CHECK FLIGHT CERTIFICATE

B767-200 (GE CF6-80A; CF6-80A2; CF6-80C2) **CFS 224 Issue 3**

Registration:

Date:	Crew:	Observer:

Performance	Climb #1	Climb #2	
Average Weight			
Average Altitude			ft
Average Temp.			°C
Speed			KIAS
Achieved Rate			fpm
Scheduled Rate			fpm
Margin			fpm
Permitted Margin	-80	-120	fpm

Airfield:

Start Weight Kg/Lbs*:

Takeoff cg:

Performance:

SATIS/UNSATIS/NOT APPLICABLE*

*(delete as applicable)**

Defects

No.	Defect	-/R/FT	Action?

(use a continuation sheet as necessary)

Conclusions/Comments

I CERTIFY that I have tested the above aircraft and have detailed the deficiencies and unsatisfactory features above. Those items annotated R or FT must be dealt with as shown in the notes on the reverse side.

Name:	Signed:	Date:	Licence No.:
For CAA Use only	Report Logged by:	Date:	Report No.:

NOTES

General

Only CAA personnel or pilots specifically briefed to carry out CAA check flights may conduct the test.
General notes on test conduct can be found in the CAA Check Flight Handbook.
This sheet replaces any flight test certificate given in the schedule.
Registration: If the aircraft is not on the UK register, add the manufacturers serial number and expected UK registration (if known).
Crew: Captain, co-pilot, Flight engineer (where applicable).
Airfield: Departure airfield.
Start Weight: Actual all up weight at first engine start. Also delete Kg or Lbs as appropriate.
Takeoff cg: Actual cg at lift-off, preferably as a % of the Mean Aerodynamic Chord.

Performance

A full description of climb analysis is given in the CAA Check Flight Handbook.
Climb#1/Climb#2: Enter in these columns data from the first and second climbs.
Average Weight: The aircraft all up weight at the midpoint of the measured climb.
Average Altitude: The altitude at which the line drawn to average the measured points passes through at the mid time.
Average Temp: The temperature at which the line drawn to average the measured points passes through at the mid time.
Speed: The target climb speed (Indicated Airspeed.)
Achieved Rate: The climb rate as given by the slope of the line drawn to average the measured altitude points in feet per minute.
Scheduled Rate: The expected gross rate of climb read from the appropriate graph in the Flight Manual with any adjustments for configuration differences. For large aircraft, the basic gross data are normally to be found in a separate supplement labelled 'Additional Flight Test Data'.
Margin: The difference between the Scheduled and Achieved rates of climb (negative if achieved is lower than scheduled).

Defects

Enter all defects from the flight. All defects must also be entered in the Technical Log. Procedural items entered in the Technical Log (such as re-stowing oxygen masks) need not be entered here. Items affecting flight safety which were known before the flight, whether or not they were deferred should be entered. In the latter case, the defect should be annotated accordingly after the details.
No.: The first column is to allow the items to be numbered.
Defect: Enter details of the defect.
-/R/FT: Classify each defect according to its impact on safety, regardless of whether it can be deferred according to the MEL. Any deferrals should be dealt with in the normal way in the Technical Log. Items requiring rectification (or deferral under the MEL) before further flight for hire or reward or before the issue of the CofA should be marked 'R'. Additionally, items that require re-checking in-flight following rectification (such as inadequate climb performance) should be marked 'FT'. Items requiring both should be marked 'R/FT'.
Action?: This column should be left blank unless further information is required from the engineers or the item is considered to be of sufficient import that CAA action is considered necessary, then the person/department/agency from whom further action is required should be noted in this column. Annotate accordingly if an MOR or similar report is to be raised.

Conclusions/Comments

Any conclusions, notes or comments useful for tracking defects may be entered.
Name: Only the pilot who carried out the test may sign this sheet.

CAA Check Flight Schedules

All CAA Check Flight Schedules (CFSs) are prepared based on a design standard which, before September 2003, was the UK Type Certificate. Following the creation of EASA there may be different design standards in service within the European Union (EU) - this may include modifications approved in any EU country.

It is the responsibility of the flight crew to ensure that the exercises and limitations in the CFS are correct for the aircraft under test.

The prime source of information will be the aircraft flight manual and in the event of conflict the flight manual should be taken as overriding.

