–2000	0	5000	10000	15000	20000	25000	30000	35000	41000
–70	–94	––	––	––	––	––	86.0	87.8	89.9	90.0	92.6
–65	–85	72.8	74.7	78.5	81.0	82.2	86.9	88.9	90.9	91.1	93.6
–60	–76	73.7	75.6	79.4	81.9	83.2	87.8	89.9	91.9	92.1	94.7
–55	–67	74.5	76.4	80.3	82.9	84.1	88.7	90.9	92.9	93.1	95.7
–50	–58	75.3	77.3	81.2	83.8	85.1	89.6	91.9	93.9	94.1	96.6
–45	–49	76.2	78.2	82.1	84.7	86.0	90.4	92.9	94.9	95.1	96.9
–40	–40	77.0	79.0	83.0	85.7	86.9	91.3	93.8	95.8	96.0	95.9
–35	–31	77.8	79.8	83.9	86.6	87.8	92.3	94.8	96.8	96.3	95.2
–30	–22	78.6	80.7	84.8	87.4	88.7	93.2	95.7	97.7	95.9	94.8
–25	–13	79.4	81.5	85.6	88.3	89.6	94.1	96.7	98.2	95.6	94.3
–20	–4	80.2	82.3	86.4	89.2	90.5	95.1	96.9	98.0	95.4	93.8
–15	5	80.9	83.1	87.3	90.0	91.3	96.0	96.7	97.8	94.9	––
–10	14	81.7	83.8	88.1	90.9	92.2	96.8	96.5	97.6	94.6	––
–5	23	82.5	84.6	88.9	91.7	93.0	96.9	96.2	97.2	94.2	––
0	32	83.2	85.4	89.8	92.6	93.9	96.7	95.5	96.8	––	––
5	41	84.0	86.2	90.6	93.4	94.7	96.2	94.7	96.4	––	––
10	50	84.8	87.0	91.4	94.2	94.3	95.6	93.8	––	––	––
15	59	85.5	87.7	92.2	93.6	93.5	94.5	92.9	––	––	––
20	68	86.2	88.5	92.9	92.6	92.3	93.4	––	––	––	––
25	77	87.0	89.2	91.8	91.2	91.0	92.3	––	––	––	––
30	86	87.7	90.0	90.5	89.8	89.6	––	––	––	––	––
35	95	88.1	88.9	89.2	88.6	88.2	––	––	––	––	––
40	104	86.7	87.6	87.6	87.1	––	––	––	––	––	––
45	113	85.3	86.2	85.9	85.8	––	––	––	––	––	––
50	122	84.0	84.6	84.1	84.4	––	––	––	––	––	––
53	127	83.3	83.7	83.1	––	––	––	––	––	––	––

cs300_pw1521G_v05r2_status_enroute_to_avg_000–160.ch16

Maximum continuous thrust – OEI – 160 KIAS – Engine bleeds closed <72211001D>

Figure 03–02B–36

THRUST SETTING– %N1

MAXIMUM CONTINUOUS THRUST– 230 KIAS

MCT (ONE ENGINE INOPERATIVE)

ENGINE BLEEDS CLOSED

PW1521G–3

SAT		PRESSURE ALTITUDE (Feet)									
(°C)	(°F)	–2000	0	5000	10000	15000	20000	25000	30000	35000	41000
–70	–94	––	––	––	––	––	87.9	88.8	93.4	93.1	92.4
–65	–85	72.6	74.5	78.3	80.7	84.0	88.9	89.8	94.4	94.2	93.4
–60	–76	73.5	75.4	79.2	81.7	85.0	89.8	90.9	95.3	95.2	94.4
–55	–67	74.3	76.2	80.1	82.6	85.9	90.7	91.9	96.3	96.1	95.5
–50	–58	75.2	77.1	81.0	83.6	86.9	91.6	92.8	97.2	97.1	96.5
–45	–49	76.0	77.9	81.9	84.5	87.8	92.5	93.8	98.2	98.1	96.9
–40	–40	76.8	78.8	82.7	85.4	88.8	93.3	94.8	98.2	97.4	96.4
–35	–31	77.6	79.6	83.6	86.3	89.7	94.0	95.7	98.2	96.7	95.9
–30	–22	78.4	80.4	84.5	87.1	90.6	94.9	96.7	98.2	96.3	95.4
–25	–13	79.2	81.2	85.3	88.0	91.5	95.9	97.6	98.2	95.9	94.7
–20	–4	80.0	82.0	86.2	88.9	92.4	96.8	97.3	98.1	95.4	93.7
–15	5	80.8	82.8	87.0	89.7	93.2	97.7	97.0	97.7	94.7	––
–10	14	81.5	83.6	87.8	90.6	94.1	97.6	96.6	97.3	94.1	––
–5	23	82.3	84.4	88.6	91.4	94.9	97.2	95.9	96.7	93.5	––
0	32	83.0	85.2	89.5	92.3	95.7	96.6	95.0	96.1	––	––
5	41	83.8	85.9	90.3	93.1	95.1	95.8	93.9	95.3	––	––
10	50	84.5	86.7	91.1	93.9	94.2	94.7	92.7	––	––	––
15	59	85.3	87.5	91.9	93.0	93.1	93.5	91.4	––	––	––
20	68	86.0	88.2	92.3	91.9	91.7	92.3	––	––	––	––
25	77	86.8	89.0	91.2	90.6	90.6	91.0	––	––	––	––
30	86	87.5	89.7	89.8	89.3	89.4	––	––	––	––	––
35	95	88.0	88.7	88.7	88.1	88.2	––	––	––	––	––
40	104	86.7	87.4	87.0	86.6	––	––	––	––	––	––
45	113	85.4	86.1	85.3	85.2	––	––	––	––	––	––
50	122	84.1	84.5	83.5	83.8	––	––	––	––	––	––
53	127	83.3	83.6	82.5	––	––	––	––	––	––	––

cs300_pw1521G_v05r2_status_enroute_to_avg_000–230.ch16

Maximum continuous thrust – OEI – 230 KIAS – Engine bleeds closed <72211001D>
Figure 03–02B–37

THRUST SETTING– %N1

MAXIMUM CONTINUOUS THRUST– 290 KIAS

MCT (ONE ENGINE INOPERATIVE)

ENGINE BLEEDS CLOSED

PW1521G–3

SAT		PRESSURE ALTITUDE (Feet)									
(°C)	(°F)	–2000	0	5000	10000	15000	20000	25000	30000	35000	41000
–70	–94	––	––	––	––	––	87.3	88.7	92.9	92.6	92.8
–65	–85	72.2	74.0	79.1	83.4	86.2	88.3	89.7	93.9	93.6	93.9
–60	–76	73.0	74.9	80.0	84.4	87.2	89.3	90.7	94.9	94.6	94.9
–55	–67	73.9	75.8	80.9	85.3	88.2	90.3	91.7	95.8	95.6	96.0
–50	–58	74.7	76.6	81.8	86.3	89.2	91.3	92.7	96.8	96.6	97.0
–45	–49	75.5	77.5	82.7	87.2	90.2	92.3	93.7	97.7	97.6	97.6
–40	–40	76.3	78.3	83.6	88.1	91.1	93.2	94.7	98.2	97.4	97.4
–35	–31	77.1	79.1	84.4	89.1	92.1	94.1	95.6	98.2	97.0	97.0
–30	–22	77.9	79.9	85.3	90.0	93.0	94.9	96.6	98.2	96.7	96.4
–25	–13	78.7	80.7	86.2	90.9	93.9	95.7	97.5	98.3	96.1	95.4
–20	–4	79.5	81.5	87.0	91.8	94.8	96.6	97.3	98.3	95.3	94.2
–15	5	80.2	82.3	87.9	92.6	95.7	97.5	96.9	97.9	94.2	––
–10	14	81.0	83.1	88.7	93.5	96.6	97.2	96.2	97.2	93.3	––
–5	23	81.8	83.9	89.5	94.4	97.4	96.7	95.2	96.3	92.4	––
0	32	82.5	84.7	90.3	95.2	96.8	95.8	94.2	95.3	––	––
5	41	83.3	85.4	91.2	96.1	96.0	94.8	93.2	94.2	––	––
10	50	84.0	86.2	92.0	95.2	94.9	93.8	92.1	––	––	––
15	59	84.8	86.9	92.8	94.2	93.8	92.8	91.1	––	––	––
20	68	85.5	87.7	92.3	93.0	92.6	91.8	––	––	––	––
25	77	86.2	88.4	91.1	91.8	91.6	90.7	––	––	––	––
30	86	87.0	89.2	89.8	90.6	90.5	––	––	––	––	––
35	95	87.6	88.2	88.7	89.4	89.3	––	––	––	––	––
40	104	86.2	86.8	87.2	88.2	––	––	––	––	––	––
45	113	84.9	85.6	85.8	87.0	––	––	––	––	––	––
50	122	83.7	84.0	84.4	85.7	––	––	––	––	––	––
53	127	83.1	83.3	83.5	––	––	––	––	––	––	––

cs300_pw1521G_v05r2_status_enroute_to_avg_000–290.ch16

Maximum continuous thrust – OEI – 290 KIAS – Engine bleeds closed <72211001D>
Figure 03–02B–38

THRUST SETTING– %N1

MAXIMUM CONTINUOUS THRUST– 160 KIAS

MCT (ONE ENGINE INOPERATIVE)

PACK(S) ON, ANTI–ICE OFF

PW1521G–3

SAT		PRESSURE ALTITUDE (Feet)									
(°C)	(°F)	–2000	0	5000	10000	15000	20000	25000	30000	35000	41000
–70	–94	––	––	––	––	––	86.2	88.0	90.2	90.2	92.8
–65	–85	72.8	74.8	78.6	81.1	82.3	87.1	89.1	91.3	91.2	93.9
–60	–76	73.7	75.7	79.5	82.1	83.3	87.9	90.1	92.3	92.3	94.9
–55	–67	74.6	76.5	80.4	83.0	84.3	88.8	91.1	93.3	93.3	95.9
–50	–58	75.4	77.4	81.3	83.9	85.2	89.7	92.1	94.3	94.3	96.9
–45	–49	76.2	78.2	82.2	84.8	86.1	90.5	93.1	95.3	95.2	96.1
–40	–40	77.1	79.1	83.1	85.8	87.1	91.5	94.1	96.2	95.8	94.8
–35	–31	77.9	79.9	84.0	86.7	88.0	92.4	95.0	96.2	95.4	94.1
–30	–22	78.7	80.7	84.8	87.6	88.9	93.3	95.1	96.0	95.2	93.8
–25	–13	79.5	81.5	85.7	88.4	89.7	94.3	95.0	95.8	94.9	93.5
–20	–4	80.2	82.3	86.5	89.3	90.6	95.2	94.9	95.6	94.7	92.8
–15	5	81.0	83.1	87.4	90.2	91.5	95.5	94.6	95.4	94.2	––
–10	14	81.8	83.9	88.2	91.0	92.3	95.5	94.2	95.0	93.8	––
–5	23	82.6	84.7	89.0	91.8	93.2	95.3	93.4	94.3	93.5	––
0	32	83.3	85.5	89.8	92.7	93.2	94.7	92.4	93.9	––	––
5	41	84.1	86.3	90.7	93.2	92.6	93.9	90.8	93.5	––	––
10	50	84.8	87.0	91.5	92.3	91.5	92.4	89.8	––	––	––
15	59	85.6	87.8	91.8	91.1	90.2	90.6	88.8	––	––	––
20	68	86.3	88.6	90.7	89.8	88.8	89.4	––	––	––	––
25	77	87.1	89.0	89.3	88.2	87.4	88.2	––	––	––	––
30	86	87.0	87.8	87.8	86.6	86.0	––	––	––	––	––
35	95	85.6	86.4	86.3	85.1	84.5	––	––	––	––	––
40	104	84.1	84.8	84.3	83.6	––	––	––	––	––	––
45	113	82.7	83.3	82.5	82.3	––	––	––	––	––	––
50	122	81.3	81.7	80.7	80.9	––	––	––	––	––	––
53	127	80.5	80.7	79.6	––	––	––	––	––	––	––

cs300_pw1521G_v05r2_status_enroute_to_avg_300–160.ch16

Maximum continuous thrust – OEI – 160 KIAS – Pack(s) on, anti–ice off <72211001D>

Figure 03–02B–39

THRUST SETTING– %N1

MAXIMUM CONTINUOUS THRUST– 230 KIAS

MCT (ONE ENGINE INOPERATIVE)

PACK(S) ON, ANTI–ICE OFF

PW1521G–3

SAT		PRESSURE ALTITUDE (Feet)									
(°C)	(°F)	–2000	0	5000	10000	15000	20000	25000	30000	35000	41000
–70	–94	––	––	––	––	––	88.1	89.1	94.1	93.3	92.6
–65	–85	72.7	74.6	78.4	80.9	84.1	89.1	90.2	95.1	94.4	93.7
–60	–76	73.6	75.5	79.3	81.8	85.1	90.0	91.2	96.1	95.4	94.7
–55	–67	74.4	76.3	80.2	82.8	86.1	90.9	92.2	97.0	96.3	95.7
–50	–58	75.2	77.2	81.1	83.7	87.1	91.8	93.2	98.0	97.3	96.7
–45	–49	76.1	78.0	82.0	84.6	88.0	92.7	94.1	98.2	97.6	95.9
–40	–40	76.9	78.9	82.8	85.5	88.9	93.4	95.1	98.0	96.5	95.4
–35	–31	77.7	79.7	83.7	86.4	89.8	94.2	96.0	97.0	95.8	95.0
–30	–22	78.5	80.5	84.6	87.3	90.8	95.1	95.9	96.3	95.6	94.5
–25	–13	79.3	81.3	85.4	88.2	91.7	96.1	95.6	96.0	95.2	93.7
–20	–4	80.1	82.1	86.3	89.0	92.5	96.3	95.4	95.8	94.7	92.5
–15	5	80.8	82.9	87.1	89.9	93.4	96.2	95.0	95.4	93.8	––
–10	14	81.6	83.7	87.9	90.7	94.3	95.8	94.3	94.7	93.2	––
–5	23	82.4	84.5	88.8	91.6	94.3	95.2	93.2	93.7	92.7	––
0	32	83.1	85.3	89.6	92.4	93.6	94.3	91.8	92.9	––	––
5	41	83.9	86.0	90.4	92.8	92.7	93.0	90.5	92.2	––	––
10	50	84.6	86.8	91.2	91.8	91.5	91.6	89.2	––	––	––
15	59	85.4	87.6	91.3	90.7	90.1	90.1	87.9	––	––	––
20	68	86.1	88.3	90.2	89.3	88.7	88.8	––	––	––	––
25	77	86.9	88.8	88.8	87.8	87.4	87.5	––	––	––	––
30	86	86.9	87.7	87.4	86.3	86.2	––	––	––	––	––
35	95	85.7	86.3	85.8	84.8	84.9	––	––	––	––	––
40	104	84.3	84.9	84.0	83.3	––	––	––	––	––	––
45	113	82.8	83.4	82.1	81.9	––	––	––	––	––	––
50	122	81.4	81.7	80.4	80.5	––	––	––	––	––	––
53	127	80.7	80.7	79.3	––	––	––	––	––	––	––

cs300_pw1521G_v05r2_status_enroute_to_avg_300–230.ch16

Maximum continuous thrust – OEI – 230 KIAS – Pack(s) on, anti–ice off <72211001D>

Figure 03–02B–40

THRUST SETTING– %N1

MAXIMUM CONTINUOUS THRUST– 290 KIAS

MCT (ONE ENGINE INOPERATIVE)

PACK(S) ON, ANTI–ICE OFF

PW1521G–3

SAT		PRESSURE ALTITUDE (Feet)									
(°C)	(°F)	–2000	0	5000	10000	15000	20000	25000	30000	35000	41000
–70	–94	––	––	––	––	––	87.5	88.9	93.5	92.7	92.9
–65	–85	72.3	74.2	79.2	83.5	86.4	88.5	90.0	94.5	93.7	94.0
–60	–76	73.1	75.0	80.1	84.5	87.4	89.5	91.0	95.5	94.8	95.1
–55	–67	74.0	75.9	81.0	85.5	88.4	90.5	92.0	96.5	95.8	96.1
–50	–58	74.8	76.7	81.9	86.4	89.4	91.5	93.0	97.5	96.8	97.2
–45	–49	75.6	77.6	82.8	87.3	90.3	92.5	94.0	98.2	97.2	97.0
–40	–40	76.4	78.4	83.7	88.3	91.3	93.4	94.9	98.1	96.8	96.8
–35	–31	77.2	79.2	84.6	89.2	92.2	94.3	95.9	97.4	96.5	96.4
–30	–22	78.0	80.1	85.4	90.1	93.2	95.1	96.1	97.1	96.1	95.7
–25	–13	78.8	80.8	86.3	91.0	94.1	95.9	95.9	96.8	95.5	94.6
–20	–4	79.6	81.7	87.1	91.9	95.0	96.3	95.5	96.3	94.6	93.2
–15	5	80.4	82.4	88.0	92.8	95.9	96.0	94.8	95.6	93.4	––
–10	14	81.1	83.2	88.8	93.7	96.5	95.4	93.7	94.6	92.5	––
–5	23	81.9	84.0	89.7	94.5	95.9	94.5	92.5	93.4	91.5	––
0	32	82.6	84.8	90.5	95.4	95.0	93.4	91.4	92.4	––	––
5	41	83.4	85.5	91.3	94.5	93.9	92.3	90.3	91.3	––	––
10	50	84.1	86.3	92.1	93.4	92.6	91.2	89.2	––	––	––
15	59	84.9	87.1	91.5	92.1	91.3	90.1	88.1	––	––	––
20	68	85.6	87.8	90.3	90.7	90.1	89.0	––	––	––	––
25	77	86.4	88.4	88.9	89.4	88.9	87.9	––	––	––	––
30	86	86.4	87.2	87.6	88.1	87.7	––	––	––	––	––
35	95	85.4	85.9	86.1	86.6	86.6	––	––	––	––	––
40	104	84.0	84.5	84.6	85.4	––	––	––	––	––	––
45	113	82.6	83.0	83.0	84.1	––	––	––	––	––	––
50	122	81.4	81.5	81.5	82.8	––	––	––	––	––	––
53	127	80.7	80.7	80.6	––	––	––	––	––	––	––

cs300_pw1521G_v05r2_status_enroute_to_avg_300–290.ch16

Maximum continuous thrust – OEI – 290 KIAS – Pack(s) on, anti–ice off <72211001D>

Figure 03–02B–41

THRUST SETTING– %N1

MAXIMUM CONTINUOUS THRUST– 160 KIAS

MCT (ONE ENGINE INOPERATIVE)

PACK(S) ON, COWL ANTI–ICE ON

PW1521G–3

SAT		PRESSURE ALTITUDE (Feet)									
(°C)	(°F)	–2000	0	5000	10000	15000	20000	25000	30000	35000	41000
–70	–94	––	––	––	––	––	86.3	88.3	91.0	91.0	93.6
–65	–85	72.9	74.8	78.7	81.2	82.5	87.2	89.3	92.1	92.1	94.7
–60	–76	73.8	75.7	79.6	82.2	83.5	88.1	90.4	93.1	93.2	94.1
–55	–67	74.7	76.6	80.5	83.2	84.5	89.0	91.4	94.1	94.2	93.5
–50	–58	75.5	77.5	81.4	84.1	85.4	89.8	92.4	95.1	94.7	92.7
–45	–49	76.3	78.3	82.3	85.0	86.3	90.7	93.4	95.5	94.8	91.8
–40	–40	77.2	79.2	83.2	85.9	87.3	91.6	94.3	95.6	94.3	90.8
–35	–31	78.0	80.0	84.1	86.8	88.2	92.6	94.4	95.4	93.3	89.7
–30	–22	78.8	80.8	84.9	87.7	89.1	93.5	94.2	94.8	90.5	88.6
–25	–13	79.6	81.6	85.8	88.6	89.9	94.4	93.8	94.2	88.8	87.6
–20	–4	80.3	82.4	86.7	89.5	90.8	94.4	93.4	92.8	87.4	86.6
–15	5	81.1	83.2	87.5	90.3	91.7	94.2	91.8	90.7	86.4	––
–10	14	81.9	84.0	88.3	91.2	92.6	93.7	90.2	87.7	85.9	––
–5	23	82.7	84.8	89.2	92.0	92.8	92.4	87.9	86.2	85.5	––
0	32	83.4	85.6	90.0	92.9	91.7	91.1	85.4	85.7	––	––
5	41	84.2	86.4	90.8	92.1	90.4	89.4	82.2	85.2	––	––
10	50	84.9	87.1	91.6	90.8	89.0	87.2	81.0	––	––	––

cs300_pw1521G_v05r2_status_enroute_to_avg_310–160.ch16

Maximum continuous thrust – OEI – 160 KIAS – Pack(s) on, cowl anti–ice on <72211001D>

Figure 03–02B–42

THRUST SETTING– %N1

MAXIMUM CONTINUOUS THRUST– 230 KIAS

MCT (ONE ENGINE INOPERATIVE)

PACK(S) ON, COWL ANTI–ICE ON

PW1521G–3

SAT		PRESSURE ALTITUDE (Feet)									
(°C)	(°F)	–2000	0	5000	10000	15000	20000	25000	30000	35000	41000
–70	–94	––	––	––	––	––	88.4	89.6	94.3	94.4	93.6
–65	–85	72.8	74.7	78.5	81.1	84.3	89.3	90.6	95.3	95.5	94.7
–60	–76	73.7	75.6	79.4	82.0	85.3	90.3	91.6	96.3	96.5	95.2
–55	–67	74.5	76.4	80.3	82.9	86.3	91.2	92.6	97.3	96.3	94.9
–50	–58	75.4	77.3	81.2	83.9	87.2	92.1	93.6	97.1	96.1	94.3
–45	–49	76.2	78.2	82.1	84.8	88.2	92.9	94.6	96.8	95.9	93.1
–40	–40	77.0	79.0	83.0	85.7	89.1	93.7	95.5	96.7	95.3	91.8
–35	–31	77.8	79.8	83.9	86.6	90.0	94.5	95.9	96.2	94.2	90.8
–30	–22	78.6	80.6	84.7	87.5	90.9	95.4	95.2	95.3	92.8	89.8
–25	–13	79.4	81.4	85.6	88.3	91.8	96.0	94.4	94.3	91.4	88.9
–20	–4	80.2	82.2	86.4	89.2	92.7	95.6	93.4	93.2	89.7	88.0
–15	5	81.0	83.1	87.3	90.1	93.6	95.1	92.2	92.1	88.4	––
–10	14	81.7	83.8	88.1	90.9	94.2	94.2	90.8	90.6	87.7	––
–5	23	82.5	84.6	88.9	91.8	93.8	92.9	89.2	88.3	87.0	––
0	32	83.3	85.4	89.7	92.6	92.6	91.6	86.9	87.4	––	––
5	41	84.0	86.2	90.5	92.1	91.3	90.1	83.0	86.7	––	––
10	50	84.8	86.9	91.3	90.9	89.9	88.2	81.4	––	––	––

cs300_pw1521G_v05r2_status_enroute_to_avg_310–230.ch16

Maximum continuous thrust – OEI – 230 KIAS – Pack(s) on, cowl anti–ice on <72211001D>

