# CHECK FLIGHT CERTIFICATE

**Boeing 737-300** **CFS 234 issue 2**
**(CFM 56 rated at –3 (20K) or –3B (22K) thrust)**

| Date: | Crew: | Observer: | Registration: |
|---|---|---|---|

| **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:<br>SATIS/UNSATIS/NOT APPLICABLE*<br>*(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 check flight 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 check flights 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 check flights 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 737-300** **CFS 234 Issue 2**
**(CFM56 rated at -3 (20K) or - 3B (22K) thrust)**

| | |
|---|---|
| Registration | |
| Flight Date | |

## INTRODUCTION

This schedule is applicable only to Boeing 737-300 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 check 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

Commanders are reminded that it is illegal to carry passengers on a check flight made under A conditions, except where they are required to perform duties in the aircraft in connection with the flight. 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.

## CHECK FLIGHT SCHEDULES

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.

## 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

| | |
|---|---|
| Total airframe hours | |

| Engine Serial Nos | Port | Starboard |
|---|---|---|
| | | |

## LOADING AND CALCULATION OF WEIGHT

Load the aircraft to a ramp weight between 40,000 kg and 46,000 kg and a cg between 12-18% 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 |
|---|---|---|---|

| | |
|---|---|
| Ramp Weight | |
| Ramp cg % MAC | |

**FIGURE 1A**

**GA THRUST SETTING FOR ACCELERATION CHECK**

| | | |
|---|---|---|
| Air Conditioning | - | AUTO Both Packs |
| Wing TAI | - | ON |
| Engine Cowl TAI | - | ON |

