CHECK FLIGHT CERTIFICATE

BAe 125-1000	**CFS 268 Issue 1**	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	-100	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 Flight may conduct the test.
General notes on test conduct can be found in the CAA Check Flight Handbook.

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

BAe 125-1000 CFS 268, Issue 1
(PRATT AND WHITNEY PW 305)

INTRODUCTION

This schedule is applicable only to BAe 125-1000 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 crew for this test flight should 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. Passengers drop-out mask covers may be loosely secured to prevent full mask deployment during the cabin de-pressurisation checks provided that operation of the cover latches is not obscured.

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 (Flight Department - Airworthiness Division) should be informed.

LOADING

The aircraft is to be loaded with 3000 lb of fuel per side in the wing tanks and with the forward and aft ventral tanks full. C.G. as convenient within normal limits.

The actual initial weight and C.G. must be recorded.

POST-FLIGHT ACTION

Complete a statement of defects, sign the Check Flight Certificate and state clearly whether or not the aircraft needs to be re-flown. Pass the completed flight test report to the CAA (Airworthiness Division) supervising Surveyor.

POST-FLIGHT ACTION

Plot out the performance climbs and compare the results with the gross performance graphs in sub-section 5-12 of the Flight Manual.

Complete a statement of defects, sign the Check Flight Certificate and state clearly whether or not the aircraft needs to be re-flown. Pass the completed flight test report to the CAA (Airworthiness Division) supervising Surveyor.

FLIGHT INFORMATION

Operator	
Total Airframe Hours	
Times : Chocks under	
Chocks away	
Total chock to chock	
Landing	
Take-off	
Total airborne	

TEST SCHEDULE

Except where otherwise indicated the flight techniques are those associated with normal operation of the aircraft.

1. PRE-FLIGHT CHECKS

1.1 Before Starting Engines. APU Running

1.1.1 Flight Deck Placards, Colour Coding and Labelling

Check all flight deck placards, instrument colour coding and control labelling for presence, accuracy and legibility. SAT/UNSAT

1.2 After Engine Start

1.2.1 Take-off Configuration Warning

With the aircraft chocked, or held on the toe brakes, release the parking brake and hold the CONFIG CHECK test button. Confirm that the following conditions produce a CONFIG warning. SAT/UNSAT

a) Flaps selected more than 15 degrees.

b) Airbrakes not fully shut.

c) Elevator mistrim - outside of green BAND NU and ND.

d) Aileron mistrim - greater than 0.9 div either side of neutral.

e) Parking brake not fully off.

f) Reversers selected out and then reselected to forward idle.

1.2.2 Gust Lock Throttle Baulk

With the flying controls gust lock engaged, HP cocks ON, check that each throttle in turn can be fully opened but that they are baulked before the CR detent is reached when operated together. This can be done by quickly moving the throttles and retarding them before significant power has been achieved. SAT/UNSAT

1.2.3 Airbrake Warning

With the flaps set to 25 degrees check that the airbrake/lift dump lever is baulked at the airbrake OPEN position. SAT/UNSAT

2. **TAKE-OFF**

Carry out a normal full throttle take-off

Record - Airfield pressure altitude

- OAT

- N1 REF

- N1 for each engine when power set

LEFT RIGHT

- any unusual characteristics

Select cabin altitude to 8000 feet.

NOTE : Do not select AUX FUEL TRANSFER until after the completion of item 4.1.

3. **HIGH SPEED WARNING (VENTRAL TANK FULL)**

Recommended 4,000 feet

With the ventral tank full, check each overspeed warning in turn by tripping the O/S WARN circuit breakers on panel DA.

