INSP

ENGINE CHANGE PREFLIGHT

PRODUCTION CONTROL				OPN NBR	JIC REV DT	KEYWORD
				6039	11-17-2010	RII

Actual Hours	

REQUIRED INSPECTION ITEM

VISIT	WBS	PWR REQ	PNEU	HYDR	ELEC		POSITION	PAGE
								1 of 1

SHIP	DATE	JOB	WO	MTC PRG	OPN NBR	EST STD	CARD	SKILL	NBR MEN	AREA
6803	2/6/11			B-757	6039	2.0		12	1	-0

ENGINE CHANGE PREFLIGHT

MECH.	INSP.				OPN NBR	JIC REV DT	KEYWORD
					6039	11-17-2010	RII

ENGINE POSITION: # 2

	1. [redacted]	Note: Items designated EQ are to be accomplished by ETOPS qualified personnel per TOPP 20–20–50. The mechanic requirement to be "EQ" qualified does not apply to NON-ETOPS aircraft. 1. **EQ** Start engines. (Ref. B-757 Preflight Checklist)
	2. [redacted]	2. **EQ** Test engine.

VISIT	WBS	PWR REQ	PNEU	HYDR	ELEC		POSITION	PAGE
								1 of 1

SHIP	DATE	JOB	WO	MTC PRG	OPN NBR	ATA	CARD	SKILL	NBR MEN	AREA
6803	2/6/11			B-757	6039	72-00-00		12	1	-0

- -

REQUIRED INSPECTION ITEM

SHORT SIGN

Note: Items designated EQ are to be accomplished by ETOPS qualified personnel per TOPP 20–20–50. The mechanic requirement to be "EQ" qualified does not apply to NON-ETOPS aircraft.

1. Start engines. (Ref. B-757 Preflight Checklist)
   - A. Ground safety precautions.
   - B. Cockpit safety check.
   - C. Fire detection test.
   - D. APU start.
   - E. Position switches and controls.
   - F. Engine start.
   - G. Reposition switches.
2. Test engine.
   - A. Engine test.
     - (1) Perform engine fire detection test
     - (2) Press ELEC/HYD switch on EICAS maintenance panel (P61).
     - (3) Check hydraulic pump operation.
       - (a) Actuate aileron control wheel.
         1) Hyd. pressure --- 2850-3150 PSI
       - (b) L or R eng. driven pump switch ---- UNLATCHED/OFF
         1) ON light --- EXTINGUISH
         2) PRESS light --- ILLUMINATE
         3) SYS PRESS light --- ILLUMINATE
       - (c) L or R eng. driven pump switch ---- LATCHED/ON
         1) On light --- ILLUMINATE
         2) PRESS light --- EXTINGUISH
         3) SYS PRESS light --- EXTINGUISH
     - (4) Check generator operation.
       - (a) Voltage --- 115 +/-5 volts

Attachment 4

(b) Frequency --- 400 +/-5 cps

(5) Ground idle test.

(a) Allow N2 rpm to stabilize at idle for five minutes.

(b) Select PERF/APU page on panel P61, and verify reception of N1, N2, EGT, and FF.

(c) Press EPCS DISPLAY SELECT switch on panel P61, and verify reception of TLR, SVA, BVA, N2C, T2, P2/PS, and RVA.

(6) Check standby engine indicator.

(a) Standby engine indicator --- ON

1) Verify indicator read-out.

(b) Standby engine indicator selector --- AUTO

1) Indicator --- CLEAR

(7) Engine anti-ice system test.

(a) L or R ENGINE ANTI-ICE switch --- LATCHED/ON

1) L or R VALVE light --- (While in transit) ---- ILLUMINATED

2) L or R ON light --- ILLUMINATED

3) EICAS --- TAI (Above N1 indicator)

Note:	Minimum N1 Cursor will only be displayed when operating on a single bleed source.

4) Observe increase in EGT and Eng RPM.

(b) L or R ENGINE ANTI-ICE switch --- UNLATCHED/OFF

1) L or R VALVE light --- (While in transit) --- ILLUMINATED.

2) L or R ON light --- EXTINGUISHED.

3) EICAS --- TAI and TAI cursor --- clear.

4) EGT and RPM decrease.

(8) Air Supply Distribution Test.

(a) Pneumatic isolation valve --- UNLATCHED/CLOSED

(b) APU bleed air switch --- UNLATCHED/OFF

(c) L & R engine bleed air switches --- LATCHED/ON

2. A. (8) (c) continued

1) OFF light --- extinguished

(d) L & R packs --- AUTO

1) Pack OFF lights --- EXTINGUISHED

(e) Advance left thrust lever until L bleed air pressure stabilizes at 45 +/-5 PSI.

1) EPR --- 1.07 MAX.

(f) Continue advancing left thrust lever until left bleed air pressure decreases to approximately 33 PSI.

1) EPR --- 1.08 MIN

Note: This confirms closure of high stage valve.

(g) Continue advancing left thrust lever until left bleed air pressure stabilizes at 45 +/- 5 PSI.

Note: This confirms PRSOV is regulating within tolerance.

(h) Retard left thrust lever until left duct pressure decreases, then increases.

Note: This confirms opening of the high stage valve.

(i) Left thrust lever --- IDLE

1) Left duct pressure --- 14 PSI MIN.

(j) Repeat proceeding steps (a) thru (i) using right engine.

B. Accel Check

(1) With the applicable trim check table, **(Ref. Figure 2)** — 8, find the targets that follow for the local conditions of the weather:

(a) MIN IDLE %N2 57.4

(b) APP IDLE %N2 67.2

(c) TAKEOFF (EPR) 1.39

(d) 95% TAKEOFF THRUST (EPR) 1.39

(2) Push the EPCS display select switch on the P61 panel.

(a) Make sure the white box is around the PRI.

(3) Push the PERF/APU display select switch on the P61 panel.

(4) Pull the THRUST REF SET switch on forward electronics panel, P9.

(5) Set the REF EPR target bug on the EICAS to the 95% TAKEOFF THRUST (EPR) target.

Attachment 4

(a) Do not push in the THRUST REF SET switch.