CAA policy is that pilots who conduct airtests on the behalf of the Authority must be acceptable to the Authority, must have been briefed on techniques and safety considerations before carrying out the tests in these schedules and must have carried out an airtest within the last 4 years.

The CAA does not accept responsibility for the use of a CAA CFS on a test flight not directly under their control.

CHECK FLIGHT SCHEDULE

Aircraft Registration

Date

INTRODUCTION

This schedule is applicable only to Boeing 767 aircraft. It is based on the assumption that the everyday operation of the aircraft serves as a continuous check on the functioning of all normal services. On these test flights, however, the crew are expected generally to monitor the behaviour of all equipment and report any unserviceable items. In addition to completing all the required tests in this schedule, any characteristics which are considered unsafe or undesirable must be recorded.

The minimum flight crew for this test shall be increased by one observer to record the results of the tests. Passengers should not be carried. Oxygen shall be available for all persons on board. Passenger drop-out oxygen panels should be taped before flight. The test should, if possible, be carried out in the sequence as written; altitude conditions must be observed.

The data contained in this schedule is correct at the time of writing, but might not be in agreement with subsequent Flight Manual amendments. In cases of conflict the current Flight Manual is overriding and CAA (Design and Manufacturing Standards Division) should be informed.

The crew of the aircraft must be familiar with the contents of this schedule before flight. In addition the pilot conducting the tests must be specifically approved by the CAA for airworthiness test flights on Boeing 767.

LOADING AND CALCULATION OF WEIGHT

The aircraft is to be loaded to between 120,000 kg and 124,000 kg and a CG between 23% and 29% MAC.

The actual values shall be recorded; where specific tests require the aircraft weight to be recorded, it shall be calculated from the "fuel quantity".

POST-FLIGHT ACTION

Complete a statement of defects, sign the Flight Test Certificate and state clearly whether or not the aircraft needs to be re-flown. Pass the completed Flight Test Report to the CAA (Design and Manufacturing Standards Division) Supervising Surveyor.

PERFORMANCE CLIMB AND STALL CHECK SPEEDS

			STALL SPEEDS								
AIRCRAFT WEIGHT KG	FLAP 15 V2 KTS	ERC KNOTS	CLEAN			FLAPS 20°			FLAPS 30°		
			TRIM	SHAKE	PUSH	TRIM	SHAKE	PUSH	TRIM	SHAKE	PUSH
130,000	139	225	195	177	151	146	122	112	140	115	107
128,000	138	223	193	176	149	145	120	111	139	114	106
126,000	137	221	191	174	147	143	119	110	138	113	106
124,000	136	219	189	173	146	142	118	110	137	112	105
122,000	135	217	187	172	144	141	118	109	135	111	104
120,000	134	215	185	170	142	140	117	108	134	110	103
118,000	133	213	183	169	141	138	116	107	133	109	102
116,000	132	211	181	167	140	137	114	106	132	108	101
114,000	131	209	179	166	138	136	113	104	130	107	100
112,000	130	208	177	164	136	134	112	103	129	106	99
110,000	128	206	175	163	135	133	111	102	128	105	98
108,000	127	204	173	161	133	131	110	101	126	104	97
106,000	126	202	171	160	132	130	109	100	125	103	97
104,000	125	200	169	158	130	128	108	99	124	102	96
102,000	124	198	167	156	129	127	106	98	123	101	95
100,000	123	196	165	155	127	127	105	97	122	100	94
98,000	122	194	163	154	126	124	104	96	120	99	92
96,000	121	192	161	152	124	123	103	95	118	98	91
94,000	120	190	159	150	122	122	102	94	117	97	90
92,000	119	188	157	149	120	121	100	92	116	96	89
90,000	118	187	155	148	119	120	99	91	114	95	88

*1

B767-200 with CF6-80A or CF6-80A2 Engines

*1 Speeds correct for 15,000 feet, -4 knot correction at 10,000 feet.

