

Seabee Annual Inspection Procedures

Due to the wide variety of Seabee's flying out there, these procedures should be modified to fit YOUR Seabee. Make sure that all AD's are complied with as well as any required Service Bulletins for your airplane, engine and propeller. Check the Seabee website (www.republicseabee.com) for a list of all known AD's and Service Bulletins. User of this document assumes complete liability for use or misuse of its contents.

It is a good idea to print this out at each annual and keep it in the aircraft records for future reference. Notes can be made on each sheet to indicate work done or work that needs to be done.

Check each item when completed (✓).

	<u>Page</u>
Lycoming Engine	2
Hartzell Propeller	3
Airframe: Wings	4
Empennage and Tail Boom	5
Cabin and Gondola	6
Hull and Bottom	7
Landing Gear	8
Recurring AD's	8

Seabee Annual Inspection

Engine

- Drain Oil, change filter and service per engine service instructions.
 - Check Oil Screens (Lycoming): Suction and Pressure are close together on rear of engine.
 - Safety Screen Plugs to each other after inspection.
 - Check Fuel and Oil line connections.
 - Drain Fuel Sump (gascolator).
 - Make sure all shields and cowl are secure.
 - Check engine controls for general condition, travel and freedom of operation.
 - Inspect induction system.
 - Change Air Filter.
 - Check security of engine fan (Franklin engine).
 - Examine Spark Plug leads for corrosion and deposits. Check CHT and EGT probes.
 - Remove Spark Plugs: Clean-Test-Re-Gap-*Rotate-Re Torque to specs.
- *Rotate plugs (not Franklin): **1T to 6B, 2B to 5T, 3T to 4B, 1B to 6T, 2T to 5B, 3B to 4T**
- Check Ignition Harness for security and check that all connections are tight
 - Check breaker points for pitting and minimum gap check for excessive oil in breaker compartment. Lubricate felt. Comply with Bendix **AD-2005-12-06**.
 - Check Magneto timing.
 - Check exhaust attaching flanges at exhaust ports for cracks. Check CHT and EGT probes.
 - Inspect Exhaust system for cracks and deformity.
 - Check rocker box covers for leaks.
 - Check cylinders for excessive heat (discoloration).
 - Check all wiring connections to engine.
 - Check all engine accessories for security of mounting, leakage and tight connections.
 - Check carburetor fuel screens.
 - Check for cracked or broken fins on cylinders
 - Check Engine Mounting Bolts for security and excessive wear, check Engine Mount Rubbers.
 - Compression check: Put in Engine logbook. 1 ___ / 80 2 ___ / 80 3 ___ / 80
Check for air sounds in engine through Carburetor, 4 ___ / 80 5 ___ / 80 6 ___ / 80
Exhaust, Oil filler.

Seabee Annual Inspection

Propeller

- Inspect blades for nicks and cracks. Remove all nicks and gouges, etc. per service manual.
- Inspect hub parts for cracks or wear.
- Check all visible parts for wear and safety.
- Check for oil and grease leaks.
- Grease propeller.
- Check blades to determine whether they turn freely on the hub pilot. This can be done by rocking the counter weights back and forth through the slight freedom allowed by the pitch change mechanism. If they appear tight, the pitch change mechanism should be removed so that each blade can be checked individually. If the blades are tight the propeller should be disassembled.
- Check for correct propeller tracking. This can be done static or with the engine running.
- Check Carbon Beta block clearance on Hartzell Propellers (.010" or 0.25mm). Clean and check for proper operation.

