

CHECK FLIGHT CERTIFICATE



Boeing 737-500

CFS 287 Issue 1

Registration:

Date:	Crew:	Observer:
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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* <i>(delete as applicable)*</i>

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.

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



BOEING 737-500 (CFM56-3 SERIES)

CFS 287 Issue 1

REGISTRATION	
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FLIGHT DATE	
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INTRODUCTION

This schedule is applicable only to Boeing 737-500 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 tests 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.

MINIMUM CREW

The minimum flight crew shall be increased by one flight observer to record the results of the tests. The pilot conducting the tests shall be specifically approved by the CAA (SRG) for airworthiness flight testing of Boeing 737 aircraft.

PASSENGERS

While it is legal to carry passengers on a test flight of an aircraft with a valid Certificate of Airworthiness, the practice is not recommended. If passengers are carried, however, they should be informed that the risk is greater than on an ordinary flight.

TEST SCHEDULE

The pilot conducting the tests must be familiar with the contents of this schedule before flight. All members of the required minimum crew must be provided with copies of the schedule for use in flight.

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 Flight Manual is overriding, and CAA (SRG) Flight Test Section must be informed. The altitude conditions in the schedule must be observed to ensure adequate safety and validity of the test results. The tests should, if possible, be carried out in the sequence as written.

For standard Check Flights the Take Off and En-Route performance climbs are no longer required and may be omitted.

PRE-FLIGHT PREPARATION

Oxygen shall be available to all persons on board. All Passenger drop out oxygen mask covers should be latched before the flight.

Locate the circuit breakers for both high speed warning systems and the No. 1 stall warning system. These require to be tripped and reset during flight.

Determine the type of elevator tab push rods fitted (aluminium or titanium). This sets the tolerances applicable to the elevator manual reversion check.

PRE-FLIGHT INFORMATION

Aircraft Registration

Operator

Location

Date

1st Pilot

2nd Pilot

Observer

Total airframe hours

Engine Serial Nos

Port	Starboard
<input type="text"/>	<input type="text"/>

LOADING AND CALCULATION OF WEIGHT

Load the aircraft to a ramp weight between 40,000 kg and 46,000 kg and a cg between 10-15% MAC.

Where specific tests require the aircraft weight to be recorded it shall be calculated from the 'fuel gone' indicators.

Zero Fuel Weight

Fuel Contents

No.1	CTR	No.2
<input type="text"/>	<input type="text"/>	<input type="text"/>

Ramp Weight

Ramp cg % MAC

FIGURE 1A

GA THRUST SETTING

- Air Conditioning - AUTO Both Packs
- Wing TAI - OFF
- Engine Cowl TAI - OFF

For the engine acceleration test (Para. 3) the wing and engine cowl anti-icing must be ON, the acceleration should be measured to the chart value of GA N_1 minus 1.5%.