POWER TABLE CF6-80A ENGINES

TAKE-OFF/GO-AROUND % N_1

ON GROUND USE AIRPORT OAT °C	WHEN AIRBORNE USE TAT °C	ALTITUDE FEET				
		0	2000	4000	6000	8000
+30	+33	106.0	107.2	107.3	107.0	107.5
+25	+28	105.1	106.3	107.6	107.8	108.0
+20	+23	104.2	105.4	106.7	108.1	108.8
+15	+18	103.3	104.4	105.8	107.2	108.8
+10	+13	102.4	103.5	104.9	106.3	107.9
+5	+8	101.4	102.5	104.0	105.3	106.9
0	+3	100.5	101.6	103.0	104.4	105.9
-5	-2	99.6	100.7	102.1	103.5	104.9
-10	-7	98.7	99.8	101.1	102.5	104.0
-15	-12	97.8	98.8	100.1	101.5	103.0
-20	-17	96.8	97.9	99.1	100.4	102.0
-25	-22	95.8	96.9	98.1	99.4	101.0
-30	-27	94.8	95.9	99.1	98.4	99.0
PACKS OFF ADD		+0.3	+0.3	+0.3	+0.3	+0.3

POWER TABLE FOR CF6-80A2 ENGINES

TAKE-OFF AND GO-AROUND % N1

TAKE-OFF POWER SETTING % N1

AIRPORT ALTITUDE	**AIRPORT OAT °C**									
	-15	-10	-5	0	5	10	15	20	25	30
S.L.	99.4	100.3	101.4	102.3	103.2	104.2	105.1	106.0	106.9	107.8
2000	100.5	101.5	102.5	103.4	104.4	105.3	106.2	107.2	108.1	109.0

GO-AROUND POWER SETTING % N1

BLEED ON

PRESSURE ALTITUDE	**TAT °C**								
	-15	-10	-5	0	5	10	15	20	25
0.	98.5	99.5	100.5	101.4	102.4	103.3	104.2	105.1	106.0
1000	99.1	100.1	101.1	102.0	103.0	103.9	104.8	105.7	106.6
2000	99.7	100.7	101.6	102.5	103.5	104.4	105.4	106.3	107.2
3000	100.6	101.6	102.5	103.5	104.0	105.4	106.4	107.5	108.2
4000	101.4	102.4	103.4	104.3	105.4	106.6	107.3	108.2	109.2
5000	102.2	103.2	104.2	105.2	106.2	107.1	108.1	109.0	109.8
6000	103.0	103.9	104.9	105.9	106.9	107.8	108.8	109.7	110.4
7000	103.6	104.6	105.6	106.6	107.6	108.5	109.5	110.4	-
≥7500	103.9	104.9	105.9	106.9	107.9	108.9	109.8	110.7	-

for BLEED OFF SUBTRACT 0.3% N1

PERFORMANCE CLIMB AND STALL CHECK SPEEDS

B767-200 with CF6-80C2 Engines

			STALL SPEEDS								
AIRCRAFT WEIGHT KG	FLAP 20 V2 KTS	ERC KNOTS	CLEAN			FLAPS 20°			FLAPS 30°		
			TRIM	SHAKE	PUSH	TRIM	SHAKE	PUSH	TRIM	SHAKE	PUSH
130,000	136	226	195	177	151	146	122	112	140	115	107
128,000	135	225	193	176	149	145	120	111	139	114	106
126,000	133	223	191	174	147	143	119	110	138	113	106
124,000	132	221	189	173	146	142	118	110	137	112	105
122,000	131	219	187	172	144	141	118	109	135	111	104
120,000	129	218	185	170	142	140	117	108	134	110	103
118,000	128	216	183	169	141	138	116	107	133	109	102
116,000	127	214	181	167	140	137	114	106	132	108	101
114,000	126	212	179	166	138	136	113	104	130	107	100
112,000	124	210	177	164	136	134	112	103	129	106	99
110,000	123	208	175	163	135	133	111	102	128	105	98
108,000	122	206	173	161	133	131	110	101	126	104	97
106,000	120	204	171	160	132	130	109	100	125	103	97
104,000	119	202	169	158	130	128	108	99	124	102	96
102,000	118	200	167	156	129	127	106	98	123	101	95
100,000	117	198	165	155	127	126	105	97	122	100	94
98,000	115	196	163	154	126	124	104	96	120	99	92
96,000	114	194	161	152	124	123	103	95	118	98	91
94,000	112	192	159	150	122	122	102	94	117	97	90
92,000	111	190	157	149	120	121	100	92	116	96	89
90,000	109	189	155	148	119	120	99	91	114	95	88

*1

B767-200 with CF6-80C2 Engines

*1 Speeds correct for 15,000 feet, -4 knot correction at 10,000 feet.

