SECTION 2 - OPERATING DETAILS/LIMITATIONS

FLIGHT CHARACTERISTICS

The rigid, fabric covered fuselage of the KITFOX is a time-proven design similar to that of several classic airplanes, including the Piper Cub, Taylorcraft, and the Champ. Its 3-axis control system is also similar therefore the general flight characteristics are similar. Its huge flaperons lend the KITFOX superior controllability at very low airspeeds, and its light weight, high power loading, and high lift wing contribute to its outstanding maneuverability and short take-off capability. The low wing loading of the KITFOX means it will be affected more by wind than larger, heavier aircraft. The KITFOX is not designed for flight in hazardous weather or under Instrument Flight Rules.

KITFOX FLIGHT TIPS

- The KITFOX is a high performance airplane at slow speeds. Until you are thoroughly familiar with its flight characteristics, or unless you are at extremely high density altitude, **restrict take-off power to about 75% of full power.** Normally this is plenty of power to safely operate the aircraft and the take-off roll and climb will be more comfortable and easier to manage.

  CAUTION: Pilots that are new to the Kitfox's performance can be startled at how quick the Kitfox can get airborn and the high rate of climb, so restrict take off power until you become familiar with the aircraft.

- Application of flaps causes the center of lift of the wing to move slightly aft. This causes the airplane to pitch nose down, which tendency must be countered by a slight up elevator. The use of flaps and the resulting changes in control "feel" should be explored at altitude and various airspeeds. Use very little or no flaps for the initial take-off in your new KITFOX.

- You should restrict flap deflection to 25°. Deflection beyond 25° tends to restrict aileron travel and effectiveness. Exercise caution on final approach in gusty or crosswind conditions by using less flap deflection so that aileron effectiveness is not diminished.

- Your KITFOX will safely land at speeds of only 33 - 35 mph. However, the airspeed will bleed off rather quickly in the flare, so it is best to carry some speed on short final. Initially, you should

maintain 55 - 60 mph on final. After some practice, you can slow your final approach speed to 45 mph, (solo). Do not hesitate to use power to arrest the sink rate if you find the aircraft settling too rapidly, or to use full power to go around and try again.

° The KITFOX has a low wing loading so you must exercise caution on rollout and while taxiing. The large control surfaces are very effective in countering crosswinds if used properly. Most importantly, if winds are strong, GO SLOW. When taxiing always have the stick firmly back ensuring download on the tailwheel.

° Pilots who have not flown airplanes as small as the KITFOX may be surprised by its responsiveness and its light control feel. You can fly it with your fingertips and tiptoes, and once mastered it is a delight to fly. The tendency of first-time KITFOX flyers is to over control. Don't do it! To properly execute any maneuver, some rudder input is required. Usually very little pressure is necessary, but you must use the rudder. We strongly recommend that you install a slip-skid indicator to help you "find your seat".

OPERATING LIMITATIONS

Your airplane must be operated in accordance with all FAA-approved markings and placards in the airplane. If there is any information in this section which contradicts the FAA-approved markings and placards, it is to be disregarded.

Gross Weight . . . . . 1050 lbs / 480kg
Flight Load Factor, *Flaps Up . . . . . +5.7 -2.85

AIRSPEED LIMITATIONS

Never exceed (glide or dive, smooth air) . . . . 125 MPH
Flap Operating Range . . . . . 22-75 MPH

ENGINE OPERATION LIMITATIONS

Power and Speed Rotax 582 . . . . . 65 BPH at 6500 RPM
Power and Speed Rotax 912 . . . . . 80 BHP at 5500 RPM

ENGINE INSTRUMENT MARKINGS

OIL TEMPERATURE GAUGE (912 only)

Maximum Allowable . . . . . 285°F (red line)

OIL PRESSURE GAUGE (912 only)