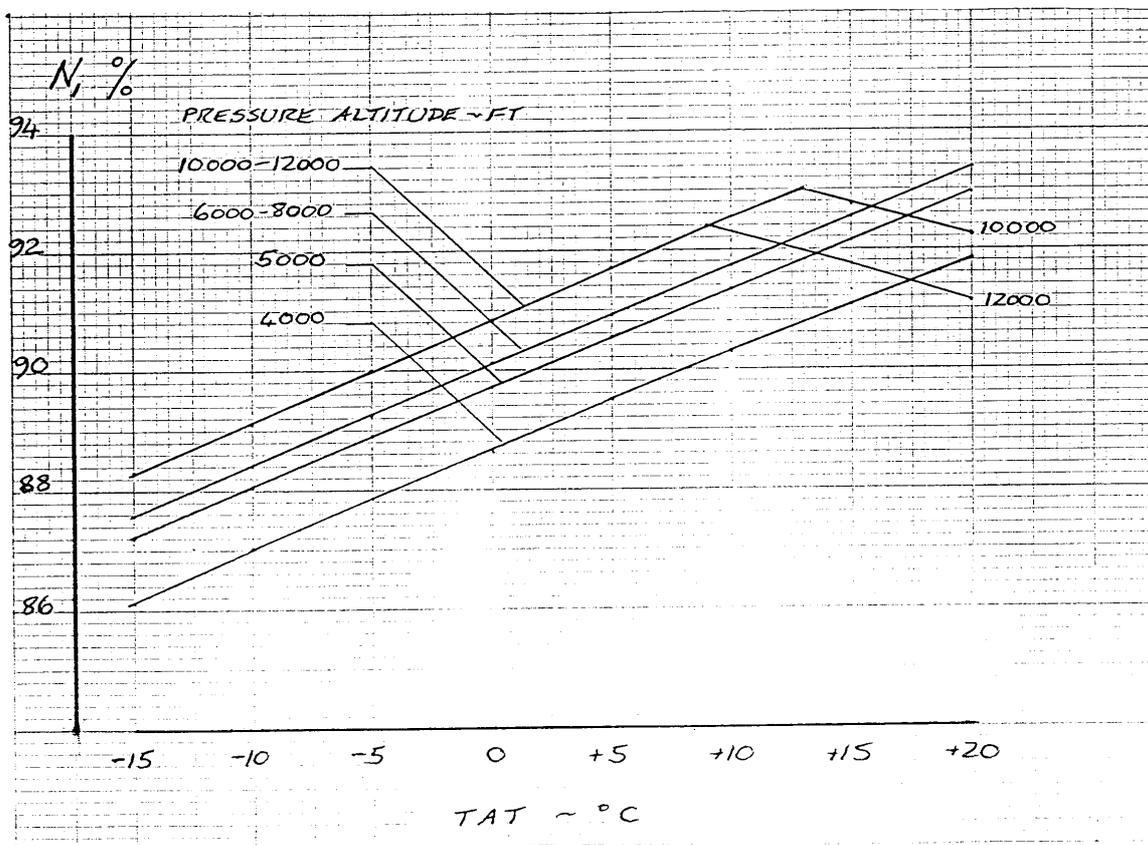


FIGURE 1B

GA THRUST SETTING

- Air Conditioning - AUTO Both Packs
- Wing TAI - OFF
- Engine Cowl TAI - OFF

For the engine acceleration test (Para. 3) the wing and engine cowl anti-icing must be ON, the acceleration should be measured to the chart value of GA N_1 minus 1.5%.