POWER TABLE CF6-80C2 ENGINES

TAKE-OFF/GO-AROUND % N_1

ON GROUND USE AIRPORT OAT °C	WHEN AIRBORNE USE TAT °C	ALTITUDE FEET				
		0	2000	4000	6000	8000
+30	+33	107.1	107.7	107.7	107.8	108.4
+25	+28	106.2	107.4	108.8	108.8	109.5
+20	+23	105.3	106.5	108.1	109.8	110.4
+15	+18	104.4	105.6	107.2	108.9	111.0
+10	+13	103.6	104.7	106.3	108.8	110.1
+5	+8	102.7	103.8	105.4	107.1	109.2
0	+3	101.8	102.9	104.5	106.1	108.2
-5	-2	100.9	102.0	103.6	105.2	107.3
-10	-7	99.9	101.1	102.6	104.2	106.3
-15	-12	99.0	100.2	101.7	103.3	105.3
-20	-17	98.0	99.2	100.7	102.3	104.3
-25	-22	97.1	98.2	99.7	101.3	103.4
-30	-27	96.1	97.2	98.7	100.3	102.4
PACKS OFF ADD		+0.3	+0.2	+0.4	+0.5	+0.5

PRE-FLIGHT INFORMATION

Aircraft Registration

Date

Total Airframe Hours

Date of last airworthiness flight test

Hours since last major maintenance

Engine Serial Number

LEFT RIGHT

Engine Hours Run

LEFT RIGHT

Time : Chocks Under

Chocks Away

Total Chock to Chock

Time : Landing

Take-off

Total Airborne

Ramp Weight CG

Zero Fuel Weight

TEST SCHEDULE

Except where otherwise indicated the flight techniques are those associated with normal operation of the aircraft, for example, all dampers engaged. Fuel asymmetry must be maintained across the aircraft particularly during and after the engine out climb.

1. FUNCTIONING ONE

1.1 Before Starting Engines

1.1.1 Warning Systems

Check: All warning lights.
Record any lights which have faulty filaments

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Check:

1. Fire Warning Test — SAT/UNSAT

2. Ground Proximity System Test — SAT/UNSAT

3. Air Data Computer Test — SAT/UNSAT

Overspeed warning for 2 seconds
Invalid Flags for 5 seconds
Air Data Instruments Indicator
10,000 ft 137 kts CAS 357 kts V_{MO} Needle
0.75 MACH then black shutter appears
Outboard ailerons lockout on EICAS

LEFT Systems — SAT/UNSAT

RIGHT Systems — SAT/UNSAT

4. Stall Warning Test

With flaps set to up, check operation of stall warning, with both test switches on check column moves fwd; repeat flaps down, check column does not move.

LEFT System — SAT/UNSAT

RIGHT System — SAT/UNSAT

1.1.2 Flight Deck Placards

Check Airframe Limitations — SAT/UNSAT

Check instrument colour coding on EICAS — SAT/UNSAT

Check flight deck engraving, instrument panels and circuit breakers — SAT/UNSAT

VMO pointer reading P1 [ ] P2 [ ] (355-359 kt) SAT/UNSAT

1.1.3 EFIS Switching

Select alternate EFIS. Check for proper displays, instrument switching annunciations and return to normal.

P1	SAT/UNSAT	P2	SAT/UNSAT

Select alternate IRS. Check for proper displays, instrument switching annunciations and return to normal.

P1	SAT/UNSAT	P2	SAT/UNSAT

1.1.4 Auto Speed-brake

With throttles closed deploy speedbrake lever to ARM. Check speedbrakes deploy.	SAT/UNSAT
Advance No.1 throttle 1 inch forward. Check speedbrakes retract.	SAT/UNSAT
Close No.1 throttle and redeploy auto-speedbrakes. Advance No.2 throttle 1 inch forward and check speedbrakes retract.	SAT/UNSAT
Close throttles and put speedbrake lever down. Select reverse and check speedbrakes deploy.	SAT/UNSAT

1.1.5 Stabiliser Trim

Check operation of stabiliser on control column switches.	SAT/UNSAT
Check operation of stabiliser on manual trim levers.	SAT/UNSAT
Check operation of stabiliser trim cutout switches (check each in turn note operation at half rate).	SAT/UNSAT
Check stabiliser trim brake by opposing trim with control column.	SAT/UNSAT
Then check that the manual trim levers will override the trim brake.	SAT/UNSAT