(6) To prevent the activation of the probe heaters, open the circuit breakers that follow:

(a) Open these circuit breakers on the main power distribution panel, P6, and attach DO-NOT-CLOSE tags:

1) 6L15, PITOT HEAT CAPT MAIN

2) 6L16, PITOT HEAT L AUX

3) 6L17, L AOA HEAT

4) 6L21, PITOT HEAT R AUX

5) 6L22, PITOT HEAT F/O MAIN

6) 6L23, R AOA HEAT

7) 6L24, TAT PROBE HEAT

(b) Open these circuit breakers on the right miscellaneous electrical equipment panel, P37, and attach DO-NOT-CLOSE tags:

1) 37F4, HEAT F/O AUX HI

2) 37F7, HEATER DRAIN INST AIR

(c) Open this circuit breaker on the miscellaneous electrical equipment panel, P70, and attach DO-NOT-CLOSE tag:

1) 70A6, CAPT AUX HTR HI

(7) For the left engine, open this circuit breaker on the overhead circuit breaker panel, P11, in sequence and attach DO-NOT-CLOSE tag:

(a) 11C14, FSEU 2 PWR

(b) 11S15, AIR/GND SYS 1

(c) 11C30, LANDING GEAR POS SYS 1

(8) For the right engine, open this circuit breaker on the overhead circuit breaker panel, P11, in sequence and attach DO-NOT-CLOSE tag:

(a) 11G21, FSEU 3 PWR

(b) 11S19, AIR/GND SYS 2

(c) 11S23, LANDING GEAR POS SYS 2

(d) 11C19, LANDING GEAR POS SYS 2 ALTN

(9) Make sure the engine speed increases to the APP IDLE %N2 target.

Note: Flaps must be set to 25° or greater for aircraft 639 and subsequent and 601-638 incorporating E.O.6-57885-3.

(10) Permit the engine to become stable at approach idle for 60 seconds.

(11) Quickly move the thrust lever forward to increase the speed of the engine and measure the time as follows:

(a) In less than one second, move the applicable thrust lever to the full forward position.

CAUTION: YOU MUST RETARD THE POWER LEVERS BEFORE THE EGT IS MORE THAN THE MAXIMUM EGT. THE EEC ONLY HAS A LIMIT ON THE EPR AND THE ENGINE SPEED. THE EEC DOES NOT PREVENT THE OVERTEMPERATURE AND DOES NOT HAVE A LIMIT FOR THE TEMPERATURE (EGT). THE DETERIORATION OF THE ENGINE OR BLEED SYSTEM CAN CAUSE AN EGT WHICH IS MORE THAN THE MAXIMUM EGT BEFORE THE EPR (OR ROTOR SPEED) DECREASES. IF YOU DO NOT RETARD THE POWER LEVERS, YOU CAN CAUSE DAMAGE TO THE ENGINE.

(b) Measure the time of acceleration from approach idle to the 95% TAKEOFF THRUST (EPR) target.

(c) Make sure the acceleration time is 5.8 seconds or less.

(d) Make sure the engine does not go above the TAKEOFF (EPR) target.

(e) Permit the engine to become stable for 15-20 seconds.

(12) Push the EVENT RECORD switch on the forward electronics panel P9 to make a record of the engine conditions.

(13) For the left engine, remove the DO-NOT-CLOSE tag and close this circuit breaker on the P11 panel:

(a) 11C14, FSEU 2 PWR

(b) 11S15, AIR/GND SYS 1

(c) 11C30, LANDING GEAR POS SYS 1

(14) For the right engine, remove the DO-NOT-CLOSE tag and close this circuit breaker on the P11 panel:

(a) 11G21, FSEU 3 PWR

(b) 11S19, AIR/GND SYS 2

(c) 11S23, LANDING GEAR POS SYS 2

(d) 11C19, LANDING GEAR POS SYS 2 ALTN

(15) Move the thrust lever rearward to the minimum idle stop.

(a) Let engine stabilize at idle for 5 minutes.

(b) Operate the ECS and anti-ice systems during the idle run to ensure there is no smoke/smell in cabin.

(c) Move the thrust lever forward until N1 is approximately 65% and maintain speed for 5 minutes. Make sure the engine parameters remain within operation limits.

(d) Cycle the ECS and anti-ice systems three times during the power run to ensure there is no smoke/smell in cabin.

(e) Move the thrust lever aft to the idle position.

(f) Make sure the engine becomes stable at the MIN IDLE (%N2) target.

(16) Close the circuit breakers for the probe heaters.

(a) Remove the DO-NOT-CLOSE tags and close these circuit breakers on the P6 panel:

1) 6L15, PITOT HEAT CAPT MAIN

2) 6L16, PITOT HEAT L AUX

3) 6L17, L AOA HEAT

4) 6L21, PITOT HEAT R AUX

5) 6L22, PITOT HEAT F/O MAIN

6) 6L23, R AOA HEAT

7) 6L24, TAT PROBE HEAT

(b) Remove the DO-NOT-CLOSE tags and close these circuit breakers on the P37 panel:

1) 37F4, HEATER F/O AUX HI

2) 37F7, HEATER DRAIN MST AIR

(c) Remove the DO-NOT-CLOSE tag and close this circuit breaker on the P70 panel:

1) 70A6, CAPT AUX HTR HI

(17) Push in the THRUST REF SET switch on the P9 panel.

C. Check thrust reverser

(1) Slowly move the thrust reverser lever to the DEPLOY position.

2. C. continued

(2) Make sure the REV indication shows on the top EICAS display.

(a) The amber REV indication shows when the thrust reverser moves.

(b) The green REV indication shows when the thrust reverser is fully deployed.

(3) Slowly move the thrust reverser lever to the stow position.

(4) Make sure the REV indication changes from green to amber then goes off from the top EICAS display.

D. Check for EPCS messages

E. Disconnect IDG

(1) Push the applicable GEN DRIVE DISC switch on the P5 panel.

(2) Make sure the applicable DRIVE light and GEN CONT OFF lights go on to make sure the IDG is disconnected.

