CHECK FLIGHT CERTIFICATE

Pilatus PC6 H2/H4 **CFS 138 Issue 1**

Date:	Crew:	Observer:	Registration:

Performance	Climb #1		
Average Weight			
Average Altitude			ft
Average Temp.			°C
Speed			KIAS
Achieved Rate			fpm
Scheduled Rate			fpm
Margin			fpm
Permitted Margin	-70		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 check flight certificate given in the schedule.
Registration: If the aircraft is not on the UK register, add the manufacturer's 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 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 a check flight 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

Pilatus PC6 H2/H4 **CFS 138 Issue 1**

Registration	
Flight Date	

1. INTRODUCTION

This schedule is only applicable to the Pilatus PC6 H2/H4. The schedule is based on the assumption that the everyday operation of the aircraft serves as a continuous check on the functioning of all normal services.

The check flight must be carried out by an experienced pilot acceptable to the Airworthiness Division of the CAA in accordance with this schedule and the general guidance given in the CAA Check Flight Handbook. The crew are expected generally to monitor the behaviour of all equipment and report any unserviceable items.

It is illegal to carry passengers on a test flight made under 'A' or 'B' conditions except passengers performing duties in the aircraft in connection with the flight. Although it may be legal to carry passengers on a test flight with a Certification of Airworthiness in force, it is strongly recommended, for Check Flights and other tests entailing greater risk than normal flight, that:

1. It is preferable to use ballast, and

2. Before accepting any passengers on a check flight the pilot in command should inform them that the risk is greater than on an ordinary flight.

Under no circumstances are the limitations contained in the CAA approved Flight Manual to be exceeded.

Should there be any query regarding the Flight Test or the results, the local CAA Surveyor or the Flight Department, Aviation House, Gatwick must be consulted.

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.

It is recommended that the tests are performed in the sequence given. The results are to be written in ink in the spaces provided.

2. PRE-FLIGHT INFORMATION

Operator/Maintenance Organisation		
Aerodrome		
Altitude	Temperature	QFE/QNH
Registration		
Flight Date		
Pilots		
Observer		

3. LOADING

Take-off Weight:	Kg/lb
Fuel:	Kg/lb
CoG Position:	m./in aft of datum

4. PRE-FLIGHT

Flight Clearance authority issued and signed	

Check that the following items are on board:-

4.1	Aeroplane Flight Manual or other designated manual (e.g. Owner's Manual, Pilot's Operating Handbook, Pilot Notes)	
4.2	Cabin fire extinguisher (if applicable)	SAT/UNSAT/NOT FITTED

5. GROUND TESTS

5.1 Controls

Check for full travel, freedom and correct functioning:-

Flying Controls

		Remarks
Elevator/Stabilator	SAT/UNSAT	
Elevator/Stabilator trimmer	SAT/UNSAT	
Ailerons	SAT/UNSAT	
Rudder	SAT/UNSAT	
Rudder trimmer	SAT/UNSAT	
Wing-flaps	SAT/UNSAT	

***Engine Controls* (including friction/locking mechanisms**

		Remarks
Throttle	SAT/UNSAT	
Propeller pitch	SAT/UNSAT	
Cooling Flap	SAT/UNSAT	

5.2 Equipment

Check the following items for security and correct functioning:-

		Remarks
Safety harness/lap straps	SAT/UNSAT	
Door/Canopy fastening	SAT/UNSAT	
Adjustment of pilots' seats and locking	SAT/UNSAT	

5.3 Starting Engine

NG > 12%, LO-IDLE

Time to Ignition	SAT/UNSAT		≦ 10 Sec
Max. ITT Transient	SAT/UNSAT		≦ 1090 ^{o}C

Idle Power

Propeller RPM	SAT/UNSAT		%
Gas Generator RPM	SAT/UNSAT		≧ 51%
Oil Pressure	SAT/UNSAT		≧ 40 PSI
ITT	SAT/UNSAT		≦ 660 ^{o}C

6. TAXING

A/C can be held with brakes up to torque	SAT/UNSAT		≦ 47.3 PSI
Tail Wheel Steering Operating	SAT/UNSAT		
Tail Wheel Locked	SAT/UNSAT		Straight

7. TAKE-OFF

		Remarks
Wing-flap setting	SAT/UNSAT	
Trimmer settings - Elevator/Stabilator	SAT/UNSAT	
- Rudder	SAT/UNSAT	
Behaviour during take-off:-	SAT/UNSAT	
Record any abnormal features, e.g. unusual tendency to swing, ease or difficulty of raising tail-wheel, control forces (including any unusual control forces) or wing heaviness.	SAT/UNSAT	
Was artificial stall warning triggered?	SAT/UNSAT	

8. CLIMB PERFORMANCE

Flight conditions: Clear of cloud and turbulence, and well clear of any hills which could produce wave conditions.

Configuration: Normal for en-route climb (see manual)

Power: Maximum Continuous with air intake in ‘Cold’ or ‘Ram’ position.