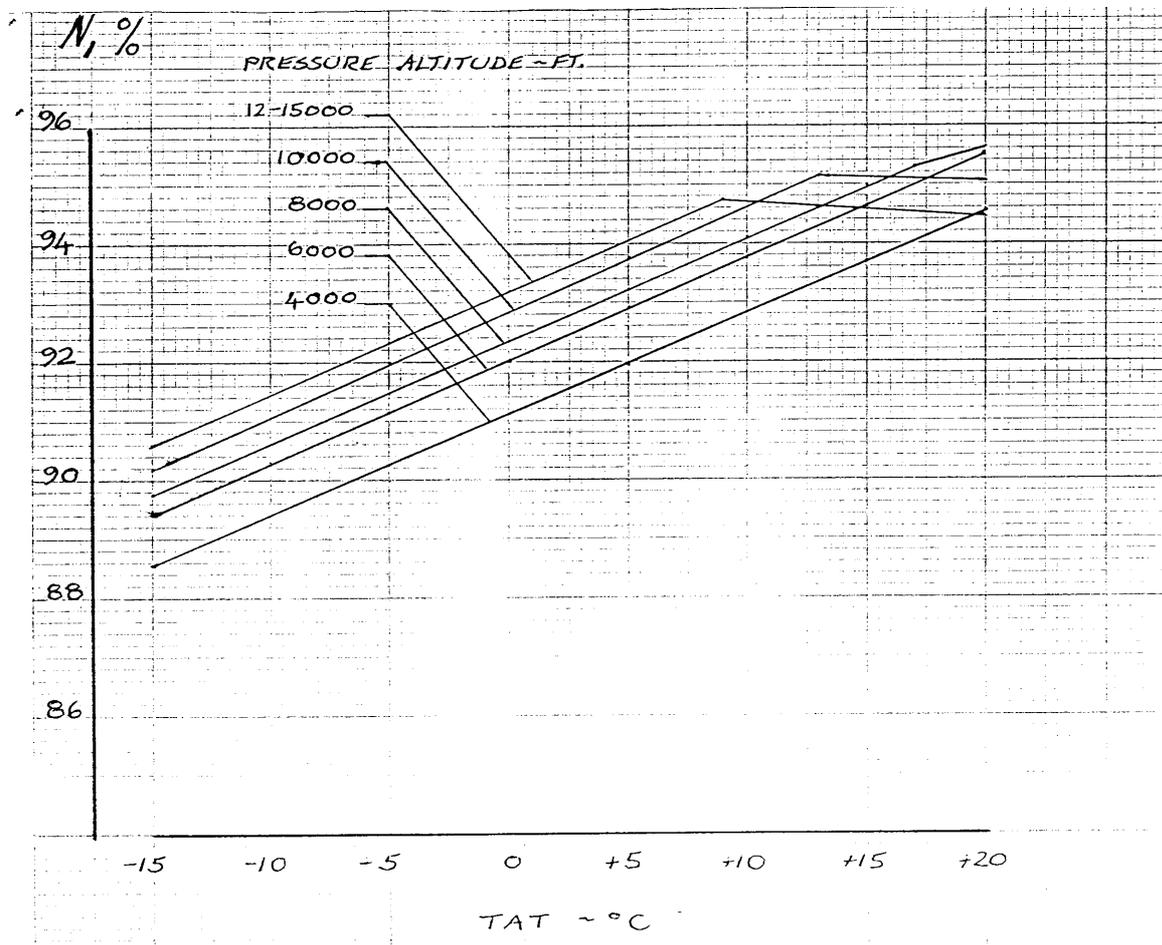


TABLE 1
SPEEDS, KNOTS IAS, B737-500

Note: There is a small probability that an adverse combination of stall warning and stall speed tolerances could give a very small margin between stick shaker operation and the stall. The scheduled stall speeds are therefore included in this table, for information only, to increase crew awareness.

The aircraft must not be decelerated to the full stall.

Weight Kg	T/O Climb 5° Flap	E/R Climb	Stall Approach - Flap 5°			Stall Approach Flap 30°		
			Trim	Shaker	Stall (Info Only)	Trim	Shaker	Stall (Info Only)
46000	134	199	145	123	117	126	109	103
45000	133	197	143	122	116	125	107	102
44000	131	195	141	120	114	123	106	100
43000	129	193	139	119	113	122	105	99
42000	128	191	138	117	111	120	103	98
41000	126	188	136	116	110	119	102	96
40000	125	185	134	114	108	117	100	95
39000	124	183	132	113	107	115	99	94
38000	122	181	131	111	105	114	97	92
37000	121	178	129	110	104	112	96	91
36000	119	176	127	108	102	110	94	89
35000	118	174	125	107	101	109	92	88
34000	116	172	123	105	99	107	91	87

Tolerances (1) Stick Shaker ± 4 kts
 (2) Stall (*Information Only*) ± 5 kts

PART 1 - TEST SCHEDULE

1. FUNCTIONING BEFORE ENGINE START

1.1 Take-off Configuration Warning

Check that the take-off configuration warning sounds:

Parking Brake	Speed Brake	Thrust Lever Above 30°	Flap	Stab. Trim	
ON	DOWN	No. 1	5	Within green band.	SAT/UNSAT
OFF (feet on brakes for remainder of check)	ARMED	No. 1	5	Within green band	SAT/UNSAT
OFF	DOWN	No. 2	5	Warning commences within ± 0.5 div of each end of T.O. band. (1.5 to 6.8)	SAT/UNSAT
OFF	DOWN	No. 2	25	Within green band	SAT/UNSAT
OFF	DOWN	No. 2	2	Within green band	SAT/UNSAT

Reset thrust lever to flight idle and parking brake ON, flaps as required.