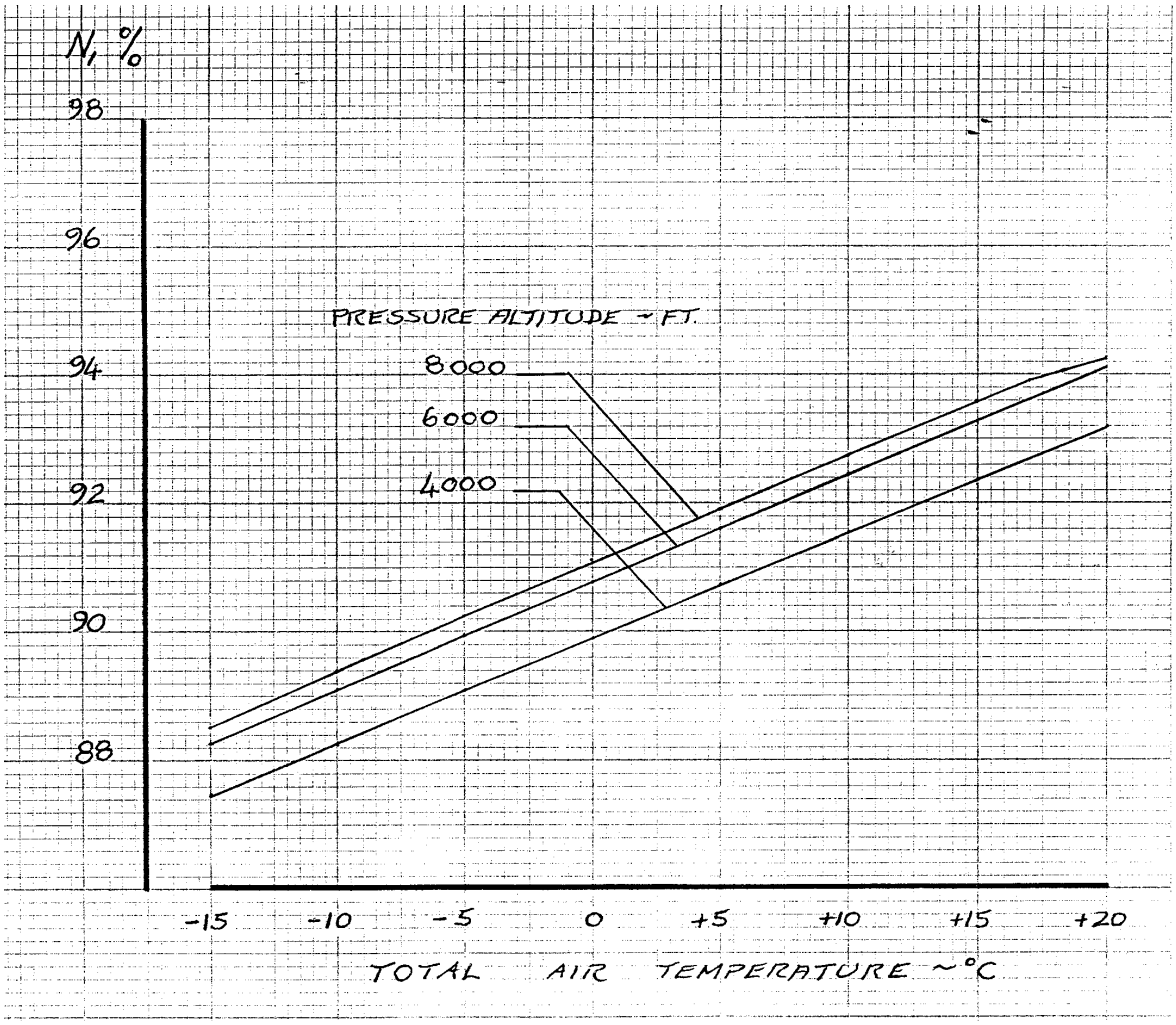

**FIGURE 1B**

**GA THRUST SETTING FOR ACCELERATION CHECK**

| | | |
|---|---|---|
| Air Conditioning | - | AUTO Both Packs |
| Wing TAI | - | ON |
| Engine Cowl TAI | - | ON |

