CHECK FLIGHT CERTIFICATE

Pilatus PC12	**CFS 327 issue 1**	Registration:

Date:	Crew:	Observer:

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 flight test certificate given in the schedule.
Registration: If the aircraft is not on the UK register, add the manufacturers serial number and expected UK registration (if known).
Crew: Captain, co-pilot, Flight engineer (where applicable).
Airfield: Departure airfield.
Start Weight: Actual all up weight at first engine start. Also delete Kg or Lbs as appropriate.
Takeoff cg: Actual cg at lift-off, preferably as a % of the Mean Aerodynamic Chord.

Performance

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

Defects

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

Conclusions/Comments

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

CHECK FLIGHT SCHEDULE

PILATUS PC12 **CFS 327**

Flight Date	
Registration	

INTRODUCTION

This schedule is only applicable to Pilatus PC12 aircraft. It is based on the assumption that the everyday operation of the aeroplane serves as a continuous check on the correct functioning of all normal services. On this test flight, however, the pilot is expected generally to monitor the behaviour of all equipment and report any unserviceable items. In addition to completing all the tests in this schedule, any characteristics which are considered to be unsafe or undesirable must be recorded.

The minimum crew for the test flight shall be one pilot, and one observer to record the results of the tests. The tests should, if possible, be flown in the sequence of this schedule; altitude conditions must be observed. Except where otherwise indicated, the flight techniques are those associated with normal operation of the aeroplane. The limitations and procedures of the Pilot's Operating Handbook and UK Supplement must be observed.

The data contained in this schedule was correct at the time of writing, but may not be in agreement with subsequent Pilot's Operating Handbook and Flight Manual amendments. In case of conflict, the current Manuals are overriding and CAA Flight Department should be informed of the conflict.

Commanders are reminded that it is illegal to carry passengers on a test 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.

PART 1 - LOADING AND CALCULATION OF WEIGHT

The aircraft is to be loaded with fuel to the maximum ramp weight, using ballast as necessary to keep the C.G. within the Flight Manual limits.

RECORD:	AIRCRAFT WEIGHT: (kg/lb)		
	FUEL CONTENTS: (kg/lb)		
	CG: (inches/meters AOD		

PART 2 - TEST SCHEDULE

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

1. PRE-FLIGHT FUNCTIONING CHECKS

Check flight deck placards for presence, accuracy and legibility.	SAT/UNSAT
Carry out a comprehensive external and internal pre-flight check	SAT/UNSAT
Check all external lights	SAT/UNSAT
Check pitot, static port and alpha vane heaters	SAT/UNSAT
Check all filaments are working correctly using LAMP TEST	SAT/UNSAT
Check both pilot seat locking in all positions	SAT/UNSAT

2. ENGINE START

During engine start note :

Maximum ITT achieved (degrees C)		Max: 1000
Time to stabilized idle (seconds)		

3. AFTER ENGINE START

3.1 Check each control trimmer for satisfactory operation and indication over its full range:

Check satisfactory operation of the pitch/aileron trim engage button and check the pitch trim from both control columns.	SAT/UNSAT
Aileron	SAT/UNSAT
ALTERNATE STAB Trim	SAT/UNSAT
Rudder	SAT/UNSAT
Check the TRIM INTR switch disables Pitch trim, ALT Pitch trim, Aileron, Rudder trim	SAT/UNSAT

Select 15 flap

3.2 Stall Warning/ Stick Push Test (engine 5 psi min)	SAT/UNSAT
3.3 Check engine manual control	SAT/UNSAT

3.4 Autopilot Overide

Set the heading bug to the actual heading.
Engage the autopilot in HDG and HEIGHT modes

Confirm autopilot clutches can be overridden in pitch	SAT/UNSAT
and roll	SAT/UNSAT
Check that moving the trim switches disengages the autopilot	SAT/UNSAT

Reset flaps as required.

4. TAXYING

Check brake efficiency SAT/UNSAT

5. TAKE-OFF

Set cabin altitude to 8000 ft for a later test.

Carry out normal take-off - Record any unusual characteristics

6. PERFORMANCE CLIMB

Recommended Starting Altitude
Not Above FL50

Carry out a climb for five minutes. The recording of instrument readings should not be started until the aircraft is trimmed out in a steady climb in the required configuration. Airspeed should be kept within 3 knots of the required speed and a constant heading should be maintained throughout the climb The climb should be carried out clear of cloud or turbulent air and away from areas likely to be affected by standing waves.