Figure 03–02B–43

THRUST SETTING– %N1

MAXIMUM CONTINUOUS THRUST– 290 KIAS

MCT (ONE ENGINE INOPERATIVE)

PACK(S) ON, COWL ANTI–ICE ON

PW1521G–3

SAT		PRESSURE ALTITUDE (Feet)									
(°C)	(°F)	–2000	0	5000	10000	15000	20000	25000	30000	35000	41000
–70	–94	––	––	––	––	––	87.8	89.3	94.3	93.5	93.7
–65	–85	72.4	74.3	79.3	83.7	86.6	88.8	90.3	95.4	94.6	94.8
–60	–76	73.3	75.2	80.2	84.7	87.6	89.8	91.3	96.4	95.6	95.8
–55	–67	74.1	76.0	81.2	85.6	88.6	90.8	92.4	97.4	96.6	95.9
–50	–58	75.0	76.9	82.1	86.6	89.6	91.8	93.4	97.8	96.3	95.1
–45	–49	75.8	77.7	83.0	87.5	90.6	92.8	94.3	97.6	95.8	93.9
–40	–40	76.6	78.6	83.9	88.5	91.5	93.7	95.3	97.3	95.2	92.7
–35	–31	77.4	79.4	84.7	89.4	92.5	94.6	95.5	96.6	94.3	91.5
–30	–22	78.2	80.2	85.6	90.3	93.4	95.4	94.8	95.9	93.3	90.3
–25	–13	79.0	81.0	86.5	91.2	94.3	95.4	94.0	95.1	92.3	89.1
–20	–4	79.8	81.8	87.3	92.1	95.3	94.8	93.1	94.2	90.9	87.9
–15	5	80.5	82.6	88.2	93.0	95.9	94.0	92.1	93.2	89.1	––
–10	14	81.3	83.4	89.0	93.9	95.1	93.1	91.0	92.0	88.1	––
–5	23	82.1	84.2	89.8	94.7	94.2	92.0	89.5	90.5	87.1	––
0	32	82.8	84.9	90.7	94.2	93.0	90.8	87.8	89.4	––	––
5	41	83.6	85.7	91.5	93.1	91.7	89.3	86.0	88.3	––	––
10	50	84.3	86.5	91.9	91.8	90.2	87.8	84.8	––	––	––

cs300_pw1521G_v05r2_status_enroute_to_avg_310–290.ch16

Maximum continuous thrust – OEI – 290 KIAS – Pack(s) on, cowl anti–ice on <72211001D>

Figure 03–02B–44

THRUST SETTING– %N1

MAXIMUM CONTINUOUS THRUST– 160 KIAS

MCT (ONE ENGINE INOPERATIVE)

PACK(S) ON, WING AND COWL ANTI–ICE ON

PW1521G–3

SAT		PRESSURE ALTITUDE (Feet)								
(°C)	(°F)	–2000	0	5000	10000	15000	20000	25000	30000	35000
–70	–94	––	––	––	––	––	86.3	87.5	89.1	90.6
–65	–85	72.9	74.8	78.7	81.2	82.5	87.2	88.5	90.2	90.3
–60	–76	73.8	75.7	79.6	82.2	83.5	88.1	89.6	90.5	90.0
–55	–67	74.7	76.6	80.5	83.2	84.5	89.0	90.6	90.7	89.9
–50	–58	75.5	77.5	81.4	84.1	85.4	89.8	90.9	90.9	89.7
–45	–49	76.3	78.3	82.3	85.0	86.3	90.7	91.0	90.8	89.5
–40	–40	77.2	79.2	83.2	85.9	87.3	91.6	91.1	90.9	88.7
–35	–31	78.0	80.0	84.1	86.8	88.2	92.3	91.2	91.0	87.3
–30	–22	78.8	80.8	84.9	87.7	89.1	92.6	91.0	90.5	82.2
–25	–13	79.6	81.6	85.8	88.6	89.9	92.5	90.5	89.8	79.2
–20	–4	80.3	82.4	86.7	89.5	90.8	92.2	89.7	87.3	76.6
–15	5	81.1	83.2	87.5	90.3	91.2	91.6	86.6	83.1	74.8
–10	14	81.9	84.0	88.3	91.2	90.9	90.2	83.4	77.2	74.2
–5	23	82.7	84.8	89.2	91.2	89.9	87.4	79.1	74.6	73.6
0	32	83.4	85.6	90.0	90.1	87.6	84.8	74.5	73.9	––
5	41	84.2	86.4	89.8	88.4	85.2	81.8	68.7	73.3	––
10	50	84.9	87.1	88.2	86.3	82.8	77.7	67.1	––	––

cs300_pw1521G_v05r2_status_enroute_to_avg_312–160.ch16

Maximum continuous thrust – OEI – 160 KIAS – Pack(s) on, wing and cowl anti–ice on <72211001D>
Figure 03–02B–45

THRUST SETTING– %N1

MAXIMUM CONTINUOUS THRUST– 230 KIAS

MCT (ONE ENGINE INOPERATIVE)

PACK(S) ON, WING AND COWL ANTI–ICE ON

PW1521G–3

SAT		PRESSURE ALTITUDE (Feet)								
(°C)	(°F)	–2000	0	5000	10000	15000	20000	25000	30000	35000
–70	–94	––	––	––	––	––	88.4	89.6	94.3	94.1
–65	–85	72.8	74.7	78.5	81.1	84.3	89.3	90.6	95.3	93.1
–60	–76	73.7	75.6	79.4	82.0	85.3	90.3	91.6	94.7	92.0
–55	–67	74.5	76.4	80.3	82.9	86.3	91.2	92.6	93.6	91.4
–50	–58	75.4	77.3	81.2	83.9	87.2	92.1	93.6	92.7	91.0
–45	–49	76.2	78.2	82.1	84.8	88.2	92.9	92.9	92.3	90.5
–40	–40	77.0	79.0	83.0	85.7	89.1	93.7	92.5	91.9	89.7
–35	–31	77.8	79.8	83.9	86.6	90.0	93.8	92.2	91.5	88.2
–30	–22	78.6	80.6	84.7	87.5	90.9	93.6	91.7	90.7	86.0
–25	–13	79.4	81.4	85.6	88.3	91.8	93.4	90.9	89.3	83.6
–20	–4	80.2	82.2	86.4	89.2	92.0	92.9	89.3	87.5	80.4
–15	5	81.0	83.1	87.3	90.1	91.9	92.1	87.2	85.6	77.9
–10	14	81.7	83.8	88.1	90.9	91.6	90.4	84.8	82.7	77.0
–5	23	82.5	84.6	88.9	91.6	91.1	88.1	82.2	78.5	76.2
0	32	83.3	85.4	89.7	90.7	89.0	86.1	78.5	77.2	––
5	41	84.0	86.2	90.2	88.9	87.0	83.8	71.6	76.4	––
10	50	84.8	86.9	88.6	87.1	84.9	81.1	69.6	––	––

cs300_pw1521G_v05r2_status_enroute_to_avg_312–230.ch16

Maximum continuous thrust – OEI – 230 KIAS – Pack(s) on, wing and cowl anti–ice on <72211001D>
Figure 03–02B–46

THRUST SETTING– %N1

MAXIMUM CONTINUOUS THRUST– 290 KIAS

MCT (ONE ENGINE INOPERATIVE)

PACK(S) ON, WING AND COWL ANTI–ICE ON

PW1521G–3

SAT		PRESSURE ALTITUDE (Feet)								
(°C)	(°F)	–2000	0	5000	10000	15000	20000	25000	30000	35000
–70	–94	––	––	––	––	––	87.8	89.3	94.3	93.5
–65	–85	72.4	74.3	79.3	83.7	86.6	88.8	90.3	95.4	94.0
–60	–76	73.3	75.2	80.2	84.7	87.6	89.8	91.3	95.9	93.4
–55	–67	74.1	76.0	81.2	85.6	88.6	90.8	92.4	94.9	93.0
–50	–58	75.0	76.9	82.1	86.6	89.6	91.8	93.4	94.2	92.7
–45	–49	75.8	77.7	83.0	87.5	90.6	92.8	93.5	93.8	92.2
–40	–40	76.6	78.6	83.9	88.5	91.5	93.7	93.2	93.5	91.4
–35	–31	77.4	79.4	84.7	89.4	92.5	94.3	92.8	93.0	90.1
–30	–22	78.2	80.2	85.6	90.3	93.4	93.8	92.1	92.1	88.4
–25	–13	79.0	81.0	86.5	91.2	94.3	93.2	91.0	90.8	86.8
–20	–4	79.8	81.8	87.3	92.1	94.4	92.4	89.7	89.3	84.7
–15	5	80.5	82.6	88.2	93.0	93.7	91.3	88.2	87.8	81.9
–10	14	81.3	83.4	89.0	93.9	92.8	89.9	86.7	86.0	80.6
–5	23	82.1	84.2	89.8	92.9	91.5	88.5	84.8	83.7	79.6
0	32	82.8	84.9	90.7	91.6	89.9	87.1	82.6	82.5	––
5	41	83.6	85.7	90.3	90.0	88.2	85.2	80.0	81.4	––
10	50	84.3	86.5	88.8	88.2	86.4	83.2	78.7	––	––

cs300_pw1521G_v05r2_status_enroute_to_avg_312–290.ch16

Maximum continuous thrust – OEI – 290 KIAS – Pack(s) on, wing and cowl anti–ice on <72211001D>
Figure 03–02B–47

THRUST SETTING– %N1

MAXIMUM CONTINUOUS THRUST– 160 KIAS

MCT (ONE ENGINE INOPERATIVE)

COWL ANTI–ICE ON

PW1521G–3

SAT		PRESSURE ALTITUDE (Feet)									
(°C)	(°F)	–2000	0	5000	10000	15000	20000	25000	30000	35000	41000
–70	–94	––	––	––	––	––	86.2	88.2	90.6	90.5	93.3
–65	–85	72.9	74.8	78.6	81.2	82.4	87.1	89.2	91.6	91.6	94.4
–60	–76	73.8	75.7	79.6	82.1	83.4	88.0	90.2	92.6	92.6	95.4
–55	–67	74.6	76.6	80.5	83.1	84.3	88.9	91.2	93.6	93.7	96.3
–50	–58	75.5	77.4	81.4	84.0	85.3	89.8	92.2	94.6	94.7	96.0
–45	–49	76.3	78.3	82.3	84.9	86.2	90.6	93.2	95.6	95.6	94.7
–40	–40	77.1	79.1	83.2	85.8	87.1	91.6	94.2	96.6	94.9	93.1
–35	–31	77.9	79.9	84.0	86.7	88.1	92.5	95.2	97.5	94.6	92.3
–30	–22	78.7	80.8	84.9	87.6	88.9	93.4	95.9	97.4	94.4	92.3
–25	–13	79.5	81.6	85.8	88.5	89.8	94.3	95.8	97.1	94.2	92.1
–20	–4	80.3	82.4	86.6	89.4	90.7	95.3	95.7	96.8	93.9	91.4
–15	5	81.1	83.2	87.4	90.2	91.6	95.9	95.5	96.6	93.4	––
–10	14	81.8	84.0	88.3	91.1	92.4	96.0	95.1	96.3	93.1	––
–5	23	82.6	84.8	89.1	91.9	93.2	95.9	94.6	95.8	92.7	––
0	32	83.4	85.6	89.9	92.8	94.1	95.4	93.7	95.3	––	––
5	41	84.1	86.3	90.7	93.6	94.4	94.8	92.4	94.9	––	––
10	50	84.9	87.1	91.5	93.8	93.8	93.6	91.4	––	––	––

cs300_pw1521G_v05r2_status_enroute_to_avg_010–160.ch16

Maximum continuous thrust – OEI – 160 KIAS – Cowl anti–ice on <72211001D>
Figure 03–02B–48

THRUST SETTING– %N1

MAXIMUM CONTINUOUS THRUST– 230 KIAS

MCT (ONE ENGINE INOPERATIVE)

COWL ANTI–ICE ON

PW1521G–3

SAT		PRESSURE ALTITUDE (Feet)									
(°C)	(°F)	–2000	0	5000	10000	15000	20000	25000	30000	35000	41000
–70	–94	––	––	––	––	––	88.2	89.3	94.2	93.8	93.1
–65	–85	72.8	74.6	78.4	80.9	84.2	89.2	90.4	95.2	94.8	94.2
–60	–76	73.6	75.5	79.3	81.9	85.2	90.1	91.4	96.2	95.8	95.2
–55	–67	74.5	76.4	80.3	82.8	86.2	91.0	92.4	97.2	96.8	96.2
–50	–58	75.3	77.2	81.2	83.8	87.2	91.9	93.4	98.2	97.8	95.8
–45	–49	76.1	78.1	82.1	84.7	88.1	92.8	94.3	98.2	96.8	94.8
–40	–40	76.9	78.9	82.9	85.6	89.0	93.6	95.3	98.2	95.5	94.3
–35	–31	77.8	79.8	83.8	86.5	90.0	94.4	96.3	98.2	94.9	93.9
–30	–22	78.6	80.6	84.7	87.4	90.9	95.3	97.2	97.8	94.7	93.4
–25	–13	79.3	81.4	85.5	88.2	91.8	96.2	96.7	97.3	94.5	92.5
–20	–4	80.1	82.2	86.3	89.1	92.7	97.0	96.3	96.9	93.9	91.1
–15	5	80.9	83.0	87.2	90.0	93.5	96.8	96.0	96.6	92.9	––
–10	14	81.7	83.8	88.0	90.8	94.4	96.5	95.4	96.0	92.3	––
–5	23	82.4	84.6	88.8	91.7	95.2	96.0	94.6	95.2	91.7	––
0	32	83.2	85.3	89.7	92.5	94.8	95.2	93.4	94.4	––	––
5	41	84.0	86.1	90.5	93.3	94.0	94.1	92.2	93.7	––	––
10	50	84.7	86.9	91.3	92.8	93.0	92.8	90.9	––	––	––

cs300_pw1521G_v05r2_status_enroute_to_avg_010–230.ch16

Maximum continuous thrust – OEI – 230 KIAS – Cowl anti–ice on <72211001D>
Figure 03–02B–49

THRUST SETTING– %N1

MAXIMUM CONTINUOUS THRUST– 290 KIAS

MCT (ONE ENGINE INOPERATIVE)

COWL ANTI–ICE ON

PW1521G–3

SAT		PRESSURE ALTITUDE (Feet)									
(°C)	(°F)	–2000	0	5000	10000	15000	20000	25000	30000	35000	41000
–70	–94	––	––	––	––	––	87.6	89.1	93.9	93.0	93.3
–65	–85	72.3	74.2	79.2	83.6	86.5	88.7	90.1	94.9	94.1	94.4
–60	–76	73.2	75.1	80.2	84.6	87.5	89.7	91.2	95.9	95.1	95.5
–55	–67	74.1	76.0	81.1	85.6	88.5	90.7	92.2	96.9	96.1	96.5
–50	–58	74.9	76.8	82.0	86.5	89.5	91.7	93.2	97.8	97.1	96.3
–45	–49	75.7	77.7	82.9	87.4	90.4	92.7	94.2	98.2	96.5	96.2
–40	–40	76.5	78.5	83.8	88.4	91.4	93.6	95.1	98.2	96.1	96.1
–35	–31	77.3	79.3	84.7	89.3	92.3	94.4	96.1	98.2	95.9	95.7
–30	–22	78.1	80.1	85.5	90.2	93.3	95.2	96.9	98.0	95.5	94.8
–25	–13	78.9	80.9	86.4	91.1	94.2	96.1	96.6	97.7	94.8	93.5
–20	–4	79.7	81.7	87.2	92.0	95.1	96.8	96.3	97.2	93.7	92.1
–15	5	80.4	82.5	88.1	92.9	96.0	96.5	95.7	96.6	92.5	––
–10	14	81.2	83.3	88.9	93.8	96.9	96.0	94.8	95.7	91.6	––
–5	23	82.0	84.1	89.7	94.6	96.4	95.3	93.7	94.6	90.6	––
0	32	82.7	84.9	90.6	95.5	95.6	94.2	92.6	93.6	––	––
5	41	83.5	85.6	91.4	94.9	94.5	93.2	91.5	92.6	––	––
10	50	84.2	86.4	92.2	93.8	93.3	92.1	90.5	––	––	––

cs300_pw1521G_v05r2_status_enroute_to_avg_010–290.ch16

Maximum continuous thrust – OEI – 290 KIAS – Cowl anti–ice on <72211001D>
Figure 03–02B–50

THRUST SETTING– %N1

MAXIMUM CONTINUOUS THRUST– 160 KIAS

MCT (ONE ENGINE INOPERATIVE)

WING AND COWL ANTI–ICE ON

PW1521G–3

SAT		PRESSURE ALTITUDE (Feet)								
(°C)	(°F)	–2000	0	5000	10000	15000	20000	25000	30000	35000
–70	–94	––	––	––	––	––	86.3	88.3	91.0	85.3
–65	–85	72.9	74.8	78.7	81.2	82.5	87.2	89.3	92.1	84.4
–60	–76	73.8	75.7	79.6	82.2	83.5	88.1	90.4	93.1	84.0
–55	–67	74.7	76.6	80.5	83.2	84.5	89.0	91.4	93.9	83.8
–50	–58	75.5	77.5	81.4	84.1	85.4	89.8	92.4	94.1	83.4
–45	–49	76.3	78.3	82.3	85.0	86.3	90.7	93.4	94.0	82.8
–40	–40	77.2	79.2	83.2	85.9	87.3	91.6	93.5	94.1	81.5
–35	–31	78.0	80.0	84.1	86.8	88.2	92.6	93.4	94.0	79.9
–30	–22	78.8	80.8	84.9	87.7	89.1	93.5	93.1	93.4	71.9
–25	–13	79.6	81.6	85.8	88.6	89.9	93.8	92.7	92.8	67.0
–20	–4	80.3	82.4	86.7	89.5	90.8	93.6	92.2	90.9	63.0
–15	5	81.1	83.2	87.5	90.3	91.6	93.3	90.1	88.1	60.2
–10	14	81.9	84.0	88.3	91.2	92.3	92.5	88.0	84.2	59.3
–5	23	82.7	84.8	89.2	92.0	91.7	90.6	85.0	82.5	58.6
0	32	83.4	85.6	90.0	91.8	90.1	88.8	81.8	81.9	––
5	41	84.2	86.4	90.8	90.5	88.4	86.7	77.7	81.3	––
10	50	84.9	87.1	90.2	88.9	86.6	83.8	76.4	––	––

cs300_pw1521G_v05r2_status_enroute_to_avg_012–160.ch16

Maximum continuous thrust – OEI – 160 KIAS – Wing and cowl anti–ice on <72211001D>
Figure 03–02B–51

THRUST SETTING– %N1

MAXIMUM CONTINUOUS THRUST– 230 KIAS

MCT (ONE ENGINE INOPERATIVE)

WING AND COWL ANTI–ICE ON

PW1521G–3

SAT		PRESSURE ALTITUDE (Feet)								
(°C)	(°F)	–2000	0	5000	10000	15000	20000	25000	30000	35000
–70	–94	––	––	––	––	––	88.4	89.6	94.3	90.1
–65	–85	72.8	74.7	78.5	81.1	84.3	89.3	90.6	95.3	88.0
–60	–76	73.7	75.6	79.4	82.0	85.3	90.3	91.6	96.3	86.3
–55	–67	74.5	76.4	80.3	82.9	86.3	91.2	92.6	95.9	85.2
–50	–58	75.4	77.3	81.2	83.9	87.2	92.1	93.6	95.2	84.6
–45	–49	76.2	78.2	82.1	84.8	88.2	92.9	94.6	94.9	83.8
–40	–40	77.0	79.0	83.0	85.7	89.1	93.7	95.2	94.6	82.6
–35	–31	77.8	79.8	83.9	86.6	90.0	94.5	94.7	94.1	80.6
–30	–22	78.6	80.6	84.7	87.5	90.9	95.4	94.1	93.3	77.4
–25	–13	79.4	81.4	85.6	88.3	91.8	95.1	93.3	92.1	73.8
–20	–4	80.2	82.2	86.4	89.2	92.7	94.6	92.1	90.7	68.6
–15	5	81.0	83.1	87.3	90.1	93.4	94.0	90.6	89.2	64.8
–10	14	81.7	83.8	88.1	90.9	93.2	92.9	88.9	87.1	63.6
–5	23	82.5	84.6	88.9	91.8	92.7	91.3	87.0	83.9	62.7
0	32	83.3	85.4	89.7	92.2	91.2	89.7	84.3	82.9	––
5	41	84.0	86.2	90.5	90.8	89.6	88.0	79.4	82.0	––
10	50	84.8	86.9	90.3	89.3	88.0	85.8	77.7	––	––

cs300_pw1521G_v05r2_status_enroute_to_avg_012–230.ch16

Maximum continuous thrust – OEI – 230 KIAS – Wing and cowl anti–ice on <72211001D>
Figure 03–02B–52

THRUST SETTING– %N1

MAXIMUM CONTINUOUS THRUST– 290 KIAS

MCT (ONE ENGINE INOPERATIVE)

WING AND COWL ANTI–ICE ON

PW1521G–3

SAT		PRESSURE ALTITUDE (Feet)								
(°C)	(°F)	–2000	0	5000	10000	15000	20000	25000	30000	35000
–70	–94	––	––	––	––	––	87.8	89.3	94.3	91.4
–65	–85	72.4	74.3	79.3	83.7	86.6	88.8	90.3	95.4	90.0
–60	–76	73.3	75.2	80.2	84.7	87.6	89.8	91.3	96.4	88.9
–55	–67	74.1	76.0	81.2	85.6	88.6	90.8	92.4	96.9	88.3
–50	–58	75.0	76.9	82.1	86.6	89.6	91.8	93.4	96.4	88.0
–45	–49	75.8	77.7	83.0	87.5	90.6	92.8	94.3	96.1	87.5
–40	–40	76.6	78.6	83.9	88.5	91.5	93.7	95.3	95.7	86.6
–35	–31	77.4	79.4	84.7	89.4	92.5	94.6	95.2	95.1	84.7
–30	–22	78.2	80.2	85.6	90.3	93.4	95.4	94.5	94.3	82.1
–25	–13	79.0	81.0	86.5	91.2	94.3	95.3	93.7	93.3	79.7
–20	–4	79.8	81.8	87.3	92.1	95.3	94.7	92.8	92.1	76.6
–15	5	80.5	82.6	88.2	93.0	95.6	93.9	91.7	90.9	72.5
–10	14	81.3	83.4	89.0	93.9	94.8	92.9	90.6	89.5	71.0
–5	23	82.1	84.2	89.8	94.5	93.8	91.9	89.0	87.6	69.9
0	32	82.8	84.9	90.7	93.4	92.6	90.7	87.3	86.4	––
5	41	83.6	85.7	91.5	92.1	91.2	89.2	85.3	85.3	––
10	50	84.3	86.5	90.5	90.6	89.7	87.6	84.2	––	––

cs300_pw1521G_v05r2_status_enroute_to_avg_012–290.ch16

Maximum continuous thrust – OEI – 290 KIAS – Wing and cowl anti–ice on <72211001D>