1.2 Stabiliser Trim Brake and Over-ride

Check operation of the stabiliser trim brake by running electric trim and applying a column force in the opposing sense. Check that operation of the stabiliser trim over-ride switch releases the brake.

Check in nose up and nose down directions. SAT/UNSAT

1.3 Stabiliser Cut-out

Check operation of the main electric stabiliser cut-out switch. SAT/UNSAT

Reset stabiliser for take-off.

1.4 V_{MO} Pointers

Record V_{MO} limit pointer readings on both ASIs (336 to 344 kts).

CAPT.	F/O
SAT/UNSAT	

1.5 Pressurisation

Set standby mode, 4000 ft cabin altitude in standby, and a high rate.
Set 35000 ft in the AUTO window.

2. **TAKE-OFF**

Carry out a normal full thrust take-off. Record any unusual behaviour.

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3. **ENGINE ACCELERATIONS** Preferred altitude FL50, but not above FL80.

Flap	15°
Gear	Down
Airspeed	150 kt
Air Conditioning	Both Packs AUTO
Engine and Wing Anti-ice	ON

Record:

Altitude ft	TAT °C	Target N ₁ from Fig 1 %	FMC G/A N ₁ %

On each engine in turn retard to flight idle, record N₁ and N₂ as soon as they are stable and immediately accelerate the engine to the target N₁ with a rapid thrust lever movement.

Record:

	No.1	No.2
Idle N ₁ %		
Idle N ₂ %		
Acceleration Time (sec)		

For standard Check Flights the Take Off and En-Route performance climbs are no longer required and may be omitted.

4. PERFORMANCE - TAKE-OFF CLIMB

Carry out an engine out take-off climb for 5 mins. on a constant heading, clear of cloud and significant turbulence. Commence the climb from not below 3,000 ft above terrain, and not above FL 70 with :

- gear up, 5° flap
- No. 1 engine at GA thrust throughout (Figure 1A for 18.5K, Fig. 1B for 20K)
- No. 2 engine idling (throttle fully closed)
- air-conditioning bleeds auto, anti-icing bleeds off
- take-off climb speed for the weight (Table 1)
- Captain's altimeter set to 1013 mb
- the aircraft trimmed laterally to zero wheel angle, and directionally to constant bank angle and heading.

Record:

- scheduled take-off climb speed
- FMC GA N_1 at start and finish of climb
- aircraft weight at start and finish
- Captain's altimeter reading every half minute
- T.A.T., N_1 and Captain's A.S.I. reading every minute
- No.1 engine instrument readings after three minutes
- both A.S.I. readings at any one moment (max. difference - 5 kts.)
- trim settings, bank angle and direction
- degree of turbulence

Ramp Weight	
Fuel Gone	
Start Weight	
V ₂	

Time	Altimeter ft	ASI kt	TAT °C	N₁ %	FMC GA N₁ %
0					
½					
1					
1½					
2					
2½					
3					
3½					
4					
4½					
5					

ASI Cross Check

Capt.	F/O

 SAT/UNSAT

Trim Settings Rudder
Aileron
Stabiliser Bank Angle
Direction

No. 1 Engine Data at 3 minutes.

N ₁ %	
EGT °C	
N ₂ %	
Fuel Flow kg/hr	

Oil Pressure psi
Oil Temperature °C

Ramp Weight	
Fuel Gone	
Finish Weight	

Mean Weight kg

Weather

Accelerate and retract Flaps to Up.