F. Shutdown engine (Ref. B-757 Preflight Checklist)

G. Open the fan cowl panels

H. Do this procedure: Thrust Reverser Deactivation for Ground Maintenance (AMM 78-31-00)

I. Open the core cowl panels

J. Open the thrust reversers

K. Make sure the N2 rotor has stopped

L. Pull out the IDG disconnect reset ring until you feel the solenoid pin go into position

M. Perform leak check of engine components

N. Close the thrust reversers

O. Close the core cowls

P. Close the fan cowls

Q. Do the activation procedure for the thrust reversers (AMM 78-31-00)

R. Start engine (REF B-757 Preflight Checklist)

S. Verify the applicable DRIVE and GEN CONT OFF lights are off

T. Push the ELEC/HYD display select switch on the P61 panel.

(1) Make sure the indications that follow show for the applicable L/R generator:

(a) AC-V = 115 +/- 5

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2. T. (1) continued

(b) FREQ = 400 +- 5

U. Shutdown engine (REF B-757 Preflight Checklist)

Attachment 4

CONDITION	MAX N1%	MAX N2%	MAX EGT°C	TIME LIMIT (MIN)	MIN OIL PRESS(6)	MAX OIL TEMP°C
STARTING	100.5	100.0	545 (2)	-	N/A	N/A
IDLE			460 - 490 (3)	(1)	70 PSID	163
CONTINUOUS	100.5	100.0	615	-	80 PSID	163
TAKE-OFF	100.5	100.0	645	5	80 PSID	163
MAX TRANSIENT		100.7 (4)	660 (4)	(4) (5)		177 (5)

(1) An engine should not be permitted to take longer than 90 seconds to accelerate from fuel ON to idle.

(2) If N2 acceleration becomes sluggish and EGT is climbing rapidly through 425° C, abort the start.

(3) The 460° C idle EGT value applies to an engine not using airbleed or power extraction.

The 490° C idle EGT value applies to an engine using airbleed or power extraction.

(4) The N2 and EGT transient limit applies for 5 seconds.

(5) The transient oil temperature limit applies for 20 minutes.

(6) Normal oil pressure at steady-state engine operation is 80 to 200 PSID except at idle where 70 PSID minimum is permissible. Oil pressure PSID values are displayed on EICAS as PSI values. Oil pressure above and below normal are unsafe and require engine shutdown.

NOTE: Engines written up for an EGT limited condition can be verified using the EGT Limit Check in the B757 AMM, 71-00-00-5

ENGINE GROUND OPERATING LIMITS

Figure 1.

OAT °F (°C)	TRIM TARGETS	BAROMETER, INCHES OF MERCURY									
		31.0	30.0	29.0	28.0	27.0	26.0	25.0	24.0	23.0	22.0
-40 (-40)	MIN IDLE (%N2)	54.3	54.3	54.4	54.7	55.0	55.3	55.6	56.1	56.8	57.4
	APP IDLE (%N2)	63.7	63.7	63.8	63.8	63.9	64.0	64.1	64.4	64.7	65.1
	TAKEOFF (EPR)	1.41	1.42	1.44	1.46	1.48	1.50	1.52	1.54	1.56	1.58
	95% TAKEOFF THRUST (EPR)	1.39	1.39	1.41	1.43	1.45	1.46	1.48	1.50	1.51	1.52
	90% THRUST CHANGE DECEL (EPR)	1.03	1.03	1.03	1.03	1.03	1.03	1.04	1.04	1.04	1.04
-36 (-38)	MIN IDLE (%N2)	54.6	54.6	54.7	55.0	55.2	55.5	55.9	56.4	57.0	57.7
	APP IDLE (%N2)	64.0	64.0	64.1	64.2	64.2	64.3	64.4	64.7	65.0	65.4
	TAKEOFF (EPR)	1.41	1.42	1.44	1.46	1.48	1.50	1.52	1.54	1.56	1.58
	95% TAKEOFF THRUST (EPR)	1.39	1.39	1.41	1.43	1.45	1.46	1.48	1.50	1.51	1.52
	90% THRUST CHANGE DECEL (EPR)	1.03	1.03	1.03	1.03	1.03	1.03	1.04	1.04	1.04	1.04
-32 (-36)	MIN IDLE (%N2)	54.9	54.9	54.9	55.2	55.5	55.8	56.1	56.7	57.3	58.0
	APP IDLE (%N2)	64.3	64.3	64.4	64.5	64.5	64.6	64.7	65.0	65.3	65.7
	TAKEOFF (EPR)	1.41	1.42	1.44	1.46	1.48	1.50	1.52	1.54	1.56	1.58
	95% TAKEOFF THRUST (EPR)	1.39	1.39	1.41	1.43	1.45	1.46	1.48	1.50	1.51	1.52
	90% THRUST CHANGE DECEL (EPR)	1.03	1.03	1.03	1.03	1.03	1.03	1.04	1.04	1.04	1.04
-28 (-33)	MIN IDLE (%N2)	55.1	55.1	55.2	55.5	55.8	56.1	56.4	56.9	57.6	58.3
	APP IDLE (%N2)	64.6	64.6	64.7	64.8	64.8	64.9	65.0	65.3	65.6	66.0
	TAKEOFF (EPR)	1.41	1.42	1.44	1.46	1.48	1.50	1.52	1.54	1.56	1.58
	95% TAKEOFF THRUST (EPR)	1.39	1.39	1.41	1.43	1.45	1.46	1.48	1.50	1.51	1.52
	90% THRUST CHANGE DECEL (EPR)	1.03	1.03	1.03	1.03	1.03	1.03	1.04	1.04	1.04	1.04
-24 (-31)	MIN IDLE (%N2)	55.4	55.4	55.5	55.7	56.0	56.3	56.7	57.2	57.8	58.5
	APP IDLE (%N2)	64.9	64.9	65.0	65.1	65.1	65.2	65.3	65.6	66.0	66.3
	TAKEOFF (EPR)	1.41	1.42	1.44	1.46	1.48	1.50	1.52	1.54	1.56	1.58
	95% TAKEOFF THRUST (EPR)	1.39	1.39	1.41	1.43	1.45	1.46	1.48	1.50	1.51	1.52
	90% THRUST CHANGE DECEL (EPR)	1.03	1.03	1.03	1.03	1.03	1.03	1.04	1.04	1.04	1.04
-20 (-29)	MIN IDLE (%N2)	55.6	55.6	55.7	56.0	56.3	56.6	56.9	57.5	58.1	58.8
	APP IDLE (%N2)	65.2	65.2	65.3	65.4	65.4	65.5	65.6	65.9	66.3	66.6
	TAKEOFF (EPR)	1.41	1.42	1.44	1.46	1.48	1.50	1.52	1.54	1.56	1.58
	95% TAKEOFF THRUST (EPR)	1.39	1.39	1.41	1.43	1.45	1.46	1.48	1.50	1.51	1.52
	90% THRUST CHANGE DECEL (EPR)	1.03	1.03	1.03	1.03	1.03	1.03	1.04	1.04	1.04	1.04