Figure 03–02B–53

C. Maximum altitude and driftdown – PW1521G-3

MAXIMUM ALTITUDE AND DRIFTDOWN			
PW1521G-3 - MCT ONE ENGINE INOPERATIVE ENGINE BLEED: PACKS ON, A/I OFF APU ON GREEN DOT		INITIAL ALTITUDE 37000FT CG FWD	GROSS LEVEL OFF ALTITUDE (FT) FINAL WEIGHT (1000 KG)
INITIAL WEIGHT (KG)	TEMPERATURE (°C)		
	ISA	ISA + 10	ISA + 20
40000	33700	33300	31900
	39.0	39.1	39.0
42000	32600	32200	30800
	41.0	41.0	40.9
46000	30600	29900	28200
	44.8	44.8	44.6
50000	28600	27500	25500
	48.6	48.5	48.4
54000	26500	25100	23200
	52.4	52.3	52.3
58000	24500	23100	21300
	56.3	56.2	56.2
60000	23500	22200	20300
	58.2	58.2	58.1
66000	-	-	-
	-	-	-
67500	-	-	-
	-	-	-
Correction for CAI ON	-300	-1000	-2100
	0.0	-0.1	-0.2
Correction for CAI & WAI ON	-3000	-4200	-9100
	-0.1	-0.8	-1.0

CS300_21K_QRH_MET_v01_Max alt - driftdown

Maximum altitude and driftdown <Metric> and <72211001D>
Figure 03–02B–54

D. Maximum altitude and driftdown – ETOPS <10109100C>

MAXIMUM ALTITUDE AND DRIFTDOWN (ETOPS)			
PW1521G-3 - MCT ONE ENGINE INOPERATIVE ENGINE BLEED: PACKS ON, A/I OFF APU ON 0.78M / 290KIAS	INITIAL ALTITUDE 37000FT CG 27% MAC	GROSS LEVEL OFF ALTITUDE (FT) FINAL WEIGHT (1000 KG)	
INITIAL WEIGHT (KG)	TEMPERATURE (°C)		
	ISA	ISA + 10	ISA + 20
40000	18000	16200	11200
	38.0	37.9	36.8
45000	17500	15600	10000
	42.8	42.6	41.4
50000	16900	14900	8800
	47.7	47.3	45.9
55000	16300	14100	7400
	52.5	52.2	50.6
60000	15400	13200	5600
	57.2	57.0	55.2
65000	14400	12400	4000
	62.0	61.7	60.0
CORRECTION FOR ALL A/I ON	-2800	-9300	--
	-0.2	-1.5	--
CORRECTION FOR ICE ACCRETION	-3200	-4100	-6100
	-0.5	-0.5	-0.5

CS300_21K_QRH-MET_v02_Max alt - driftdown - ETOPS

ETOPS – Maximum altitude and driftdown <Metric> and <72211001D>
Figure 03–02B–55

MAXIMUM DIVERSION DISTANCE (ETOPS)					
ONE ENGINE INOPERATIVE CLEAN CONFIGURATION ENGINE BLEED: PACKS ON, A/I OFF APU ON		ISA CG 27% MAC		AIR DISTANCE (NM)	
DESCENT SCHEDULE		CRUISE SPEED			
0.78M / 290KIAS		290KIAS			
WEIGHT (KG)	ALTITUDE (FT)	DIVERSION TIME (MIN)			
		60	90	120	180
40000	18000	396	584	--	--
42000	17000	396	581	766	--
44000	17000	396	581	766	1136
46000	17000	395	581	766	1136
48000	17000	395	580	765	1135
50000	16000	394	577	759	1124
52000	16000	393	576	758	1123
54000	16000	392	574	757	1121
56000	16000	391	573	756	1120
58000	15000	389	570	749	1109
60000	15000	387	567	747	1106
62000	15000	386	566	746	1105
64000	14000	384	563	740	1094
66000	14000	384	561	738	1092

CS300_21K_FCOM-MET_v01_Max diversion dist - ETOPS

ETOPS – Maximum diversion distance <Metric> and <72211001D>
Figure 03–02B–56

E. LRC – OEI

LRC - OEI							
PW1521G-3 - ONE ENGINE INOPERATIVE CLEAN CONFIGURATION ENGINE BLEED: PACKS ON, A/I OFF APU OFF						LRC (KIAS)	
WEIGHT (KG)	PRESSURE ALTITUDE (FT)						
	0	5000	10000	15000	20000	25000	30000
42000	229	232	220	216	219	210	203
44000	236	234	224	218	224	214	205
46000	244	236	229	221	225	221	207
48000	250	238	234	224	228	226	--
50000	253	240	237	234	231	227	--
52000	255	242	238	240	234	227	--
54000	257	247	240	244	237	227	--
56000	259	251	243	248	242	--	--
58000	261	257	246	250	247	--	--
60000	262	259	253	253	251	--	--
62000	264	260	260	255	252	--	--
64000	266	261	264	257	254	--	--
66000	269	263	268	259	--	--	--

CS300_21K_QRH-MET_v01-LRC-OEI

LRC – OEI <Metric> and <72211001D>
Figure 03–02B–57

F. In cruise quick check

IN CRUISE QUICK CHECK - OEI							
ONE ENGINE INOPERATIVE CLEAN CONFIGURATION ENGINE BLEED: PACKS ON, A/I OFF APU OFF				ISA CG 27% MAC		FUEL (KG) TIME (MIN)	
CRUISE SPEED				DESCENT SCHEDULE			
LRC				0.78M / 275KIAS / 250KIAS			
WEIGHT (KG)	FL	AIR DISTANCE (NM)						
		400	600	800	1000	1200	1400	1600
40000	100	2028	--	–	–	--	–	--
		100	--	–	–	--	–	--
	180	1737	2612	–	–	--	--	--
		92	137	–	–	--	--	--
	260	1509	2292	–	–	--	--	–
		83	123	–	–	--	--	–
44000	100	2116	3157	4186	5202	6206	--	–
		98	145	193	241	289	--	–
	180	1815	2737	3649	4549	5439	6318	–
		87	130	173	217	261	305	–
	260	1577	2405	3223	4032	4832	5622	6404
		80	119	158	197	236	276	316
48000	100	2206	3296	4373	5436	6486	7523	8547
		94	140	186	233	280	327	375
	180	1892	2862	3821	4768	5703	6627	7540
		84	124	165	206	248	290	333
	260	1650	2528	3394	4251	5095	5929	6753
		78	114	151	189	226	265	304
52000	100	2294	3434	4559	5671	6768	7851	8921
		92	136	180	225	271	317	363
	180	1964	2979	3985	4979	5960	6929	7886
		83	122	162	201	241	282	322
	260	1724	2650	3564	4467	5359	6240	7111
		77	114	150	187	223	260	297

CS300_ALL_NAMEPLATES_QRH_MET_v01_In_cruise_OEI – p1

In cruise quick check – LRC – page 1 <Metric>
Figure 03–02B–58

IN CRUISE QUICK CHECK - OEI								
ONE ENGINE INOPERATIVE CLEAN CONFIGURATION ENGINE BLEED: PACKS ON, A/I OFF APU OFF				ISA CG 27% MAC			FUEL (KG) TIME (MIN)	
CRUISE SPEED				DESCENT SCHEDULE				
LRC				0.78M / 275KIAS / 250KIAS				
WEIGHT (KG)	FL	AIR DISTANCE (NM)						
		1800	2000	2200	2400	2600	2800	3000
40000	100	--	--	--	--	--	--	--
		--	--	--	--	--	--	--
	180	--	--	--	--	--	--	--
		--	--	--	--	--	--	--
	260	--	--	--	--	--	--	--
		--	--	--	--	--	--	--
44000	100	--	--	--	--	--	--	--
		--	--	--	--	--	--	--
	180	--	--	--	--	--	--	--
		--	--	--	--	--	--	--
	260	--	--	--	--	--	--	--
		--	--	--	--	--	--	--
48000	100	9558	10558	--	--	--	--	--
		423	471	--	--	--	--	--
	180	8442	9333	10213	--	--	--	--
		377	421	466	--	--	--	--
	260	7567	8372	9168	9955	10733	--	--
		343	382	421	461	501	--	--
52000	100	9977	11020	12050	13068	14073	--	--
		410	457	505	553	601	--	--
	180	8832	9767	10691	11603	12503	13393	14273
		363	405	447	491	535	579	623
	260	7971	8819	9657	10484	11301	12109	12908
		334	371	410	448	487	526	566

CS300_ALL_NAMEPLATES_QRH_MET_v01_In_cruise_OEI – p2

In cruise quick check – LRC – page 2 <Metric>
Figure 03–02B–59

IN CRUISE QUICK CHECK - OEI								
ONE ENGINE INOPERATIVE CLEAN CONFIGURATION ENGINE BLEED: PACKS ON, A/I OFF APU OFF				ISA CG 27% MAC			FUEL (KG) TIME (MIN)	
CRUISE SPEED				DESCENT SCHEDULE				
LRC				0.78M / 275KIAS / 250KIAS				
WEIGHT (KG)	FL	AIR DISTANCE (NM)						
		400	600	800	1000	1200	1400	1600
56000	100	2383 90	3570 134	4742 178	5900 221	7045 265	8175 310	9291 354
	180	2036 81	3095 120	4143 158	5179 197	6203 237	7217 276	8219 316
	260	– --	– --	-- --	-- --	– --	– –	-- --
60000	100	2474 88	3709 131	4929 173	6134 217	7323 260	8499 304	9660 348
	180	2108 80	3211 117	4302 155	5381 194	6448 232	7503 271	8546 310
	260	-- --	-- --	– –	-- --	-- --	-- --	– –
64000	100	2564 84	3848 125	5116 166	6368 208	7605 251	8826 294	10032 337
	180	2190 77	3340 114	4476 151	5598 188	6707 226	7803 264	8888 302
	260	– –	– –	– –	-- --	-- --	-- --	-- --

CS300_ALL_NAMEPLATES_QRH_MET_v01_In_cruise_OEI - p3

In cruise quick check – LRC – page 3 <Metric>
Figure 03–02B–60

IN CRUISE QUICK CHECK - OEI								
ONE ENGINE INOPERATIVE CLEAN CONFIGURATION ENGINE BLEED: PACKS ON, A/I OFF APU OFF				ISA CG 27% MAC			FUEL (KG) TIME (MIN)	
CRUISE SPEED				DESCENT SCHEDULE				
LRC				0.78M / 275KIAS / 250KIAS				
WEIGHT (KG)	FL	AIR DISTANCE (NM)						
		1800	2000	2200	2400	2600	2800	3000
56000	100	10393	11481	12555	13616	14663	15698	16720
		400	445	492	539	586	633	681
	180	9210	10188	11155	12109	13053	13985	14906
		355	395	436	477	518	560	602
	260	--	--	--	--	--	--	--
		--	--	--	--	--	--	--
60000	100	10807	11940	13059	14164	15255	16332	17396
		391	436	480	525	571	617	664
	180	9577	10597	11606	12604	13591	14564	15526
		349	388	427	467	507	547	588
	260	--	--	--	--	--	--	--
		--	--	--	--	--	--	--
64000	100	11223	12399	13562	14710	15844	16965	--
		380	424	468	511	556	600	--
	180	9960	11020	12068	13105	14130	15145	16148
		341	379	418	457	496	535	575
	260	--	--	--	--	--	--	--
		--	--	--	--	--	--	--

CS300_ALL_NAMEPLATES_QRH_MET_v01_In_cruise_OEI - p4

In cruise quick check – LRC – page 4 <Metric>
Figure 03–02B–61

G. In cruise quick check – ETOPS <10109100C>

IN CRUISE QUICK CHECK - OEI (ETOPS)								
ONE ENGINE INOPERATIVE CLEAN CONFIGURATION ENGINE BLEED: PACKS ON, A/I OFF APU ON				ISA CG 27% MAC			TIME (MIN) FUEL (KG)	
CRUISE SPEED				DESCENT SCHEDULE				
290KIAS				0.78M / 290KIAS / 250KIAS				
WEIGHT (KG)	FL	AIR DISTANCE (NM)						
		400	600	800	1000	1200	1400	1600
40000	100	77 2617	-- --	-- --	-- --	-- --	-- --	-- --
	170	71 2301	-- --	-- --	-- --	-- --	-- --	-- --
44000	100	77 2639	113 3969	149 5293	185 6613	-- --	-- --	-- --
	170	71 2321	103 3517	136 4709	168 5896	-- --	-- --	-- --
48000	100	77 2665	113 4012	149 5352	185 6687	221 8017	257 9341	293 10660
	160	72 2379	104 3608	137 4831	170 6048	203 7260	236 8465	269 9666
52000	100	77 2694	113 4058	149 5416	185 6768	221 8114	257 9454	293 10789
	160	71 2405	104 3652	137 4894	170 6130	203 7359	236 8584	269 9802
CORRECTION			PER 10°C BELOW ISA		PER 10°C ABOVE ISA		ALL A/I ON	
FUEL			-0.5%		0.9%		5.1%	

CS300_21K_FCOM-MET_v01-In cruise_OEI - ETOPS - p1

ETOPS – In cruise quick check – OEI – page 1 <Metric> and <72211001D>
Figure 03–02B–62

IN CRUISE QUICK CHECK - OEI (ETOPS)

ONE ENGINE INOPERATIVE CLEAN CONFIGURATION ENGINE BLEED: PACKS ON, A/I OFF APU ON	ISA CG 27% MAC	TIME (MIN) FUEL (KG)

CRUISE SPEED	DESCENT SCHEDULE
290KIAS	0.78M / 290KIAS / 250KIAS

WEIGHT (KG)	FL	AIR DISTANCE (NM)						
		1800	2000	2200	2400	2600	2800	3000
40000	100	--	--	--	--	--	--	--
		--	--	--	--	--	--	--
	170	--	--	--	--	--	--	--
		--	--	--	--	--	--	--
44000	100	--	--	--	--	--	--	--
		--	--	--	--	--	--	--
	170	--	--	--	--	--	--	--
		--	--	--	--	--	--	--
48000	100	--	--	--	--	--	--	--
		--	--	--	--	--	--	--
	160	302	--	--	--	--	--	--
		10862	--	--	--	--	--	--
52000	100	329	365	401	--	--	--	--
		12118	13441	14760	--	--	--	--
	160	302	335	368	401	--	--	--
		11014	12221	13423	14620	--	--	--

CORRECTION	PER 10°C BELOW ISA	PER 10°C ABOVE ISA	ALL A/I ON
FUEL	-0.6%	0.9%	4.8%

CS300_21K_FCOM-MET_v01-In cruise_OEI - ETOPS - p2

ETOPS – In cruise quick check – OEI – page 2 <Metric> and <72211001D>
Figure 03–02B–63

IN CRUISE QUICK CHECK - OEI (ETOPS)							
ONE ENGINE INOPERATIVE CLEAN CONFIGURATION ENGINE BLEED: PACKS ON, A/I OFF APU ON				ISA CG 27% MAC		TIME (MIN) FUEL (KG)	
CRUISE SPEED				DESCENT SCHEDULE			
290KIAS				0.78M / 290KIAS / 250KIAS			
WEIGHT (KG)	FL	AIR DISTANCE (NM)					
		400	600	800	1000	1200	1400	1600
56000	100	77 2731	113 4114	149 5491	185 6861	221 8225	257 9582	293 10933
	150	72 2479	106 3762	139 5038	172 6307	206 7571	239 8828	273 10079
60000	100	77 2777	113 4185	149 5585	185 6975	221 8357	257 9733	293 11101
	140	73 2563	107 3887	141 5202	175 6509	209 7808	243 9099	277 10384
64000	100	77 2824	113 4259	149 5686	185 7101	221 8507	257 9904	292 11293
	140	73 2604	107 3954	141 5296	175 6628	209 7952	243 9266	276 10573
CORRECTION			PER 10°C BELOW ISA		PER 10°C ABOVE ISA		ALL A/I ON	
FUEL			-0.5%		0.9%		5.1%	

CS300_21K_FCOM-MET_v01-In cruise_OEI - ETOPS - p3

ETOPS – In cruise quick check – OEI – page 3 <Metric> and <72211001D>
Figure 03–02B–64

IN CRUISE QUICK CHECK - OEI (ETOPS)								
ONE ENGINE INOPERATIVE CLEAN CONFIGURATION ENGINE BLEED: PACKS ON, A/I OFF APU ON			ISA CG 27% MAC				TIME (MIN) FUEL (KG)	
CRUISE SPEED			DESCENT SCHEDULE					
290KIAS			0.78M / 290KIAS / 250KIAS					
WEIGHT (KG)	FL	AIR DISTANCE (NM)						
		1800	2000	2200	2400	2600	2800	3000
56000	100	329 12278	365 13618	401 14952	436 16280	-- --	-- --	-- --
	150	306 11325	340 12565	373 13799	406 15027	440 16250	-- --	-- --
60000	100	329 12464	364 13820	400 15170	436 16514	-- --	-- --	-- --
	140	310 11663	344 12936	378 14203	412 15464	446 16719	-- --	-- --
64000	100	328 12674	364 14047	400 15414	436 16776	-- --	-- --	-- --
	140	310 11871	344 13162	378 14447	412 15725	446 16998	-- --	-- --
CORRECTION			PER 10°C BELOW ISA		PER 10°C ABOVE ISA		ALL A/I ON	
FUEL			-0.6%		0.9%		4.8%	

CS300_21K_FCOM-MET_v01-In cruise_OEI - ETOPS - p4

ETOPS – In cruise quick check – OEI – page 4 <Metric> and <72211001D>
Figure 03–02B–65

H. Holding (GDOEI)

HOLDING - OEI						
ONE ENGINE INOPERATIVE CLEAN CONFIGURATION RACETRACK PATTERN			ISA CG 27% MAC		HOLDING SPEED (KIAS) TOTAL FUEL FLOW (KG/MIN)	
FL	GROSS WEIGHT (KG)					
	40000	45000	50000	55000	60000	65000
15	165	176	187	197	207	216
	19	21	23	25	28	30
50	166	178	189	200	209	219
	19	21	23	25	28	30
100	169	181	192	203	213	222
	18	21	23	26	28	31
150	172	184	195	206	216	226
	18	21	23	26	29	32
200	175	187	199	210	219	--
	19	21	24	27	30	--
250	178	190	202	--	--	--
	19	22	25	--	--	--
300	181	--	--	--	--	--
	20	--	--	--	--	--

CS300_ALL_NAMEPLATES_FCOM_MET_v01_OEI_Holding

NOTE

In a linear holding reduce the Fuel Flow by 5%

Holding – OEI <Metric>
Figure 03–02B–66

LANDING

A. Operating speeds (recommended VREF, VAC, VGA)

VREF - VAC			
FLAP 2 APP FLAP 4 LDG			VREF (KIAS) VAC (KIAS)
WEIGHT (KG)	PRESSURE ALTITUDE (FT)		
	0	4000	8000
39000	114	114	114
	120	120	120
40000	115	115	116
	121	121	122
44000	121	121	122
	127	127	128
48000	126	127	127
	132	133	133
52000	132	132	133
	138	138	139
56000	137	138	139
	143	144	145
60000	142	143	144
	148	149	150
64000	146	147	148
	152	153	154
67500	150	151	152
	156	157	158

CS300_ALL_NAMEPLATES_FCOM_MET_v01_vref_vac_F2_4

VREF – VAC – FLAP 2 approach – FLAP 4 landing <Metric>
Figure 03–02B–67

VREF - VAC			
FLAP 4 APP FLAP 5 LDG			VREF (KIAS) VAC (KIAS)
WEIGHT (KG)	PRESSURE ALTITUDE (FT)		
	0	4000	8000
39000	110	110	110
	110	110	110
40000	110	110	110
	110	110	110
44000	114	114	114
	114	114	114
48000	119	119	119
	119	119	119
52000	124	124	124
	124	124	124
56000	128	128	129
	128	128	129
60000	133	133	134
	133	133	134
64000	137	137	138
	137	137	138
67500	140	141	142
	140	141	142

CS300_ALL_NAMEPLATES_FCOM_MET_v01_vref_vac_F4_5

VREF – VAC – FLAP 4 approach – FLAP 5 landing <Metric>
Figure 03–02B–68

GO AROUND SPEED			
PW1521G-3 FLAP 2			VGA(KIAS)
WEIGHT (KG)	PRESSURE ALTITUDE (FT)		
	0	4000	8000
39000	145	135	130
40000	143	134	132
44000	137	137	138
48000	142	143	143
52000	148	148	149
56000	153	154	155
60000	158	159	160
64000	162	163	164
67500	166	167	168

CS300_21K_FCOM_MET_v01_vga_F2

VGA – FLAP 2 <Metric> and <72211001D>
Figure 03–02B–69

GO AROUND SPEED			
PW1521G-3 FLAP 4			VGA (KIAS)
WEIGHT (KG)	PRESSURE ALTITUDE (FT)		
	0	4000	8000
39000	124	120	120
40000	122	120	120
44000	124	124	124
48000	129	129	129
52000	134	134	134
56000	138	138	139
60000	143	143	144
64000	147	147	148
67500	150	151	152

CS300_21K_FCOM_MET_v01_vga_F4

VGA – FLAP 4 <Metric> and <72211001D>
Figure 03–02B–70

B. N1 for go-around – PW1521G-3 <72211001D>

THRUST SETTING– %N1

GO–AROUND – 140 KIAS

GA (AEO or OEI)