1.1.6 Take-off Configuration Warning

While the CONFIG test switch is held in the TAKE-OFF position, check the Take-off Configuration Warning sounds, the Master Warning flashes, the red CONFIG light appears and the appropriate EICAS message appears for each of the following conditions.

a) Speed brake lever out of the DOWN detent SAT/UNSAT

b) Stabiliser trim - may be up to ½ unit outside green band but TOCW must NOT sound with trim in the green band. SAT/UNSAT

c) Flaps out of take-off configuration SAT/UNSAT

d) Parking brake set SAT/UNSAT

2. **AFTER STARTING ENGINES**

1.2.1 Thrust Rating Computer

Record: Airfield pressure altitude at 1013 mb [ ]

TAT [ ]

Take-off	N1		A/C AIRBLEED	ON	
Achieved	[ ]		Scheduled	[ ]	P3
Take-off	N1		A/C AIRBLEED	OFF	
Achieved	[ ]		Scheduled	[ ]	

1.2.2 Brakes

During low speed taxi verify braking action from right hydraulic system. SAT/UNSAT

Depressurise right hydraulic system and verify braking action from centre hydraulic system. SAT/UNSAT

Depressurise centre hydraulic system and check that C hydraulic system pressure is zero. Braking action shall be maintained with accumulator pressure. SAT/UNSAT

Depressurise brake accumulator by operating brakes. SAT/UNSAT

NOTE : Nose gear steering inoperative.

Push the RESERVE BRAKES and STRG switch on the pilot's panel, the left ELECTRIC PUMP LOW PRESS light shall extinguish, accumulator pressure will read normal and brake source light shall extinguish. Braking shall be normal; Nosegear steering available: SAT/UNSAT

Pressurise right and centre hydraulic systems and push the RESERVE BRAKES and steering switch 'OFF'. SAT/UNSAT

1.2.3 Take-off Configuration Warning

With engines operating check any one of the Take-off Configuration Warnings occur when either engine is increased to 75% N_1: SAT/UNSAT

Set 8,000 feet cabin altitude.

2. TAKE-OFF

Carry out a normal take-off. Record any unusual characteristics.

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3. FUNCTIONING TWO - ENGINE ACCELERATIONS

Pressurisation on, anti-icing off. With gear down flaps 25 at 140 knots. Between 4,000 ft and 7,000 ft.

Record: Altitude [ ] TAT [ ]

Thrust Computer Go-Around N1 [ ]

Flight Manual Go-Around N1 [ ]

For each engine record the engine flight idle stabilised N2 and the time to accelerate to 2% N1 below go-around limit.

NOTE: The engine should be set to idle from stabilised power for level flight and must NOT remain idle for more than 20 seconds.

	LEFT	RIGHT
Engine Idle N1		
Time to accelerate (8 seconds max.)		

4. **PERFORMANCE - TAKE-OFF CLIMB**

Clear of cloud and turbulence carry out a measured climb for 5 minutes from a starting altitude between 4,000 ft and 7,000 ft.

Conditions:-

Gear up
Flaps 15 (CF6-80A) (CF6-80A2)
Flaps 20 (CF6-80C2)
LEFT engine **idle**
RIGHT engine at **flight take-off power N_1**
2 A/C packs on
Engine anti-icing off

Take-off safety speed V2 for the weight

Captain's altimeter set at 1013 mb.

Record: Altitude TAT

Thrust Computer Go-Around N1

Flight Manual Go-Around N1

If any discrepancy use the flight manual power for the climb.

Fuel contents at start of climb.

LEFT	CENTRE	RIGHT

Time Mins	Altitude (Captain's Altimeter)	Speed (Captain's A.S.I.)	TAT	N_1	
				LEFT	RIGHT
0					
½					
1					
1½					
2					
2½					
3*					
3½					
4					
4½					
5					

* After 3 minutes record the following engine parameters for the **right** engine.

N1

EGT

N2

Fuel Flow

Stabiliser

Rudder

Ailerons

ASI Comparison
(Max difference 5 knots)

Captain

First Officer

Fuel contents at end of climb.