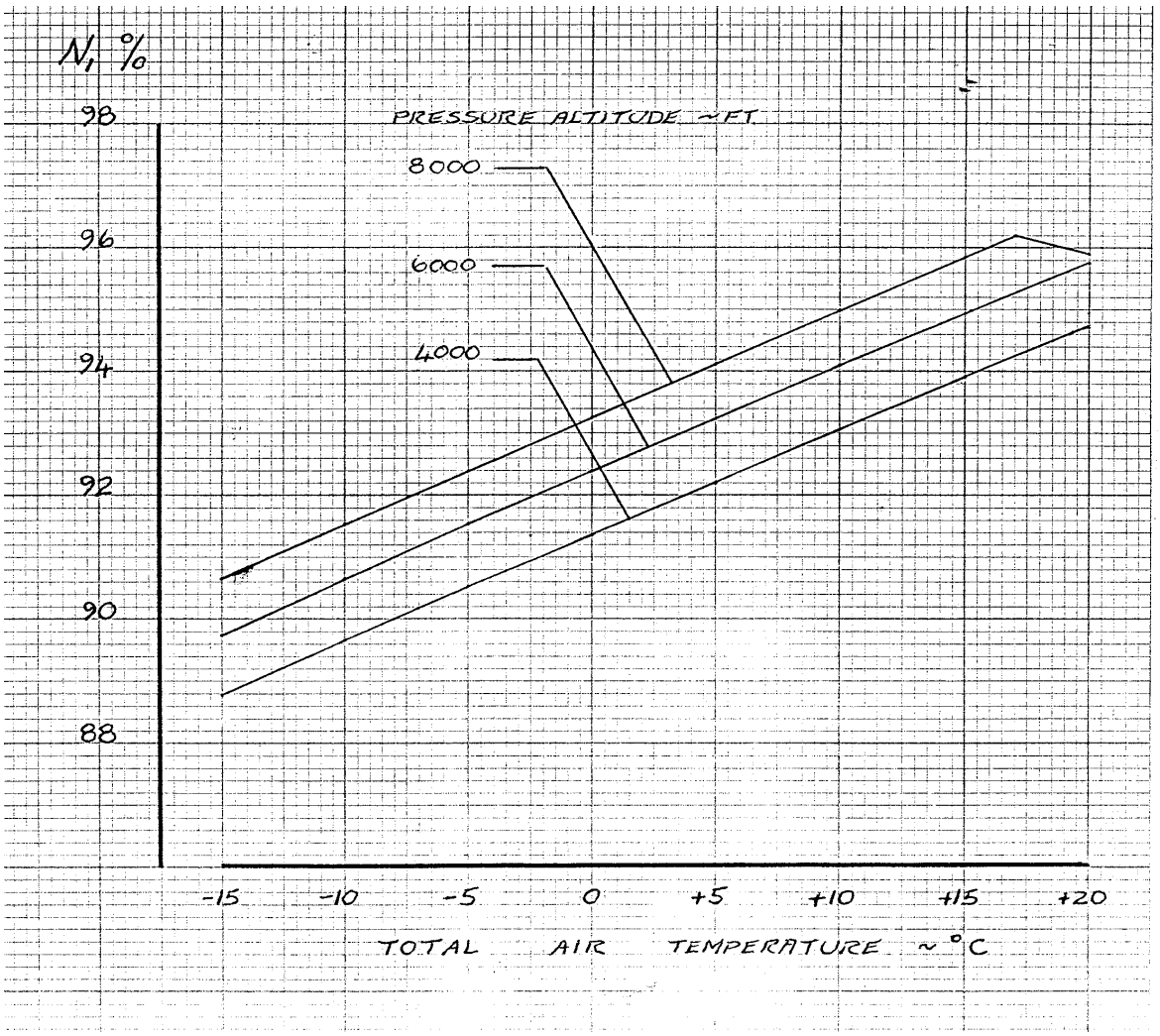

**TABLE 1**

**SPEEDS, KNOTS IAS, B737-300**

**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.

**<u>The aircraft must not be decelerated to the full stall.</u>**

| | | **Stall Approach - Flap 5°** | | | **Stall Approach Flap 30°** | | |
|---|---|---|---|---|---|---|---|
| **Weight Kg** | | **Trim** | **Shaker** | **Stall *(Info Only)*** | **Trim** | **Shaker** | **Stall *(Info Only)*** |
| 46000 | | 146 | 121 | *113* | 128 | 107 | *102* |
| 45000 | | 145 | 120 | *112* | 127 | 106 | *101* |
| 44000 | | 143 | 119 | *110* | 125 | 105 | *100* |
| 43000 | | 141 | 117 | *109* | 124 | 104 | *99* |
| 42000 | | 140 | 116 | *107* | 122 | 102 | *97* |
| 41000 | | 138 | 115 | *106* | 120 | 101 | *96* |
| 40000 | | 136 | 113 | *104* | 119 | 100 | *94* |
| 39000 | | 134 | 111 | *103* | 117 | 98 | *93* |
| 38000 | | 133 | 110 | *101* | 116 | 97 | *92* |
| 37000 | | 131 | 109 | *100* | 114 | 96 | *90* |
| 36000 | | 129 | 107 | *98* | 112 | 94 | *89* |
| 35000 | | 127 | 106 | *97* | 111 | 93 | *87* |
| 34000 | | 125 | 104 | *95* | 109 | 92 | *86* |

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

## PART 1 – CHECK FLIGHT 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. (1.0 to 6.3) | SAT/UNSAT |
| OFF | DOWN | No. 2 | 25 | Within green band | SAT/UNSAT |
| OFF | DOWN | No. 2 | 0 | 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, 8000 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.

| |
|---|
| |

## 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 $N_1$ and $N_2$ as soon as they are stable and immediately accelerate the engine to the target $N_1$ with a rapid thrust lever movement.

Record:

| | No.1 | No.2 |
|---|---|---|
| Idle $N_1$ % | | |
| Idle $N_2$ % | | |
| Acceleration Time (sec) | | |

## 4. NO.1 ENGINE SHUTDOWN AND RESTART FL100-150

Start APU

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

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.