Record the onset of the overspeed warnings:

O/S WARN 1 C/B PULLED	KIAS	SAT/UNSAT
O/S WARN 2 C/B PULLED	KIAS	SAT/UNSAT

(Limits 280-284 knots)

4. PERFORMANCE AND FUNCTIONING

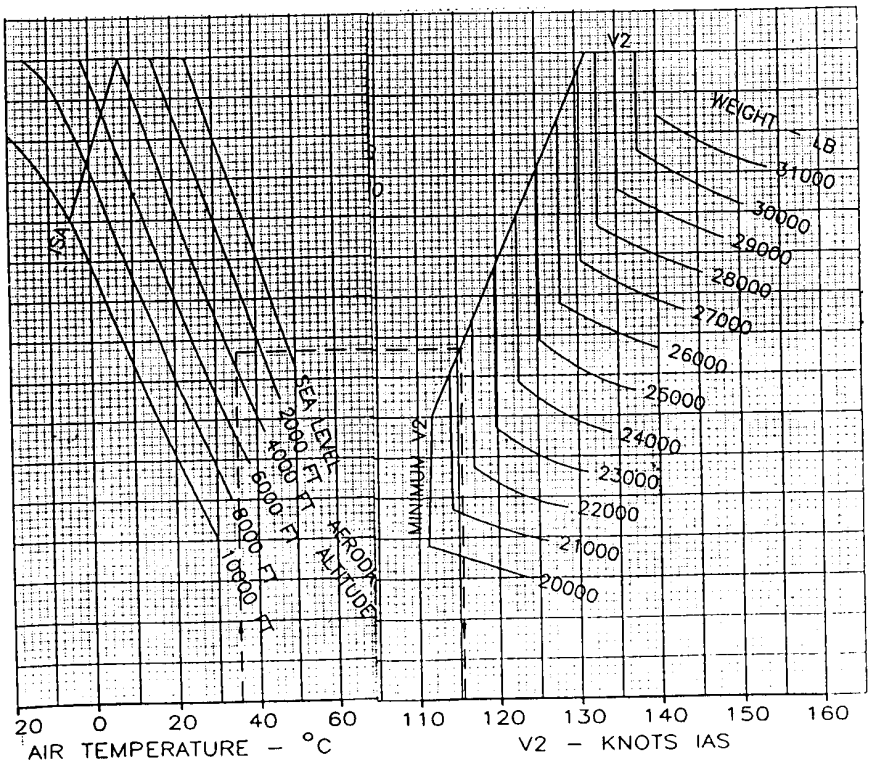
Carry out 5 minute climbs clear of cloud and turbulence and on a constant heading. Start recording when in a stabilised trimmed condition at the scheduled speed using not more than 5³ bank towards the operative engine. Aim to maintain IAS within ± 2 kts of scheduled speed, and to adjust the operative engine as necessary to maintain the scheduled thrust setting. The achieved rate of climb must be compared with the relevant gross performance information in the Flight Manual section 5-12.

For each climb record:
- aircraft weight at start and finish of climb
- Captain's altimeter (set to 1013 mb) every half minute
- Captain's ASI reading and OAT every minute
- all operative engine instrument readings after three minutes
- flying control trimmer settings and any remaining control forces
- both pilots ASI readings at any one moment

4.1 Engine Idling Take-off Climb

Recommended start FL40. Limits 3000 ft. AGL to FL80.

Conditions
- gear up, flaps 15°
- No.2 engine idling, throttle closed
- No.1 engine at maximum take-off power (T.O. detent) subject to not exceeding 102% N_1, 102% N_2 or 785°C ITT)
- APR ON
- airspeed V_2 (see graph below)
- air bleed off No.1 Engine
- rudder and aileron trim as required to achieve less than 50 lb foot force
- engine synchroniser OFF
- anti-ice OFF



Record :	LEFT	RIGHT
- fuel used at start of climb	lb/kg	lb/kg

- aircraft weight at start of climb ____ lb/kg

- V2 for test conditions ____ KIAS

TIME	***ALTITUDE (1013 mb)***	***IAS***	***INDICATED OAT***	***No. 1 ENG N1***
Min	feet	Knots	°C	%
0				
½		-	-	-
1				
1½		-	-	-
2				
2½		-	-	-
3		-	-	-
3½				
4				
4½		-	-	-
5				

Note: For analysis true OAT is 2°C below indicated OAT.

- ASI comparison LEFT ____ KIAS RIGHT ____ KIAS

- trimmer settings rudder ____ aileron ____

N1	**ITT**	**N2**	**OIL P.**	**OIL T.**	**FUEL FLOW**
%	°C	%	psi	°C	(lb/kg)/hr

Record :	LEFT	RIGHT
- fuel used at end of climb	lb/kg	lb/kg

- aircraft weight at end of climb ____ lb/kg

At the end of the climb select AUX FUEL TRANSFER. Select the main air valves open. Check that auxiliary tank fuel transfers equally to port and starboard wing tanks with the AFT tank transferring first. SAT/UNSAT

4.2 Electrical Generators FL 150

Trip and reset each generator in turn:
Note that bustie closes when each generator is tripped.