LEFT

CENTRE

RIGHT

5. PERFORMANCE - ENGINE OUT EN-ROUTE CLIMB

5.1 Clear of cloud and turbulence carry out a measured climb for 5 minutes as follows, from a starting altitude the higher of 5,000 ft above terrain or flight level 100 but not above flight level 160.

Note: Leave **RIGHT** engine at flight idle for 3 minutes before shutting off the fuel.

Start APU with generator select switch OFF.
Shut down **RIGHT** engine and check satisfactory Instrument transfer.
Select APU generator switch ON.

Conditions:

Gear up
Flaps up
LEFT engine **maximum continuous thrust**
RIGHT engine **inoperative**
Pressurisation on; a/c pack on
Engine anti-icing off, APU on
Airframe anti-icing off
Engine out en-route climb speed for the weight
Captain's altimeter set at 1013 mb

Fuel contents at start of climb.

LEFT	CENTRE	RIGHT

Time Mins	Altitude (Captain's Altimeter)	Speed (Captain's A.S.I.)	TAT	N_1	
				LEFT	RIGHT
0					
½					
1					
1½					
2					
2½					
3*					
3½					
4					
4½					
5					

* After 3 minutes record the following engine parameters for the **left** engine.

N1

EGT

N2

Fuel Flow

Stabiliser

Rudder

Ailerons

Fuel contents at end of climb.

LEFT	CENTRE	RIGHT

5.2 Engine Relighting

At the end of the en-route climb, carry out a starter assist relight of the **RIGHT** engine at 10,000 feet and 180 knots with gear up and flaps 15.

Record:	Altitude		TAT

Engine windmilling speed N2		
Time to EGT rise		30 seconds max.
Maximum EGT during relight		870°C max.
Time to idle		2 mins max.

NOTE: Following relight, the engine must be left at stabilised idle for one minute before power is increased.

SHUT DOWN APU.

6. **FUNCTIONING THREE**

Low Cabin Pressure

During a climb to flight level 180 select MAN MODE and raise cabin altitude and control cabin rate by turning the packs on and off and/or using OVRD valve as required.

Record:

Cabin Altitude Warning		9000-11000 ft

Check:

Crew Oxygen Masks	SAT/UNSAT
Oxygen Mask Microphones	SAT/UNSAT

Record:

Cabin altitude at Oxygen Mask Drop Out		13250-14750 ft

Lower cabin altitude and control cabin rate by turning packs on and off.

Record any masks panels which fail to drop.

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Reset normal pressurisation when cabin altitude is below 10,000 ft and with a low rate of descent.

Reset passenger oxygen by cycling passenger oxygen control circuit breakers.

7. FUNCTIONING FOUR

7.1 Controls and Trims

During the climb to flight level 350 at any convenient time note:

Mean Altitude	
I.A.S.	
Mach	

Trims: Stabiliser		Rudder ±3 Div		Aileron ±1 Div	

(a) Check controls for:

Breakout, centering, weight and response

(b) Check operation of trimmers:

Stabiliser on control column switches	SAT/UNSAT
Rudder	SAT/UNSAT
Aileron	SAT/UNSAT

(c) Check operation of yaw dampers by initiating a Dutch roll with a rudder input with all dampers off.

Check that each yaw damper in turn stops the Dutch roll oscillation.

LEFT	SAT/UNSAT
RIGHT	SAT/UNSAT

Re-select all yaw dampers on.

7.2 High Cabin Pressure

7.2.1 Maximum Differential

(a) At 35,000 feet aeroplane altitude, record maximum differential achieved in "AUTO". [ ]

(b) Select AUTO 1 and check that cabin remains at 8.6 ± .25 psi. [ ]

7.2.2 Safety Valve

(a) Drive the outflow valve toward full CLOSED in MAN mode. The cabin pressure shall limit to the primary value of the pressure relief (SAFETY) valve. Record the indicated differential pressure, cabin altitude and flight altitude.

DIFF [ ] CABIN ALT [ ]

AIRCRAFT ALT [ ]

(b) Use recorded cabin altitude and calculate the cabin differential pressure by comparing to the flight altitude. The calculated differential pressure shall not exceed 9.05 psi ± 0.2 psi (PAGE 6).

NOTE: Do not exceed 9.4 psi indicated pressure.