For standard Check Flights the Take Off and En-Route performance climbs are no longer required and may be omitted.

5. PERFORMANCE - EN-ROUTE CLIMB AND ENGINE RELIGHT

5.1 En-route Climb

Start the APU.

Leave No. 1 engine at flight idle for three minutes before shutting it down.

Carry out an engine out en-route climb for 5 minutes, on a constant heading, clear of cloud and significant turbulence. Commence the climb from not below 8,000 ft above terrain, and not above FL 150.

- With
- gear up, flaps up
 - No. 1 engine windmilling, engine start lever at "cut off"
 - No. 2 engine at maximum continuous thrust throughout (FMC N₁)
 - air-conditioning bleeds auto, anti-icing bleeds off
 - the en-route climb speed for the weight (table 1)
 - the aircraft trimmed laterally to zero wheel angle and directionally to constant bank angle and heading.
 - scheduled E/R climb speed

Record:

- aircraft weight at start and finish
- Captain's altimeter reading every half minute
- T.A.T., N₁ and Captain's A.S.I. reading every minute
- No.2 engine instrument readings after 3 minutes
- trim settings, bank angle and direction
- degree of turbulence

Ramp Weight	
Fuel Gone	
Start Weight	
$V_{E/R}$	

Time	Altimeter ft	ASI kt	TAT °C	N_1 %	FMC MCT N_1 %
0					
½					
1					
1½					
2					
2½					
3					
3½					
4					
4½					
5					

Trim Settings	Rudder	<input type="text"/>	Bank Angle	<input type="text"/>	
	Aileron	<input type="text"/>		Direction	<input type="text"/>
	Stabiliser	<input type="text"/>			

No. 2 Engine Data at 3 minutes.

N_1 %	<input type="text"/>
EGT °C	<input type="text"/>
N_2 %	<input type="text"/>
Fuel Flow kg/hr	<input type="text"/>

Oil Pressure psi	<input type="text"/>
Oil Temperature °C	<input type="text"/>

Ramp Weight	<input type="text"/>
Fuel Gone	<input type="text"/>
Finish Weight	<input type="text"/>

Mean Weight kg	<input type="text"/>
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Weather	<input type="text"/>
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If the en-route climb has not been done, the next relight should be carried out by shutting down No.1 engine after at least 3 minutes at flight idle.

5.2 No. 1 Engine Restart

On completing the climb, but below 15000 ft, relight No. 1 engine at 150 kt. with flaps 10°, using the starter assist procedure. Record:

Windmilling N ₁ %	
Windmilling N ₂ %	
Time to EGT rise (sec.)	
Max. EGT °C	
Time to stabilised flight idle (sec.)	
Any abnormality	

SAT/UNSAT

Leave the engine idling for two minutes before applying thrust. Shutdown the APU. Accelerate and retract Flaps to Up.

6. **Pressurisation**

Not above FL200

Record: Cabin altitude when stabilised (3750 to 4250 ft) SAT/UNSAT

Select the highest cabin altitude possible using the standby pressurisation mode. Continue the climb, but not above FL 200 until the following pressurisation checks are completed.

Record: Cabin Altitude Warning (9000 to 11000 ft) SAT/UNSAT

Functioning of crew oxygen masks, flow and microphones.

Capt.	SAT/UNSAT
F/O	SAT/UNSAT
Supernumerary	SAT/UNSAT

Automatic Passenger mask drop out (12000 to 15000 ft) SAT/UNSAT

Record : positions of any masks which have failed to drop.

Repressurise the aircraft in standby mode, with 1000 ft set in the STBY cabin altitude window.

Commence a climb to FL350 once control of pressurisation is assured.

7. **HANDLING IN CLIMB**

7.1 Trim Settings

During the climb record accurate trim in each axis:

Stabiliser		
Rudder $\pm \frac{1}{2}$ unit		SAT/UNSAT
Aileron $\pm \frac{3}{4}$ unit		SAT/UNSAT

7.2 Controls and Trimmers

Check the primary flying controls for breakout loads, centring, backlash, weight and response.