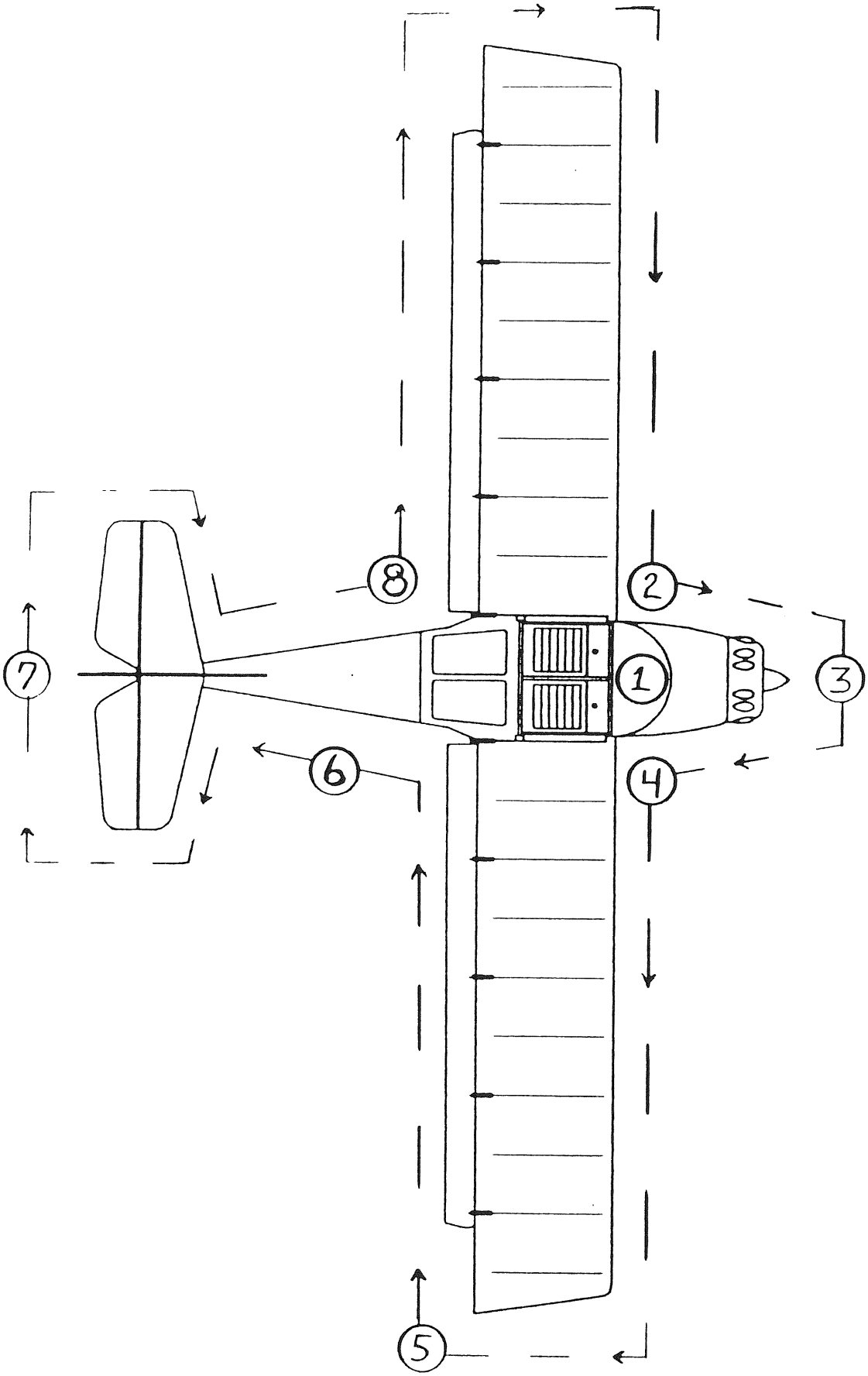
Minimum Idling . . . . . 20 PSI (red line)
Normal Operating Range . . . . . 20-70 PSI (green arc)
Maximum . . . . . 70 PSI (red line)

FUEL QUANTITY INDICATORS

Sight Gauge Style

TACHOMETER

Maximum Allowable 582 . . . . . 6800 RPM (red line)
Maximum Allowable 912 . . . . . 5800 RPM (red line)



EXTERIOR INSPECTION
- KITFOX -

PRE-FLIGHT CHECK LIST

Conduct a thorough walk-around inspection in accordance with the figure.

CHECK:

1. a. Key start switch "OFF" and ignition "Master" toggle switches "OFF".
   b. Wing tank and header tank fuel shutoff valve "OPEN" (horizontal position).
   c. Control stick for free and proper movement of control surfaces (flaperons and elevator).
   d. Look behind the seat and inspect the control system. Look for loose jamb nuts, missing or loose cotter pins, cracks in bellcranks or any other parts, chaffed or frayed rudder cables, or excessive "play" in any hinge point or rod end.
   e. Throttle reverser bellcrank and its control cables.

2. a. Radiator for damage or coolant leaks.
   b. Bungee cord for wear, fraying, or loosening.
   c. Left main tire for proper inflation (9 psi) and hydraulic lines for leaks.
   d. Left lift strut to fuselage attach bolt.
   e Left front spar clevis pin and safety pin.
   f. Fuel level in left wing tank and the filler cap.
   g. Drain and check sample from wing tank quick-drain.

3. a. Cowling fasteners for proper installation and security.
   b. Propeller and spinner for nicks and security.
   c. Gascolator: Drain and check fuel sample for water and sediment.
   d. Oil level.

4. a. Right front spar clevis pin and safety pin.
   b. Right main tire for proper inflation and hydraulic lines for leaks.
   c. Right lift struts and attach bolts.
   d. Fuel level in right wing tank and the filler cap.
   e. Drain and check sample from wing tank quick-drain.
   f. Right leading edge and right wing tip for damage.

5. a. Right flaperon for freedom of movement.
   b. Right flaperon control horn, flaperon hinges and flaperons for damage.
   c. Turtle deck and fasteners.

6. a. Fabric on fuselage top, sides, and belly.
   b. Vertical and horizonal stabilizers.
   c. Horizontal stabilizer braces and attach points.

7. a. Rudder and elevator control surfaces for freedom of movement and clevis pin security.
   b. Rudder cable connections and chain connections to tailwheel.
   c. Tailwheel

8. a. Left flaperon control horn, flaperon hinges, and flaperons for damage.
   b. Left flaperon for freedom of movement.
   c. Left wing tip and left leading edge for damage.

Before Starting Engine

1. Exterior Preflight -- COMPLETE.
2. Seats, Belts, Shoulder Harnesses -- ADJUST and LOCK.
3. Fuel Shutoff Valve -- ON.
4. Radios, Electrical Equipment -- OFF.
5. Brakes -- TEST and SET.

Starting the Engine

1. Brakes "ON".
2. Carburetor Heat -- COLD. (912 only).
3. Both ignition switches on
4. Choke or primer as required (4-5 pumps when cold).
5. Throttle -- idle.
6. Propeller Area -- CLEAR.
7. Keyed ignition switch -- "START". (Release when engine starts).
8. Monitor EGT and Coolant Temperature indication.
9. Monitor Oil Pressure (912 only)

Warm-Up

Run the engine at the minimum speed necessary for smooth operation, not less than 3 minutes in hot weather or 4 minutes in cold weather. Coolant temperature should reach at least 120°F before run-up and 140^0 before flight.