

100 hour/ Annual inspection

A75N1 Stearman with Pratt & Whitney R-985, HS 2D30

Engine

1. Inspect propeller governor for oil leaks.
2. Inspect the propeller shaft thrust bearing cover for oil leakage.
3. Remove, clean, and inspect engine and accessory cowling.
4. Inspect for loose nuts and broken lock wire.
5. Inspect drain plugs and covers for proper lockwiring.
6. Inspect deflectors for security and fin clearance.
7. Inspect general condition of cylinder assemblies, and for evidence of loose or broken flange nuts or studs.
8. Inspect pushrod housing gland nuts for security, evidence of oil leakage, and lockwiring.
9. Inspect rocker covers for security, chafing, and evidence of oil leakage.
10. Tighten exhaust port stud nuts.
11. Inspect exhaust for cracks, and signs of burning.
12. Examine all engine controls for excessive play, restriction of movement, and security of attachment.
13. Inspect all accessories for leaks, security, and condition.
14. Inspect all clamps, bonding, rods, and lines for security and condition.
15. Inspect engine mount, mount bolts, and mount shock units for cracks, corrosion, security, and lockwiring.
16. Perform engine compression check.
17. Check cold valve clearance.
18. Clean oil separator.
19. Clean vacuum relief valve.
20. Remove, disassemble, inspect and clean main pressure oil screen.
21. Remove, inspect and clean sump plugs.
22. Remove, inspect and clean the scavenge oil screen in sump.
23. Inspect all oil lines and connections for leaks, dents, cracks, chafing, and security.
24. Inspect connections and clamps for general condition, positioning, and tightness.
25. Change oil.
26. Remove sparkplugs and install new or reconditioned sparkplugs.
27. Clean sparkplug lead insulators.
28. Check sparkplugs' lead elbows for security and condition.
29. Inspect the ignition harness for signs of overheating, security and condition.
30. Inspect ignition cables for evidence of chafing and deterioration of insulation.
31. Inspect magneto ground wires for security and condition.
32. Inspect the magnetos for security and condition.
33. Inspect breaker points and cam followers for excessive wear.
34. Check magneto timing and synchronization.
35. Clean breaker compartments, distributor rotors, and distributor blocks.
36. Inspect all electrical conduits and connectors for security and condition.
37. Inspect induction vibrator cables and connections for security and condition.

Engine, continued.

38. Inspect thermocouple leads for security and condition.
39. Inspect starter for security and condition.
40. Inspect generator/alternator for security and condition.
41. Inspect air intake ducts for security, condition, and for obstructions.
42. Inspect intake pipes for leaks, security, and condition.

Propeller

1. Inspect propeller blades for looseness, condition of bolts, nuts, and pins, and for proper safetying.
2. Examine exterior of all parts of propeller for cracks, nicks, alignments, and similar defects.
3. Grease propeller hub.

Fuel and oil systems

1. Drain fuel screens and tank drains.
2. Remove fuel tank and inspect front and rear spars for condition. (AD)
3. Check fuel tank for evidence of loose baffles, leaks.
4. Inspect fuel vent lines for security.
5. Remove, inspect, and clean all main fuel screens.
6. Remove and inspect the carburetor fuel screen.
7. Inspect the entire fuel system for leaks under pressure.
8. Inspect the priming system for evidence of leakage, security, and condition.
9. Inspect all fuel line supports and clamps for security and condition.
10. Inspect the carburetor for leaks at the parting surfaces, and hold down nuts for tightness.
4. Check security of mounting, and safetying of tank straps.
5. Inspect all oil lines for general condition, and leaks.
6. Inspect oil tank for security of mounting, signs of leakage, condition and location of padding, proper tension of supporting straps and for proper anchorage of lines leading from the tank.

Airframe

1. Inspect struts, braces, and fittings for general condition.
2. Check all parts for proper safetying.
3. Inspect wings, fuselage, stabilizers, and fin for general condition, distortion, pulled rivets, torn fabric, or other evidence of failure.
4. Inspect flight controls for general condition.
5. Check all external brace wires and interplane struts for proper tensions and security of attachment.
6. Check condition of static ground.
7. Check tension of control cables.
8. Inspect all control linkages.
9. Inspect cables for frayed wires. No more than six broken strands per inch.
10. Inspect pulleys.
11. Inspect control rods for freedom of movement, condition of bearings.
12. Inspect brackets and guides for misalignment and security of mounting.
13. Inspect rudder pedal assembly for proper function, and condition, full movement, and interference with elevators.
14. Check elevator neutral position.
15. Inspect tab mechanism for proper functioning, and check indicators for correct position.
16. Repack trim tab gearbox.
17. Inspect all turnbuckle barrels for seasoning cracks.
18. Inspect internal drag wires for tightness, even tension, and locknuts for security.

Landing gear, wheels, tires

1. Check tailwheel post, upper and lower bearings for wear and proper clearance.
2. Inspect tailwheel trunion and attachment fittings for damage and cracks.
3. Inspect tail wheel for proper tire inflation.
4. Inspect landing gear struts, arms, and fittings for cracks, bends, security and condition.
5. Inspect sponson bolts and fittings for elongation.
6. Inspect shock struts for leakage.
7. Lubricate landing gear.
8. Remove landing gear filler plug, and fill to level of filler hole with red shock absorber fluid.
9. Check torque movement of shock absorber piston. If great than 1/16" measured at the outside diameter of the tire, bushings and spacers in the torque links should be inspected and all parts indicating excessive wear replaced.
10. Inspect brake system for leaks, dents, kinks, and condition of attaching clips and flexible connections.
11. Inspect brakes for air, and bleed if necessary.
12. Check and fill master cylinder if necessary.
13. Check brake lining-to-drum clearance.
14. Clean and inspect wheel bearings, and grease/lubricate. Check wheel bearings for free turning, no looseness.
15. Check brake drums for scarring, undue wear, loose screws, shoes and plates for distortion and corrosion.
16. Inspect wheels for bent or distorted rims and for security of retaining bolts and nuts.
17. Inspect tires for tread wear, cuts, breaks, and other visible damage.
18. Check tires for proper inflation and general condition.

Cockpits, interior controls, instruments

1. Check instrument panels for proper float flexibility.
2. Inspect instruments for general condition and security of mounting.
3. Check connections to all instruments for tightness and insulation.
4. Inspect compass for fluid discoloration and bubbles.
5. Inspect compass and swing if necessary.
6. Check altimeter against field elevation, and correct if necessary.
7. Check pitot and static lines for loose attachment, and tightness.
8. Remove drain plug from pitot-static lines, and drain.
9. See that cockpits are clean and free from loose articles.
10. Check flight controls for freedom of operation.
11. Check engine controls in cockpits for full and free movement.
12. Clean and lubricate all moving connections and bellcranks.
13. Lubricate fuel valve control linkage.
14. Inspect fuel cock control for binding, excessive backlash, and general condition.
15. Inspect seats for security of attachment, condition, and function of adjustment mechanism, breaks or cracks in seats.
16. Oil seat adjustment mechanism.
17. Inspect safety belts for cuts, fraying, and latching devices.
18. Inspect windshields for condition and security.

Electrical

1. Inspect battery, battery bracket, leads and connections for condition and security.
2. Inspect all wiring for loose connections, chafing, burning or breaks in insulation.
3. Replace ELT batteries, and check operation.
4. Check all fuses, and replacement fuses.