Configuration:	Flaps	UP
	Gear	UP
	Power	Maximum Climb (36.95 psi torque, maximum 760 degrees C ITT)
	ECS	AUTO
	Anti ice/de-ice	OFF
	Climb Speed	120 KIAS
	Altimeter set to 1013mb	

Start-up Weight		kg/lb
Fuel Used at start of climb		kg/lb
Aircraft Weight at start of climb		kg/lb

TIME	ALTIMETER	ASI P1	IOAT	TORQUE
0				
0.5				
1.0				
1.5				
2.0				
2.5				
3.0				
3.5				
4.0				
4.5				
5.0				

ASI readings at any one moment L KIAS R KIAS

TRIM POSITIONS

Elevator	
Rudder	
Aileron	

ENGINE DATA AT 3 MIN

Torque psi		Fuel Flow	
ITT °C		Oil Temperature °C	
Ng %		Oil Pressure psi	
Np RPM			

Start-up Weight		kg/lb
Fuel Used at end of climb		kg/lb
Aircraft Weight at end of climb		kg/lb

Average Aircraft Weight during climb		kg/lb

7. PRESSURISATION | Start FL90

Check pilot oxygen masks for flow and microphone operation SAT/UNSAT

PULL the ECS EMERG SHUT OFF lever and confirm aircraft begins to depressurize SAT/UNSAT

Re-stow the ECS EMERG SHUT OFF lever

With the CABIN PRESS control set to AUTO, raise the cabin altitude by setting the cabin altitude to maximum. Use the rate knob to raise the cabin altitude at a comfortable rate (1000-2000 fpm).

With less than 1 psi differential pressure, select DUMP on the CABIN PRESS switch and confirm operation SAT/UNSAT

Climb the aircraft depressurized to check the cabin altitude warning. Record:

CABIN PRESS warning	SAT/UNSAT
Cabin Altitude At Audio Warning	FEET

(10,300 - 10,700 FEET)

Repressurise by de-selecting DUMP, resetting the ECS and setting cabin altitude to sea level (in preparation for a later test).

8. CONTROLS AND TRIMMERS | FL150

Establish a high speed cruise and check flying controls for break out, backlash, weight and response SAT/UNSAT

Check trimmers for friction backlash and response. SAT/UNSAT

9. PRESSURISATION - NORMAL MAXIMUM | FL150

With the cabin set to sea level:

Record:

Maximum Cabin Differential in auto	PSI	(5.6-5.9 PSI)
Cabin Altitude	FT	900-1500 ft

10. DE-ICE — As convenient

Check operation of:

De-ice boots — SAT/UNSAT

Windshield Heat — SAT/UNSAT

11. YAW DAMPER — As convenient

Check that the yaw damper can be overridden — SAT/UNSAT

12. CRUISE AND HIGH IAS — Below FL150

Confirm the aircraft does not turn with the slip ball centred and wings level
SAT/UNSAT

With 36.9 PSI torque set, determine the maximum level flight speed

SPEED	KNOTS

(approx 200 knots)

Clear of turbulence, accelerate to not more than 245 KIAS. Confirm airspeed readout turns red and record airspeed when audio warning sounds.

WARNING SPEED	KNOTS

(236 knots)

Control checks using small movements of rudder and aileron
SAT/UNSAT

13. STALLING AND FLAP/GEAR TIMINGS

FL30 to FL100

With flap and gear up, idle power, carry out a stall from a 1.5 V_S trim speed, decelerating at 1 knot/second. Scheduled trim and stall speeds are given in Table 1 and 2. Stall warning should occur 5-10 knots above the stall.

TABLE 1

Flap/Gear	UP/UP		15/DN		30/DN		LAND/DN		LAND/DN - ICE	
Weight (Kg)	Trim	Stall	Trim	Stall	Trim	Stall	Trim	Stall	Trim	Stall
4500	137	91	111	74	102	68	96	64	107	71
4400	135	90	109	73	100	67	95	63	105	70
4300	133	88	108	72	99	66	94	62	104	69
4200	131	87	106	71	97	65	92	62	103	69
4100	129	86	105	70	96	64	91	61	102	68
4000	128	85	104	69	95	63	90	60	101	67
3900	126	84	102	68	93	62	89	59	99	66
3800	124	83	101	67	92	61	88	58	98	65
3700	123	82	100	66	91	60	86	58	97	65
3600	121	81	99	66	90	60	85	57	96	64
3500	120	80	98	65	89	59	84	56	95	63