LEFT SAT/UNSAT

RIGHT SAT/UNSAT

4.3 Pressurisation FL 150

Check and record operation of crew oxygen masks for flow and microphones.

LEFT SAT/UNSAT

RIGHT SAT/UNSAT

Select main air valves to CLOSE.

Check and record:

- cabin altitude at which the altitude warning occurs

feet (limits: 9,000 to 9,600 ft) SAT/UNSAT

- cabin altitude at which passenger oxygen dropout occurs

feet (limits: 11,250 to 12,750 ft) SAT/UNSAT

- operation of auxiliary valve. SAT/UNSAT

Re-pressurise using manual pressurisation control. Check operation of manual control. SAT/UNSAT

Reselect automatic pressurisation control and select cabin altitude to 4000 feet in preparation for test 7.

4.4 Engine Out En-Route Climb

Recommended start FL150. Limits FL100 to FL300.

NOTE : The auxiliary tank fuel transfer must be complete before starting the climb.

Conditions

- gear and flap up
- No.1 engine shutdown
- No.2 engine at MCT detent (102% N_1, subject to not exceeding 102% N_2 or 785°C ITT)
- en-route climb speed (see table 1 at end of schedule)
- pressurisation ON
- all anti-icing OFF
- engine synchroniser OFF
- APR disarmed

Record :	LEFT	RIGHT
- fuel used at start of climb	lb/kg	lb/kg

- aircraft weight at start of climb ____ lb/kg

- En-route climb speed for test conditions ____ KIAS

TIME	***ALTITUDE (1013 mb)***	***IAS***	***INDICATED OAT***	***No. 2 ENG N1***
Min	feet	Knots	°C	%
0				
½		-	-	-
1				
1½		-	-	-
2				
2½		-	-	-
3		-	-	-
3½				
4				
4½		-	-	-
5				

Note: For analysis true OAT is 4°C below indicated OAT.

- ASI comparison LEFT ____ KIAS RIGHT ____ KIAS

- trimmer settings rudder ____ aileron ____

N1	**ITT**	**N2**	**OIL P.**	**OIL T.**	**FUEL FLOW**
%	°C	%	psi	°C	(lb/kg)/hr

Record :	LEFT	RIGHT
- fuel used at end of climb	lb/kg	lb/kg

- aircraft weight at end of climb ____ lb/kg

4.6 No.1 Engine Relight — Not Above FL 300

After completion of the climb, with 15° flap at 130 KIAS, time an assisted relight on No.1 engine.

NOTE : A relight should not be attempted if N_1 indicates zero.

Record - altitude _____ feet

- windmill speeds

N1	N2
%	%

- time from start switch on to ITT rise

_____ sec — SAT/UNSAT

- time to idle N2 _____ sec

- Max ITT _____ °C

4.7 Fuel System — As convenient

Check and record:

- operation of fuel crossfeed and correct annunciation. — SAT/UNSAT

- operation of wing tank fuel transfer and correct annunciation. — SAT/UNSAT

5. TRIM, CONTROLS AND TRIMMERS

Climb to FL350

Continue a normal climb to FL350. Trim the aircraft accurately about all axes.

Check and record:

- lateral and directional trim settings:

Aileron [ ] SAT/UNSAT

Rudder [ ] SAT/UNSAT

- all primary flying controls for backlash, breakout, centring, forces and response. Record any unsatisfactory characteristics: SAT/UNSAT

- all trimmers for effectiveness, operating forces and backlash. Record any unsatisfactory characteristics. SAT/UNSAT

6. PRESSURISATION

FL350

With the cabin altitude selected to 4000 feet and the cabin stabilised at maximum differential pressure, check and record:

- aircraft altitude _____ feet

- cabin altitude at stabilsed maximum Δ P. _____ feet

- stabilised maximum differential pressure.