Altimeter: 1013 mb (29.92 in Hg)

Speed	Scheduled en-route climb speed (knots/mph IAS) (From AFM, POH or Appendix No. 2)		
Fuel Contents		Wing-flap position	
Weight (Kg/lb)		Engine cooling – flap position	

Time (min)	Altitude (ft) (1013 mb)	IAS (knots/mph)	OAT (^{o}C)
0			
$^{1}/_{2}$			
1			
$1^{1}/_{2}$			
2			
$2^{1}/_{2}$			
3			
$3^{1}/_{2}$			
4			
$4^{1}/_{2}$			
5			

Note altitude at which torque limit occurs; record the following:

Altitude		OAT	^{o}C
Gas gen RPM	%	Torque	psi
ITT	^{o}C	Fuel Flow	G/H
Oil press	psi	Oil temp	^{o}C
Oil cooler position			
Trim	Stabilator	Rudder	
	Aileron		

9. STALLS

To be made with propeller control fully fine and throttle closed.

Stall	**1**	**2**
Landing Gear (unless fixed)	Up	Down
Wings-flaps	Up	Landing
Trim, power off, at 1.5 x Scheduled stall speed (knots/mph IAS)**		
Stall warning (knots/mph IAS)		
Type of stall warning		
Stall (knots/mph IAS)		
Scheduled stall speed (knots/mph IAS)**		
Did control column reach back stop?		
Angle of wing drop		
Other characteristics		

** From AFM or POH

10. DIVE TO VNE (THIS TEST MUST ONLY BE DONE IN SMOOTH AIR CONDITIONS)

Landing gear and wing-flaps retracted.

Accelerate the aeroplane in level flight –

Full throttle or maximum continuous RPM, with a fixed pitch propeller;
Full throttle, but 200 RPM below maximum permissible, with a constant speed propeller.

In level flight, **record:-**

IAS (knots/mph)		Elevator-Stabilator trimmer setting	
RPM		Rudder trimmer setting	

Increase speed up to VNE. Keep RPM within maximum permissible. If any unusual airframe or control vibration is felt, immediately reduce speed by gradually pulling the control column back and by closing the throttle. **Record:-**

Any unusual behaviour	
Whether the control forces and responses over small angles are normal	
Steadiness of propeller governing (if applicable)	
Maximum RPM	
Maximum IAS (knots/mph)	

Regain cruising flight by closing throttle and gradually pulling the control back. **Record:-**

Engine behaviour on closing throttle	SAT/UNSAT	
Propeller governing (if applicable)	SAT/UNSTA	

11. MIN. PITCH IN FLIGHT

T.O. WEIGHT 2100-2200 KG

POWER LEVER	IDLE LEVER	FLAPS	IAS	RATE OF DESCENT	TRIM POSITION			HANDS
					STABIL.	RUDDER	AILERON	OFF
POS.	POS.	POS.	KTS	FT/MIN.	UNIT	UNIT	UNIT	YES/NO
DETENT	HIGH	38°	68		7° N.UP			

Remarks:

	SAT/UNSAT

12. FUNCTIONING CHECKS

During the flight, check the following:-

12.1 Flying Controls

	Friction	Backlash	Are control forces normal?
Elevator/Stabilator			
Aileron			
Rudder			
Elavator/Stabilator Trimmer			
Rudder Trimmer			

During normal cruise, check that aeroplane:-

(a)	Can be trimmed to fly level	SAT/UNSAT	
(b)	Has no tendency to fly one wing low	SAT/UNSAT	
(c)	Flies straight with slip indicator central	SAT/UNSAT	

12.2 Wing-flaps

Operate as follows recording time and any unusual change of longitudinal trim with flap position and any significant change in lateral trim.

12.2.1	From Up to Take-off*	(sec)		SAT/UNSAT
	From Take-off to Down*	(sec)		SAT/UNSAT

* At limiting speed for setting

If, in the case of power operated flaps, the flap does not move to the full down position at the limiting speed:-

(a)	Record angle at which flap stops	
(b)	With flap selected Down, reduce speed until flap Reaches full down position. **Record IAS (knots/mph)**	

12.2.2 From Down to Take-off*	(sec)		SAT/UNSAT
From Take-off to Up*	(sec)		SAT/UNSAT

* At any convenient speed below limiting speeds.

12.3 Fuel System

During the flight, feed from each fuel tank in turn for not less than 3 minutes

Record:-

System functioning on each Tank (identify which)				
Fuel Selector				
Fuel Gauges				

12.4 Electrical System **Check all electrical equipment for satisfactory operation:-**

Record generator charging rate under maximum electrical load

12.5 Gyro Instruments **Check behaviour of gyro instruments:-**

If air-pump driven, record:- Press. gauge [ ] During cruises at [ ] RPM

12.6 Other Instruments **Check for satisfactory functioning:-**

12.7 Radio **Complete Radio Flight Test Report, if required. Schedule available on application.**

13. LANDING

LANDING

BETA APPROACH LANDING		
REVERSE TORQUE		32-36 PSI
ITT		≦ 725 °C

ENGINE SHUT-DOWN	MEASURED	REQUIREMENT
LO IDLE ITT		≦ 585 °C

14. POST FLIGHT

	MEASURED	REQUIREMENT
CUT OFF, G.G RPM DECELERATION TO STOP		≧ 30 °C

14.1 Placards

Check that all Cockpit, Cabin, Baggage Space and external placards are fitted and legible.	

