

## **ANNUAL INSPECTION PROCEDURES FOR RV6-A - C-GBOX**

ne: Lycoming O-360-A4M

ne Accessories: Bendix fuel injection, 'Light Speed' Capacitive discharge ignition system replacing right magneto. Left magneto with impulse coupling retained.

Oil filter, vacuum pump, Weldon high pressure electric fuel pump, engine driven high pressure fuel pump, (both in excess of 21 psi.), 70 AH Delco alternator with built in voltage regulation, 'Sky Tec' planetary drive light weight starter with permanent magnet field coils and built in starter solenoid, block heater (300 watt-110 volt), 4 EGT and 4 CHT pickups, fuel flow monitor, oil press and temp sensors etc., to drive the dash mounted CRT made by Visions Microsystems engine monitor unit, magneto mounted Hall effect trigger for C/D ignition unit containing automatic electronic advance, 14 mm platinum tip automotive type spark plugs in the top locations with regular aircraft 18 mm spark plugs in the bottom spark plug holes, sump quick drain, no-blo exhaust gaskets.

### ne Group Maintenance

1. Remove engine cowls, clean and inspect for cracks and retention security.
2. Drain warm engine oil, remove oil filter, cut filter open for contaminant inspection.
3. Check engine intake manifold for leaks, loose clamps and rubber deterioration.
4. Check valve pushrod tube seals for leakage.
5. Check ignition high-tension wires, coils and boots for security and condition.
6. Replace or clean spark plugs as required. Reinstall/re-torque plugs using 'never seize' lube on threads. Keep anti-seize compound from lowest 2 threads of spark plugs.
7. Check magneto points for condition and gap ONLY if excess drop at run-up is noted.
8. Check engine wiring for security and magneto 'P' wire condition.
9. Shut off fuel in cockpit, remove right firewall cold air cover, top and bottom bolts from gascolator, remove gascolator, change fuel filter if required, (every 100 hours), clean bowl, reinstall, rebolt and safety wire top bolt, turn on cockpit fuel and check for leaks, etc. Reinstall wing bolts on cooler area cover.
10. Check throttle and mixture controls for proper travel, security and condition.
11. Check rubber engine mounts for condition and bolt security.
12. Check engine exhaust pipes, clamps, engine mount bolts and nuts for security and condition. Check for evidence of exhaust leaks at cylinder head exhaust gaskets.
13. Check engine baffles for evidence of cracking or insecurity
14. Lubricate engine baffle rubber seals with silicone spray before installing cowlings.
15. Remove air box from engine, remove and service air filter, re-oil filter element as per K & N instructions, reinstall and resecure air box. Check operation of aux. air inlet door. A gentle finger push should activate door.
16. Check vacuum pump and hoses for security and possible leaks.
17. Check engine oil breather/separator can and hoses for security and possible leaks.
18. Inspect condition and security of all fuel and oil hoses, their clamps, and firesleeves.
19. Check operation of oil cooler door, as well as condition of SCAT tubing and clamps.
20. Every 100 hours inspect Hall effect trigger assembly through inspection hole cover.

21. Check condition, security and operation of both fresh air heaters, their hoses, clamps and plenums.
22. Check security of firewall mounted hardware, engine mount, wiring, hoses and grommets.
23. Check brake fluid level in reservoir. Use only approved aircraft brake fluid (red).
24. Fill engine with correct quantity of approved engine oil – Aeroshell 15w/50
25. Fit and properly torque new Champion oil filter, re-secure using .040 dia. safety wire.
26. Perform engine balance test, record results for analysis of engine condition.
27. Check nose wheel for correct preload on swivel (22 lb drag sideways at the axle).
28. Check mounting bolts and fairing for security, and condition. Lubricate with grease the nose wheel swivel fitting. Check nose wheel for play, lubrication, inflation pressure (40 psi) and tire condition. Check nose wheel axle bolt for condition, looseness and security.
29. Wash engine compartment only as necessary.
30. Refit lower cowl with protection tape strips (2” wide masking tape) in place to prevent spinner/cowl interference. Take care while fitting. If located correctly it goes on easily.
31. Refit and secure upper cowl. Take great care so you do not chip paint while fitting.
32. Remove the battery box cover, clean area thoroughly. Remove terminals if needed to properly clean battery, and to ensure positive electrical connections. Refit terminals and battery cover, making sure retaining pins are rotated to fit into locking grooves.
33. After engine is operating, check that the battery voltage is within the proper range of 14.2 – 15 volts as indicated on engine monitor on dash.
34. Battery used is NAPA brand, P/N 52-E5W LM 250