Drive the outflow valve to OPEN to reduce differential pressure, then select AUTO mode.

8. **HIGH MACH**

Trim the aircraft at flight level 350 in a level cruise at 0.82 IMN.

Note: For aircraft with an FAA Mmo of 0.86, trim at 0.84IMN.

Record:

Altitude [ ] IAS [ ] Mach [ ] TAT [ ]

ASI limit speed hand [ ] kts 280–286 kts (Mmo 0.84) or 288-294 kts (Mmo 0.86)

Apply maximum continuous thrust and accelerate to 0.86 IMN. Do not trim above 0.84 IMN.

Record IMN at which appropriate half of the overspeed warning light illuminates and confirm each related aural warning.

Captain [ ] Co-pilot [ ] Limits: 0.842-0.85 (Mmo 0.84) or 0.862-0.87 (Mmo 0.86)

Note handling qualities at 0.86 IMN (slight push force required). SAT/UNSAT

Extend airbrakes at 0.86 IMN (no roll and a gentle pitch up). SAT/UNSAT

9. **FUNCTIONING FIVE - ENGINE RELIGHTING (WINDMILL)**

Start the APU at 35,000 ft and 0.76M. SAT/UNSAT

Idle **LEFT** engine for 3 minutes.

With the APU generator selector switch OFF, shut the fuel off on the **LEFT** engine, and check satisfactory instrument transfer. SAT/UNSAT

Select APU generator switch ON.

After 3 minutes carry out a windmill relight of the **LEFT** engine at:-

- 29,000 ft and 270 kts (CF6-80A and CF6-80A2)
- 30.000 ft and 220 kts (CF6-80C2).

Record: Altitude [ ] TAT [ ]

Engine windmilling speed N2		
Time to light		30 secs max
Maximum E.G.T. during relight		
Time to idle N1		2 minutes max

NOTE: Following relight, maintain flight idle for one minute before increasing power.

10. **HIGH IAS**

At any convenient altitude between flight level 150 and 200 clear of cloud and turbulence, trim the aircraft in level flight at 350 knots.

Record :

Limit speed hand pointer	L	R	355 - 359 kts

Trims: Stabiliser		Rudder ±5 Div		Aileron ±1 Div	

Accelerate slowly by applying power to 370 knots IAS Accelerate slowly by applying power to 370 knots IAS. Record indicated airspeed at high speed warning (left and right sides can be determined by the appropriate filaments in the dedicated OVSP red warning light) and confirm each related aural warning.

Captain	Co-Pilot	
		350 - 360 kts

Operation of controls over small angles	SAT/UNSAT
Extend speed brakes at 370 knots (gentle nose up pitch with no roll).	SAT/UNSAT

11. **STALLS**

Flight level 150-100

With power off and flaps UP carry out a straight slow deceleration, from a trim speed of 1.3 V_S, to a point below stick shake where correct nudger operation can be confirmed.

NOTE: Use of thrust for stall recovery should be kept to a minimum necessary to achieve a safe recovery.

Record Weight

Trim Speed | Trim Setting

Stick Shaker Speed Scheduled

Stick Shaker Speed Achieved | Scheduled ± 5 knots

Start of Buffet

Note whether nudger provides a progressive force below stall warning.

Any unusual characteristics.....

Time flaps UP to 20 at 190 knots

Pull the **RIGHT** stall warning circuit breaker.

Carry out a slow straight stall to stick shake.

Record Weight

Trim Speed | Trim Setting

Stick Shaker Speed Scheduled

Stick Shaker Speed Achieved | Scheduled ± 4 knots

Start of Buffet

Any unusual characteristics. .....

Reinstate **RIGHT** stall warning circuit breaker.

Pull **LEFT** stall warning circuit breaker.

Carry out a slow straight approach to stall warning.

Record Weight

Trim Speed

Trim Setting

Stick Shaker Speed Scheduled

Stick Shaker Speed Achieved

Scheduled ± 4 knots

Reinstated **LEFT** stall warning circuit breaker.

Time Gear Down

at 160 knots

Time Flaps 20 - 30 at 160 knots

Carry out a slow straight power off stall to the nose drop.

Record Weight

Stick Shaker Speed Scheduled

Stick Shaker Speed Achieved

Scheduled ± 4 knots

Any unusual characteristics .....