14.2 Lighting

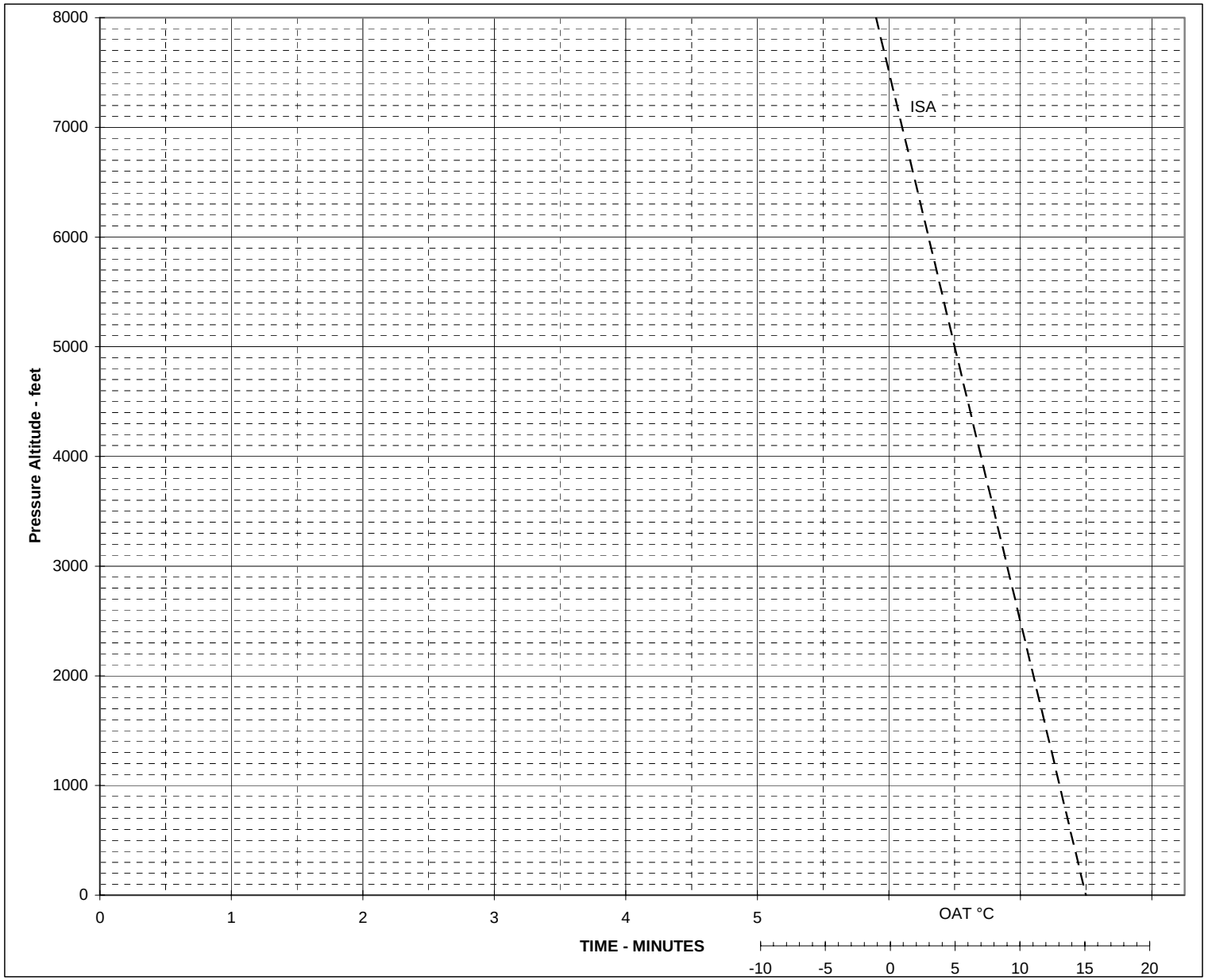
Check that all external and internal lighting is serviceable.	

14.3 Climb Performance

The observed figures for the climb are to be plotted on the attached graph and compared with the scheduled performance (see Appendix). It is important that the results are presented as observed, and that any signification meteorological conditions are noted.

NOTE: Where no correction for temperature is given in the designated Manual, the following temperature correction is to be applied:-

When the indicated outside air temperature is above International Standard Atmosphere for the altitude, the scheduled rate of climb may be reduced by 4ft/min/°C (2.2 ft/min/°F). When the indicated OAT is below ISA, the scheduled rate of climb is to be increased by the same amount.



AIRCRAFT TYPE
REGISTRATION
DATE OF TEST

Mean Weight	_____ Kg/lb
Mean Altitude	_____ feet
Mean OAT	_____ °C
SCHEDULED ROC	
Basic	_____ ft/min
Correction	_____ ft/min
Correction	_____ ft/min
Final SROC	_____ ft/min
Observed ROC	_____ ft/min
Difference from Scheduled	_____ ft/min (Observed ROC minus Final SROC)