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Aeroprakt A22 Foxbat

New owner familiarisation programme

July 2009



Foxbat Australia

Foxbat Australia PO Box 237, Black Rock, Victoria 3193, Australia
www.foxbat.com.au 03 9592 3101 (tel & fax) 0413 900 892 (mobile/cell)

Welcome to your new A22 Foxbat!

To ensure full enjoyment and to maximise safe operation of your new A22 Foxbat, we have developed the following familiarisation programme in conjunction with the manufacturer and a number of instructors in Australia with experience of flying and training in the Foxbat.

The programme will give you all the basics you need to build a firm foundation on which to enjoy many hours of safe flying in your Foxbat.

In the words of one instructor, “the A22 Foxbat is a very easy and safe plane to fly” but like all aircraft it has its own characteristics, which you need to experience and learn.

Familiarisation training on the Aeroprakt A22 Foxbat consists of up to 5 hours of flying in accordance with the procedures described in the Pilot Operating Handbook (POH), and includes all the elements described here.

Please read the POH fully before and during your conversion flying!

Your familiarisation programme covers the following:

1. Initial briefing on the aircraft.
2. Pre-flight preparation including determining the take-off weight and aircraft CG position, and pre-flight check.
3. Initial familiarisation flight.
4. Airfield circuit flights.
5. Short field take off and landing (STOL).
6. Baulked landing/go-around.
7. Low speed flight, recognising the stall and stall recovery.
8. High speed flight, recognising a steep spiral dive and recovery.
9. Crosswind take off and landing.
10. Practised engine failure.

Appendix – Speeds & weights for the A22

All boxes on following pages should be ticked as satisfactory before the pilot is signed off by the instructor (see last page) for unrestricted flight.



1. Initial on-ground briefing. This will cover at least the following :
- basic structure of the aircraft
 - weight limits
 - Rotax engine; layout & location of main items
 - checking fluid levels; oil, coolant, hydraulics, fuel tanks
 - flight control system; stick/yokes, flaperons, elevator trim, rudder
 - ground control system; steering, brakes, park brake
 - seat adjustment, harnesses & headsets
 - doors & door locks; do not open in flight!
 - basic speeds: take-off, climb, cruise, descent, approach speeds
 - ASI white, green and yellow arcs
 - engine RPM limitations
 - stall characteristics
 - LSA/RA-Aus performance limits (steep turns, spinning etc)
2. Pre-flight preparation including pre-flight checks, determining the takeoff weight & CG position.
3. Initial familiarisation flight To enable the new owner to adapt to the controls and flight characteristics, including the following:
(Assumes slip ball centred elevator trim used correctly)
- a) Level flight at various airspeeds and power settings.
- b) Climb at various airspeeds including full engine power.
- c) Descending at various airspeeds and flap settings including minimum engine power.
- d) Right & left turns at various speeds and bank angles.

Recommended minimum flight time – 45 minutes
Recommended minimum landings – 1





4. Airfield circuit flights Touch-and-go and full-stop landing circuits should be flown for familiarisation with the take-off and landing characteristics of the A22.

Key elements (assumes slip ball centred and elevator trimmed):

- After engine start, ensure oil pressure rises within 10 seconds
- For take-off, increase power steadily to maximum. Lift nose at 20+ kts. Aircraft will take-off at 40+ kts.
- Set climb speed at 55-60 kts. Retract flaps at safe altitude.
- On downwind target airspeed is 80-85 kts in level flight.
- On base reduce airspeed to 60 kts (A22L) or 65-70 kts (A22LS) and extend flaps to 1st position.
- After turning final approach, add 2nd stage of flap if required. Keep the airspeed on finals in the range 50-55 kts.
- Target speed over the threshold is 50 kts.
- Hold nose wheel clear of runway until it lowers gently on its own.
- If a touch-and-go is flown, engine power increase will give a nose-up pitching moment which should be countered by pushing the controls forward and adjusting elevator trim.
- For a full-stop landing, use brakes after gently lowering the nose.