	Elevator	SAT/UNSAT
	Rudder	
SAT/UNSAT	Aileron	SAT/UNSAT

Record any abnormality.

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Check all trimmers for friction, backlash and response:

Stabiliser Trim	SAT/UNSAT
Rudder Trim	SAT/UNSAT
Aileron Trim	SAT/UNSAT

Record any abnormality.

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7.3 Spoiler Isolation

Select the speedbrake lever to the flight detent, then switch off spoilers A and B.

Record, by visual inspection from the cabin the spoiler extensions in inches at the trailing edge.

Port		Starboard	
Outer	Inner	Inner	Outer

Return speedbrake lever to down. Spoiler switches A and B ON.
SAT/UNSAT

8. **FUNCTIONING AT FL350**

8.1 Pressurisation

Record normal cabin pressure control at maximum differential pressure.

7.60 to 8.15 psi

SAT/UNSAT

Select Manual DC mode, and increase cabin differential pressure. (It may be necessary to select both packs to HI to achieve the necessary differential to function the safety valve).

Record safety valve operation 8.65 psi

SAT/UNSAT

DO NOT EXCEED 9.0 PSI

Both Packs AUTO

Re-establish normal pressurisation control.

8.2 Yaw Damper

Select the yaw damper off at a typical cruise Mach No. Apply a gentle rudder doublet to excite the dutch roll. Select the yaw damper on and check that the dutch roll damps rapidly.

SAT/UNSAT

8.3 Manual Reversion and Standby Rudder FL350

Airspeed 0.74M
 Wing fuel loads equal
 N₁'s equal
 Aircraft in trim (Aileron less than $\frac{3}{4}$ div, rudder less than $\frac{1}{2}$ div.)
 Spoiler A and B switches OFF
 FLT CONTROL A and B switches STBY RUD

Record direction and number of turns of stabiliser trim wheel to re-trim

either : Aluminium Tab Rods (3.5 NU to 2 ND)
 or : Titanium Tab Rods (4.5 NU to 2ND)

SAT/UNSAT

Functioning of Manual Trim Wheel SAT/UNSAT

Satisfactory control in Manual with both systems off:

Elevator slop (approx. 1½ inches)
 SAT/UNSAT

Rudder trim change less than 2 units
 SAT/UNSAT

Aileron forces symmetrical, or any asymmetry not greater than a 2 to 1 ratio. SAT/UNSAT

If asymmetry is greater than 2 to 1, record the force required at the hand grip knob to turn the wheel to 30° in each direction.

clockwise	<input type="text"/>	lb
anti-clockwise	<input type="text"/>	lb

FLT CONTROL A switch OFF

Check satisfactory rudder control on STBY RUD B only SAT/UNSAT

FLT CONTROL A switch STBY RUD
 FLT CONTROL B switch OFF

Check satisfactory rudder control on STBY RUD A only SAT/UNSAT

FLT CONTROL A switch ON
 (expect pitch trim change)

Check satisfactory elevator, aileron and rudder control on A system only SAT/UNSAT

FLT CONTROL B switch ON

FLT CONTROL A switch	OFF
Check satisfactory elevator, aileron and rudder control on B system only	SAT/UNSAT
FLT CONTROL A switch	ON
SPOILER A and B switches	ON
YAW DAMPER	ON

8.4 APU Relight FL350

At 0.70 IMN, relight the APU.

Time to 'RUN'

	sec
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SAT/UNSAT

9. **HANDLING HIGH MACH. NO.** **FL350 - FL300**

At FL 350 record limit pointer readings on both ASI's (276 to 284 kt).

Capt.	F/O

SAT/UNSAT

Trip No. 2 high speed warning circuit breaker and increase speed slowly to 0.84 IMN using a high thrust.