ENGINE BLEEDS CLOSED

PW1521G–3

SAT		PRESSURE ALTITUDE (Feet)											
(°C)	(°F)	–2000	0	1000	2000	3000	4000	6000	8000	10000	12000	14500	16000
–56	**–68**	75.0	77.1	77.7	78.4	79.0	79.7	80.8	81.7	82.8	83.6	84.2	84.5
–50	**–58**	76.1	78.1	78.8	79.5	80.1	80.7	81.9	82.8	83.9	84.7	85.3	85.6
–45	**–49**	76.9	79.0	79.7	80.3	81.0	81.6	82.8	83.7	84.8	85.6	86.3	86.6
–40	**–40**	77.7	79.8	80.5	81.2	81.8	82.5	83.6	84.6	85.7	86.5	87.2	87.5
–35	**–31**	78.5	80.7	81.4	82.1	82.7	83.4	84.5	85.5	86.6	87.4	88.1	88.4
–30	**–22**	79.3	81.5	82.2	82.9	83.6	84.2	85.4	86.4	87.5	88.3	89.0	89.3
–25	**–13**	80.1	82.3	83.0	83.7	84.4	85.1	86.2	87.2	88.4	89.2	89.9	90.2
–20	**–4**	80.9	83.1	83.8	84.6	85.2	85.9	87.1	88.1	89.2	90.1	90.8	91.0
–15	**5**	81.7	83.9	84.7	85.4	86.1	86.8	87.9	89.0	90.1	90.9	91.6	91.9
–10	**14**	82.5	84.7	85.5	86.2	86.9	87.6	88.8	89.8	91.0	91.8	92.5	92.8
–5	**23**	83.3	85.5	86.3	87.0	87.7	88.4	89.6	90.6	91.8	92.7	93.3	93.6
0	**32**	84.0	86.3	87.1	87.8	88.5	89.2	90.4	91.5	92.6	93.5	94.2	94.5
5	**41**	84.8	87.1	87.8	88.6	89.3	90.0	91.2	92.3	93.5	94.3	94.7	94.7
10	**50**	85.5	87.9	88.6	89.4	90.1	90.8	92.1	93.1	94.3	94.4	94.3	94.4
15	**59**	86.3	88.7	89.4	90.2	90.9	91.6	92.9	93.8	93.7	93.7	93.7	93.8
20	**68**	87.1	89.4	90.2	90.9	91.7	92.4	93.1	93.0	93.0	92.8	92.9	93.0
25	**77**	87.8	90.2	91.0	91.7	92.1	92.2	92.2	92.1	91.9	91.7	91.8	92.0
30	**86**	88.5	90.9	91.0	91.1	91.1	91.2	91.1	91.0	90.7	90.5	90.6	91.0
35	**95**	88.9	89.8	89.9	89.9	90.0	90.0	90.0	89.8	89.4	89.2	89.3	––
40	**104**	87.7	88.7	88.7	88.8	88.8	88.9	88.9	88.6	88.2	87.9	88.0	––
45	**113**	86.5	87.5	87.6	87.6	87.7	87.7	87.7	87.4	86.9	86.6	––	––
53	**127**	84.6	85.6	85.7	85.7	85.8	85.8	85.8	85.3	––	––	––	––

cs300_pw1521G_v05r2_status_goaround_to_avg_000.ch16

Go–around – 140 KIAS – AEO or OEI – Engine bleeds closed <72211001D>
Figure 03–02B–71

THRUST SETTING– %N1

GO–AROUND – 140 KIAS

GA (AEO)

PACKS ON, ANTI–ICE OFF

PW1521G–3

SAT		PRESSURE ALTITUDE (Feet)											
(°C)	(°F)	–2000	0	1000	2000	3000	4000	6000	8000	10000	12000	14500	16000
–56	–68	75.1	77.1	77.8	78.4	79.1	79.7	80.8	81.8	82.8	83.6	84.3	84.6
–50	–58	76.1	78.2	78.8	79.5	80.2	80.8	81.9	82.9	83.9	84.8	85.4	85.7
–45	–49	76.9	79.0	79.7	80.4	81.0	81.7	82.8	83.8	84.9	85.7	86.3	86.7
–40	–40	77.8	79.9	80.6	81.2	81.9	82.6	83.7	84.7	85.8	86.6	87.3	87.6
–35	–31	78.6	80.7	81.4	82.1	82.8	83.4	84.6	85.6	86.7	87.5	88.2	88.5
–30	–22	79.4	81.6	82.2	82.9	83.6	84.3	85.5	86.4	87.6	88.4	89.1	89.4
–25	–13	80.2	82.4	83.1	83.8	84.5	85.1	86.3	87.3	88.4	89.3	90.0	90.3
–20	–4	81.0	83.2	83.9	84.6	85.3	86.0	87.2	88.2	89.3	90.2	90.8	91.1
–15	5	81.8	84.0	84.7	85.4	86.1	86.8	88.0	89.0	90.2	91.0	91.7	92.0
–10	14	82.5	84.8	85.5	86.2	86.9	87.6	88.8	89.9	91.0	91.9	92.5	92.9
–5	23	83.3	85.6	86.3	87.1	87.8	88.5	89.7	90.7	91.9	92.7	93.4	93.7
0	32	84.1	86.4	87.1	87.8	88.6	89.3	90.5	91.6	92.7	93.6	93.9	93.8
5	41	84.8	87.2	87.9	88.7	89.4	90.1	91.3	92.4	93.6	93.7	93.6	93.6
10	50	85.6	87.9	88.7	89.4	90.2	90.9	92.1	93.2	93.2	93.1	93.1	93.1
15	59	86.4	88.7	89.5	90.2	91.0	91.7	92.7	92.6	92.5	92.3	92.2	92.2
20	68	87.1	89.5	90.2	91.0	91.8	91.9	91.8	91.7	91.4	91.0	90.8	90.8
25	77	87.9	90.2	90.7	90.8	90.8	90.8	90.7	90.5	90.0	89.6	89.4	89.5
30	86	88.6	89.5	89.6	89.6	89.6	89.6	89.5	89.2	88.6	88.3	88.2	88.4
35	95	87.4	88.3	88.3	88.3	88.3	88.3	88.2	87.9	87.3	87.0	86.9	––
40	104	86.1	87.0	87.0	87.0	87.0	87.0	86.8	86.5	86.1	85.7	85.6	––
45	113	84.7	85.6	85.7	85.7	85.7	85.6	85.5	85.3	84.7	84.4	––	––
53	127	82.7	83.5	83.5	83.5	83.5	83.6	83.6	83.2	––	––	––	––

cs300_pw1521G_v05r2_status_goaround_to_avg_100.ch16

Go–around – 140 KIAS – AEO – Packs on, anti–ice off <72211001D>
Figure 03–02B–72

THRUST SETTING– %N1

GO–AROUND – 140 KIAS

GA (AEO)

PACKS ON, COWL ANTI–ICE ON

PW1521G–3

SAT		PRESSURE ALTITUDE (Feet)											
(°C)	(°F)	–2000	0	1000	2000	3000	4000	6000	8000	10000	12000	14500	16000
–56	**–68**	75.1	77.2	77.8	78.5	79.2	79.8	80.9	81.8	82.9	83.7	84.4	84.7
–50	**–58**	76.2	78.2	78.9	79.6	80.2	80.9	82.0	82.9	84.0	84.8	85.5	85.8
–45	**–49**	77.0	79.1	79.8	80.4	81.1	81.8	82.9	83.9	84.9	85.8	86.4	86.8
–40	**–40**	77.8	79.9	80.6	81.3	82.0	82.6	83.8	84.8	85.9	86.7	87.4	87.7
–35	**–31**	78.6	80.8	81.5	82.2	82.8	83.5	84.7	85.7	86.8	87.6	88.3	88.6
–30	**–22**	79.4	81.6	82.3	83.0	83.7	84.4	85.5	86.5	87.7	88.5	89.2	89.5
–25	**–13**	80.2	82.4	83.2	83.8	84.5	85.2	86.4	87.4	88.5	89.4	90.1	90.4
–20	**–4**	81.0	83.2	84.0	84.7	85.4	86.1	87.2	88.3	89.4	90.3	90.9	91.2
–15	**5**	81.8	84.1	84.8	85.5	86.2	86.9	88.1	89.1	90.3	91.1	91.8	92.1
–10	**14**	82.6	84.9	85.6	86.3	87.0	87.7	88.9	90.0	91.1	92.0	92.7	93.0
–5	**23**	83.4	85.7	86.4	87.1	87.8	88.5	89.8	90.8	92.0	92.8	93.5	93.7
0	**32**	84.1	86.4	87.2	87.9	88.6	89.3	90.6	91.6	92.8	93.6	93.7	93.6
5	**41**	84.9	87.2	88.0	88.7	89.4	90.2	91.4	92.4	93.2	93.2	93.3	93.4
10	**50**	85.7	88.0	88.8	89.5	90.2	91.0	92.2	92.6	92.5	92.6	92.8	92.8

cs300_pw1521G_v05r2_status_goaround_to_avg_110.ch16

Go–around – 140 KIAS – AEO – Packs on, cowl anti–ice on <72211001D>
Figure 03–02B–73

THRUST SETTING– %N1

GO–AROUND – 140 KIAS

GA (AEO)

PACKS ON, WING AND COWL ANTI–ICE ON

PW1521G–3

SAT		PRESSURE ALTITUDE (Feet)											
(°C)	(°F)	–2000	0	1000	2000	3000	4000	6000	8000	10000	12000	14500	16000
–56	**–68**	75.1	77.2	77.8	78.5	79.2	79.8	80.9	81.8	82.9	83.7	84.4	84.7
–50	**–58**	76.2	78.2	78.9	79.6	80.2	80.9	82.0	82.9	84.0	84.8	85.5	85.8
–45	**–49**	77.0	79.1	79.8	80.4	81.1	81.8	82.9	83.9	84.9	85.8	86.4	86.8
–40	**–40**	77.8	79.9	80.6	81.3	82.0	82.6	83.8	84.8	85.9	86.7	87.4	87.7
–35	**–31**	78.6	80.8	81.5	82.2	82.8	83.5	84.7	85.7	86.8	87.6	88.3	88.6
–30	**–22**	79.4	81.6	82.3	83.0	83.7	84.4	85.5	86.5	87.7	88.5	89.2	89.5
–25	**–13**	80.2	82.4	83.2	83.8	84.5	85.2	86.4	87.4	88.5	89.4	90.1	90.4
–20	**–4**	81.0	83.2	84.0	84.7	85.4	86.1	87.2	88.3	89.4	90.3	90.9	91.2
–15	**5**	81.8	84.1	84.8	85.5	86.2	86.9	88.1	89.1	90.3	91.1	91.8	92.1
–10	**14**	82.6	84.9	85.6	86.3	87.0	87.7	88.9	90.0	91.1	92.0	92.7	93.0
–5	**23**	83.4	85.7	86.4	87.1	87.8	88.5	89.8	90.8	92.0	92.8	93.5	93.6
0	**32**	84.1	86.4	87.2	87.9	88.6	89.3	90.6	91.6	92.8	93.3	93.4	93.4
5	**41**	84.9	87.2	88.0	88.7	89.4	90.2	91.4	92.4	92.7	92.8	93.0	93.1
10	**50**	85.7	88.0	88.8	89.5	90.2	91.0	91.9	91.9	91.8	92.1	92.4	92.5

cs300_pw1521G_v05r2_status_goaround_to_avg_111.ch16

Go–around – 140 KIAS – AEO – Packs on, wing and cowl anti–ice on <72211001D>
Figure 03–02B–74

THRUST SETTING– %N1

GO–AROUND – 140 KIAS

GA (AEO or OEI)

COWL ANTI–ICE ON

PW1521G–3

SAT		PRESSURE ALTITUDE (Feet)											
(°C)	(°F)	–2000	0	1000	2000	3000	4000	6000	8000	10000	12000	14500	16000
–56	**–68**	75.1	77.2	77.8	78.5	79.2	79.8	80.9	81.8	82.9	83.7	84.4	84.7
–50	**–58**	76.2	78.2	78.9	79.6	80.2	80.9	82.0	82.9	84.0	84.8	85.5	85.8
–45	**–49**	77.0	79.1	79.8	80.4	81.1	81.8	82.9	83.9	84.9	85.8	86.4	86.8
–40	**–40**	77.8	79.9	80.6	81.3	82.0	82.6	83.8	84.8	85.9	86.7	87.4	87.7
–35	**–31**	78.6	80.8	81.5	82.2	82.8	83.5	84.7	85.7	86.8	87.6	88.3	88.6
–30	**–22**	79.4	81.6	82.3	83.0	83.7	84.4	85.5	86.5	87.7	88.5	89.2	89.5
–25	**–13**	80.2	82.4	83.2	83.8	84.5	85.2	86.4	87.4	88.5	89.4	90.1	90.4
–20	**–4**	81.0	83.2	84.0	84.7	85.4	86.1	87.2	88.3	89.4	90.3	90.9	91.2
–15	**5**	81.8	84.1	84.8	85.5	86.2	86.9	88.1	89.1	90.3	91.1	91.8	92.1
–10	**14**	82.6	84.9	85.6	86.3	87.0	87.7	88.9	90.0	91.1	92.0	92.7	93.0
–5	**23**	83.4	85.7	86.4	87.1	87.8	88.5	89.8	90.8	92.0	92.8	93.5	93.8
0	**32**	84.1	86.4	87.2	87.9	88.6	89.3	90.6	91.6	92.8	93.7	94.3	94.6
5	**41**	84.9	87.2	88.0	88.7	89.4	90.2	91.4	92.4	93.6	94.5	94.4	94.4
10	**50**	85.7	88.0	88.8	89.5	90.2	91.0	92.2	93.3	93.9	93.8	94.0	94.1

cs300_pw1521G_v05r2_status_goaround_to_avg_010.ch16

Go–around – 140 KIAS – AEO or OEI – Cowl anti–ice on <72211001D>
Figure 03–02B–75

THRUST SETTING– %N1

GO–AROUND – 140 KIAS

GA (AEO)

WING AND COWL ANTI–ICE ON

PW1521G–3

SAT		PRESSURE ALTITUDE (Feet)											
(°C)	(°F)	–2000	0	1000	2000	3000	4000	6000	8000	10000	12000	14500	16000
–56	**–68**	75.1	77.2	77.8	78.5	79.2	79.8	80.9	81.8	82.9	83.7	84.4	84.7
–50	**–58**	76.2	78.2	78.9	79.6	80.2	80.9	82.0	82.9	84.0	84.8	85.5	85.8
–45	**–49**	77.0	79.1	79.8	80.4	81.1	81.8	82.9	83.9	84.9	85.8	86.4	86.8
–40	**–40**	77.8	79.9	80.6	81.3	82.0	82.6	83.8	84.8	85.9	86.7	87.4	87.7
–35	**–31**	78.6	80.8	81.5	82.2	82.8	83.5	84.7	85.7	86.8	87.6	88.3	88.6
–30	**–22**	79.4	81.6	82.3	83.0	83.7	84.4	85.5	86.5	87.7	88.5	89.2	89.5
–25	**–13**	80.2	82.4	83.2	83.8	84.5	85.2	86.4	87.4	88.5	89.4	90.1	90.4
–20	**–4**	81.0	83.2	84.0	84.7	85.4	86.1	87.2	88.3	89.4	90.3	90.9	91.2
–15	**5**	81.8	84.1	84.8	85.5	86.2	86.9	88.1	89.1	90.3	91.1	91.8	92.1
–10	**14**	82.6	84.9	85.6	86.3	87.0	87.7	88.9	90.0	91.1	92.0	92.7	93.0
–5	**23**	83.4	85.7	86.4	87.1	87.8	88.5	89.8	90.8	92.0	92.8	93.5	93.8
0	**32**	84.1	86.4	87.2	87.9	88.6	89.3	90.6	91.6	92.8	93.7	94.2	94.5
5	**41**	84.9	87.2	88.0	88.7	89.4	90.2	91.4	92.4	93.6	94.2	94.1	94.2
10	**50**	85.7	88.0	88.8	89.5	90.2	91.0	92.2	92.9	93.2	93.2	93.6	93.8

cs300_pw1521G_v05r2_status_goaround_to_avg_011.ch16

Go–around – 140 KIAS – AEO – Wing and cowl anti–ice on <72211001D>
Figure 03–02B–76

THRUST SETTING– %N1

GO–AROUND – 140 KIAS

GA (OEI)

ENGINE BLEEDS CLOSED

PW1521G

SAT		PRESSURE ALTITUDE (Feet)									
(°C)	(°F)	–2000	0	1000	2000	4000	6000	8000	10000	12000	14000
–56	–68	75.0	77.1	77.7	78.4	79.7	80.8	81.7	82.8	83.6	84.0
–50	–58	76.1	78.1	78.8	79.5	80.7	81.9	82.8	83.9	84.7	85.1
–45	–49	76.9	79.0	79.7	80.3	81.6	82.8	83.7	84.8	85.6	86.1
–40	–40	77.7	79.8	80.5	81.2	82.5	83.6	84.6	85.7	86.5	87.0
–35	–31	78.5	80.7	81.4	82.1	83.4	84.5	85.5	86.6	87.4	87.9
–30	–22	79.3	81.5	82.2	82.9	84.2	85.4	86.4	87.5	88.3	88.8
–25	–13	80.1	82.3	83.0	83.7	85.1	86.2	87.2	88.4	89.2	89.7
–20	–4	80.9	83.1	83.8	84.6	85.9	87.1	88.1	89.2	90.1	90.5
–15	5	81.7	83.9	84.7	85.4	86.8	87.9	89.0	90.1	90.9	91.4
–10	14	82.5	84.7	85.5	86.2	87.6	88.8	89.8	91.0	91.8	92.2
–5	23	83.3	85.5	86.3	87.0	88.4	89.6	90.6	91.8	92.7	93.1
0	32	84.0	86.3	87.1	87.8	89.2	90.4	91.5	92.6	93.5	93.9
5	41	84.8	87.1	87.8	88.6	90.0	91.2	92.3	93.5	94.3	94.8
10	50	85.5	87.9	88.6	89.4	90.8	92.1	93.1	94.3	94.4	94.2
15	59	86.3	88.7	89.4	90.2	91.6	92.9	93.8	93.7	93.7	93.6
20	68	87.1	89.4	90.2	90.9	92.4	93.1	93.0	93.0	92.8	92.7
25	77	87.8	90.2	91.0	91.7	92.2	92.2	92.1	91.9	91.7	91.6
30	86	88.5	90.9	91.0	91.1	91.2	91.1	91.0	90.7	90.5	90.3
35	95	88.9	89.8	89.9	89.9	90.0	90.0	89.8	89.4	89.2	89.0
40	104	87.7	88.7	88.7	88.8	88.9	88.9	88.6	88.2	87.9	87.7
45	113	86.5	87.5	87.6	87.6	87.7	87.7	87.4	86.9	86.6	––
53	127	84.6	85.6	85.7	85.7	85.8	85.8	85.3	––	––	––

cs300_pw1524G_v05r2_status_goaround_to_avg_000_OEI.ch16

Go–around – 140 KIAS – OEI – Engine bleeds closed <72211001D>
Figure 03–02B–77

THRUST SETTING– %N1

GO–AROUND – 140 KIAS

GA (OEI)

PACK(S) ON, ANTI–ICE OFF

PW1521G–3

SAT		PRESSURE ALTITUDE (Feet)											
(°C)	(°F)	–2000	0	1000	2000	3000	4000	6000	8000	10000	12000	14500	16000
–56	–68	75.1	77.1	77.8	78.5	79.1	79.7	80.8	81.8	82.8	83.7	84.3	84.6
–50	–58	76.1	78.2	78.9	79.5	80.2	80.8	81.9	82.9	84.0	84.8	85.4	85.8
–45	–49	76.9	79.1	79.7	80.4	81.1	81.7	82.8	83.8	84.9	85.7	86.4	86.7
–40	–40	77.8	79.9	80.6	81.3	81.9	82.6	83.7	84.7	85.8	86.6	87.3	87.6
–35	–31	78.6	80.7	81.4	82.1	82.8	83.4	84.6	85.6	86.7	87.5	88.2	88.5
–30	–22	79.4	81.6	82.3	83.0	83.6	84.3	85.5	86.5	87.6	88.4	89.1	89.4
–25	–13	80.2	82.4	83.1	83.8	84.5	85.2	86.3	87.3	88.5	89.3	90.0	90.3
–20	–4	81.0	83.2	83.9	84.6	85.3	86.0	87.2	88.2	89.3	90.2	90.9	91.2
–15	5	81.8	84.0	84.7	85.4	86.1	86.8	88.0	89.1	90.2	91.1	91.7	92.0
–10	14	82.6	84.8	85.5	86.3	87.0	87.7	88.9	89.9	91.1	91.9	92.6	92.9
–5	23	83.3	85.6	86.3	87.1	87.8	88.5	89.7	90.7	91.9	92.8	93.4	93.7
0	32	84.1	86.4	87.1	87.9	88.6	89.3	90.5	91.6	92.7	93.6	93.5	93.4
5	41	84.8	87.2	87.9	88.7	89.4	90.1	91.3	92.4	93.4	93.2	93.2	93.1
10	50	85.6	87.9	88.7	89.5	90.2	90.9	92.2	92.9	92.7	92.6	92.5	92.5
15	59	86.4	88.7	89.5	90.2	91.0	91.7	92.2	92.1	91.9	91.7	91.5	91.5
20	68	87.1	89.5	90.3	91.0	91.4	91.4	91.3	91.1	90.7	90.1	89.8	89.8
25	77	87.9	90.3	90.3	90.3	90.3	90.2	90.2	89.8	89.1	88.6	88.3	88.3
30	86	88.2	89.1	89.1	89.1	89.0	88.9	88.8	88.5	87.7	87.3	87.0	87.3
35	95	87.0	87.8	87.8	87.8	87.7	87.6	87.4	87.0	86.3	86.1	85.7	––
40	104	85.7	86.4	86.4	86.4	86.3	86.2	86.0	85.7	85.0	84.7	84.4	––
45	113	84.2	85.0	85.0	84.9	84.8	84.7	84.7	84.4	83.7	83.4	––	––
53	127	82.2	82.9	82.8	82.7	82.7	82.6	82.7	82.3	––	––	––	––

cs300_pw1521G_v05r2_status_goaround_to_avg_300.ch16

Go–around – 140 KIAS – OEI – Pack(s) on, anti–ice off <72211001D>
Figure 03–02B–78

THRUST SETTING– %N1

GO–AROUND – 140 KIAS

GA (OEI)