_____ psi (limits: 8.6 to 8.8 psi) SAT/UNSAT

DO NOT EXCEED 9.0 psi

Select cabin altitude to 6000 feet and allow to stabilise.
Close No.2 main air valve and fully close No.1 throttle.
Check and record:

- cabin altitude does not increase, apart from an initial transient. SAT/UNSAT

Restore power on No.1 engine and re-open No.2 main air valve. After 30 seconds close No.1 main air valve and fully close No.2 throttle. Check and record:

- cabin altitude does not increase, apart from an initial transient. SAT/UNSAT

Restore normal pressurisation.

7. **HIGH MACH** FL350 to FL300

Trim the aircraft accurately at M_{MO}. Check each overspeed warning in turn by accelerating with the appropriate C/B tripped.

Trip C/B O/S WARN 1 and accelerate to 0.82 IMN on the left ASI.

Check and record overspeed warning.

IMN	(limits: not before the airspeed needle reaches the V_{MO} tape and not above 0.81 IMN).	SAT/UNSAT

- handling qualities at 0.82 IMN (no significant trim changes, airframe or control buffet). SAT/UNSAT
- operation of airbrakes at 0.82 IMN. SAT/UNSAT
- operation of Mach trimmer, needing positive push to achieve speed. SAT/UNSAT

Reduce speed to M_{MO}. Reset C/B O/S WARN 1 and trip C/B O/S WARN 2. Accelerate to the onset of overspeed warning on the right ASI (but not above 0.82 IMN in the absence of a warning).

Record - onset of the overspeed warning on the right ASI.

IMN	(limits: not before the airspeed needle reaches the V_{MO} tape and not above 0.81 IMN).	SAT/UNSAT

Reduce speed to M_{MO} and reset C/B O/S WARN 2.

Check operation of yaw damper. SAT/UNSAT

8. **ENGINE SHUTDOWN AND RELIGHT** FL200

At 20,000 feet 260 knots, shut down the right engine. When N_2 decays to 12% select the throttle lever to IDLE.

- ignition ON

- time from throttle at idle to ITT rise.

sec (limit : 10 sec) SAT/UNSAT

- time from throttle at idle to idle N2

sec SAT/UNSAT

- maximum ITT

°C

9. STALLING

FL180 to FL100

The following conditions apply to the stall checks:

- the stall identification system MUST be fully serviceable, as shown by normal pre-flight checks and systems.
- the ventral fuel tanks MUST be empty.
- altitude to be between FL180 and 10,000 feet AGL.
- all external surfaces to be free from ice.
- weather radar, if fitted, to be at standby.
- the tests must be conducted clear of cloud and with a good visual horizon.
- autopilot disengaged.
- the yaw damper should be ON for the stalls in the clean configuration and OFF for the stalls in the flaps 45° configurations.
- Airbrakes closed.

For each stall the aircraft is to be trimmed at 1.4 times the scheduled stall (stick push) speed with the throttles closed. Speed should then be reduced smoothly at approximately 1 knot per second. Do not attempt to maintain constant altitude.

During normal operation of the system with all three channels of the stall identification system operating, the stall VALVE A and VALVE B lights by ASI should illuminate simultaneously. Any delay between illumination of the VALVE A and VALVE B lights indicates that the 3rd channel is inoperative and should be recorded as a defect.

The test must be discontinued and recovery action taken in the event of:

- speed reducing to the scheduled stick shake speed minus 4 knots in the absence of stick shake occurring.
- a natural aerodynamic stall occurring. Some aerodynamic buffet may occur briefly, coincident with stick pusher operation.
- speed reducing to the scheduled stick push speed minus 4 knots in the absence of stick push occurring.

9.1 <u>Clean Configuration</u> Yaw damper ON.

(a) Normal operation

Record - aircraft weight | lb/kg |

- scheduled and achieved speeds.

	SCHEDULED SPEED KIAS	ACHIEVED SPEED KIAS (from ADI)	LIMITS	
TRIM		-		
STICK SHAKE			SCHEDULED ±3 KIAS	SAT/UNSAT
STICK PUSH			SCHEDULED ±3 KIAS	SAT/UNSAT
MARGIN SHAKE TO PUSH	-		NOT LESS THAN 5 KIAS	SAT/UNSAT

- stall characteristics (straight nose down pitch in response to stick pusher). SAT/UNSAT

- simultaneous illumination of stall VALVE A and VALVE B lights. SAT/UNSAT

(b) 3rd channel inoperative

Trip C/B J5 on Panel D to isolate the 3rd channel of the stall identification system.