(limits: stall speed +3/-5 Knots)

TABLE 2

Flap/Gear	UP/UP		15/DN		30/DN		LAND/DN		LAND/DN - ICE	
Weight (lb)	Trim	Stall	Trim	Stall	Trim	Stall	Trim	Stall	Trim	Stall
10000	137	91	112	74	103	68	96	64	107	71
9800	135	90	110	73	101	67	95	64	106	71
9600	134	89	109	72	100	66	94	63	105	70
9400	132	88	107	72	98	66	93	62	104	69
9200	130	87	106	71	97	65	92	61	103	68
9000	129	86	105	70	96	64	91	61	101	68
8800	127	85	103	69	94	63	90	60	100	67
8600	126	84	102	68	93	62	89	59	99	66
8400	124	83	101	67	92	61	88	58	98	65
8200	123	82	100	67	91	61	87	58	97	65
8000	122	81	99	66	90	60	86	57	96	64

(limits: stall speed +3/-5 Knots)

Record:

Ramp Weight	
Fuel Gone	
Aircraft weight	

13.1 Flaps Up/ Gear Up Stall

Trim speed	knots	Trim setting	
		Achieved warning	knots
Scheduled stall	knots	Achieved stall	knots
	(limit: Min diff 4kts)	Stall to Warning Achieved Difference	knots

Time gear to DOWN around 130 KIAS (Max 12 secs)	secs
Time flaps from UP to LAND around 120 KIAS (27-33 secs)	secs

Retract the flaps to 15.

13.2 Flaps 15/ Gear Down Stall

Trim speed	knots	Trim setting	
		Achieved warning	knots
Scheduled stall	knots	Achieved stall	knots
	(limit: Min diff 4kts)	Stall to Warning Achieved Difference	knots

13.3 Flaps 30/ Gear Down Stall

Trim speed	knots	Trim setting	
		Achieved warning	knots
Scheduled stall	knots	Achieved stall	knots
	(limit: Min diff 4kts)	Stall to Warning Achieved Difference	knots

13.4 Flaps LAND/ Gear Down Stall

Trim speed	knots	Trim setting	
		Achieved warning	knots
Scheduled stall	knots	Achieved stall	knots
	(limit: Min diff 4kts)	Stall to Warning Achieved Difference	knots

13.5 Flaps LAND/ Gear Down Stall - ICE MODE

Select PROP de-ice to ON

Confirm Prop Anti Ice (Generator load increases if OAT <0) SAT/UNSAT

Set INERT SEP to OPEN

Confirm PUSH ICE MODE annunciated SAT/UNSAT

Trim speed	knots	Trim setting	
		Achieved warning	knots
Scheduled stall	knots	Achieved stall	knots
	(limit: Min diff 4kts)	Stall to Warning Achieved Difference	knots

Reset PROP de-ice and INERT SEP

Confirm PUSH ICE MODE Annunciator extinguishes SAT/UNSAT

Time flaps from LAND to UP around 120 KIAS	secs
Time gear to UP around 130 KIAS	secs

14. <u>GEAR WARNING</u> As convenient

During descent and reducing speed through 130 KIAS, with the gear and flaps up and at idle

Confirm gear red lights illuminate and aural warning sounds SAT/UNSAT

Press warning cancel button

Confirm aural warning cancelled but red lights remain SAT/UNSAT

Staying below 130 KIAS, slowly move the power lever up from idle

Torque when gear red lights go out | psi

around 10 psi

With gear red lights out, lower flaps to LAND

Confirm gear red lights illuminate and aural warning sounds SAT/UNSAT

Press warning cancel button

Confirm aural warning and red lights remain SAT/UNSAT

Reset flaps as necessary

15. EMERGENCY GEAR EXTENSION

At any convenient altitude and at 110 KIAS

Pull the HYD CNTL Circuit Breaker (Co-Pilot's forward breaker panel)

Normal Landing Gear handle to down

Manually pump as necessary to achieve three greens

Confirm three greens SAT/UNSAT

Restow the Emergency Gear Extension pump handle (if used)

Reset the HYD CNTL Circuit Breaker

Wait until the HYDR caution light extinguishes, then Normal Landing Gear handle to UP