PACK(S) ON, COWL ANTI–ICE ON

PW1521G–3

SAT		PRESSURE ALTITUDE (Feet)											
(°C)	(°F)	–2000	0	1000	2000	3000	4000	6000	8000	10000	12000	14500	16000
–56	**–68**	75.2	77.3	78.0	78.6	79.3	79.9	81.0	81.9	83.0	83.9	84.5	84.8
–50	**–58**	76.3	78.3	79.0	79.7	80.3	81.0	82.1	83.1	84.2	85.0	85.7	86.0
–45	**–49**	77.1	79.2	79.9	80.6	81.2	81.9	83.0	84.0	85.1	85.9	86.6	86.9
–40	**–40**	77.9	80.1	80.7	81.4	82.1	82.8	83.9	84.9	86.0	86.8	87.5	87.8
–35	**–31**	78.8	80.9	81.6	82.3	82.9	83.6	84.8	85.8	86.9	87.8	88.4	88.8
–30	**–22**	79.6	81.7	82.4	83.1	83.8	84.5	85.6	86.7	87.8	88.7	89.3	89.7
–25	**–13**	80.4	82.6	83.3	84.0	84.7	85.3	86.5	87.5	88.7	89.5	90.2	90.5
–20	**–4**	81.2	83.4	84.1	84.8	85.5	86.2	87.4	88.4	89.5	90.4	91.1	91.3
–15	**5**	81.9	84.2	84.9	85.6	86.3	87.0	88.2	89.2	90.4	91.3	91.8	92.1
–10	**14**	82.7	85.0	85.7	86.4	87.1	87.8	89.0	90.1	91.2	92.1	92.7	93.0
–5	**23**	83.5	85.8	86.5	87.2	87.9	88.7	89.9	90.9	92.0	92.9	92.8	92.5
0	**32**	84.3	86.6	87.3	88.1	88.8	89.5	90.7	91.7	92.8	92.6	91.8	91.3
5	**41**	85.0	87.3	88.1	88.8	89.6	90.3	91.4	92.3	92.1	91.6	90.2	89.8
10	**50**	85.8	88.1	88.9	89.6	90.4	90.8	91.6	91.3	90.8	90.0	88.8	88.3

cs300_pw1521G_v05r2_status_goaround_to_avg_310.ch16

Go–around – 140 KIAS – OEI – Pack(s) on, cowl anti–ice on <72211001D>
Figure 03–02B–79

THRUST SETTING– %N1

GO–AROUND – 140 KIAS

GA (OEI)

PACK(S) ON, WING AND COWL ANTI–ICE ON

PW1521G–3

SAT		PRESSURE ALTITUDE (Feet)											
(°C)	(°F)	–2000	0	1000	2000	3000	4000	6000	8000	10000	12000	14500	16000
–56	**–68**	75.2	77.3	78.0	78.6	79.3	79.9	81.0	81.9	83.0	83.9	84.5	84.8
–50	**–58**	76.3	78.3	79.0	79.7	80.3	81.0	82.1	83.1	84.2	85.0	85.7	86.0
–45	**–49**	77.1	79.2	79.9	80.6	81.2	81.9	83.0	84.0	85.1	85.9	86.6	86.9
–40	**–40**	77.9	80.1	80.7	81.4	82.1	82.8	83.9	84.9	86.0	86.8	87.5	87.8
–35	**–31**	78.8	80.9	81.6	82.3	82.9	83.6	84.8	85.8	86.9	87.8	88.4	88.8
–30	**–22**	79.6	81.7	82.4	83.1	83.8	84.5	85.6	86.7	87.8	88.7	89.3	89.7
–25	**–13**	80.4	82.6	83.3	84.0	84.7	85.3	86.5	87.5	88.7	89.5	90.2	90.5
–20	**–4**	81.2	83.4	84.1	84.8	85.5	86.2	87.4	88.4	89.5	90.4	91.1	91.0
–15	**5**	81.9	84.2	84.9	85.6	86.3	87.0	88.2	89.2	90.4	91.3	91.2	90.9
–10	**14**	82.7	85.0	85.7	86.4	87.1	87.8	89.0	90.1	91.2	91.4	90.9	90.6
–5	**23**	83.5	85.8	86.5	87.2	87.9	88.7	89.9	90.9	91.2	90.8	90.4	90.0
0	**32**	84.3	86.6	87.3	88.1	88.8	89.5	90.7	90.8	90.5	90.1	89.1	88.4
5	**41**	85.0	87.3	88.1	88.8	89.6	90.3	90.3	89.9	89.4	88.5	86.9	86.1
10	**50**	85.8	88.1	88.9	89.6	89.5	89.4	89.0	88.5	87.8	86.3	84.8	83.9

cs300_pw1521G_v05r2_status_goaround_to_avg_312.ch16

Go–around – 140 KIAS – OEI – Pack(s) on, wing and cowl anti–ice on <72211001D>

Figure 03–02B–80

THRUST SETTING– %N1

GO–AROUND – 140 KIAS

GA (OEI)

COWL ANTI–ICE ON

PW1521G

SAT		PRESSURE ALTITUDE (Feet)									
(°C)	(°F)	–2000	0	1000	2000	4000	6000	8000	10000	12000	14000
–56	**–68**	75.1	77.2	77.8	78.5	79.8	80.9	81.8	82.9	83.7	84.2
–50	**–58**	76.2	78.2	78.9	79.6	80.9	82.0	82.9	84.0	84.8	85.3
–45	**–49**	77.0	79.1	79.8	80.4	81.8	82.9	83.9	84.9	85.8	86.2
–40	**–40**	77.8	79.9	80.6	81.3	82.6	83.8	84.8	85.9	86.7	87.2
–35	**–31**	78.6	80.8	81.5	82.2	83.5	84.7	85.7	86.8	87.6	88.1
–30	**–22**	79.4	81.6	82.3	83.0	84.4	85.5	86.5	87.7	88.5	89.0
–25	**–13**	80.2	82.4	83.2	83.8	85.2	86.4	87.4	88.5	89.4	89.8
–20	**–4**	81.0	83.2	84.0	84.7	86.1	87.2	88.3	89.4	90.3	90.7
–15	**5**	81.8	84.1	84.8	85.5	86.9	88.1	89.1	90.3	91.1	91.6
–10	**14**	82.6	84.9	85.6	86.3	87.7	88.9	90.0	91.1	92.0	92.4
–5	**23**	83.4	85.7	86.4	87.1	88.5	89.8	90.8	92.0	92.8	93.3
0	**32**	84.1	86.4	87.2	87.9	89.3	90.6	91.6	92.8	93.7	94.1
5	**41**	84.9	87.2	88.0	88.7	90.2	91.4	92.4	93.6	94.5	94.4
10	**50**	85.7	88.0	88.8	89.5	91.0	92.2	93.3	93.9	93.8	93.8

cs300_pw1524G_v05r2_status_goaround_to_avg_010_OEI.ch16

Go–around – 140 KIAS – OEI – Cowl anti–ice on <72211001D>
Figure 03–02B–81

THRUST SETTING– %N1

GO–AROUND – 140 KIAS

GA (OEI)

WING AND COWL ANTI–ICE ON

PW1521G–3

SAT		PRESSURE ALTITUDE (Feet)											
(°C)	(°F)	–2000	0	1000	2000	3000	4000	6000	8000	10000	12000	14500	16000
–56	**–68**	75.2	77.3	78.0	78.6	79.3	79.9	81.0	81.9	83.0	83.9	84.5	84.8
–50	**–58**	76.3	78.3	79.0	79.7	80.3	81.0	82.1	83.1	84.2	85.0	85.7	86.0
–45	**–49**	77.1	79.2	79.9	80.6	81.2	81.9	83.0	84.0	85.1	85.9	86.6	86.9
–40	**–40**	77.9	80.1	80.7	81.4	82.1	82.8	83.9	84.9	86.0	86.8	87.5	87.8
–35	**–31**	78.8	80.9	81.6	82.3	82.9	83.6	84.8	85.8	86.9	87.8	88.4	88.8
–30	**–22**	79.6	81.7	82.4	83.1	83.8	84.5	85.6	86.7	87.8	88.7	89.3	89.7
–25	**–13**	80.4	82.6	83.3	84.0	84.7	85.3	86.5	87.5	88.7	89.5	90.2	90.5
–20	**–4**	81.2	83.4	84.1	84.8	85.5	86.2	87.4	88.4	89.5	90.4	91.1	91.4
–15	**5**	81.9	84.2	84.9	85.6	86.3	87.0	88.2	89.2	90.4	91.3	92.0	92.3
–10	**14**	82.7	85.0	85.7	86.4	87.1	87.8	89.0	90.1	91.2	92.1	92.8	93.2
–5	**23**	83.5	85.8	86.5	87.2	87.9	88.7	89.9	90.9	92.1	93.0	93.4	93.3
0	**32**	84.3	86.6	87.3	88.1	88.8	89.5	90.7	91.8	92.9	93.2	93.1	93.0
5	**41**	85.0	87.3	88.1	88.8	89.6	90.3	91.5	92.6	92.5	92.6	92.4	92.3
10	**50**	85.8	88.1	88.9	89.6	90.4	91.1	91.8	91.7	91.7	91.6	91.6	91.5

cs300_pw1521G_v05r2_status_goaround_to_avg_012.ch16

Go–around – 140 KIAS – OEI – Wing and cowl anti–ice on <72211001D>
Figure 03–02B–82

THRUST SETTING– %N1

GO–AROUND – 140 KIAS

GA (AEO or OEI)

ENGINE BLEEDS CLOSED

PW1521G

SAT		PRESSURE ALTITUDE (Feet)									
(°C)	(°F)	–2000	0	1000	2000	4000	6000	8000	10000	12000	14000
–56	–68	75.0	77.1	77.7	78.4	79.7	80.8	81.7	82.8	83.6	84.0
–50	–58	76.1	78.1	78.8	79.5	80.7	81.9	82.8	83.9	84.7	85.1
–45	–49	76.9	79.0	79.7	80.3	81.6	82.8	83.7	84.8	85.6	86.1
–40	–40	77.7	79.8	80.5	81.2	82.5	83.6	84.6	85.7	86.5	87.0
–35	–31	78.5	80.7	81.4	82.1	83.4	84.5	85.5	86.6	87.4	87.9
–30	–22	79.3	81.5	82.2	82.9	84.2	85.4	86.4	87.5	88.3	88.8
–25	–13	80.1	82.3	83.0	83.7	85.1	86.2	87.2	88.4	89.2	89.7
–20	–4	80.9	83.1	83.8	84.6	85.9	87.1	88.1	89.2	90.1	90.5
–15	5	81.7	83.9	84.7	85.4	86.8	87.9	89.0	90.1	90.9	91.4
–10	14	82.5	84.7	85.5	86.2	87.6	88.8	89.8	91.0	91.8	92.2
–5	23	83.3	85.5	86.3	87.0	88.4	89.6	90.6	91.8	92.7	93.1
0	32	84.0	86.3	87.1	87.8	89.2	90.4	91.5	92.6	93.5	93.9
5	41	84.8	87.1	87.8	88.6	90.0	91.2	92.3	93.5	94.3	94.8
10	50	85.5	87.9	88.6	89.4	90.8	92.1	93.1	94.3	94.4	94.2
15	59	86.3	88.7	89.4	90.2	91.6	92.9	93.8	93.7	93.7	93.6
20	68	87.1	89.4	90.2	90.9	92.4	93.1	93.0	93.0	92.8	92.7
25	77	87.8	90.2	91.0	91.7	92.2	92.2	92.1	91.9	91.7	91.6
30	86	88.5	90.9	91.0	91.1	91.2	91.1	91.0	90.7	90.5	90.3
35	95	88.9	89.8	89.9	89.9	90.0	90.0	89.8	89.4	89.2	89.0
40	104	87.7	88.7	88.7	88.8	88.9	88.9	88.6	88.2	87.9	87.7
45	113	86.5	87.5	87.6	87.6	87.7	87.7	87.4	86.9	86.6	––
53	127	84.6	85.6	85.7	85.7	85.8	85.8	85.3	––	––	––

cs300_pw1524G_v05r2_status_goaround_to_avg_000_AEO_OEI.ch16

Go–around – 140 KIAS – AEO or OEI – Engine bleeds closed <72211001D>
Figure 03–02B–83

THRUST SETTING– %N1

GO–AROUND – 140 KIAS

GA (AEO or OEI)

COWL ANTI–ICE ON

PW1521G

SAT		PRESSURE ALTITUDE (Feet)									
(°C)	(°F)	–2000	0	1000	2000	4000	6000	8000	10000	12000	14000
–56	**–68**	75.1	77.2	77.8	78.5	79.8	80.9	81.8	82.9	83.7	84.2
–50	**–58**	76.2	78.2	78.9	79.6	80.9	82.0	82.9	84.0	84.8	85.3
–45	**–49**	77.0	79.1	79.8	80.4	81.8	82.9	83.9	84.9	85.8	86.2
–40	**–40**	77.8	79.9	80.6	81.3	82.6	83.8	84.8	85.9	86.7	87.2
–35	**–31**	78.6	80.8	81.5	82.2	83.5	84.7	85.7	86.8	87.6	88.1
–30	**–22**	79.4	81.6	82.3	83.0	84.4	85.5	86.5	87.7	88.5	89.0
–25	**–13**	80.2	82.4	83.2	83.8	85.2	86.4	87.4	88.5	89.4	89.8
–20	**–4**	81.0	83.2	84.0	84.7	86.1	87.2	88.3	89.4	90.3	90.7
–15	**5**	81.8	84.1	84.8	85.5	86.9	88.1	89.1	90.3	91.1	91.6
–10	**14**	82.6	84.9	85.6	86.3	87.7	88.9	90.0	91.1	92.0	92.4
–5	**23**	83.4	85.7	86.4	87.1	88.5	89.8	90.8	92.0	92.8	93.3
0	**32**	84.1	86.4	87.2	87.9	89.3	90.6	91.6	92.8	93.7	94.1
5	**41**	84.9	87.2	88.0	88.7	90.2	91.4	92.4	93.6	94.5	94.4
10	**50**	85.7	88.0	88.8	89.5	91.0	92.2	93.3	93.9	93.8	93.8

cs300_pw1524G_v05r2_status_goaround_to_avg_010_AEO_OEI.ch16

Go–around – 140 KIAS – AEO or OEI – Cowl anti–ice on <72211001D>
Figure 03–02B–84

C. Runway conditions assessment matrix

Runway condition code	Runway surface condition description	Pilot-reported braking action
6	Dry	—
5	• Frost	Good

Runway condition code	Runway surface condition description	Pilot-reported braking action
	• Wet (includes damp and 3 mm (0.12 in.) depth or less of water) 3 mm (0.12 in.) depth or less of: • Slush • Dry snow • Wet snow	
4	–15°C and colder outside air temperature: • Compacted snow	Good to medium
3	• Wet (“slippery when wet” runway) • Dry snow or wet snow (any depth) over compacted snow More than 3 mm (0.12 in.) depth, of: • Dry snow • Wet snow Warmer than –15°C outside air: • Compacted snow	Medium
2	More than 3 mm (0.12 in.) depth, of: • Water • Slush	Medium to poor
1	• Ice	Poor

D. Operational landing distance (OLD)

OPERATIONAL LANDING DISTANCES								
ADVISORY DATA ONLY								
FLAP 4 VREF 2 THRUST REVERSERS MANUAL BRAKES OR AUTOBRAKE LEVEL HIGH MANUAL LANDING		ISA WIND CALM SLOPE ZERO					OPERATIONAL LANDING DISTANCES (M)	
WEIGHT (KG)	RUNWAY CONDITION CODE	PRESSURE ALTITUDE (1000 FT)						
		0	1	2	3	4	6	8
39000	6	901	920	938	958	979	1024	1072
	5	1025	1050	1076	1103	1130	1188	1250
	4	1172	1197	1223	1250	1278	1337	1399
	3	1254	1282	1310	1340	1371	1436	1505
	2	1345	1379	1414	1451	1488	1569	1662
	1	1555	1593	1632	1673	1713	1803	1898
40000	6	917	936	956	977	998	1044	1095
	5	1046	1072	1098	1125	1152	1212	1277
	4	1193	1219	1245	1273	1301	1360	1425
	3	1277	1305	1334	1364	1396	1462	1534
	2	1373	1408	1443	1480	1519	1603	1702
	1	1585	1624	1663	1704	1747	1837	1936
44000	6	986	1007	1030	1053	1077	1128	1185
	5	1128	1155	1184	1214	1245	1314	1391
	4	1276	1304	1333	1362	1393	1460	1534
	3	1367	1398	1430	1463	1497	1572	1654
	2	1484	1522	1562	1605	1652	1752	1862
	1	1703	1746	1789	1833	1880	1982	2094

CS300_ALL_NAMEPLATES_FCOM_MET_v04_OLD_HI_F4_p1

NOTE

Data does not include an operational factor

Operational landing distances – FLAP 4 – Manual landing – Manual brakes or autobrake HI – page 1 <Metric>
Figure 03–02B–85

OPERATIONAL LANDING DISTANCES

ADVISORY DATA ONLY

FLAP 4 VREF 2 THRUST REVERSERS MANUAL BRAKES OR AUTOBRAKE LEVEL HIGH MANUAL LANDING	ISA WIND CALM SLOPE ZERO	OPERATIONAL LANDING DISTANCES (M)

WEIGHT (KG)	RUNWAY CONDITION CODE	PRESSURE ALTITUDE (1000 FT)						
		0	1	2	3	4	6	8
48000	6	1055	1078	1102	1127	1155	1212	1275
	5	1211	1241	1273	1307	1343	1421	1508
	4	1358	1389	1420	1452	1487	1562	1642
	3	1458	1492	1526	1562	1601	1684	1773
	2	1599	1644	1691	1740	1792	1902	2024
	1	1822	1868	1916	1965	2017	2129	2251
52000	6	1123	1149	1176	1205	1234	1296	1360
	5	1296	1330	1367	1405	1445	1532	1627
	4	1441	1474	1509	1546	1584	1664	1751
	3	1549	1586	1625	1665	1707	1796	1893
	2	1722	1771	1823	1878	1935	2056	2189
	1	1942	1992	2045	2099	2156	2278	2411
56000	6	1193	1221	1249	1278	1308	1372	1441
	5	1385	1423	1463	1505	1550	1645	1748
	4	1526	1562	1600	1639	1680	1766	1859
	3	1642	1683	1725	1768	1813	1909	2013
	2	1848	1902	1959	2018	2080	2210	2354
	1	2065	2120	2177	2236	2298	2428	2572

CS300_ALL_NAMEPLATES_FCOM_MET_v04_OLD_HI_F4_p2

NOTE

Data does not include an operational factor

Operational landing distances – FLAP 4 – Manual landing – Manual brakes or autobrake HI – page 2 <Metric>
Figure 03–02B–86

OPERATIONAL LANDING DISTANCES

ADVISORY DATA ONLY

FLAP 4 VREF 2 THRUST REVERSERS MANUAL BRAKES OR AUTOBRAKE LEVEL HIGH MANUAL LANDING	ISA WIND CALM SLOPE ZERO	OPERATIONAL LANDING DISTANCES (M)

WEIGHT (KG)	RUNWAY CONDITION CODE	PRESSURE ALTITUDE (1000 FT)						
		0	1	2	3	4	6	8
60000	6	1255	1283	1313	1345	1377	1445	1519
	5	1472	1514	1558	1604	1652	1754	1867
	4	1608	1647	1687	1729	1772	1864	1963
	3	1733	1776	1821	1868	1915	2017	2128
	2	1971	2030	2092	2155	2220	2361	2516
	1	2186	2245	2306	2370	2434	2574	2727
64000	6	1314	1345	1377	1410	1444	1516	1595
	5	1559	1605	1652	1701	1753	1863	1984
	4	1688	1729	1772	1817	1862	1960	2065
	3	1822	1868	1915	1965	2015	2124	2242
	2	2094	2157	2222	2290	2360	2512	2679
	1	2305	2368	2433	2501	2570	2719	2882
67500	6	1366	1398	1431	1466	1502	1578	1661
	5	1636	1685	1735	1787	1842	1959	2089
	4	1758	1801	1846	1893	1941	2043	2154
	3	1899	1948	1997	2049	2103	2217	2340
	2	2202	2268	2336	2409	2483	2644	2820
	1	2410	2476	2543	2615	2688	2846	3016

CS300_ALL_NAMEPLATES_FCOM_MET_v04_OLD_HI_F4_p3

NOTE

Data does not include an operational factor

Operational landing distances – FLAP 4 – Manual landing – Manual brakes or autobrake HI – page 3 <Metric>
Figure 03–02B–87

OPERATIONAL LANDING DISTANCES

ADVISORY DATA ONLY

FLAP 4 VREF 2 THRUST REVERSERS AUTOBRAKE LEVEL MEDIUM MANUAL LANDING	ISA WIND CALM SLOPE ZERO	OPERATIONAL LANDING DISTANCES (M)

WEIGHT (KG)	RUNWAY CONDITION CODE	PRESSURE ALTITUDE (1000 FT)						
		0	1	2	3	4	6	8
39000	6	1191	1218	1246	1275	1304	1367	1433
	5	1192	1219	1247	1276	1306	1369	1437
	4	1252	1280	1309	1340	1371	1437	1507
	3	1292	1322	1353	1384	1417	1486	1560
	2	1345	1379	1413	1448	1486	1565	1652
	1	1553	1590	1629	1670	1712	1800	1895
40000	6	1214	1242	1270	1300	1330	1394	1463
	5	1215	1243	1271	1301	1332	1396	1467
	4	1276	1305	1335	1365	1397	1464	1538
	3	1317	1347	1378	1411	1444	1514	1591
	2	1373	1407	1442	1478	1516	1598	1691
	1	1583	1621	1662	1702	1745	1835	1934
44000	6	1307	1337	1368	1400	1432	1505	1585
	5	1308	1339	1370	1402	1436	1509	1590
	4	1372	1403	1436	1469	1504	1579	1663
	3	1414	1447	1481	1516	1552	1631	1719
	2	1483	1520	1559	1601	1642	1742	1852
	1	1703	1744	1788	1833	1879	1980	2092

CS300_ALL_NAMEPLATES_FCOM_MET_v04_OLD_MED_F4_p1

NOTE

Data does not include an operational factor

Operational landing distances – FLAP 4 – Manual landing – Autobrake MED – page 1 <Metric>
Figure 03–02B–88

OPERATIONAL LANDING DISTANCES

ADVISORY DATA ONLY

FLAP 4 VREF 2 THRUST REVERSERS AUTOBRAKE LEVEL MEDIUM MANUAL LANDING	ISA WIND CALM SLOPE ZERO	OPERATIONAL LANDING DISTANCES (M)

WEIGHT (KG)	RUNWAY CONDITION CODE	PRESSURE ALTITUDE (1000 FT)						
		0	1	2	3	4	6	8
48000	6	1398	1431	1464	1499	1538	1619	1706
	5	1401	1433	1467	1503	1542	1624	1712
	4	1466	1500	1535	1572	1612	1697	1788
	3	1511	1546	1582	1621	1663	1751	1846
	2	1595	1636	1682	1730	1782	1893	2014
	1	1823	1867	1915	1964	2016	2128	2251
52000	6	1489	1525	1564	1604	1645	1733	1827
	5	1492	1529	1568	1608	1650	1739	1835
	4	1560	1598	1638	1680	1723	1814	1913
	3	1606	1645	1687	1730	1775	1870	1973
	2	1713	1763	1814	1870	1926	2047	2179
	1	1942	1992	2044	2101	2158	2279	2412
56000	6	1583	1623	1665	1708	1752	1846	1948
	5	1587	1628	1670	1713	1759	1854	1957
	4	1657	1698	1742	1786	1833	1931	2037
	3	1704	1748	1792	1839	1888	1990	2101
	2	1839	1894	1950	2010	2071	2203	2346
	1	2066	2121	2178	2237	2299	2431	2573