Record - aircraft weight | lb/kg |

- scheduled and achieved speeds.

	SCHEDULED SPEED KIAS	ACHIEVED SPEED KIAS (from ADI)	LIMITS	
TRIM		-		
STICK SHAKE			SCHEDULED ±3 KIAS	SAT/UNSAT
STICK PUSH			SCHEDULED ±3 KIAS	SAT/UNSAT
MARGIN SHAKE TO PUSH	-		NOT LESS THAN 5 KIAS	SAT/UNSAT

- stall characteristics SAT/UNSAT

(c) Autopilot disconnect

Reset C/B J5 on panel D. With the aircraft trimmed at the original trim speed, engage the autopilot in altitude hold and close the throttles. Allow speed to reduce until the autopilot disconnects automatically.

Record - autopilot disconnect occurs at onset of stick shaker. SAT/UNSAT

DO NOT CONTINUE below the scheduled stick shake speed if autopilot fails to disconnect.

9.2 Flaps 15°, gear up Yaw damper OFF

(a) Normal operation

Record - aircraft weight lb/kg

- scheduled and achieved speeds.

	SCHEDULED SPEED KIAS	ACHIEVED SPEED KIAS (from ADI)	LIMITS	
TRIM		-		
STICK SHAKE			SCHEDULED ±3 KIAS	SAT/UNSAT
STICK PUSH			SCHEDULED ±3 KIAS	SAT/UNSAT
MARGIN SHAKE TO PUSH	-		NOT LESS THAN 5 KIAS	SAT/UNSAT

- stall characteristics SAT/UNSAT

- simultaneous illumination of stall VALVE A and VALVE B lights. SAT/UNSAT

9.3 <u>Flaps 45°, gear down</u> Yaw damper OFF

(a) Normal operation

Record - aircraft weight | lb/kg |

- scheduled and achieved speeds.

	SCHEDULED SPEED KIAS	ACHIEVED SPEED KIAS (from ADI)	LIMITS	
TRIM		-		
STICK SHAKE			SCHEDULED ±3 KIAS	SAT/UNSAT
STICK PUSH			SCHEDULED ±3 KIAS	SAT/UNSAT
MARGIN SHAKE TO PUSH	-		NOT LESS THAN 5 KIAS	SAT/UNSAT

- stall characteristics SAT/UNSAT

- simultaneous illumination of stall VALVE A and VALVE B lights. SAT/UNSAT

10. **HIGH IAS** FL 100

Trim the aircraft at V_{MO}.

Trip C/B O/S WARN 1 and accelerate to 350 KIAS on the left ASI.
Check and record:

KIAS	(limits: not before the airspeed needle reaches the V_{MO} tape and between 330-334 KIAS).	SAT/UNSAT

- operation of flying controls over small angles SAT/UNSAT
- airframe behaviour SAT/UNSAT
- operation of airbrakes at 350 KIAS SAT/UNSAT

Reduce speed to V_{MO}. Reset C/B O/S WARN 1 and trip C/B O/S WARN 2. Accelerate to the onset of overspeed warning on the right ASI (but not above 339 KIAS in the absence of a warning).

Record - onset of the overspeed warning on the right ASI.

KIAS	(limits: not before the airspeed needle reaches the V_{MO} tape and between 330-334 KIAS).	SAT/UNSAT

Reduce speed and reset C/B O/S WARN 2.

11. **FUNCTIONING** As convenient

12.1 Normal operation of flap and gear.

Record - flap and gear operating times as follows:

OPERATION	SPEED KIAS	OPERATING TIME	LIMIT	LIMIT	
		SEC	MAX SEC	MIN SEC	
FLAPS 0-15°	220		5.5	4.0	SAT/UNSAT
GEAR DOWN	220		7	-	SAT/UNSAT
FLAPS 15°-25°	180		3.5	2.5	SAT/UNSAT
FLAPS 25°-45°	170		7.5	5.5	SAT/UNSAT
FLAPS 45°-15°	170		6	-	SAT/UNSAT
GEAR UP	220		7	-	SAT/UNSAT
FLAPS 15°-0	220		4	-	SAT/UNSAT

11.2 Engine Slam Accelerations

Flaps 25°, gear down. VREF. Record N1 REF. %

For each engine in turn, take the air bleed and synch off, close the throttle to idle, and with APR off slam throttle to T.O.