#### eller Group Maintenance

Sensenich makes propeller. Model – forged aluminum fixed pitch # 72FM8S9-0  
 Engine crankshaft is solid.

1. Remove spinner carefully. Will only fit on one way.
2. Rotate prop blades and check for cracks, chips and blemishes. Dress as necessary.
3. Check bolt torque (60 ft lbs.) if removed.
4. Re-safety wire propeller bolts using .040. inch dia. Stainless safety wire in groups of 2.
5. Inspect propeller extension hub for cracks, damage or evidence of movement.
6. Check propeller backing plate and nose plate for damage, cracks and plate-nut security.
7. Recheck safety wire installation on propeller bolts.
8. Carefully reinstall spinner, torque spinner retaining screws 7-10 inch pounds only.

#### ame Group Maintenance

1. Check seats, seat backs and baggage area folding cover for security, operation and condition.
2. Check for smooth operation of canopy hinges and throttle quadrant levers.
3. Check for smooth preloaded movement of elevator manual trim wheel.
4. Check fire extinguisher for security, charge condition, and retaining pin safety tie.
5. Check contents, condition and security of first aid and survival kit.
6. Clean and vacuum out cabin carpets and corners, baggage compartment etc.

7. Check tire pressures at 40 psi (maximum), or as dictated by field conditions.
8. Check and rotate main wheel tires as necessary, using wheel jack and jack points.
9. Check and repack main wheel bearings as necessary. Adjust with 0-.010" endplay, using new cotter pin only.
10. Check condition and security of brake lining, rotors, brake cylinders, hydraulic lines and tire condition for cuts, bruises, wear remaining and wheel assembly bolt tightness.
11. Check condition and security of wheel fairing, axle nut and wheel bolts.
12. Check security, condition and free play of control sticks, push tubes, bearings, pins and pivot bolts.
13. Check security and condition of aileron, elevator, flap and rudder bearings, pins and hinges.
14. Check for operation of parking and main brakes, their security as well as for leaks and binding conditions. Use heavy foot pressure to check for leaks in system.
15. Check instruments security and condition on dash, hoses behind and rubber isolation mounts.
16. Check canopy gas struts, pins and canopy pivot pins as well as both latching mechanisms, their alignment and smooth operation.
17. Check seat/shoulder belts for operation, latching, anchor pins and web condition.
18. Check operation of navigation, interior and landing lights.
19. Check operation of fuel valve, fuel lines security in cabin, and for evidence of leaks.
20. Check for flaps simultaneous operation, noise, hinge security, travel and linkage, etc.
21. Check aileron bellcranks for looseness, binding, bolt retention security and push tube-bearing condition. Accessed through under wing inspection panels.
22. Check ailerons, flaps, elevator and especially rudder for cracks, loose rivets, hinge play, bearing binding condition etc.
23. Check ELT for battery condition, inspection period deadlines, operation on 121.5 Mhz (at .05 minutes after the hour only), for minimum number of cycles.
24. Check operation of stall warning horn by lifting switch on leading edge of left wing with master on.
25. Inspect cowl flap for security, condition, free play, locking ability and free operation.
26. Check security and condition of radio antennae and cables.
27. Ground run up engine to check for leaks, refit cowlings, test fly for proper operation.
28. Complete written notations in Journey log and engine/airframe logs.