TOLERANCES: MI N IDLE (%N2) - (+1.5/-0.5)
APP IDLE (%N2) - ±0.5
TAKEOFF (EPR) - (+0.01/-0.00)

Figure 2.

OAT °F (°C)	TRIM TARGETS	BAROMETER, INCHES OF MERCURY									
		31.0	30.0	29.0	28.0	27.0	26.0	25.0	24.0	23.0	22.0
-16 (-27)	MIN IDLE (%N2)	55.9	55.9	56.0	56.2	56.5	56.8	57.2	57.7	58.4	59.1
	APP IDLE (%N2)	65.5	65.5	65.6	65.6	65.7	65.8	65.9	66.2	66.6	66.9
	TAKEOFF (EPR)	1.41	1.42	1.44	1.46	1.48	1.50	1.52	1.54	1.56	1.58
	95% TAKEOFF THRUST (EPR)	1.39	1.39	1.41	1.43	1.45	1.46	1.48	1.50	1.51	1.52
	90% THRUST CHANGE DECEL (EPR)	1.03	1.03	1.03	1.03	1.03	1.03	1.04	1.04	1.04	1.04
-12 (-24)	MIN IDLE (%N2)	56.1	56.1	56.2	56.5	56.8	57.1	57.4	58.0	58.6	59.3
	APP IDLE (%N2)	65.8	65.8	65.9	65.9	66.0	66.1	66.2	66.5	66.9	67.2
	TAKEOFF (EPR)	1.41	1.42	1.44	1.46	1.48	1.50	1.52	1.54	1.56	1.58
	95% TAKEOFF THRUST (EPR)	1.39	1.39	1.41	1.43	1.45	1.46	1.48	1.50	1.51	1.52
	90% THRUST CHANGE DECEL (EPR)	1.03	1.03	1.03	1.03	1.03	1.03	1.04	1.04	1.04	1.04
-8 (-22)	MIN IDLE (%N2)	56.4	56.4	56.5	56.7	57.0	57.3	57.7	58.2	58.9	59.6
	APP IDLE (%N2)	66.1	66.1	66.1	66.2	66.3	66.4	66.5	66.8	67.2	67.5
	TAKEOFF (EPR)	1.41	1.42	1.44	1.46	1.48	1.50	1.52	1.54	1.56	1.58
	95% TAKEOFF THRUST (EPR)	1.39	1.39	1.41	1.43	1.45	1.46	1.48	1.50	1.51	1.52
	90% THRUST CHANGE DECEL (EPR)	1.03	1.03	1.03	1.03	1.03	1.03	1.04	1.04	1.04	1.04
-4 (-20)	MIN IDLE (%N2)	56.6	56.6	56.7	57.0	57.3	57.6	57.9	58.5	59.2	59.9
	APP IDLE (%N2)	66.4	66.4	66.4	66.5	66.6	66.7	66.8	67.1	67.4	67.8
	TAKEOFF (EPR)	1.41	1.42	1.44	1.46	1.48	1.50	1.52	1.54	1.56	1.58
	95% TAKEOFF THRUST (EPR)	1.39	1.39	1.41	1.43	1.45	1.46	1.48	1.50	1.51	1.52
	90% THRUST CHANGE DECEL (EPR)	1.03	1.03	1.03	1.03	1.03	1.03	1.04	1.04	1.04	1.04
0 (-18)	MIN IDLE (%N2)	56.9	56.9	57.0	57.2	57.5	57.8	58.2	58.8	59.4	60.1
	APP IDLE (%N2)	66.6	66.6	66.7	66.8	66.9	67.0	67.1	67.4	67.7	68.1
	TAKEOFF (EPR)	1.41	1.42	1.44	1.46	1.48	1.50	1.52	1.54	1.56	1.58
	95% TAKEOFF THRUST (EPR)	1.39	1.39	1.41	1.43	1.45	1.46	1.48	1.50	1.51	1.52
	90% THRUST CHANGE DECEL (EPR)	1.03	1.03	1.03	1.03	1.03	1.03	1.04	1.04	1.04	1.04
4 (-16)	MIN IDLE (%N2)	57.1	57.1	57.2	57.5	57.8	58.1	58.4	59.0	59.7	60.4
	APP IDLE (%N2)	66.9	66.9	67.0	67.1	67.2	67.3	67.4	67.7	68.0	68.4
	TAKEOFF (EPR)	1.41	1.42	1.44	1.46	1.48	1.50	1.52	1.54	1.56	1.58
	95% TAKEOFF THRUST (EPR)	1.39	1.39	1.41	1.43	1.45	1.46	1.48	1.50	1.51	1.52
	90% THRUST CHANGE DECEL (EPR)	1.03	1.03	1.03	1.03	1.03	1.03	1.04	1.04	1.04	1.04

TOLERANCES: MI N IDLE (%N2) - (+1.5/-0.5)
APP IDLE (%N2) - ±0.5
TAKEOFF (EPR) - (+0.01/-0.00)

Figure 3.

