SECTION 5 - MAINTENANCE

KITFOX ANNUAL INSPECTION CHECKLIST

ENGINE GROUP

_____ Remove cowling and wash down engine. (mineral spirits or water soluble solvent)
_____ Drain engine oil (912 engine).
_____ Check drain plug for metal particles.
_____ Remove and cut open oil filter-inspect for metal. (Replace)
_____ Drain gearbox oil. (Replace)
_____ Check drain plug for metal particles.
_____ Remove spinner, re-torque prop bolts, and safety wire again.
_____ Check prop blades for nicks, splits or other damage.
_____ Check spinner and bulkhead for cracks.
_____ Clean and re-gap or replace spark plugs.
_____ Check compression. Refer to engine manual for specifications.
_____ Check ignition leads for security and condition.
_____ Check exhaust system for cracks, leaks and security.
_____ Clean or replace air cleaner(s).
_____ Check carburetors for position and security.
_____ Check throttle linkage for condition and operation.
_____ Remove and clean float bowls.
_____ Check choke cables for condition and operation.
_____ Check fuel and primer hoses for condition and security.
_____ Check rotary valve lubrication system tank and hoses for condition and security (582 engine).
_____ Check oil injection system tank and hoses for condition and security (582 engine).
_____ Check oil tank and hoses for condition and security (912 engine).
_____ Disassemble engine shock mount assemblies and inspect rubber bushings. Replace if deteriorated.
_____ Check engine mount weldment for cracks and distortion.
_____ Turn fuel valve off. Remove and clean gascolator bowl and screen. Re-apply the safety strap.
_____ Check EGT and water temp probes and wiring for security and condition.
_____ Check alternator wiring for security and condition.
_____ Check all coolant lines and hoses. Replace hoses if deteriorated. Tighten all hose clamps.
_____ Drain and replace coolant
_____ Check radiator for security and condition.

FUSELAGE GROUP

_____ Check rudder pedals and brake master cylinders for security and condition.
_____ Flush brake system with fresh fluid.
_____ Remove seat upholstery and seat, kick panels, and rear fuselage trim panel.
_____ Check aileron control system for condition and operation. Replace components as necessary to keep free play to an absolute minimum.
_____ Check flap control system for condition and operation.
_____ Check elevator control system for condition and operation.
_____ Lubricate all rod ends, swivel fittings, bearings and hinge bolts.
_____ Check seat belts for fraying and secure attachment.
_____ Check door hinges and latches for condition and operation.
_____ Check windows and windshield for cracks and security.
_____ Check fuel filler cap for condition and marking.
_____ Check fuel valves for proper operation and markings.
_____ Check fuel lines for proper routing, condition and security. Replace fuel hoses at rear spar if kinked or deteriorated.
_____ Check instrument panel for secure mounting.
_____ Check engine and flight instruments for operation and markings.
_____ Check pitot system plumbing for condition and security.
_____ Check instrument panel wiring for condition and security.
_____ Remove and clean battery and check electrolyte level.
_____ Clean battery box and check for secure mounting.
_____ Check battery box area for evidence of corrosion or acid overflow spillage.
_____ Check battery/solenoid wiring for condition and security.
_____ Check radio installation and antennas for condition and security.
_____ Check condition of fabric covering and finish.

UNDERCARRIAGE GROUP

_____ Check shock cords for proper tension and fraying.
_____ Take weight off gear legs and check for play at attach fittings.
_____ Check gear legs for distortion and damage.
_____ Check brake system for fluid leaks.
_____ Check brake pads for wear and discs for scoring.
_____ Check tires for wear and inflation.
_____ Check wheel bearings for end play and smooth rotation. Clean, inspect and repack if wheels are removed.

_____ Take weight off tailwheel and check swivel operation.
_____ Check tailwheel spring for distortion and damage.
_____ Check spring mounting bolts for proper torque.
_____ Check spring attach angles on fuselage for cracks and distortion.
_____ Check tailwheel bearings for end play and smooth rotation.
_____ Check steering springs and chains for condition and security.

EMPENNAGE GROUP

_____ Check elevator hinge pins and bushings for excessive play.
_____ Check rudder hinge pins and bushings for excessive play.
_____ Check all hinge pins for condition of cotter pins.
_____ Check horizontal stabilizer mounting bolts for proper torque.
_____ Check horizontal stabilizer struts for distortion and damage.
_____ Check strut hardware for condition and security.
_____ Check fabric covering of tail surfaces.

WING GROUP

_____ Remove all inspection panels and check interior of wing structure.
_____ Check top surface of wing for wrinkles and irregularities that would indicate rib or spar damage.
_____ Check wingtips for security and condition.
_____ Check rear spar to fuselage hinge bolt and fittings for wear and security.
_____ Check front spar lock pins and fittings for wear and security.
_____ Check lift strut to fuselage hinge bolts and fittings for wear and security. Replace bolts if wings are folded often.
_____ Check lift struts for distortion and damage.
_____ Check strut to spar fitting bolts for proper torque.
_____ Check fuel filler caps for condition and marking.
_____ Check flaperon hinge brackets for cracks and damage.
_____ Check flaperon horns for condition and security.

MISCELLANEOUS

_____ Check for proper display of airworthiness certificate and registration.
_____ Check for proper display of "Experimental" marking and passenger warning markings.

WING FOLDING PROCESS

To fold the wing:

1. Chock the wheels.
2. Release the 9 winged camlocks and remove the turtledeck.
3. Detach the aileron controls at the flaperon control horns.
4. Remove the front spar attach pin.
5. Swing the wing back and secure it with the wing lock-back brace.

(Hold the wing and swing it back gently, manually maneuvering the flaperons to avoid their inboard ends hitting the fuselage side. When they reach the full folded-back position, the flaperon should be vertical chordwise).

NOTE: Do not fold the wing with a full wing tank. Fuel may overflow through the cap or vent and onto the wing. Do not tow the aircraft with more than a couple of gallons in each wing tank as the weight of the fuel puts undue stress on the unsupported wing.