CS300_ALL_NAMEPLATES_FCOM_MET_v04_OLD_MED_F4_p2

NOTE

Data does not include an operational factor

Operational landing distances – FLAP 4 – Manual landing – Autobrake MED – page 2 <Metric>
Figure 03–02B–89

OPERATIONAL LANDING DISTANCES

ADVISORY DATA ONLY

FLAP 4 VREF 2 THRUST REVERSERS AUTOBRAKE LEVEL MEDIUM MANUAL LANDING	ISA WIND CALM SLOPE ZERO	OPERATIONAL LANDING DISTANCES (M)

WEIGHT (KG)	RUNWAY CONDITION CODE	PRESSURE ALTITUDE (1000 FT)						
		0	1	2	3	4	6	8
60000	6	1674	1716	1760	1806	1854	1954	2063
	5	1679	1722	1767	1814	1862	1963	2073
	4	1750	1794	1840	1888	1937	2042	2155
	3	1799	1846	1894	1944	1995	2105	2223
	2	1963	2023	2084	2147	2213	2354	2509
	1	2187	2246	2307	2371	2436	2578	2731
64000	6	1761	1807	1853	1902	1952	2059	2174
	5	1768	1814	1861	1911	1962	2070	2188
	4	1840	1887	1936	1986	2039	2150	2270
	3	1893	1941	1992	2045	2100	2216	2342
	2	2087	2149	2215	2283	2353	2504	2671
	1	2308	2369	2435	2503	2572	2722	2885
67500	6	1837	1885	1934	1985	2038	2150	2271
	5	1845	1893	1943	1995	2048	2163	2288
	4	1918	1968	2019	2072	2127	2243	2369
	3	1973	2025	2078	2133	2191	2313	2445
	2	2194	2260	2329	2401	2476	2637	2813
	1	2412	2478	2546	2617	2691	2849	3020

CS300_ALL_NAMEPLATES_FCOM_MET_v04_OLD_MED_F4_p3

NOTE

Data does not include an operational factor

Operational landing distances – FLAP 4 – Manual landing – Autobrake MED – page 3 <Metric>
Figure 03–02B–90

OPERATIONAL LANDING DISTANCES

ADVISORY DATA ONLY

FLAP 4 VREF 2 THRUST REVERSERS AUTOBRAKE LEVEL LOW MANUAL LANDING	ISA WIND CALM SLOPE ZERO	OPERATIONAL LANDING DISTANCES (M)

WEIGHT (KG)	RUNWAY CONDITION CODE	PRESSURE ALTITUDE (1000 FT)						
		0	1	2	3	4	6	8
39000	6	1496	1532	1570	1609	1649	1733	1824
	5	1496	1532	1570	1609	1649	1733	1824
	4	1496	1532	1570	1609	1649	1733	1824
	3	1498	1535	1573	1612	1652	1737	1828
	2	1500	1536	1575	1614	1655	1742	1835
	1	1661	1703	1746	1791	1837	1934	2039
40000	6	1527	1564	1603	1642	1683	1770	1865
	5	1527	1564	1603	1642	1683	1770	1865
	4	1527	1564	1603	1642	1683	1770	1865
	3	1530	1567	1606	1646	1687	1774	1869
	2	1531	1569	1608	1649	1691	1779	1881
	1	1695	1737	1782	1827	1874	1973	2082
44000	6	1652	1693	1735	1778	1823	1921	2031
	5	1652	1693	1735	1778	1823	1921	2031
	4	1652	1693	1735	1778	1823	1921	2031
	3	1656	1696	1738	1782	1827	1925	2035
	2	1658	1699	1742	1786	1832	1939	2051
	1	1829	1875	1923	1973	2023	2136	2260

CS300_ALL_NAMEPLATES_FCOM_MET_v04_OLD_LO_F4_p1

NOTE

Data does not include an operational factor

Operational landing distances – FLAP 4 – Manual landing – Autobrake LO – page 1 <Metric>
Figure 03–02B–91

OPERATIONAL LANDING DISTANCES

ADVISORY DATA ONLY

FLAP 4 VREF 2 THRUST REVERSERS AUTOBRAKE LEVEL LOW MANUAL LANDING	ISA WIND CALM SLOPE ZERO	OPERATIONAL LANDING DISTANCES (M)

WEIGHT (KG)	RUNWAY CONDITION CODE	PRESSURE ALTITUDE (1000 FT)						
		0	1	2	3	4	6	8
48000	6	1777	1820	1866	1914	1966	2077	2197
	5	1777	1820	1866	1914	1966	2077	2197
	4	1777	1820	1866	1914	1966	2077	2197
	3	1780	1824	1870	1918	1971	2082	2202
	2	1784	1828	1879	1930	1983	2096	2219
	1	1961	2011	2063	2117	2176	2301	2436
52000	6	1900	1949	2002	2056	2113	2233	2363
	5	1900	1949	2002	2056	2113	2233	2363
	4	1900	1949	2002	2056	2113	2233	2363
	3	1904	1953	2006	2061	2118	2238	2368
	2	1914	1965	2018	2074	2132	2254	2388
	1	2092	2147	2206	2268	2332	2467	2614
56000	6	2029	2083	2140	2199	2260	2390	2530
	5	2029	2083	2140	2199	2260	2390	2530
	4	2029	2083	2140	2199	2260	2390	2530
	3	2033	2088	2145	2204	2265	2395	2536
	2	2044	2100	2157	2217	2280	2413	2556
	1	2227	2289	2352	2418	2487	2634	2791

CS300_ALL_NAMEPLATES_FCOM_MET_v04_OLD_LO_F4_p2

NOTE

Data does not include an operational factor

Operational landing distances – FLAP 4 – Manual landing – Autobrake LO – page 2 <Metric>
Figure 03–02B–92

OPERATIONAL LANDING DISTANCES

ADVISORY DATA ONLY

FLAP 4 VREF 2 THRUST REVERSERS AUTOBRAKE LEVEL LOW MANUAL LANDING	ISA WIND CALM SLOPE ZERO	OPERATIONAL LANDING DISTANCES (M)

WEIGHT (KG)	RUNWAY CONDITION CODE	PRESSURE ALTITUDE (1000 FT)						
		0	1	2	3	4	6	8
60000	6	2152	2211	2272	2334	2400	2539	2689
	5	2152	2211	2272	2334	2400	2539	2689
	4	2152	2211	2272	2334	2400	2539	2689
	3	2157	2216	2277	2340	2405	2545	2695
	2	2169	2228	2290	2354	2421	2563	2717
	1	2359	2424	2492	2563	2635	2792	2961
64000	6	2273	2335	2399	2466	2536	2684	2843
	5	2273	2335	2399	2466	2536	2684	2843
	4	2273	2335	2399	2466	2536	2684	2843
	3	2278	2341	2405	2472	2542	2690	2850
	2	2290	2353	2419	2488	2559	2710	2874
	1	2488	2556	2628	2704	2781	2947	3128
67500	6	2377	2443	2511	2581	2654	2810	2978
	5	2377	2443	2511	2581	2654	2810	2978
	4	2377	2443	2511	2581	2654	2810	2978
	3	2383	2449	2517	2587	2661	2816	2985
	2	2396	2462	2531	2603	2678	2837	3011
	1	2599	2672	2747	2827	2908	3083	3272

CS300_ALL_NAMEPLATES_FCOM_MET_v04_OLD_LO_F4_p3

NOTE

Data does not include an operational factor

Operational landing distances – FLAP 4 – Manual landing – Autobrake LO – page 3 <Metric>

Figure 03–02B–93

OPERATIONAL LANDING DISTANCES CORRECTIONS

FLAP 4
MANUAL BRAKES OR AUTOBRAKE LEVEL HIGH

OPERATIONAL LANDING DISTANCES CORRECTIONS (M)

WEIGHT (KG)	RUNWAY CONDITION CODE	VREF	TAIL WIND	SLOPE		REV		ISA DEVIATION	
		5kts	-10kts	-1%	1%	0	1	-10°C	+10°C
39000	6	100	290	40	0	70	50	-20	50
	5	150	490	70	0	330	130	-20	80
	4	120	420	70	-10	320	140	-20	70
	3	130	490	120	-20	470	190	-30	80
	2	190	860	220	-20	1110	380	-30	130
	1	160	930	390	-50	1460	500	-30	120
67500	6	130	360	40	0	150	70	-30	90
	5	180	670	120	-20	690	270	-40	140
	4	140	490	100	-20	430	190	-40	100
	3	150	570	130	-30	610	260	-40	110
	2	200	960	250	-50	1600	570	-60	160
	1	160	820	270	-80	1490	550	-60	120

CS300_ALL_NAMEPLATES_FCOM_MET_v04_OLD_HI_corrections_F4

NOTE
Data does not include an operational factor

Operational landing distance corrections – FLAP 4 – Manual brakes or autobrake HI <Metric>
Figure 03–02B–94

OPERATIONAL LANDING DISTANCES CORRECTIONS									
FLAP 4 AUTOBRAKE LEVEL MEDIUM							OPERATIONAL LANDING DISTANCES CORRECTIONS (M)		
WEIGHT (KG)	RUNWAY CONDITION CODE	VREF	TAIL WIND	SLOPE		REV		ISA DEVIATION	
		5kts	-10kts	-1%	1%	0	1	-10°C	+10°C
39000	6	140	370	40	10	50	50	-30	70
	5	150	500	60	0	260	50	-30	90
	4	140	440	50	0	160	40	-30	70
	3	140	500	120	0	360	150	-30	80
	2	200	860	210	-20	1110	380	-30	130
	1	170	940	380	-50	1460	500	-30	120
67500	6	160	440	30	10	10	10	-40	100
	5	180	690	120	0	690	260	-50	140
	4	160	510	70	0	190	60	-50	110
	3	160	580	130	-10	450	150	-50	110
	2	210	960	240	-50	1600	570	-60	160
	1	160	820	260	-80	1490	540	-60	120

CS300_ALL_NAMEPLATES_FCOM_MET_v04_OLD_MED_corrections_F4

NOTE

Data does not include an operational factor

Operational landing distance corrections – FLAP 4 – Autobrake MED <Metric>
Figure 03–02B–95

OPERATIONAL LANDING DISTANCES CORRECTIONS									
FLAP 4 AUTOBRAKE LEVEL LOW								OPERATIONAL LANDING DISTANCES CORRECTIONS (M)	
WEIGHT (KG)	RUNWAY CONDITION CODE	VREF	TAIL WIND	SLOPE		REV		ISA DEVIATION	
		5kts	-10kts	-1%	1%	0	1	-10°C	+10°C
39000	6	180	500	40	10	130	130	-30	90
	5	180	500	40	10	130	130	-30	90
	4	180	500	40	10	130	130	-30	90
	3	180	550	50	0	180	150	-30	90
	2	200	860	210	0	860	190	-30	130
	1	180	940	380	-30	1180	350	-40	120
67500	6	200	590	30	10	100	100	-70	120
	5	200	690	30	10	100	100	-70	140
	4	200	590	30	10	100	100	-70	120
	3	200	620	60	0	120	110	-70	120
	2	210	960	240	-10	1390	420	-70	160
	1	200	820	260	-40	1140	330	-70	130

CS300_ALL_NAMEPLATES_FCOM_MET_v04_OLD_LO_corrections_F4

NOTE

Data does not include an operational factor

Operational landing distance corrections – FLAP 4 – Autobrake LO <Metric>
Figure 03–02B–96

OPERATIONAL LANDING DISTANCES

ADVISORY DATA ONLY

FLAP 4 VREF+5 2 THRUST REVERSERS MANUAL BRAKES OR AUTOBRAKE LEVEL HIGH AUTOLAND ON	ISA WIND CALM SLOPE ZERO ILS GS 3.00° TCH 50’	OPERATIONAL LANDING DISTANCES (M)

WEIGHT (KG)	RUNWAY CONDITION CODE	PRESSURE ALTITUDE (1000 FT)						
		0	1	2	3	4	6	8
39000	6	1163	1186	1211	1236	1262	1316	1374
	5	1316	1345	1377	1410	1443	1515	1592
	4	1458	1488	1520	1552	1585	1656	1731
	3	1545	1578	1613	1648	1685	1762	1844
	2	1652	1692	1736	1781	1829	1928	2035
	1	1859	1903	1949	1994	2043	2145	2255
40000	6	1182	1206	1231	1257	1284	1339	1399
	5	1340	1371	1403	1436	1471	1544	1625
	4	1482	1513	1545	1578	1612	1684	1762
	3	1572	1606	1640	1677	1714	1792	1878
	2	1684	1727	1772	1819	1866	1968	2079
	1	1894	1938	1983	2032	2080	2184	2299
44000	6	1261	1287	1314	1341	1370	1432	1501
	5	1439	1473	1508	1545	1582	1666	1759
	4	1580	1614	1648	1684	1720	1800	1888
	3	1678	1714	1752	1791	1831	1919	2015
	2	1820	1868	1916	1966	2018	2131	2258
	1	2028	2077	2126	2179	2232	2347	2476

ILS GS AND TCH CORRECTION (M)	PER FT ABOVE 50’	PER 0.1° BELOW 3.00°	PER 0.1° ABOVE 3.00°
	+7	+14	-7

CS300_ALL_NAMEPLATES_FCOM_MET_v01_OLD_ATLND_HI_F4_p1

NOTE

Data does not include an operational factor

Operational landing distances – FLAP 4 – Autoland on – Manual brakes or autobrake HI – page 1 <Metric>
Figure 03–02B–97

OPERATIONAL LANDING DISTANCES								
ADVISORY DATA ONLY								
FLAP 4 VREF+5 2 THRUST REVERSERS MANUAL BRAKES OR AUTOBRAKE LEVEL HIGH AUTOLAND ON		ISA WIND CALM SLOPE ZERO ILS GS 3.00° TCH 50’					OPERATIONAL LANDING DISTANCES (M)	
WEIGHT (KG)	RUNWAY CONDITION CODE	PRESSURE ALTITUDE (1000 FT)						
		0	1	2	3	4	6	8
48000	6	1338	1366	1394	1425	1458	1527	1601
	5	1538	1575	1614	1654	1699	1793	1895
	4	1677	1712	1749	1788	1830	1918	2014
	3	1783	1822	1863	1905	1951	2048	2153
	2	1956	2007	2059	2115	2174	2301	2439
	1	2164	2215	2270	2326	2386	2514	2654
52000	6	1414	1445	1477	1511	1546	1620	1699
	5	1638	1680	1724	1770	1818	1921	2033
	4	1772	1811	1853	1897	1942	2036	2138
	3	1887	1930	1976	2024	2073	2177	2289
	2	2092	2148	2208	2270	2335	2472	2622
	1	2298	2355	2416	2479	2544	2682	2832
56000	6	1491	1525	1560	1596	1633	1711	1796
	5	1743	1789	1837	1888	1940	2051	2174
	4	1870	1914	1958	2005	2053	2154	2263
	3	1994	2042	2091	2141	2194	2306	2427
	2	2233	2295	2360	2426	2496	2645	2808
	1	2437	2500	2565	2631	2702	2850	3012
ILS GS AND TCH CORRECTION (M)		PER FT ABOVE 50’			PER 0.1° BELOW 3.00°		PER 0.1° ABOVE 3.00°	
		+7			+14		-7	

CS300_ALL_NAMEPLATES_FCOM_MET_v01_OLD_ATLND_HI_F4_p2

NOTE

Data does not include an operational factor

Operational landing distances – FLAP 4 – Autoland on – Manual brakes or autobrake HI – page 2 <Metric>
Figure 03–02B–98

OPERATIONAL LANDING DISTANCES

ADVISORY DATA ONLY

FLAP 4 VREF+5 2 THRUST REVERSERS MANUAL BRAKES OR AUTOBRAKE LEVEL HIGH AUTOLAND ON	ISA WIND CALM SLOPE ZERO ILS GS 3.00° TCH 50’	OPERATIONAL LANDING DISTANCES (M)

WEIGHT (KG)	RUNWAY CONDITION CODE	PRESSURE ALTITUDE (1000 FT)						
		0	1	2	3	4	6	8
60000	6	1565	1600	1637	1675	1715	1798	1887
	5	1846	1896	1948	2001	2057	2179	2311
	4	1966	2012	2059	2108	2159	2267	2383
	3	2099	2149	2201	2255	2311	2430	2558
	2	2372	2438	2507	2579	2653	2814	2989
	1	2573	2641	2709	2781	2855	3014	3186
64000	6	1636	1673	1712	1752	1794	1882	1976
	5	1947	2000	2056	2114	2175	2305	2447
	4	2058	2107	2157	2208	2262	2376	2499
	3	2200	2254	2309	2366	2425	2551	2687
	2	2508	2580	2653	2729	2810	2982	3169
	1	2707	2778	2851	2926	3006	3174	3357
67500	6	1697	1736	1777	1819	1862	1954	2053
	5	2036	2092	2151	2213	2278	2416	2567
	4	2138	2189	2241	2296	2352	2472	2601
	3	2289	2345	2402	2462	2524	2656	2799
	2	2628	2703	2781	2862	2947	3129	3328
	1	2823	2898	2975	3054	3137	3315	3507

ILS GS AND TCH CORRECTION (M)	PER FT ABOVE 50’	PER 0.1° BELOW 3.00°	PER 0.1° ABOVE 3.00°
	+7	+14	-7

CS300_ALL_NAMEPLATES_FCOM_MET_v01_OLD_ATLND_HI_F4_p3

NOTE

Data does not include an operational factor

Operational landing distances – FLAP 4 – Autoland on – Manual brakes or autobrake HI – page 3 <Metric>
Figure 03–02B–99

OPERATIONAL LANDING DISTANCES

ADVISORY DATA ONLY

FLAP 4 VREF+5 2 THRUST REVERSERS AUTOBRAKE LEVEL MEDIUM AUTOLAND ON	ISA WIND CALM SLOPE ZERO ILS GS 3.00° TCH 50’	OPERATIONAL LANDING DISTANCES (M)

WEIGHT (KG)	RUNWAY CONDITION CODE	PRESSURE ALTITUDE (1000 FT)						
		0	1	2	3	4	6	8
39000	6	1514	1548	1582	1618	1654	1731	1813
	5	1515	1548	1583	1619	1655	1733	1815
	4	1578	1613	1649	1685	1724	1804	1889
	3	1617	1653	1690	1728	1768	1851	1940
	2	1662	1700	1741	1782	1828	1926	2031
	1	1862	1904	1950	1996	2044	2147	2257
40000	6	1542	1576	1611	1647	1684	1763	1848
	5	1543	1577	1612	1648	1686	1765	1851
	4	1606	1642	1678	1716	1755	1836	1925
	3	1646	1682	1720	1759	1800	1885	1977
	2	1692	1732	1773	1818	1865	1964	2074
	1	1895	1940	1985	2033	2082	2186	2301
44000	6	1651	1688	1726	1765	1805	1893	1990
	5	1652	1689	1727	1767	1807	1896	1994
	4	1719	1757	1796	1837	1879	1971	2072
	3	1760	1800	1840	1883	1926	2021	2126
	2	1820	1866	1913	1963	2014	2126	2253
	1	2032	2080	2129	2181	2234	2350	2479

ILS GS AND TCH CORRECTION (M)	PER FT ABOVE 50’	PER 0.1° BELOW 3.00°	PER 0.1° ABOVE 3.00°
	+7	+14	-7

CS300_ALL_NAMEPLATES_FCOM_MET_v01_OLD_ATLND_MED_F4_p1

NOTE

Data does not include an operational factor

Operational landing distances – FLAP 4 – Autoland on – Autobrake MED – page 1 <Metric>
Figure 03–02B–100

OPERATIONAL LANDING DISTANCES

ADVISORY DATA ONLY

FLAP 4 VREF+5 2 THRUST REVERSERS AUTOBRAKE LEVEL MEDIUM AUTOLAND ON	ISA WIND CALM SLOPE ZERO ILS GS 3.00° TCH 50’	OPERATIONAL LANDING DISTANCES (M)

WEIGHT (KG)	RUNWAY CONDITION CODE	PRESSURE ALTITUDE (1000 FT)						
		0	1	2	3	4	6	8
48000	6	1759	1798	1839	1882	1928	2027	2132
	5	1761	1800	1841	1885	1932	2031	2137
	4	1830	1871	1913	1958	2006	2108	2218
	3	1873	1915	1959	2005	2055	2161	2275
	2	1953	2003	2056	2110	2170	2297	2435
	1	2167	2220	2273	2329	2390	2519	2658
52000	6	1865	1909	1956	2004	2054	2160	2273
	5	1868	1912	1959	2008	2058	2165	2279
	4	1939	1984	2033	2083	2135	2244	2362
	3	1983	2030	2081	2132	2186	2300	2422
	2	2088	2144	2204	2266	2331	2468	2619
	1	2302	2359	2420	2483	2548	2687	2837
56000	6	1976	2024	2074	2125	2179	2292	2414
	5	1979	2027	2078	2130	2184	2298	2421
	4	2052	2102	2154	2207	2263	2380	2506
	3	2099	2150	2204	2260	2317	2438	2570
	2	2230	2292	2357	2424	2493	2642	2805
	1	2442	2505	2570	2638	2707	2856	3019

ILS GS AND TCH CORRECTION (M)	PER FT ABOVE 50’	PER 0.1° BELOW 3.00°	PER 0.1° ABOVE 3.00°
	+7	+14	-7

CS300_ALL_NAMEPLATES_FCOM_MET_v01_OLD_ATLND_MED_F4_p2

NOTE

Data does not include an operational factor

Operational landing distances – FLAP 4 – Autoland on – Autobrake MED – page 2 <Metric>
Figure 03–02B–101

OPERATIONAL LANDING DISTANCES								
ADVISORY DATA ONLY								
FLAP 4 VREF+5 2 THRUST REVERSERS AUTOBRAKE LEVEL MEDIUM AUTOLAND ON		ISA WIND CALM SLOPE ZERO ILS GS 3.00° TCH 50’					OPERATIONAL LANDING DISTANCES (M)	
WEIGHT (KG)	RUNWAY CONDITION CODE	PRESSURE ALTITUDE (1000 FT)						
		0	1	2	3	4	6	8
60000	6	2081	2132	2185	2240	2297	2417	2547
	5	2085	2137	2190	2246	2303	2424	2555
	4	2160	2213	2268	2325	2384	2509	2643
	3	2209	2264	2321	2380	2441	2570	2710
	2	2369	2435	2504	2576	2651	2812	2987
	1	2579	2646	2714	2787	2861	3021	3193
64000	6	2183	2237	2293	2351	2411	2539	2676
	5	2188	2243	2299	2358	2419	2547	2686
	4	2265	2321	2379	2439	2501	2633	2775
	3	2317	2375	2435	2497	2562	2699	2847
	2	2506	2577	2650	2728	2807	2979	3167
	1	2713	2785	2857	2935	3013	3182	3366
67500	6	2271	2328	2387	2447	2510	2644	2788
	5	2277	2334	2394	2455	2519	2654	2799
	4	2355	2414	2475	2537	2603	2741	2890
	3	2410	2471	2533	2599	2667	2810	2965
	2	2626	2701	2779	2860	2945	3128	3327
	1	2831	2905	2982	3061	3146	3324	3516
ILS GS AND TCH CORRECTION (M)		PER FT ABOVE 50’			PER 0.1° BELOW 3.00°		PER 0.1° ABOVE 3.00°	
		+7			+14		-7	