16. NORMAL LANDING

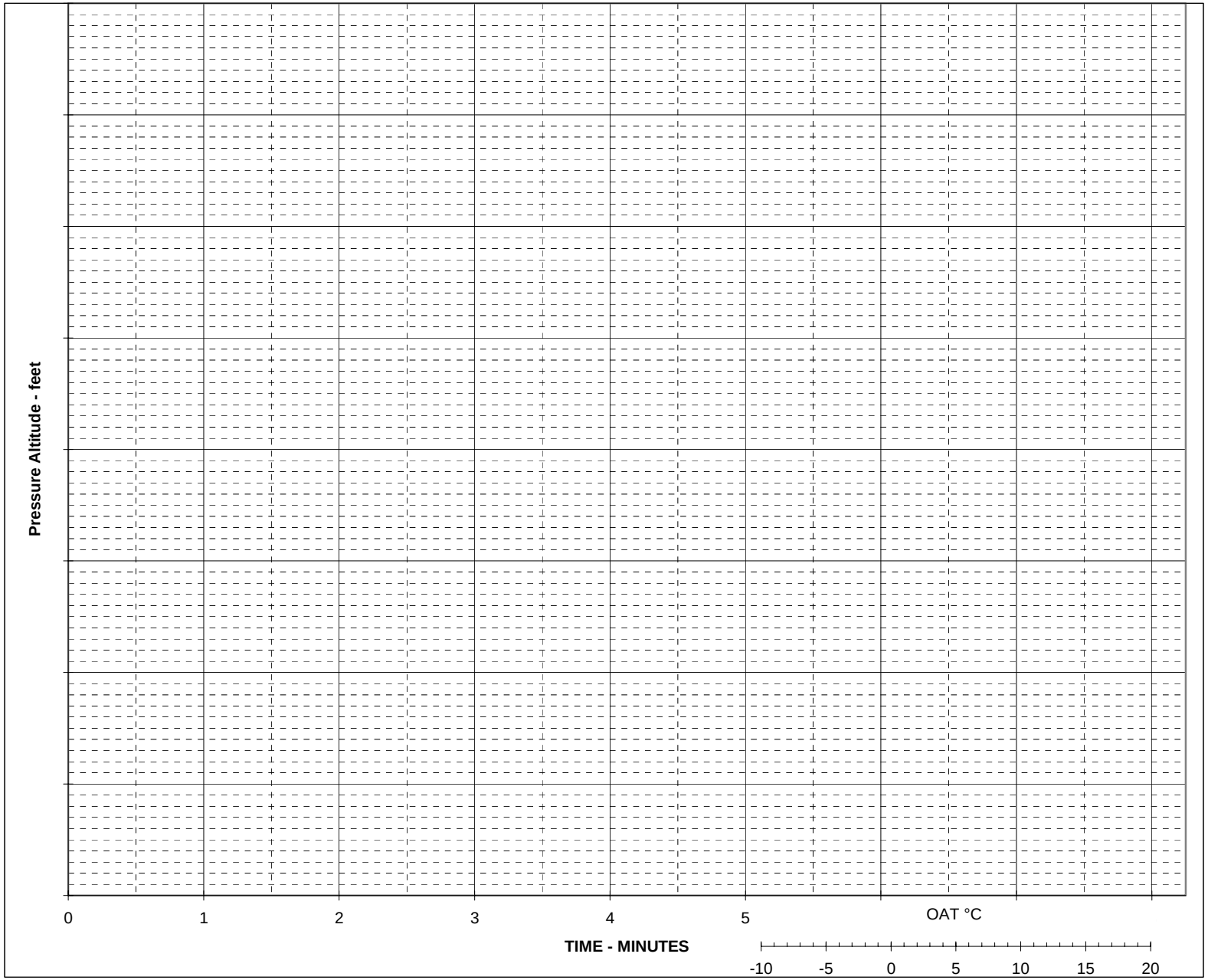
If weather conditions permit, use a high level of reverse thrust during the landing deceleration

Reverse power SAT/UNSAT

PART - 3 POST FLIGHT ACTIONS

Plot the results of the performance climb and compare the measured rates of climb with the gross data scheduled in the Flight Manual. Results worse than the allowable tolerance should be investigated before the flight test is signed off as being successfully completed.

Complete the statement of defects and sign the Check Flight Certificate.



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)