Record:

	LEFT	**RIGHT**
IDLE N1 %		
TIME TO ACCELERATE FROM IDLE TO 1% BELOW N1REF.		

(Limit : 8 seconds) SAT/UNSAT

12.3 Ram Air Valve

Reduce cabin differential pressure to approximately 1 psi. Close both main air valves and select the dump valve OPEN. Check and record:

- cabin pressure is released. SAT/UNSAT

  (A slight residual pressure may be maintained due to ram effect with dump valve open).

- with the cabin fan STOPPED and flood flow CLOSED, ventilating air flows through the flight deck. SAT/UNSAT

Restore pressurisation as required.

12.4 Airframe De-icing

Select airframe de-icing ON approximately 5 minutes before landing.

13. LANDING

Carry out a normal landing. Record any abnormal characteristics.

14. FUNCTIONING - AFTER LANDING

Shut down engines and check and record:

-	emergency flap lowering (main pressure can be exhausted by use of airbrakes). Note the flap indicator will not indicate and a visual check should be made of the flaps.	SAT/UNSAT
-	select battery switch to emergency and check flight deck emergency lighting.	SAT/UNSAT
-	wing and tail de-icing strips for satisfactory distribution of fluid.	SAT/UNSAT

Record any unsatisfactory items.

NOTE : After flight the hydraulic system must be checked and the replenishment of the emergency hydraulic tank etc. carried out.

Before the flight test certificate is completed (first page) both climbs should be checked to ensure that the achieved rate-of-climb is within the allowable tolerance. Results worse than the allowable tolerance should be investigated before the flight test is signed off as being successfully completed.

AIRCRAFT WEIGHT LBS	*FLAP 0 ERC*	*FLAP 45 VREF*	*FLAPS UP*			*FLAPS 15*			*FLAPS 45 GEAR DOWN*		
			TRIM	**SHAKE**	**PUSH**	**TRIM**	**SHAKE**	**PUSH**	**TRIM**	**SHAKE**	**PUSH**
32000	-	-	178	140	132	165	130	122	158	127	117
31000	187	144	175	138	130	162	128	120	155	125	115
30000	184	142	172	136	128	160	126	119	153	123	113
29000	181	139	169	134	126	157	124	117	150	122	111
28000	177	137	167	132	124	154	122	115	148	120	109
27000	174	135	163	130	122	152	120	113	145	118	107
26000	171	132	160	127	120	149	118	110	142	116	105
25000	167	129	157	125	117	146	116	108	139	114	103
24000	163	126	154	122	115	143	113	106	136	111	101
23000	160	123	150	120	112	139	111	104	133	109	98
22000	156	121	146	117	110	136	109	101	130	107	96
21000	152	120	143	115	107	133	106	99	127	105	94
20000	147	120	139	112	105	129	104	96	124	102	92
19000	144	120	135	109	102	126	101	94	121	100	89
18000	140	120	132	107	100	122	99	91	117	97	87

TABLE 1

MAXIMUM CONTINUOUS POWER; BLEEDS ON; ANTI-ICE OFF

OAT °C	0	5000	10000	15000	20000
+20	90.7	92.2	91.8	91.3	90.8
+15	89.9	93.0	92.6	92.1	91.5
+10	89.1	93.8	93.4	92.9	92.3
+5	88.3	94.6	94.2	93.6	93.0
0	87.5	95.4	94.9	94.3	93.7
-5	86.7	94.6	95.7	95.1	94.4
-10	85.9	93.8	96.4	95.8	95.1
-15	85.1	92.9	97.4	96.7	95.9
-20	84.3	92.0	98.4	97.6	96.8
-25	83.4	91.0	99.4	98.6	97.8
-30	82.6	90.1	100.3	99.6	98.8

TABLE 2