Recommended minimum circuit time – 90 minutes
Recommended minimum landings – 15



5. Short field take-off and landing (STOL)

Key elements (assumes slip ball centred and elevator trimmed):

- Set flaps to 2nd position and use best climb angle speed $V_X = 49$ kts.
- Approach to land at 45 kts maximum, 40 kts over threshold.
- Pilots must consistently demonstrate landings to full stop within 150-300 m of threshold and within 2 metres of centre line during landing roll.

Recommended minimum time for STOL training – 30 minutes
Recommended minimum short take-offs – 3
Recommended minimum short landings – 5



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6. Balked landing/go-around Balked landing (go-around) often occurs due to approach errors which cannot be corrected or if an obstacle is suddenly detected on the runway (eg aircraft pulling into your path).

Recommended minimum time for balked landing training – 20 minutes
Recommended minimum go-arounds (w/out flap) – 3

7. Low speed flight, stalls and stall recovery The A22 Foxbat has no adverse handling features at low speeds or at stall with any flap setting. A light vibration of the controls in roll may be noticed as a warning that a stall is approaching. The stall occurs as a nose drop, rarely if ever with wing drop. The airplane recovers from the stall immediately if the flight controls are returned to their neutral position.

During low speed flight with wings level deflection of ailerons does not initiate a stall. However during a turn at a very low speed an abrupt aileron deflection may cause a stall with noticeable wing drop.

Recommended minimum time for stall training – 30 minutes
Recommended minimum stalls (w/out flap) – 6

8. High speed flight, recognising and recovery from steep spiral dive The aircraft has no peculiar handling features at high speeds. Control forces increase with airspeed which reduces the danger of control inputs exceeding their load limits.

During high speed flight engine parameters must be carefully monitored - exceeding operational limits must be prevented.

To recover from a steep spiral dive, the engine power must be reduced first to idle and then the airplane must be brought to level flight by gently deflecting the elevator and ailerons.

Recommended minimum time high speed flight – 30 minutes
Recommended minimum spiral dives (LH & RH) – 2



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9. Crosswind take-off and landing
a) Crosswind take-off
b) Crosswind landing

Recommended minimum time for crosswind training – 30 minutes
Recommended minimum crosswind landings – 5

10. Practice engine failure Read the the relevant POH sections!
– sink rate with the engine stopped is 100 fpm higher than with engine at idle power because of stopped or windmilling propeller
– maintain airspeed!
– engine failures should be practised for every leg of the circuit

Recommended minimum time for engine failure training – 30 minutes
Recommended minimum failures (inc EFATO) – 4

I confirm this pilot has satisfactorily completed the A22 Foxbat familiarisation programme.

Pilot name:

Instructor name & signature:

Date:

Notes:



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Appendix – speeds and weights for the A22

Item	A22L	A22LS (landplane)
Weights		
Typical empty weight	265 kgs	295 kgs
MTOW (cerified)	450/472.5 kgs	600 kgs
MTOW (structure)	525 kgs	650 kgs
Load factors (maximum)	+6-3	+6-3 (650 kgs)
Load factors (operational)	+4-2	+4-2 (650 kgs)
Speeds at <u>MTOW</u>		
	450 kgs	600 kgs
Stall speed with full flap	28 kts	36 kts
Stall speed clean	32 kts	45 kts
<i>(Note – at the same take-off weight, eg 450 kgs, both versions will stall at about the same speed)</i>		
Maximum flap speed	62 kts	83 kts
Rough air cruise max	80 kts	99 kts
Never exceed	118 kts	120 kts
Best angle of climb	50 kts	49 kts
Best rate of climb	57 kts	54 kts
Best glide (no flap)	52 kts	54 kts
Best glide (with flap)	47 kts	49 kts
Engine speeds (rpm)		
Idle	1,800-2,000	
Maximum continuous	5,500	
Maximum	5,800 (5 minutes max)	