CS300_ALL_NAMEPLATES_FCOM_MET_v01_OLD_ATLND_MED_F4_p3

NOTE

Data does not include an operational factor

Operational landing distances – FLAP 4 – Autoland on – Autobrake MED – page 3 <Metric>
Figure 03–02B–102

OPERATIONAL LANDING DISTANCES

ADVISORY DATA ONLY

FLAP 4 VREF+5 2 THRUST REVERSERS AUTOBRAKE LEVEL LOW AUTOLAND ON	ISA WIND CALM SLOPE ZERO ILS GS 3.00° TCH 50’	OPERATIONAL LANDING DISTANCES (M)

WEIGHT (KG)	RUNWAY CONDITION CODE	PRESSURE ALTITUDE (1000 FT)						
		0	1	2	3	4	6	8
39000	6	1853	1897	1942	1989	2037	2139	2249
	5	1853	1897	1942	1989	2037	2139	2249
	4	1853	1897	1942	1989	2037	2139	2249
	3	1856	1900	1945	1992	2040	2143	2253
	2	1856	1900	1946	1993	2045	2149	2261
	1	2017	2066	2117	2169	2224	2339	2463
40000	6	1890	1934	1981	2029	2078	2183	2297
	5	1890	1934	1981	2029	2078	2183	2297
	4	1890	1934	1981	2029	2078	2183	2297
	3	1893	1937	1984	2032	2081	2186	2301
	2	1893	1938	1985	2036	2087	2193	2309
	1	2056	2106	2158	2212	2267	2384	2513
44000	6	2037	2086	2136	2188	2242	2359	2490
	5	2037	2086	2136	2188	2242	2359	2490
	4	2037	2086	2136	2188	2242	2359	2490
	3	2041	2089	2140	2192	2246	2363	2494
	2	2044	2094	2145	2198	2252	2372	2504
	1	2213	2267	2322	2381	2441	2572	2717

ILS GS AND TCH CORRECTION (M)	PER FT ABOVE 50’	PER 0.1° BELOW 3.00°	PER 0.1° ABOVE 3.00°
	+7	+14	-7

CS300_ALL_NAMEPLATES_FCOM_MET_v01_OLD_ATLND_LO_F4_p1

NOTE

Data does not include an operational factor

Operational landing distances – FLAP 4 – Autoland on – Autobrake LO – page 1 <Metric>
Figure 03–02B–103

OPERATIONAL LANDING DISTANCES								
ADVISORY DATA ONLY								
FLAP 4 VREF+5 2 THRUST REVERSERS AUTOBRAKE LEVEL LOW AUTOLAND ON		ISA WIND CALM SLOPE ZERO ILS GS 3.00° TCH 50’					OPERATIONAL LANDING DISTANCES (M)	
WEIGHT (KG)	RUNWAY CONDITION CODE	PRESSURE ALTITUDE (1000 FT)						
		0	1	2	3	4	6	8
48000	6	2183	2236	2290	2347	2409	2540	2682
	5	2183	2236	2290	2347	2409	2540	2682
	4	2183	2236	2290	2347	2409	2540	2682
	3	2187	2239	2294	2351	2413	2544	2686
	2	2192	2245	2300	2358	2421	2554	2699
	1	2366	2426	2485	2549	2618	2764	2921
52000	6	2327	2386	2448	2512	2579	2720	2873
	5	2327	2386	2448	2512	2579	2720	2873
	4	2327	2386	2448	2512	2579	2720	2873
	3	2332	2390	2452	2516	2583	2725	2878
	2	2337	2396	2459	2524	2592	2736	2892
	1	2518	2583	2651	2723	2797	2953	3123
56000	6	2476	2541	2607	2676	2748	2900	3064
	5	2476	2541	2607	2676	2748	2900	3064
	4	2476	2541	2607	2676	2748	2900	3064
	3	2481	2546	2612	2681	2753	2906	3070
	2	2487	2552	2620	2690	2763	2918	3086
	1	2675	2746	2820	2897	2975	3143	3326
ILS GS AND TCH CORRECTION (M)		PER FT ABOVE 50’			PER 0.1° BELOW 3.00°		PER 0.1° ABOVE 3.00°	
		+7			+14		-7	

CS300_ALL_NAMEPLATES_FCOM_MET_v01_OLD_ATLND_LO_F4_p2

NOTE

Data does not include an operational factor

Operational landing distances – FLAP 4 – Autoland on – Autobrake LO – page 2 <Metric>
Figure 03–02B–104

OPERATIONAL LANDING DISTANCES

ADVISORY DATA ONLY

FLAP 4 VREF+5 2 THRUST REVERSERS AUTOBRAKE LEVEL LOW AUTOLAND ON	ISA WIND CALM SLOPE ZERO ILS GS 3.00° TCH 50’	OPERATIONAL LANDING DISTANCES (M)

WEIGHT (KG)	RUNWAY CONDITION CODE	PRESSURE ALTITUDE (1000 FT)						
		0	1	2	3	4	6	8
60000	6	2620	2689	2760	2833	2910	3072	3247
	5	2620	2689	2760	2833	2910	3072	3247
	4	2620	2689	2760	2833	2910	3072	3247
	3	2625	2694	2765	2839	2915	3078	3253
	2	2632	2701	2773	2848	2926	3092	3271
	1	2827	2903	2980	3062	3146	3325	3518
64000	6	2760	2832	2908	2986	3067	3239	3425
	5	2760	2832	2908	2986	3067	3239	3425
	4	2760	2832	2908	2986	3067	3239	3425
	3	2765	2838	2913	2992	3073	3245	3431
	2	2773	2846	2923	3003	3085	3261	3451
	1	2974	3054	3137	3224	3313	3502	3708
67500	6	2881	2957	3036	3118	3203	3384	3579
	5	2881	2957	3036	3118	3203	3384	3579
	4	2881	2957	3036	3118	3203	3384	3579
	3	2887	2963	3042	3124	3210	3391	3586
	2	2895	2972	3052	3136	3223	3407	3607
	1	3103	3186	3273	3363	3458	3658	3873

ILS GS AND TCH CORRECTION (M)	PER FT ABOVE 50’	PER 0.1° BELOW 3.00°	PER 0.1° ABOVE 3.00°
	+7	+14	-7

CS300_ALL_NAMEPLATES_FCOM_MET_v01_OLD_ATLND_LO_F4_p3

NOTE

Data does not include an operational factor

Operational landing distances – FLAP 4 – Autoland on – Autobrake LO – page 3 <Metric>

Figure 03–02B–105

OPERATIONAL LANDING DISTANCES

ADVISORY DATA ONLY

FLAP 5 VREF 2 THRUST REVERSERS MANUAL BRAKES OR AUTOBRAKE LEVEL HIGH MANUAL LANDING	ISA WIND CALM SLOPE ZERO	OPERATIONAL LANDING DISTANCES (M)

WEIGHT (KG)	RUNWAY CONDITION CODE	PRESSURE ALTITUDE (1000 FT)						
		0	1	2	3	4	6	8
39000	6	859	876	894	912	931	971	1016
	5	967	990	1015	1040	1066	1121	1180
	4	1118	1142	1166	1191	1216	1270	1329
	3	1193	1219	1246	1274	1303	1363	1428
	2	1271	1303	1335	1369	1403	1478	1559
	1	1476	1511	1547	1585	1623	1706	1796
40000	6	860	877	895	913	932	973	1018
	5	969	992	1017	1042	1068	1123	1182
	4	1121	1144	1169	1194	1219	1274	1333
	3	1197	1223	1250	1279	1307	1368	1433
	2	1277	1309	1341	1375	1410	1485	1567
	1	1484	1519	1556	1594	1632	1716	1806
44000	6	901	921	941	962	984	1029	1078
	5	1025	1050	1076	1103	1131	1189	1252
	4	1175	1201	1227	1254	1282	1341	1404
	3	1260	1287	1316	1346	1377	1442	1513
	2	1354	1388	1423	1460	1499	1580	1676
	1	1570	1606	1646	1687	1730	1819	1917

CS300_ALL_NAMEPLATES_FCOM_MET_v04_OLD_HI_F5_p1

NOTE

Data does not include an operational factor

Operational landing distances – FLAP 5 – Manual landing – Manual brakes or autobrake HI – page 1 <Metric>
Figure 03–02B–106

OPERATIONAL LANDING DISTANCES

ADVISORY DATA ONLY

FLAP 5 VREF 2 THRUST REVERSERS MANUAL BRAKES OR AUTOBRAKE LEVEL HIGH MANUAL LANDING	ISA WIND CALM SLOPE ZERO	OPERATIONAL LANDING DISTANCES (M)

WEIGHT (KG)	RUNWAY CONDITION CODE	PRESSURE ALTITUDE (1000 FT)						
		0	1	2	3	4	6	8
48000	6	965	986	1008	1031	1053	1102	1153
	5	1100	1126	1154	1183	1213	1277	1347
	4	1250	1277	1306	1335	1365	1428	1496
	3	1341	1371	1403	1435	1468	1539	1615
	2	1454	1492	1530	1570	1614	1711	1813
	1	1676	1718	1761	1804	1850	1947	2052
52000	6	1027	1049	1072	1096	1121	1173	1234
	5	1173	1202	1233	1265	1298	1368	1450
	4	1324	1354	1384	1415	1447	1515	1593
	3	1423	1455	1489	1523	1559	1635	1721
	2	1555	1596	1642	1690	1738	1840	1959
	1	1784	1829	1874	1922	1970	2074	2193
56000	6	1087	1112	1137	1162	1189	1248	1310
	5	1248	1280	1313	1348	1383	1465	1556
	4	1398	1429	1461	1495	1529	1607	1691
	3	1504	1539	1574	1612	1650	1736	1829
	2	1663	1711	1759	1810	1861	1979	2107
	1	1891	1939	1988	2039	2091	2209	2338

CS300_ALL_NAMEPLATES_FCOM_MET_v04_OLD_HI_F5_p2

NOTE

Data does not include an operational factor

Operational landing distances – FLAP 5 – Manual landing – Manual brakes or autobrake HI – page 2 <Metric>
Figure 03–02B–107

OPERATIONAL LANDING DISTANCES

ADVISORY DATA ONLY

FLAP 5 VREF 2 THRUST REVERSERS MANUAL BRAKES OR AUTOBRAKE LEVEL HIGH MANUAL LANDING	ISA WIND CALM SLOPE ZERO	OPERATIONAL LANDING DISTANCES (M)

WEIGHT (KG)	RUNWAY CONDITION CODE	PRESSURE ALTITUDE (1000 FT)						
		0	1	2	3	4	6	8
60000	6	1146	1171	1195	1223	1252	1313	1379
	5	1321	1355	1391	1430	1471	1561	1660
	4	1469	1502	1536	1573	1612	1695	1785
	3	1582	1619	1656	1697	1741	1833	1933
	2	1770	1820	1871	1926	1986	2114	2251
	1	1995	2047	2098	2154	2213	2340	2477
64000	6	1196	1222	1251	1280	1311	1376	1447
	5	1393	1430	1471	1514	1559	1656	1763
	4	1537	1573	1611	1651	1693	1781	1876
	3	1658	1697	1740	1785	1830	1929	2035
	2	1874	1927	1986	2048	2111	2247	2395
	1	2099	2152	2211	2272	2334	2469	2616
67500	6	1241	1270	1300	1331	1363	1432	1506
	5	1457	1499	1543	1589	1637	1740	1854
	4	1598	1637	1677	1720	1763	1856	1956
	3	1725	1769	1813	1860	1909	2012	2123
	2	1968	2027	2088	2153	2220	2364	2521
	1	2190	2249	2309	2373	2440	2582	2736

CS300_ALL_NAMEPLATES_FCOM_MET_v04_OLD_HI_F5_p3

NOTE

Data does not include an operational factor

Operational landing distances – FLAP 5 – Manual landing – Manual brakes or autobrake HI – page 3 <Metric>
Figure 03–02B–108

OPERATIONAL LANDING DISTANCES

ADVISORY DATA ONLY

FLAP 5 VREF 2 THRUST REVERSERS AUTOBRAKE LEVEL MEDIUM MANUAL LANDING	ISA WIND CALM SLOPE ZERO	OPERATIONAL LANDING DISTANCES (M)

WEIGHT (KG)	RUNWAY CONDITION CODE	PRESSURE ALTITUDE (1000 FT)						
		0	1	2	3	4	6	8
39000	6	1128	1153	1179	1206	1234	1292	1355
	5	1128	1153	1180	1207	1235	1294	1356
	4	1187	1213	1241	1269	1298	1360	1425
	3	1226	1253	1282	1312	1343	1407	1476
	2	1273	1304	1336	1369	1403	1476	1557
	1	1474	1509	1546	1584	1623	1705	1794
40000	6	1128	1153	1179	1206	1234	1292	1355
	5	1128	1154	1180	1207	1235	1294	1357
	4	1187	1214	1241	1269	1299	1360	1426
	3	1227	1255	1283	1313	1344	1408	1478
	2	1277	1308	1341	1374	1409	1483	1565
	1	1482	1517	1554	1592	1632	1714	1805
44000	6	1187	1214	1242	1270	1300	1362	1429
	5	1188	1215	1243	1272	1302	1365	1432
	4	1249	1277	1306	1336	1368	1433	1503
	3	1291	1320	1351	1382	1415	1484	1558
	2	1353	1387	1422	1458	1497	1577	1666
	1	1568	1606	1644	1685	1728	1817	1915

CS300_ALL_NAMEPLATES_FCOM_MET_v04_OLD_MED_F5_p1

NOTE

Data does not include an operational factor

Operational landing distances – FLAP 5 – Manual landing – Autobrake MED – page 1 <Metric>
Figure 03–02B–109

OPERATIONAL LANDING DISTANCES

ADVISORY DATA ONLY

FLAP 5 VREF 2 THRUST REVERSERS AUTOBRAKE LEVEL MEDIUM MANUAL LANDING	ISA WIND CALM SLOPE ZERO	OPERATIONAL LANDING DISTANCES (M)

WEIGHT (KG)	RUNWAY CONDITION CODE	PRESSURE ALTITUDE (1000 FT)						
		0	1	2	3	4	6	8
48000	6	1269	1298	1328	1359	1391	1458	1530
	5	1270	1300	1330	1361	1394	1462	1534
	4	1334	1364	1396	1428	1462	1532	1608
	3	1377	1409	1442	1476	1511	1585	1665
	2	1453	1490	1529	1568	1610	1700	1804
	1	1675	1717	1760	1803	1849	1946	2051
52000	6	1351	1382	1414	1447	1481	1553	1637
	5	1353	1384	1417	1450	1485	1558	1643
	4	1418	1451	1484	1519	1555	1630	1718
	3	1463	1497	1532	1569	1607	1686	1778
	2	1554	1595	1636	1680	1730	1831	1951
	1	1783	1828	1873	1921	1971	2074	2195
56000	6	1431	1464	1499	1534	1570	1654	1744
	5	1434	1467	1502	1538	1575	1660	1751
	4	1501	1536	1572	1609	1647	1734	1829
	3	1548	1584	1622	1661	1701	1792	1891
	2	1657	1702	1750	1801	1852	1969	2099
	1	1893	1939	1988	2039	2091	2209	2339

CS300_ALL_NAMEPLATES_FCOM_MET_v04_OLD_MED_F5_p2

NOTE

Data does not include an operational factor

Operational landing distances – FLAP 5 – Manual landing – Autobrake MED – page 2 <Metric>
Figure 03–02B–110

OPERATIONAL LANDING DISTANCES

ADVISORY DATA ONLY

FLAP 5 VREF 2 THRUST REVERSERS AUTOBRAKE LEVEL MEDIUM MANUAL LANDING	ISA WIND CALM SLOPE ZERO	OPERATIONAL LANDING DISTANCES (M)

WEIGHT (KG)	RUNWAY CONDITION CODE	PRESSURE ALTITUDE (1000 FT)						
		0	1	2	3	4	6	8
60000	6	1507	1542	1578	1618	1660	1750	1846
	5	1511	1546	1583	1623	1666	1757	1855
	4	1580	1616	1654	1696	1740	1833	1934
	3	1628	1667	1706	1750	1796	1894	1999
	2	1762	1812	1863	1918	1978	2106	2243
	1	1996	2047	2099	2155	2214	2342	2479
64000	6	1580	1618	1660	1703	1748	1843	1946
	5	1585	1623	1666	1709	1755	1852	1956
	4	1655	1695	1738	1783	1830	1929	2037
	3	1706	1748	1793	1840	1889	1993	2106
	2	1866	1920	1979	2040	2104	2239	2387
	1	2100	2153	2212	2273	2337	2471	2618
67500	6	1645	1688	1731	1777	1824	1924	2032
	5	1651	1694	1738	1785	1832	1934	2045
	4	1722	1766	1812	1859	1909	2013	2125
	3	1776	1822	1870	1919	1970	2080	2198
	2	1960	2019	2081	2145	2212	2356	2513
	1	2191	2250	2312	2375	2442	2584	2739

CS300_ALL_NAMEPLATES_FCOM_MET_v04_OLD_MED_F5_p3

NOTE

Data does not include an operational factor

Operational landing distances – FLAP 5 – Manual landing – Autobrake MED – page 3 <Metric>
Figure 03–02B–111

OPERATIONAL LANDING DISTANCES

ADVISORY DATA ONLY

FLAP 5 VREF 2 THRUST REVERSERS AUTOBRAKE LEVEL LOW MANUAL LANDING	ISA WIND CALM SLOPE ZERO	OPERATIONAL LANDING DISTANCES (M)

WEIGHT (KG)	RUNWAY CONDITION CODE	PRESSURE ALTITUDE (1000 FT)						
		0	1	2	3	4	6	8
39000	6	1411	1445	1480	1516	1554	1633	1717
	5	1411	1445	1480	1516	1554	1633	1717
	4	1411	1445	1480	1516	1554	1633	1717
	3	1414	1448	1483	1519	1557	1636	1720
	2	1414	1448	1483	1520	1558	1638	1725
	1	1569	1608	1648	1690	1733	1824	1921
40000	6	1411	1445	1480	1516	1554	1633	1717
	5	1411	1445	1480	1516	1554	1633	1717
	4	1411	1445	1480	1516	1554	1633	1717
	3	1414	1448	1483	1519	1557	1636	1720
	2	1414	1448	1484	1521	1559	1639	1726
	1	1571	1610	1651	1693	1736	1827	1925
44000	6	1491	1527	1564	1603	1643	1728	1818
	5	1491	1527	1564	1603	1643	1728	1818
	4	1491	1527	1564	1603	1643	1728	1818
	3	1494	1530	1568	1606	1647	1731	1822
	2	1495	1531	1570	1609	1650	1737	1830
	1	1660	1702	1744	1789	1835	1932	2038

CS300_ALL_NAMEPLATES_FCOM_MET_v04_OLD_LO_F5_p1

NOTE

Data does not include an operational factor

Operational landing distances – FLAP 5 – Manual landing – Autobrake LO – page 1 <Metric>
Figure 03–02B–112

OPERATIONAL LANDING DISTANCES

ADVISORY DATA ONLY

FLAP 5 VREF 2 THRUST REVERSERS AUTOBRAKE LEVEL LOW MANUAL LANDING	ISA WIND CALM SLOPE ZERO	OPERATIONAL LANDING DISTANCES (M)

WEIGHT (KG)	RUNWAY CONDITION CODE	PRESSURE ALTITUDE (1000 FT)						
		0	1	2	3	4	6	8
48000	6	1602	1641	1681	1723	1767	1858	1956
	5	1602	1641	1681	1723	1767	1858	1956
	4	1602	1641	1681	1723	1767	1858	1956
	3	1605	1644	1685	1727	1770	1862	1960
	2	1607	1647	1688	1731	1776	1872	1976
	1	1779	1824	1871	1918	1968	2073	2186
52000	6	1712	1754	1798	1843	1889	1987	2102
	5	1712	1754	1798	1843	1889	1987	2102
	4	1712	1754	1798	1843	1889	1987	2102
	3	1716	1758	1802	1847	1893	1992	2107
	2	1719	1762	1806	1852	1906	2007	2125
	1	1896	1945	1994	2046	2100	2212	2344
56000	6	1821	1866	1913	1961	2011	2125	2249
	5	1821	1866	1913	1961	2011	2125	2249
	4	1821	1866	1913	1961	2011	2125	2249
	3	1825	1871	1917	1966	2016	2130	2255
	2	1829	1879	1929	1978	2029	2146	2274
	1	2014	2065	2117	2173	2230	2359	2501

CS300_ALL_NAMEPLATES_FCOM_MET_v04_OLD_LO_F5_p2

NOTE

Data does not include an operational factor

Operational landing distances – FLAP 5 – Manual landing – Autobrake LO – page 2 <Metric>
Figure 03–02B–113

OPERATIONAL LANDING DISTANCES

ADVISORY DATA ONLY

FLAP 5 VREF 2 THRUST REVERSERS AUTOBRAKE LEVEL LOW MANUAL LANDING	ISA WIND CALM SLOPE ZERO	OPERATIONAL LANDING DISTANCES (M)

WEIGHT (KG)	RUNWAY CONDITION CODE	PRESSURE ALTITUDE (1000 FT)						
		0	1	2	3	4	6	8
60000	6	1925	1972	2022	2076	2134	2257	2390
	5	1925	1972	2022	2076	2134	2257	2390
	4	1925	1972	2022	2076	2134	2257	2390
	3	1929	1977	2027	2081	2139	2262	2396
	2	1940	1989	2039	2095	2154	2280	2416
	1	2124	2179	2235	2296	2362	2501	2651
64000	6	2024	2076	2133	2193	2254	2385	2527
	5	2024	2076	2133	2193	2254	2385	2527
	4	2024	2076	2133	2193	2254	2385	2527
	3	2029	2081	2139	2198	2260	2391	2533
	2	2041	2094	2152	2213	2276	2410	2555
	1	2232	2290	2355	2422	2491	2639	2799
67500	6	2114	2172	2232	2294	2359	2497	2646
	5	2114	2172	2232	2294	2359	2497	2646
	4	2114	2172	2232	2294	2359	2497	2646
	3	2119	2177	2237	2300	2365	2503	2652
	2	2131	2190	2252	2315	2382	2523	2676
	1	2327	2393	2461	2530	2603	2759	2928