Times:- Flaps 30 - 20 at 140 knots

- Gear up at 180 knots
- Flaps up at 190 knots

12. **FUNCTIONING SEVEN - ALTERNATE FLAPS**

Flight level 100 - 50

While observing flap limit speeds arm both LE and TE ALTN flap systems.

NOTE: Observations of slat positions should be made from the cabin.

(a) Rotate the flap selector to 30° position; position flap handle to 30°. Check the flaps extend within the time listed below:

Trailing Edge - 4 minutes

Check the leading edge is in the landing position (gapped).

(b) Rotate the flap selector to the 20° position. Position the flap handle to 20°. Check the trailing edge flaps retract to 20°. SAT/UNSAT

(c) Push both LE and TE ALTN flap switches OFF and rotate the flap selector to NORM, and retract the flaps using the flap handle. Rotate the flap selector to UP.

Check the Leading Edge and Trailing Edge flaps retract fully. SAT/UNSAT

12.3 Alternate Landing Gear (Observe placard speeds)

Assure gear handle is OFF. Operate the ALTN GEAR EXTENSION switch. Check the door amber light illuminates and 2 main gear green lights illuminate within 25 seconds, and nose gear green within 40 seconds. Confirm EICAS messages "GEAR DOORS" and "GEAR DISAGREE".

Place ALTN gear extension switch off. **Wait a minimum of one minute** and place the landing gear lever down. Check doors close. Retract landing gear normally. SAT/UNSAT

12.4 Ram Air Turbine (RAT)

1. Depressurise "C" hydraulic system. Check spoilers 3, 5, 8, 10 do not work.

2. Deploy RAT prior to approach and confirm green "PRESS" light illuminates in RAT switchlight, and spoilers 3, 5, 8, 10 work. SAT/UNSAT

3. Return "C" hydraulic system to normal.

13. **LANDING**

Carry out a normal landing with full reverse thrust and record any unusual characteristics.

.....

Reverse N1 LEFT [ ] RIGHT [ ]

14. **AFTER LANDING**

14.1 Standby Power

With external power and APU off disconnect both generators and check that standby power light does not illuminate: SAT/UNSAT

Check the following items for correct operation:

VHF COMM 1	SAT/UNSAT
VHF NAV 1	SAT/UNSAT
LEFT RDMI	SAT/UNSAT
LEFT OR RIGHT ADF (as appropriate)	SAT/UNSAT
CENTRE ILS	SAT/UNSAT
STANDBY ATTITUDE INDICATOR	SAT/UNSAT
STANDBY ALTIMETER	SAT/UNSAT
INSTRUMENT LIGHTING	SAT/UNSAT
FLIGHT INTERPHONE	SAT/UNSAT
FUEL QUANTITY	SAT/UNSAT
STANDBY ENGINE INSTRUMENTS (NOTE EPR INOP.)	SAT/UNSAT
RUDDER TRIM (TRIM INDICATOR INOPERATIVE)	SAT/UNSAT
HIGH IDLE ON ENGINES	SAT/UNSAT
MANUAL STABILISER TRIM	SAT/UNSAT

Reinstate both generators and check normal operation of electrics.

14.2 Engine Shutdown

Shut engines down using the fire handles.

Check:	Spar valve shuts (light cycles)	SAT/UNSAT
	Generator field switches OPEN:	SAT/UNSAT
	Fuel control switches:	CUT OFF
	Fire handles	RE-INSTATE

Amendment Record.

Issue 2

Sections 4 & 6

Take-off and en-route climbs reinstated.

Section 7.2 High Cabin Pressure

An additional step, to open the outflow valve to reduce differential pressure, has been added.

Section 8 High Mach

The check of the captain's and co-pilot's high speed warning systems have been combined.

Section 12.2 Alternate Flaps

The Alternate Flaps test has been amended so that it finishes after the flaps have been retracted on the alternate system to 20º.

Issue 3

Section 1.1.6 Take-off Configuration Warning

Test amended to include check of all system inputs

Functioning 2 & 3

Sequence of tests amended such that en-route climb immediately follows the take-off climb.

Section 5 High Mach

Test amended to include data for aircraft with 0.86 Mmo

Section 9. Engine Relighting (Windmill)

Text amended to identify the correct engine for the test.

Section 12 Alternate Flaps

Requirement to check slats sealed deleted.