OAT °F (°C)	TRIM TARGETS	BAROMETER, INCHES OF MERCURY									
		31.0	30.0	29.0	28.0	27.0	26.0	25.0	24.0	23.0	22.0
8 (-13)	MIN IDLE (%N2)	57.4	57.4	57.5	57.7	58.0	58.4	58.7	59.3	59.9	60.6
	APP IDLE (%N2)	67.2	67.2	67.3	67.4	67.5	67.6	67.7	68.0	68.3	68.7
	TAKEOFF (EPR)	1.41	1.42	1.44	1.46	1.48	1.50	1.52	1.54	1.56	1.58
	95% TAKEOFF THRUST (EPR)	1.39	1.39	1.41	1.43	1.45	1.46	1.48	1.50	1.51	1.52
	90% THRUST CHANGE DECEL (EPR)	1.03	1.03	1.03	1.03	1.03	1.03	1.04	1.04	1.04	1.04
12 (-11)	MIN IDLE (%N2)	57.6	57.6	57.7	58.0	58.3	58.6	58.9	59.5	60.2	60.9
	APP IDLE (%N2)	67.5	67.5	67.6	67.7	67.8	67.9	68.0	68.3	68.5	69.0
	TAKEOFF (EPR)	1.41	1.42	1.44	1.46	1.48	1.50	1.52	1.54	1.56	1.58
	95% TAKEOFF THRUST (EPR)	1.39	1.39	1.41	1.43	1.45	1.46	1.48	1.50	1.51	1.52
	90% THRUST CHANGE DECEL (EPR)	1.03	1.03	1.03	1.03	1.03	1.03	1.04	1.04	1.04	1.04
16 (-9)	MIN IDLE (%N2)	57.9	57.9	58.0	58.2	58.5	58.8	59.2	59.8	60.4	61.2
	APP IDLE (%N2)	67.8	67.8	67.9	68.0	68.1	68.2	68.3	68.6	68.9	69.3
	TAKEOFF (EPR)	1.41	1.42	1.44	1.46	1.48	1.50	1.52	1.54	1.56	1.58
	95% TAKEOFF THRUST (EPR)	1.39	1.39	1.41	1.43	1.45	1.46	1.48	1.50	1.51	1.52
	90% THRUST CHANGE DECEL (EPR)	1.03	1.03	1.03	1.03	1.03	1.03	1.04	1.04	1.04	1.04
20 (-7)	MIN IDLE (%N2)	58.1	58.1	58.2	58.5	58.8	59.1	59.4	60.0	60.7	61.4
	APP IDLE (%N2)	68.1	68.1	68.2	68.3	68.3	68.5	68.6	68.9	69.2	69.6
	TAKEOFF (EPR)	1.41	1.42	1.44	1.46	1.48	1.50	1.52	1.54	1.56	1.58
	95% TAKEOFF THRUST (EPR)	1.39	1.39	1.41	1.43	1.45	1.46	1.48	1.50	1.51	1.52
	90% THRUST CHANGE DECEL (EPR)	1.03	1.03	1.03	1.03	1.03	1.03	1.04	1.04	1.04	1.04
24 (-4)	MIN IDLE (%N2)	58.3	58.3	58.4	58.7	59.0	59.3	59.7	60.3	61.0	61.7
	APP IDLE (%N2)	68.4	68.4	68.4	68.5	68.6	68.7	68.9	69.1	69.5	69.8
	TAKEOFF (EPR)	1.41	1.42	1.44	1.46	1.48	1.50	1.52	1.54	1.56	1.58
	95% TAKEOFF THRUST (EPR)	1.39	1.39	1.41	1.43	1.45	1.46	1.48	1.50	1.51	1.52
	90% THRUST CHANGE DECEL (EPR)	1.03	1.03	1.03	1.03	1.03	1.03	1.04	1.04	1.04	1.04
28 (-2)	MIN IDLE (%N2)	58.6	58.6	58.7	59.0	59.3	59.6	59.9	60.5	61.2	61.9
	APP IDLE (%N2)	68.6	68.6	68.7	68.8	68.9	69.0	69.1	69.4	69.8	70.1
	TAKEOFF (EPR)	1.41	1.42	1.44	1.46	1.48	1.50	1.52	1.54	1.56	1.58
	95% TAKEOFF THRUST (EPR)	1.39	1.39	1.41	1.43	1.45	1.46	1.48	1.50	1.51	1.52
	90% THRUST CHANGE DECEL (EPR)	1.03	1.03	1.03	1.03	1.03	1.03	1.04	1.04	1.04	1.04

TOLERANCES: MI N IDLE (%N2) - (+1.5/-0.5)
APP IDLE (%N2) - ±0.5
TAKEOFF (EPR) - (+0.01/-0.00)

Figure 4.