CS300_ALL_NAMEPLATES_FCOM_MET_v04_OLD_LO_F5_p3

NOTE

Data does not include an operational factor

Operational landing distances – FLAP 5 – Manual landing – Autobrake LO – page 3 <Metric>
Figure 03–02B–114

OPERATIONAL LANDING DISTANCES CORRECTIONS									
FLAP 5 MANUAL BRAKES OR AUTOBRAKE LEVEL HIGH							OPERATIONAL LANDING DISTANCES CORRECTIONS (M)		
WEIGHT (KG)	RUNWAY CONDITION CODE	VREF	TAIL WIND	SLOPE		REV		ISA DEVIATION	
		5kts	-10kts	-1%	1%	0	1	-10°C	+10°C
39000	6	100	280	40	0	60	40	-10	50
	5	140	470	60	0	280	110	-20	80
	4	120	410	60	-10	290	120	-20	70
	3	130	480	90	-10	420	170	-20	80
	2	180	800	190	-20	930	330	-30	130
	1	150	900	360	-40	1300	460	-30	110
67500	6	110	310	30	0	90	50	-30	70
	5	180	620	110	-10	510	210	-40	130
	4	140	470	90	-20	360	160	-30	90
	3	150	540	130	-30	520	220	-40	110
	2	200	940	250	-40	1330	490	-50	160
	1	160	840	310	-80	1280	500	-50	120

CS300_ALL_NAMEPLATES_FCOM_MET_v04_OLD_HI_corrections_F5

NOTE

Data does not include an operational factor

Operational landing distance corrections – FLAP 5 – Manual brakes or autobrake HI <Metric>
Figure 03–02B–115

OPERATIONAL LANDING DISTANCES CORRECTIONS									
FLAP 5 AUTOBRAKE LEVEL MEDIUM								OPERATIONAL LANDING DISTANCES CORRECTIONS (M)	
WEIGHT (KG)	RUNWAY CONDITION CODE	VREF	TAIL WIND	SLOPE		REV		ISA DEVIATION	
		5kts	-10kts	-1%	1%	0	1	-10°C	+10°C
39000	6	130	360	40	10	40	40	-20	60
	5	150	480	60	0	210	40	-20	80
	4	140	430	50	0	150	40	-30	70
	3	140	490	90	0	310	150	-30	80
	2	190	800	180	-10	930	330	-30	130
	1	160	900	350	-40	1300	460	-30	110
67500	6	150	430	30	10	10	10	-40	90
	5	180	630	110	0	540	210	-40	130
	4	160	490	60	0	170	50	-40	100
	3	160	550	110	-10	400	140	-40	110
	2	210	940	240	-40	1330	480	-50	160
	1	170	850	300	-70	1280	500	-50	120

CS300_ALL_NAMEPLATES_FCOM_MET_v04_OLD_MED_corrections_F5

NOTE

Data does not include an operational factor

Operational landing distance corrections – FLAP 5 – Autobrake MED <Metric>
Figure 03–02B–116

OPERATIONAL LANDING DISTANCES CORRECTIONS									
FLAP 5 AUTOBRAKE LEVEL LOW							OPERATIONAL LANDING DISTANCES CORRECTIONS (M)		
WEIGHT (KG)	RUNWAY CONDITION CODE	VREF	TAIL WIND	SLOPE		REV		ISA DEVIATION	
		5kts	-10kts	-1%	1%	0	1	-10°C	+10°C
39000	6	180	490	40	10	130	130	-30	80
	5	180	490	40	10	130	130	-30	80
	4	180	490	40	10	130	130	-30	80
	3	180	540	50	0	180	150	-30	80
	2	190	800	180	0	690	180	-30	130
	1	180	910	350	-30	1050	330	-40	110
67500	6	200	580	30	10	60	60	-60	110
	5	200	630	30	10	60	60	-60	130
	4	200	580	30	10	60	60	-60	110
	3	200	620	60	0	90	70	-60	110
	2	210	940	240	0	1200	370	-60	160
	1	190	850	300	-40	1020	310	-60	120

CS300_ALL_NAMEPLATES_FCOM_MET_v04_OLD_LO_corrections_F5

NOTE

Data does not include an operational factor

Operational landing distance corrections – FLAP 5 – Autobrake LO <Metric>
Figure 03–02B–117

OPERATIONAL LANDING DISTANCES

ADVISORY DATA ONLY

FLAP 5 VREF+5 2 THRUST REVERSERS MANUAL BRAKES OR AUTOBRAKE LEVEL HIGH AUTOLAND ON	ISA WIND CALM SLOPE ZERO ILS GS 3.00° TCH 50’	OPERATIONAL LANDING DISTANCES (M)

WEIGHT (KG)	RUNWAY CONDITION CODE	PRESSURE ALTITUDE (1000 FT)						
		0	1	2	3	4	6	8
39000	6	1110	1132	1155	1179	1203	1254	1309
	5	1251	1278	1308	1338	1368	1435	1507
	4	1392	1421	1451	1481	1513	1578	1649
	3	1474	1505	1537	1570	1605	1677	1755
	2	1567	1604	1643	1682	1724	1817	1917
	1	1768	1809	1852	1895	1940	2035	2138
40000	6	1110	1132	1155	1179	1203	1254	1309
	5	1253	1281	1310	1340	1371	1438	1510
	4	1396	1425	1455	1485	1517	1583	1654
	3	1478	1510	1542	1575	1610	1683	1761
	2	1574	1611	1650	1690	1733	1827	1928
	1	1778	1819	1862	1905	1951	2047	2150
44000	6	1160	1184	1208	1233	1259	1314	1372
	5	1317	1347	1379	1412	1446	1518	1596
	4	1463	1494	1525	1558	1591	1662	1738
	3	1552	1586	1620	1656	1693	1770	1854
	2	1664	1704	1748	1794	1842	1942	2051
	1	1876	1921	1965	2013	2061	2164	2276

ILS GS AND TCH CORRECTION (M)	PER FT ABOVE 50’	PER 0.1° BELOW 3.00°	PER 0.1° ABOVE 3.00°
	+7	+14	-7

CS300_ALL_NAMEPLATES_FCOM_MET_v01_OLD_ATLND_HI_F5_p1

NOTE

Data does not include an operational factor

Operational landing distances – FLAP 5 – Autoland on – Manual brakes or autobrake HI – page 1 <Metric>
Figure 03–02B–118

OPERATIONAL LANDING DISTANCES								
ADVISORY DATA ONLY								
FLAP 5 VREF+5 2 THRUST REVERSERS MANUAL BRAKES OR AUTOBRAKE LEVEL HIGH AUTOLAND ON		ISA WIND CALM SLOPE ZERO ILS GS 3.00° TCH 50'					OPERATIONAL LANDING DISTANCES (M)	
WEIGHT (KG)	RUNWAY CONDITION CODE	PRESSURE ALTITUDE (1000 FT)						
		0	1	2	3	4	6	8
48000	6	1230	1255	1281	1308	1336	1394	1456
	5	1405	1438	1473	1509	1546	1624	1710
	4	1551	1583	1617	1652	1688	1764	1845
	3	1648	1684	1721	1759	1799	1882	1971
	2	1783	1830	1878	1928	1979	2088	2205
	1	1998	2046	2094	2146	2198	2310	2429
52000	6	1299	1326	1353	1382	1412	1474	1545
	5	1494	1530	1567	1606	1646	1732	1831
	4	1638	1672	1709	1746	1784	1865	1958
	3	1742	1781	1820	1861	1903	1993	2094
	2	1907	1956	2008	2061	2116	2234	2369
	1	2121	2171	2224	2278	2334	2454	2589
56000	6	1367	1395	1424	1454	1485	1556	1632
	5	1584	1622	1662	1704	1747	1846	1955
	4	1724	1761	1799	1839	1879	1971	2070
	3	1836	1877	1919	1963	2008	2108	2218
	2	2030	2082	2137	2195	2254	2388	2534
	1	2242	2296	2352	2411	2471	2604	2750
ILS GS AND TCH CORRECTION (M)		PER FT ABOVE 50'			PER 0.1° BELOW 3.00°		PER 0.1° ABOVE 3.00°	
		+7			+14		-7	

CS300_ALL_NAMEPLATES_FCOM_MET_v01_OLD_ATLND_HI_F5_p2

NOTE

Data does not include an operational factor

Operational landing distances – FLAP 5 – Autoland on – Manual brakes or autobrake HI – page 2 <Metric>
Figure 03–02B–119

OPERATIONAL LANDING DISTANCES

ADVISORY DATA ONLY

FLAP 5 VREF+5 2 THRUST REVERSERS MANUAL BRAKES OR AUTOBRAKE LEVEL HIGH AUTOLAND ON	ISA WIND CALM SLOPE ZERO ILS GS 3.00° TCH 50’	OPERATIONAL LANDING DISTANCES (M)

WEIGHT (KG)	RUNWAY CONDITION CODE	PRESSURE ALTITUDE (1000 FT)						
		0	1	2	3	4	6	8
60000	6	1429	1459	1489	1523	1559	1634	1714
	5	1670	1711	1754	1801	1851	1958	2074
	4	1805	1845	1885	1929	1975	2073	2178
	3	1926	1969	2013	2062	2112	2220	2336
	2	2148	2205	2264	2328	2395	2539	2695
	1	2360	2417	2477	2541	2607	2752	2907
64000	6	1489	1521	1556	1592	1630	1709	1794
	5	1754	1799	1848	1900	1953	2068	2193
	4	1885	1927	1972	2019	2068	2172	2284
	3	2013	2059	2109	2161	2215	2329	2453
	2	2265	2326	2392	2462	2533	2687	2855
	1	2475	2537	2602	2672	2743	2895	3062
67500	6	1542	1577	1614	1652	1691	1774	1863
	5	1830	1880	1932	1987	2043	2165	2299
	4	1955	2001	2049	2098	2149	2258	2375
	3	2091	2141	2194	2248	2305	2424	2554
	2	2370	2436	2507	2579	2655	2817	2997
	1	2578	2644	2714	2786	2862	3022	3197

ILS GS AND TCH CORRECTION (M)	PER FT ABOVE 50’	PER 0.1° BELOW 3.00°	PER 0.1° ABOVE 3.00°
	+7	+14	-7

CS300_ALL_NAMEPLATES_FCOM_MET_v01_OLD_ATLND_HI_F5_p3

NOTE

Data does not include an operational factor

Operational landing distances – FLAP 5 – Autoland on – Manual brakes or autobrake HI – page 3 <Metric>
Figure 03–02B–120

OPERATIONAL LANDING DISTANCES

ADVISORY DATA ONLY

FLAP 5 VREF+5 2 THRUST REVERSERS AUTOBRAKE LEVEL MEDIUM AUTOLAND ON	ISA WIND CALM SLOPE ZERO ILS GS 3.00° TCH 50’	OPERATIONAL LANDING DISTANCES (M)

WEIGHT (KG)	RUNWAY CONDITION CODE	PRESSURE ALTITUDE (1000 FT)						
		0	1	2	3	4	6	8
39000	6	1440	1471	1503	1537	1571	1643	1720
	5	1440	1471	1504	1537	1572	1644	1721
	4	1501	1534	1568	1602	1638	1713	1793
	3	1539	1573	1608	1644	1681	1759	1843
	2	1576	1613	1651	1690	1730	1818	1916
	1	1771	1812	1854	1899	1943	2040	2143
40000	6	1440	1471	1503	1537	1571	1643	1720
	5	1440	1471	1504	1537	1572	1644	1721
	4	1502	1534	1568	1603	1639	1714	1794
	3	1540	1574	1609	1645	1682	1761	1844
	2	1581	1618	1656	1696	1736	1824	1925
	1	1780	1821	1864	1908	1953	2051	2154
44000	6	1510	1543	1577	1613	1649	1726	1807
	5	1510	1544	1578	1614	1650	1728	1810
	4	1574	1609	1645	1682	1720	1799	1885
	3	1614	1651	1687	1726	1765	1849	1938
	2	1667	1707	1748	1791	1837	1937	2046
	1	1878	1923	1967	2015	2063	2167	2279

ILS GS AND TCH CORRECTION (M)	PER FT ABOVE 50’	PER 0.1° BELOW 3.00°	PER 0.1° ABOVE 3.00°
	+7	+14	-7

CS300_ALL_NAMEPLATES_FCOM_MET_v01_OLD_ATLND_MED_F5_p1

NOTE

Data does not include an operational factor

Operational landing distances – FLAP 5 – Autoland on – Autobrake MED – page 1 <Metric>
Figure 03–02B–121

OPERATIONAL LANDING DISTANCES

ADVISORY DATA ONLY

FLAP 5 VREF+5 2 THRUST REVERSERS AUTOBRAKE LEVEL MEDIUM AUTOLAND ON	ISA WIND CALM SLOPE ZERO ILS GS 3.00° TCH 50’	OPERATIONAL LANDING DISTANCES (M)

WEIGHT (KG)	RUNWAY CONDITION CODE	PRESSURE ALTITUDE (1000 FT)						
		0	1	2	3	4	6	8
48000	6	1607	1643	1679	1717	1756	1838	1926
	5	1608	1644	1681	1719	1758	1841	1930
	4	1674	1712	1750	1789	1830	1916	2007
	3	1716	1755	1794	1836	1878	1967	2062
	2	1781	1826	1874	1924	1975	2084	2201
	1	2001	2049	2097	2149	2201	2313	2433
52000	6	1703	1741	1780	1820	1862	1950	2051
	5	1704	1742	1782	1823	1865	1953	2056
	4	1773	1813	1853	1895	1939	2030	2136
	3	1817	1857	1900	1944	1989	2084	2194
	2	1903	1953	2004	2057	2113	2231	2366
	1	2124	2174	2228	2282	2338	2458	2594
56000	6	1798	1838	1879	1922	1967	2068	2177
	5	1799	1840	1882	1925	1970	2072	2182
	4	1870	1912	1956	2000	2046	2151	2265
	3	1916	1959	2005	2051	2099	2208	2326
	2	2026	2079	2135	2192	2251	2385	2532
	1	2247	2300	2358	2415	2475	2610	2758

ILS GS AND TCH CORRECTION (M)	PER FT ABOVE 50’	PER 0.1° BELOW 3.00°	PER 0.1° ABOVE 3.00°
	+7	+14	-7

CS300_ALL_NAMEPLATES_FCOM_MET_v01_OLD_ATLND_MED_F5_p2

NOTE

Data does not include an operational factor

Operational landing distances – FLAP 5 – Autoland on – Autobrake MED – page 2 <Metric>
Figure 03–02B–122

OPERATIONAL LANDING DISTANCES

ADVISORY DATA ONLY

FLAP 5 VREF+5 2 THRUST REVERSERS AUTOBRAKE LEVEL MEDIUM AUTOLAND ON	ISA WIND CALM SLOPE ZERO ILS GS 3.00° TCH 50’	OPERATIONAL LANDING DISTANCES (M)

WEIGHT (KG)	RUNWAY CONDITION CODE	PRESSURE ALTITUDE (1000 FT)						
		0	1	2	3	4	6	8
60000	6	1886	1929	1973	2021	2072	2180	2296
	5	1889	1932	1976	2025	2076	2185	2302
	4	1962	2006	2052	2102	2155	2266	2387
	3	2009	2055	2103	2155	2210	2326	2452
	2	2146	2202	2261	2325	2393	2536	2694
	1	2365	2422	2482	2546	2614	2758	2915
64000	6	1972	2018	2068	2120	2174	2288	2411
	5	1975	2022	2073	2125	2179	2294	2419
	4	2050	2097	2149	2203	2259	2378	2505
	3	2100	2149	2203	2259	2318	2441	2574
	2	2263	2323	2389	2459	2531	2685	2853
	1	2481	2542	2608	2678	2750	2904	3069
67500	6	2048	2099	2151	2206	2262	2382	2511
	5	2053	2104	2157	2212	2269	2389	2520
	4	2128	2180	2235	2291	2350	2474	2608
	3	2180	2235	2292	2350	2411	2541	2680
	2	2367	2434	2504	2577	2653	2817	2995
	1	2583	2650	2721	2792	2869	3031	3205

ILS GS AND TCH CORRECTION (M)	PER FT ABOVE 50’	PER 0.1° BELOW 3.00°	PER 0.1° ABOVE 3.00°
	+7	+14	-7

CS300_ALL_NAMEPLATES_FCOM_MET_v01_OLD_ATLND_MED_F5_p3

NOTE

Data does not include an operational factor

Operational landing distances – FLAP 5 – Autoland on – Autobrake MED – page 3 <Metric>
Figure 03–02B–123

OPERATIONAL LANDING DISTANCES								
ADVISORY DATA ONLY								
FLAP 5 VREF+5 2 THRUST REVERSERS AUTOBRAKE LEVEL LOW AUTOLAND ON		ISA WIND CALM SLOPE ZERO ILS GS 3.00° TCH 50’					OPERATIONAL LANDING DISTANCES (M)	
WEIGHT (KG)	RUNWAY CONDITION CODE	PRESSURE ALTITUDE (1000 FT)						
		0	1	2	3	4	6	8
39000	6	1756	1797	1839	1883	1928	2024	2126
	5	1756	1797	1839	1883	1928	2024	2126
	4	1756	1797	1839	1883	1928	2024	2126
	3	1759	1800	1842	1886	1931	2027	2129
	2	1759	1800	1842	1886	1932	2030	2134
	1	1912	1959	2006	2056	2106	2214	2330
40000	6	1760	1802	1844	1888	1933	2029	2132
	5	1760	1802	1844	1888	1933	2029	2132
	4	1760	1802	1844	1888	1933	2029	2132
	3	1763	1804	1847	1891	1936	2032	2135
	2	1763	1804	1847	1892	1937	2036	2142
	1	1919	1966	2014	2063	2114	2223	2339
44000	6	1859	1903	1948	1995	2043	2146	2255
	5	1859	1903	1948	1995	2043	2146	2255
	4	1859	1903	1948	1995	2043	2146	2255
	3	1862	1906	1951	1998	2047	2149	2259
	2	1862	1907	1953	2000	2052	2156	2268
	1	2027	2076	2127	2180	2234	2349	2474
ILS GS AND TCH CORRECTION (M)		PER FT ABOVE 50’			PER 0.1° BELOW 3.00°		PER 0.1° ABOVE 3.00°	
		+7			+14		-7	

CS300_ALL_NAMEPLATES_FCOM_MET_v01_OLD_ATLND_LO_F5_p1

NOTE

Data does not include an operational factor

Operational landing distances – FLAP 5 – Autoland on – Autobrake LO – page 1 <Metric>
Figure 03–02B–124

OPERATIONAL LANDING DISTANCES								
ADVISORY DATA ONLY								
FLAP 5 VREF+5 2 THRUST REVERSERS AUTOBRAKE LEVEL LOW AUTOLAND ON		ISA WIND CALM SLOPE ZERO ILS GS 3.00° TCH 50'					OPERATIONAL LANDING DISTANCES (M)	
WEIGHT (KG)	RUNWAY CONDITION CODE	PRESSURE ALTITUDE (1000 FT)						
		0	1	2	3	4	6	8
48000	6	1989	2037	2086	2136	2188	2298	2416
	5	1989	2037	2086	2136	2188	2298	2416
	4	1989	2037	2086	2136	2188	2298	2416
	3	1993	2040	2089	2140	2192	2302	2421
	2	1994	2043	2094	2145	2199	2311	2431
	1	2165	2219	2273	2330	2389	2513	2646
52000	6	2119	2169	2221	2275	2331	2449	2586
	5	2119	2169	2221	2275	2331	2449	2586
	4	2119	2169	2221	2275	2331	2449	2586
	3	2122	2173	2225	2280	2336	2454	2591
	2	2127	2178	2231	2286	2343	2464	2603
	1	2303	2359	2418	2478	2541	2674	2826
56000	6	2246	2300	2356	2414	2473	2609	2756
	5	2246	2300	2356	2414	2473	2609	2756
	4	2246	2300	2356	2414	2473	2609	2756
	3	2250	2305	2360	2418	2478	2614	2761
	2	2256	2310	2367	2426	2487	2625	2776
	1	2438	2498	2561	2625	2692	2842	3008
ILS GS AND TCH CORRECTION (M)		PER FT ABOVE 50'			PER 0.1° BELOW 3.00°		PER 0.1° ABOVE 3.00°	
		+7			+14		-7	

CS300_ALL_NAMEPLATES_FCOM_MET_v01_OLD_ATLND_LO_F5_p2

NOTE

Data does not include an operational factor

Operational landing distances – FLAP 5 – Autoland on – Autobrake LO – page 2 <Metric>
Figure 03–02B–125

OPERATIONAL LANDING DISTANCES								
ADVISORY DATA ONLY								
FLAP 5 VREF+5 2 THRUST REVERSERS AUTOBRAKE LEVEL LOW AUTOLAND ON		ISA WIND CALM SLOPE ZERO ILS GS 3.00° TCH 50’					OPERATIONAL LANDING DISTANCES (M)	
WEIGHT (KG)	RUNWAY CONDITION CODE	PRESSURE ALTITUDE (1000 FT)						
		0	1	2	3	4	6	8
60000	6	2367	2424	2483	2547	2616	2761	2918
	5	2367	2424	2483	2547	2616	2761	2918
	4	2367	2424	2483	2547	2616	2761	2918
	3	2371	2428	2488	2552	2621	2767	2924
	2	2377	2435	2495	2561	2631	2779	2940
	1	2566	2630	2696	2768	2844	3005	3180
64000	6	2483	2544	2612	2682	2755	2909	3076
	5	2483	2544	2612	2682	2755	2909	3076
	4	2483	2544	2612	2682	2755	2909	3076
	3	2488	2549	2617	2687	2761	2915	3082
	2	2494	2557	2626	2697	2772	2929	3100
	1	2690	2758	2832	2910	2992	3163	3348
67500	6	2586	2654	2725	2799	2876	3038	3213
	5	2586	2654	2725	2799	2876	3038	3213
	4	2586	2654	2725	2799	2876	3038	3213
	3	2591	2660	2731	2805	2881	3044	3220
	2	2599	2668	2740	2815	2893	3059	3239
	1	2799	2874	2953	3034	3120	3301	3496
ILS GS AND TCH CORRECTION (M)		PER FT ABOVE 50’			PER 0.1° BELOW 3.00°		PER 0.1° ABOVE 3.00°	
		+7			+14		-7	

CS300_ALL_NAMEPLATES_FCOM_MET_v01_OLD_ATLND_LO_F5_p3

NOTE

Data does not include an operational factor

Operational landing distances – FLAP 5 – Autoland on – Autobrake LO – page 3 <Metric>
Figure 03–02B–126

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