## 5A. PRESSURISATION (Analogue Controller) Not above FL200

*(see 5B for digital controller)*

| | | |
|---|---|---|
| Record: | Cabin altitude when stabilised (7750 to 8250 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.

**5B. PRESSURISATION (Digital Controller) Not above FL200**

Select Manual Pressurisation. 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 [ ]
(13000 to 15000 ft) SAT/UNSAT

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

[ ]

Repressurise the aircraft. Reset pressurisation to AUTO.

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

## 6. HANDLING IN CLIMB

### 6.1 Trim Settings

During the climb record accurate trim in each axis:

| | | |
|---|---|---|
| Stabiliser | | |
| Rudder ± ½ unit | | SAT/UNSAT |
| Aileron ± $^{3}/_{4}$ unit | | SAT/UNSAT |

### 6.2 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.

| |
|---|
| |

Check all trimmers for friction, backlash and response:

| | |
|---|---|
| Stabiliser Trim | SAT/UNSAT |
| Rudder Trim | SAT/UNSAT |
| Aileron Trim | SAT/UNSAT |

Record any abnormality.

| |
|---|
| |

### 6.3 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

## 7. FUNCTIONING AT FL350

### 7.1A Pressurisation - Analogue Controller *(see 7.1B for digital controller)*

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 8.2 to 8.8 psi [ ]

SAT/UNSAT

**DO NOT EXCEED 9.0 PSI**

Both Packs AUTO
Re-establish normal pressurisation control.

### 7.1B Pressurisation - Digital Controller

With **FLT ALT** set at 35000 ft., with cabin rate of climb stabilised at zero, record cabin pressure.

7.60 to 8.15 psi [ ]

SAT/UNSAT

Select pressurisation to MANUAL, 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 8.2 to 8.8 psi [ ]

SAT/UNSAT

**DO NOT EXCEED 9.0 PSI**

Pressurisation AUTO
Re-establish normal pressurisation control.

### 7.2 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

## 7.3 Manual Reversion and Standby Rudder FL350

Airspeed 0.74M
Wing fuel loads equal
$N_1$'s equal
Aircraft in trim (Aileron less than $^3/_4$ div, rudder less than ½ 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 | (1 NU to 1 ND) | | |
| *or* : Titanium Tab Rods | (2 NU to 2 ND) | 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 30º in each direction.

| | |
|---|---|
| clockwise | lb |
| anti-clockwise | 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 (expect pitch trim change) | ON |
| 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 |

**7.4 <u>APU Relight</u>** **FL350**

At 0.70 IMN, relight the APU.

Time to 'RUN' [ sec ]

SAT/UNSAT

## 8. 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. [ ]

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.

## 9. 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 $N_2$ 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 $N_2$ 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.

## 10. 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.

## 11. 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 0º to 5º at 210 kt (30 sec max.) [ ]

SAT/UNSAT

5º 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 30º (no timing required).

30º 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 30º to 40º at 130 kt. (7 sec. max). [ ]
SAT/UNSAT

Time flap retraction 40º to 15º at 130 kt. (10 sec. max). [ ]
SAT/UNSAT

Time Gear Up at 130 kt (10 sec. max.) [ ]
SAT/UNSAT

Time flap retraction 15º to 5º at 150 kt. (10 sec. max). [ ]
SAT/UNSAT

Flaps up (no timing required).

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

## 12. ALTERNATE FLAP EXTENSION

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

Time from up to 10º (2 min. max.) [ ] SAT/UNSAT

Alternate Flap Switch OFF

## 13. 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

## 14. LANDING

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

Any unusual characteristics.

[ ]

## 15. 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 Flight Test Certificate.

Pass the completed proforma to the Regional Manager of the CAA Regional Office.

## 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.

(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.

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.

Changes between issue 1 and issue 2

Page 14 Safety valve operation limits changed