OAT °F (°C)	TRIM TARGETS	BAROMETER, INCHES OF MERCURY									
		31.0	30.0	29.0	28.0	27.0	26.0	25.0	24.0	23.0	22.0
32 (0)	MIN IDLE (%N2)	58.8	58.8	58.9	59.2	59.5	59.8	60.2	60.8	61.5	62.2
	APP IDLE (%N2)	68.9	68.9	69.0	69.1	69.2	69.3	69.4	69.7	70.1	70.4
	TAKEOFF (EPR)	1.41	1.42	1.44	1.46	1.48	1.50	1.52	1.54	1.56	1.58
	95% TAKEOFF THRUST (EPR)	1.39	1.39	1.41	1.43	1.45	1.46	1.48	1.50	1.51	1.52
	90% THRUST CHANGE DECEL (EPR)	1.03	1.03	1.03	1.03	1.03	1.03	1.04	1.04	1.04	1.04
36 (2)	MIN IDLE (%N2)	59.1	59.1	59.2	59.4	59.7	60.1	60.4	61.0	61.7	62.4
	APP IDLE (%N2)	69.2	69.2	69.3	69.4	69.5	69.6	69.7	70.0	70.3	70.7
	TAKEOFF (EPR)	1.41	1.42	1.44	1.46	1.48	1.50	1.52	1.54	1.56	1.58
	95% TAKEOFF THRUST (EPR)	1.39	1.39	1.41	1.43	1.45	1.46	1.48	1.50	1.51	1.52
	90% THRUST CHANGE DECEL (EPR)	1.03	1.03	1.03	1.03	1.03	1.03	1.04	1.04	1.04	1.04
40 (4)	MIN IDLE (%N2)	59.3	59.3	59.4	59.7	60.0	60.3	60.7	61.3	61.9	62.7
	APP IDLE (%N2)	69.5	69.5	69.6	69.7	69.8	69.9	70.0	70.3	70.6	71.0
	TAKEOFF (EPR)	1.41	1.42	1.44	1.46	1.48	1.50	1.52	1.54	1.56	1.58
	95% TAKEOFF THRUST (EPR)	1.39	1.39	1.41	1.43	1.45	1.46	1.48	1.50	1.51	1.52
	90% THRUST CHANGE DECEL (EPR)	1.03	1.03	1.03	1.03	1.03	1.03	1.04	1.04	1.04	1.04
44 (7)	MIN IDLE (%N2)	59.5	59.5	59.6	59.9	60.2	60.6	60.9	61.5	62.2	62.9
	APP IDLE (%N2)	69.8	69.8	69.8	69.9	70.0	70.1	70.3	70.6	70.9	71.3
	TAKEOFF (EPR)	1.41	1.42	1.44	1.46	1.48	1.50	1.52	1.54	1.56	1.58
	95% TAKEOFF THRUST (EPR)	1.39	1.39	1.41	1.43	1.45	1.46	1.48	1.50	1.51	1.52
	90% THRUST CHANGE DECEL (EPR)	1.03	1.03	1.03	1.03	1.03	1.03	1.04	1.04	1.04	1.04
48 (9)	MIN IDLE (%N2)	59.8	59.8	59.9	60.2	60.5	60.8	61.2	61.8	62.4	63.2
	APP IDLE (%N2)	70.0	70.0	70.1	70.2	70.3	70.4	70.5	70.8	71.2	71.6
	TAKEOFF (EPR)	1.41	1.42	1.44	1.46	1.48	1.50	1.52	1.54	1.56	1.58
	95% TAKEOFF THRUST (EPR)	1.39	1.39	1.41	1.43	1.45	1.46	1.48	1.50	1.51	1.52
	90% THRUST CHANGE DECEL (EPR)	1.03	1.03	1.03	1.03	1.03	1.03	1.04	1.04	1.04	1.04
52 (11)	MIN IDLE (%N2)	60.0	60.0	60.1	60.4	60.7	61.0	61.4	62.0	62.7	63.4
	APP IDLE (%N2)	70.3	70.3	70.4	70.5	70.6	70.7	70.8	71.1	71.5	71.8
	TAKEOFF (EPR)	1.41	1.42	1.44	1.46	1.48	1.50	1.52	1.54	1.56	1.57
	95% TAKEOFF THRUST (EPR)	1.39	1.39	1.41	1.43	1.45	1.46	1.48	1.50	1.51	1.52
	90% THRUST CHANGE DECEL (EPR)	1.03	1.03	1.03	1.03	1.03	1.03	1.04	1.04	1.04	1.04

TOLERANCES: MI N IDLE (%N2) - (+1.5/-0.5)
APP IDLE (%N2) - ±0.5
TAKEOFF (EPR) - (+0.01/-0.00)

Figure 5.

OAT °F (°C)	TRIM TARGETS	BAROMETER, INCHES OF MERCURY									
		31.0	30.0	29.0	28.0	27.0	26.0	25.0	24.0	23.0	22.0
56 (13)	MIN IDLE (%N2)	60.2	60.2	60.3	60.6	60.9	61.3	61.6	62.2	62.9	63.7
	APP IDLE (%N2)	70.6	70.6	70.7	70.8	70.9	71.0	71.1	71.4	71.8	72.1
	TAKEOFF (EPR)	1.41	1.42	1.44	1.46	1.48	1.50	1.52	1.54	1.56	1.57
	95% TAKEOFF THRUST (EPR)	1.39	1.39	1.41	1.43	1.45	1.46	1.48	1.50	1.51	1.52
	90% THRUST CHANGE DECEL (EPR)	1.03	1.03	1.03	1.03	1.03	1.03	1.04	1.04	1.04	1.04
60 (16)	MIN IDLE (%N2)	60.5	60.5	60.6	60.9	61.2	61.5	61.9	62.5	63.2	63.9
	APP IDLE (%N2)	70.9	70.9	70.9	71.0	71.1	71.3	71.4	71.7	72.0	72.4
	TAKEOFF (EPR)	1.41	1.42	1.44	1.46	1.48	1.50	1.52	1.54	1.56	1.56
	95% TAKEOFF THRUST (EPR)	1.39	1.39	1.41	1.43	1.45	1.46	1.48	1.50	1.51	1.51
	90% THRUST CHANGE DECEL (EPR)	1.03	1.03	1.03	1.03	1.03	1.03	1.04	1.04	1.04	1.04
64 (18)	MIN IDLE (%N2)	60.7	60.7	60.8	61.1	61.4	61.7	62.1	62.7	63.4	64.2
	APP IDLE (%N2)	71.1	71.1	71.2	71.3	71.4	71.5	71.6	72.0	72.3	72.7
	TAKEOFF (EPR)	1.41	1.42	1.44	1.46	1.48	1.50	1.52	1.54	1.55	1.55
	95% TAKEOFF THRUST (EPR)	1.39	1.39	1.41	1.43	1.45	1.46	1.48	1.50	1.50	1.50
	90% THRUST CHANGE DECEL (EPR)	1.03	1.03	1.03	1.03	1.03	1.03	1.04	1.04	1.04	1.04
68 (20)	MIN IDLE (%N2)	60.9	60.9	61.0	61.3	61.6	62.0	62.3	63.0	63.7	64.4
	APP IDLE (%N2)	71.4	71.4	71.5	71.6	71.7	71.8	71.9	72.2	72.6	73.0
	TAKEOFF (EPR)	1.41	1.42	1.44	1.46	1.48	1.50	1.52	1.53	1.53	1.53
	95% TAKEOFF THRUST (EPR)	1.39	1.39	1.41	1.43	1.45	1.46	1.48	1.49	1.49	1.49
	90% THRUST CHANGE DECEL (EPR)	1.03	1.03	1.03	1.03	1.03	1.03	1.04	1.04	1.04	1.04
72 (22)	MIN IDLE (%N2)	61.2	61.2	61.3	61.6	61.9	62.2	62.6	63.2	63.9	64.7
	APP IDLE (%N2)	71.7	71.7	71.8	71.9	72.0	72.1	72.2	72.5	72.9	73.3
	TAKEOFF (EPR)	1.41	1.42	1.44	1.46	1.48	1.50	1.52	1.52	1.52	1.52
	95% TAKEOFF THRUST (EPR)	1.39	1.39	1.41	1.43	1.45	1.46	1.48	1.48	1.48	1.48
	90% THRUST CHANGE DECEL (EPR)	1.03	1.03	1.03	1.03	1.03	1.03	1.04	1.04	1.04	1.04
76 (24)	MIN IDLE (%N2)	61.4	61.4	61.5	61.8	62.1	62.4	62.8	63.4	64.1	64.9
	APP IDLE (%N2)	71.9	71.9	72.0	72.1	72.2	72.3	72.5	72.8	73.1	73.5
	TAKEOFF (EPR)	1.41	1.42	1.44	1.46	1.48	1.49	1.50	1.50	1.50	1.50
	95% TAKEOFF THRUST (EPR)	1.39	1.39	1.41	1.43	1.45	1.46	1.46	1.46	1.46	1.46
	90% THRUST CHANGE DECEL (EPR)	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.04	1.04	1.04