Record IMN at Buffet onset.

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No.1 High Speed Warning (0.82 - 0.84 IMN)

Capt.	F/O

SAT/UNSAT

Check elevator and aileron weight and response over small angles. SAT/UNSAT

Speed brake operation - slight nose up trim change and buffet. SAT/UNSAT
Any unusual characteristics.

--

Reduce speed to less than 0.80 IMN, reinstate No.2 and trip No.1 high speed warning circuit breaker, and increase speed slowly to the high speed warning.

Record No.2 high speed warning (0.82 to 0.84 IMN)

Capt.	F/O

SAT/UNSAT

Reduce speed to 0.70 IMN, reinstate No.1 high speed warning circuit breaker and commence a drift down with No.2 engine at flight idle.

10. **NO.2 ENGINE SHUTDOWN AND RESTART**

FL240

Shut down No.2 engine after at least 3 minutes at flight idle. Continue the drift down to FL240 for a windmill relight at 260 kt.

Note: A prolonged descent to FL240 may result in windmilling N₂ falling below 15%, which is the minimum allowed for a windmill start. Choose engine shutdown altitude, rate of descent and airspeed so as to arrive at the test condition with N₂ greater than or equal to 15%.

Record:

Windmilling N ₁ %	
Windmilling N ₂ %	
Time to EGT rise (sec.)	
Max. EGT °C	
Time to stabilised flight idle (sec.)	
Any abnormality	

SAT/UNSAT

Leave the engine idling for 2 minutes before applying thrust.

Shut down the APU.

11. **HANDLING, HIGH IAS**

Below FL 200

Trip No.2 high speed warning circuit breaker and increase speed slowly to 360 kt, using a high thrust setting.

Record V_{MO} pointer readings (336 to 344 kt).

Capt.	F/O

SAT/UNSAT

No.1 high speed warning (343 to 352 kt).

Capt.	F/O

SAT/UNSAT

Check elevator and aileron weight and response over small angles.

SAT/UNSAT

Speed brake operation - slight nose up trim change and buffet.

SAT/UNSAT

Any unusual characteristics.

--

Reduce speed to less than 320 kt, reinstate No.2 and trip No.1 high speed warning circuit breakers, and increase speed slowly to the high speed warning.

Record No.2 high speed warning (343 to 352 kt).

Capt.	F/O

SAT/UNSAT

Reduce speed to less than 320 kt and reinstate No.1 high speed warning circuit breaker.

12. **LOW SPEED HANDLING AND FUNCTIONING**

At about FL 150 but not below 10000 ft above terrain carry out the following stall approaches and functioning checks:

Time flaps 0° to 5° at 210 kt (30 sec max.)

SAT/UNSAT

5° Flap, Gear Up Stall Approach:

From the trim speed scheduled in Table 1, carry out a straight 1 kt/sec deceleration to stall warning.

Do not decelerate below stick shaker, scheduled stick shaker speed minus 4 kt, or buffet onset, whichever occurs first.

Ramp Weight kg		
Fuel Gone kg		
Test Weight kg		
Scheduled Trim Speed		
Indicated Trim Speed	Capt.	F/O
Stabiliser Setting		
Stall Warning	Scheduled	Achieved

Autoslat operation

SAT/UNSAT

Any abnormalities

--

Autoslat and PTU Check.

Depressurise both System B hydraulic pumps and exhaust system B pressure.

Carry out a straight slow approach to stall warning and recover.

Check autoslat operation

SAT/UNSAT

B hydraulic pumps

ON

Yaw Damper

ON

No.1 stall warning c/b's

TRIP

Time gear extension at 170 kt (10 sec. max.)

SAT/UNSAT

Select Flap 30° (no timing required).

30° Flap, Gear Down Stall Approach:

From the trim speed scheduled in Table 1, carry out a straight 1 kt/sec deceleration to stall warning.

Do not decelerate below stick shaker, scheduled stick shaker speed minus 4 kt, or buffet onset, whichever occurs first.

Ramp Weight kg		
Fuel Gone kg		
Test Weight kg		
Scheduled Trim Speed		
Indicated Trim Speed	Capt.	F/O
Stabiliser Setting		
Stall Warning	Scheduled	Achieved

Time flap extension 30° to 40° at 130 kt. (7 sec. max).

SAT/UNSAT

Time flap retraction 40° to 15° at 130 kt. (10 sec. max).

SAT/UNSAT

Time Gear Up at 130 kt (10 sec. max.)

SAT/UNSAT

Time flap retraction 15° to 5° at 150 kt. (10 sec. max).

SAT/UNSAT

Flaps up (no timing required).

No. 1 stall warning c/b's - reinstate.

13. **ALTERNATE FLAP EXTENSION**

At 210 kt arm the alternate flap system, select 10° on the normal lever then lower the flaps on the alternate system to 10°, allowing the speed to fall to 150 kt whilst lowering.

Time from up to 10° (2 min. max.)

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SAT/UNSAT

Alternate Flap Switch OFF

14. **LANDING GEAR MANUAL EXTENSION**

At 150 kt, with the normal gear lever OFF, extend the landing gear using the manual gear extension handles. When correct locked down indications are obtained (3 green and 3 red lights), wait 15 seconds then select normal lever to down, and check that the red lights extinguish.

Select normal lever to up.

SAT/UNSAT

15. **LANDING**

Carry out a normal landing, using a high reverse thrust.

Any unusual characteristics.

--

16. **POST LANDING**

Emergency Instrument Lighting.

Check correct operation of the emergency instruments supplies and lighting by selecting the standby power switch to battery and switching off all A.C. power.

SAT/UNSAT

Placarding

Check flight deck placards, colour coding and labelling for presence, legibility and accuracy.

SAT/UNSAT

Complete and sign the Check Flight Certificate.

Plot the results of the performance climbs and compare the measured rates of climb with the gross data scheduled in the 'Series and Renewal' section of the AFM performance section. Pass the completed proforma to the CAA.

PART 2 - TEST PROCEDURES AND NOTES

- NOTE: (1) Paragraph numbers refer to the paragraphs in Part 1.
- (2) Except where otherwise indicated the flight techniques are those associated with normal operation of the aeroplane.
- (3) Fuel symmetry must be maintained across the aircraft particularly during the engine out climbs.
- (4) The co-pilot can assist considerably by taking responsibility for systems management, navigation and R/T throughout the flight.

3. Before each slam acceleration, set G/A N_1 on the test engine and mark the throttle lever position on the quadrant. Retard to idle, allow N_1 to stabilise and slam to the mark, pulling the lever rapidly back when the N_1 in Fig. 1 is reached; provided that the gauge is watched carefully and correctly bugged the N_1 overshoot will be extremely small.

If possible, the slam accelerations should be carried out within the OAT limitation for anti-icing bleeds - but not above FL80. It is permissible to have all bleeds selected for these tests outside the OAT limit, but the time with bleeds on should be kept to a reasonable minimum.

- 4 & 5 The co-pilot should be responsible for maintaining power at the correct settings throughout the climbs, enabling the Captain to concentrate on accurate flying of the aircraft.

The bank angle must not exceed 5° towards the live engine during the climbs; zero wheel angle will normally give a bank angle well below this figure. Should it be impossible to remain within 5° bank angle with zero wheel angle, the bank angle limit is overriding; in this event, record the wheel angle and ensure (by visual inspection if necessary) that the spoilers are not cracked.

- 9, 11 The V_{MO} and M_{MO} limitations are raised for this test to 360 kts and 0.84M.

- 12 For the stall approaches, initially trim the aircraft throttles fully closed at the scheduled trim speed (table 1) of the particular configuration, then, without further trimming, reduce the speed at approximately 1 knot per second right through to the stall warning.