TOLERANCES: MI N IDLE (%N2) - (+1.5/-0.5)
APP IDLE (%N2) - ±0.5
TAKEOFF (EPR) - (+0.01/-0.00)

Figure 6.

OAT °F (°C)	TRIM TARGETS	BAROMETER, INCHES OF MERCURY									
		31.0	30.0	29.0	28.0	27.0	26.0	25.0	24.0	23.0	22.0
80 (27)	MIN IDLE (%N2)	61.6	61.6	61.7	62.0	62.3	62.7	63.1	63.7	64.4	65.2
	APP IDLE (%N2)	72.2	72.2	72.3	72.4	72.5	72.6	72.7	73.0	73.4	73.8
	TAKEOFF (EPR)	1.41	1.42	1.44	1.46	1.47	1.48	1.49	1.49	1.49	1.49
	95% TAKEOFF THRUST (EPR)	1.39	1.39	1.41	1.43	1.44	1.44	1.45	1.45	1.45	1.45
	90% THRUST CHANGE DECEL (EPR)	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.04	1.04
84 (29)	MIN IDLE (%N2)	61.8	61.8	62.0	62.3	62.6	62.9	63.3	63.9	64.6	65.4
	APP IDLE (%N2)	72.5	72.5	72.6	72.7	72.8	72.9	73.0	73.3	73.7	74.0
	TAKEOFF (EPR)	1.41	1.42	1.44	1.45	1.46	1.47	1.47	1.47	1.47	1.47
	95% TAKEOFF THRUST (EPR)	1.39	1.39	1.41	1.42	1.42	1.43	1.44	1.44	1.44	1.44
	90% THRUST CHANGE DECEL (EPR)	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.04	1.04	1.03
88 (31)	MIN IDLE (%N2)	62.1	62.1	62.2	62.5	62.8	63.1	63.5	64.1	64.9	65.6
	APP IDLE (%N2)	72.7	72.7	72.8	72.9	73.0	73.1	73.3	73.6	73.9	74.3
	TAKEOFF (EPR)	1.41	1.42	1.43	1.44	1.45	1.45	1.46	1.46	1.46	1.46
	95% TAKEOFF THRUST (EPR)	1.39	1.39	1.40	1.41	1.41	1.42	1.43	1.43	1.43	1.43
	90% THRUST CHANGE DECEL (EPR)	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.04	1.03	1.03
92 (33)	MIN IDLE (%N2)	62.3	62.3	62.4	62.7	63.0	63.4	63.7	64.4	65.1	65.9
	APP IDLE (%N2)	73.0	73.0	73.1	73.2	73.3	73.4	73.5	73.9	74.2	74.6
	TAKEOFF (EPR)	1.41	1.41	1.42	1.43	1.43	1.44	1.45	1.45	1.45	1.45
	95% TAKEOFF THRUST (EPR)	1.38	1.38	1.39	1.40	1.40	1.41	1.42	1.42	1.42	1.42
	90% THRUST CHANGE DECEL (EPR)	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03
96 (36)	MIN IDLE (%N2)	62.5	62.5	62.6	62.9	63.3	63.6	64.0	64.6	65.3	66.1
	APP IDLE (%N2)	73.3	73.3	73.4	73.5	73.6	73.7	73.8	74.1	74.5	74.9
	TAKEOFF (EPR)	1.40	1.40	1.41	1.42	1.42	1.43	1.44	1.44	1.44	1.44
	95% TAKEOFF THRUST (EPR)	1.37	1.37	1.38	1.39	1.40	1.40	1.40	1.40	1.40	1.40
	90% THRUST CHANGE DECEL (EPR)	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03
100 (37.8)	MIN IDLE (%N2)	62.8	62.8	62.9	63.2	63.5	63.8	64.2	64.8	65.6	66.3
	APP IDLE (%N2)	73.5	73.5	73.6	73.7	73.8	73.9	74.1	74.4	74.7	75.1
	TAKEOFF (EPR)	1.39	1.39	1.40	1.41	1.41	1.42	1.42	1.42	1.42	1.42
	95% TAKEOFF THRUST (EPR)	1.36	1.36	1.37	1.38	1.38	1.39	1.39	1.39	1.39	1.39
	90% THRUST CHANGE DECEL (EPR)	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03

TOLERANCES: MI N IDLE (%N2) - (+1.5/-0.5)
APP IDLE (%N2) - ±0.5
TAKEOFF (EPR) - (+0.01/-0.00)

Figure 7.

OAT °F (°C)	TRIM TARGETS	BAROMETER, INCHES OF MERCURY									
		31.0	30.0	29.0	28.0	27.0	26.0	25.0	24.0	23.0	22.0
104 (40)	MIN IDLE (%N2)	63.0	63.0	63.1	63.4	63.7	64.1	64.4	65.1	65.8	66.6
	APP IDLE (%N2)	73.8	73.8	73.9	74.0	74.1	74.2	74.3	74.6	75.0	75.4
	TAKEOFF (EPR)	1.38	1.38	1.39	1.40	1.40	1.40	1.40	1.40	1.40	1.40
	95% TAKEOFF THRUST (EPR)	1.35	1.36	1.36	1.37	1.37	1.37	1.37	1.37	1.37	1.37
	90% THRUST CHANGE DECEL (EPR)	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03
108 (42)	MIN IDLE (%N2)	63.2	63.2	63.3	63.6	63.9	64.3	64.7	65.3	66.6	66.8
	APP IDLE (%N2)	74.1	74.1	74.2	74.3	74.4	74.5	74.6	74.9	75.3	75.7
	TAKEOFF (EPR)	1.37	1.37	1.38	1.38	1.38	1.38	1.38	1.38	1.38	1.38
	95% TAKEOFF THRUST (EPR)	1.35	1.35	1.35	1.36	1.36	1.36	1.36	1.36	1.36	1.36
	90% THRUST CHANGE DECEL (EPR)	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03
112 (44)	MIN IDLE (%N2)	63.4	63.4	63.5	63.8	64.2	64.5	64.9	65.5	66.3	67.0
	APP IDLE (%N2)	74.3	74.3	74.4	74.5	74.6	74.7	74.9	75.2	75.5	75.9
	TAKEOFF (EPR)	1.36	1.36	1.37	1.37	1.37	1.37	1.37	1.37	1.37	1.37
	95% TAKEOFF THRUST (EPR)	1.34	1.34	1.34	1.34	1.34	1.34	1.34	1.34	1.34	1.34
	90% THRUST CHANGE DECEL (EPR)	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03
116 (47)	MIN IDLE (%N2)	63.6	63.6	63.8	64.1	64.4	64.7	65.1	65.8	66.5	67.3
	APP IDLE (%N2)	74.6	74.6	74.7	74.8	74.9	75.0	75.1	75.4	75.8	76.2
	TAKEOFF (EPR)	1.35	1.35	1.35	1.35	1.35	1.35	1.35	1.35	1.35	1.35
	95% TAKEOFF THRUST (EPR)	1.33	1.33	1.33	1.33	1.33	1.33	1.33	1.33	1.33	1.33
	90% THRUST CHANGE DECEL (EPR)	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03
120 (49)	MIN IDLE (%N2)	63.9	63.9	64.0	64.3	64.6	65.0	65.3	66.6	66.7	67.5
	APP IDLE (%N2)	74.8	74.8	74.9	75.0	75.1	75.3	75.4	75.7	76.1	76.5
	TAKEOFF (EPR)	1.34	1.34	1.34	1.34	1.34	1.34	1.34	1.34	1.34	1.34
	95% TAKEOFF THRUST (EPR)	1.31	1.31	1.31	1.31	1.31	1.31	1.31	1.31	1.31	1.31
	90% THRUST CHANGE DECEL (EPR)	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02
124 (51)	MIN IDLE (%N2)	64.1	64.1	64.2	64.5	64.8	65.2	65.6	66.2	67.0	67.7
	APP IDLE (%N2)	75.1	75.1	75.2	75.3	75.4	75.5	75.6	76.0	76.3	76.7
	TAKEOFF (EPR)	1.32	1.32	1.32	1.32	1.32	1.32	1.32	1.32	1.32	1.32
	95% TAKEOFF THRUST (EPR)	1.30	1.30	1.30	1.30	1.30	1.30	1.30	1.30	1.30	1.30
	90% THRUST CHANGE DECEL (EPR)	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02

TOLERANCES: MI N IDLE (%N2) - (+1.5/-0.5)
APP IDLE (%N2) - ±0.5
TAKEOFF (EPR) - (+0.01/-0.00)

Figure 8.

B-757 ENGINE PREFLIGHT
PERFORMANCE AND TRIM SHEET
(B-767 ON OTHER SIDE)

DATE	TIME	SHIP	POS	ENG. SERIAL NO.
1-2	1358	6803	2	

REASON FOR RUN # 2 eng change

BAROMETRIC PRESSURE

AMBIENT TEMPERATURE -13c

		MIN	ACTUAL NO. 1 ENG.	ACTUAL NO. 2 ENG.
	CHART VALUE MIN IDLE N^2 (+1.5/-0.5%)	57.4		59
	CHART VALUE APP. IDEL N^2 (±0.5%)	67.2		67
IDLE	N^1	[redacted]		20.3
CHECK	EGT	460-475		327
	OIL PRESS	70 PSI		100

TAKE OFF POWER CHECK

NO. 1 ENG.	OIL PRESSURE	NO. 2 ENG.
	DIFF	18
	SCAV	139
	OIL TEMP	115
	OIL QTY	11
	VIB	
	N^1	.1
	N^2	.1
	BB	.2

NO. 1 ENG.	EPR	NO. 2 ENG.
	CMD	1.388
	EPR ACT	1.388
	N^1	82.5
	EGT	433
	N^2	88.0
	FF	11.609
	PP	364
	DUCT PR	42

TAT

ENGINE CHANGE

- [X] FIRE DETECTION
- [X] HYD PUMP OPN. -2850-3150
- [X] GEN CHECK 115±5V 400±4CPS
- [X] GRD. IDLE TEST
- [X] STAND BY ENG. INSTRUMENTS
- [X] ENG. ANTI-ICE
- [X] PNEUMATIC SYS.
- [X] TAKE OFF TEST
- [X] DISCONNECT CSD
- [X] RECONNECT CSD AND CHECK GEN OPN.

LETTER CHECK

- [ ] FIRE DETECTION
- [ ] HYD SYS. 2850-3150
- [ ] FUEL SYS.
- [ ] ELECT. SYS.
- [ ] PNEUMATIC SYS.
- [ ] ENG. ANTI-ICE

TAKE-OFF LIMITS

N^1 - MAX 100.5
N^2 - MAX 100.0
EGT - MAX 645
OIL PRESS 80-200 PSI
OIL TEMP. MAX 163°

CHECKED BY: [redacted]

NS 40107
4-86

Figure 9.