Seabee Annual Inspection

Airframe: Wings

- Check for corrosion and inspect:
 - a. Front and Rear spar, all bolts and fittings
 - b. Aileron and Flap hinges
 - c. Wing Tip screws
 - d. Wing fairings and screws
 - e. Wing strut, fittings, and fairings. Comply with Republic **AD- 53-23-03**
(ea. 25 hours)
 - f. Float and Float Struts. Remove float strut from wing, check for cracks at shear points. Check for cracks on floats and wing sockets.
 - g. Wing in general.
- Check for loose bolts or bushings:
 - a. Flap and actuator
 - b. Aileron and actuator
 - c. Wing strut attach-fitting to fuselage
- Check aileron cables for rust, flat spots, safeties, rigging and tension (20# \pm 5#).
- Check for loose rivets on trailing edges of flap and aileron and inboard fairing.
- Check condition of paint on all surfaces.
- Check condition of chafe rubbers on fairings.
- Lubricate hinges and bushings.
- Check electrical wiring inside the wing. (i.e.: navigation lights and landing lights)

Seabee Annual Inspection

Empennage and Tail Boom

- Check for corrosion and inspect:
 - a. Stabilizer and Vertical Stabilizer spars and bolts.
 - b. All hinges.
 - c. Inspection covers and surrounding surfaces.
 - d. Water rudder assembly.
 - e. Interior and exteriors of all surfaces.
 - f. Elevator collars.
- Check for loose bolts or bushings:
 - a. Elevator hinges and cable connections.
 - b. Rudder hinges and cable connections.
 - c. Trim tabs, bushings and mechanism.
- Check all cables for rust, flat spots, rigging, tension (20# \pm 5#), safeties and pulleys.
- Check for loose rivets on rudder tab, trailing surfaces and rudder stops.
- Check wiring, anchor light, beacon and tail light.
- Lubricate trim tab mechanism and all hinges and cable connections.
- Check wire waterproofing (at junctions).

Seabee Annual Inspection

Cabin and Gondola

- Check cables for rust, flat spots, tension (20# ± 5#), rig, safeties, pulleys and track.
- Check cable guards for corrosion.
- Check for corroded lines behind seats and cut away upholstery.
- Check fuel tank cover for corrosion.
- Check fuel lines for leakage (blue stains).
- Check all lines and wires in baggage compartment for condition and security.
- Check gondola and hat section for cracks.
- Check seats and seat cushions.
- Check doors for corrosion, friction locks. Check hinges and door locks.
- Check condition of windows and clearview panel (overhead window).
- Check flight controls for freedom of travel, travel stops and looseness.
- Take up slack in control wheel aileron chains and lubricate.
- Check instruments for proper markings, operation and connections.
- Check propeller reverse mechanism (static check only-do not attempt to operate without the engine running).
- Check wires and lines under instrument panel for security
- Clean or replace filter for vacuum instruments. Change each 200 hours.
- Check lights and accessories.
- Service battery, check for corrosion in box. Check leads for tightness and clean vent.
- Check antenna condition and connections.
- Check ELT battery date and inspect per **FAR 91.207(d)**. Sign off in logbook as a separate entry.

Seabee Annual Inspection

Hull and Bottom

- Check for corrosion and inspect paint on interior and exterior surfaces.
- Check all cables for rust, flat spots, tension (20# ± 5#), rig, safeties and free pulleys.
- Check condition of tail wheel actuating cylinder assembly and lubricate.
- Check hydraulic lines and wires.
- Check freedom of main gear linkage and lubricate.
- Check main gear actuating link, fork and lower end of cylinder.
- Check hydraulic pump and cylinder for linkage, safeties and operation.
- Check bottom for loose rivets and condition of stiffeners.
- Inspect round bilge covers for broken chains, gaskets, rusty threads.
- Remove hull plugs.
- Lubricate and replace hull plugs.
- Check Landing Gear micro switches and lubricate.

Seabee Annual Inspection

Landing Gear

- Inspect main gear and tail wheel bearings and pack.
- Check wheels for cracks and condition of tires and inflation:
Main: 35 psi, Tail wheel: 45 psi (or as directed by your tires).
- Check brake linings and bracket security.
- Fill brake master cylinders. Use Mil-5606 fluid.
- Check oleos for pitting, leaking and inflation. See Republic Service Bulletin for procedure.
- Check for loose axles and cracked castings.
- Check condition of brake lines.
- Retraction test. Check gear position lights and warning system if installed.
- Check tail wheel steering system and tracking angle per Republic Service Bulletin #17.
- Grease landing gear (12 places – 8 outside, 4 inside under the rear seats).
- Check tail wheel collar for cracks.
- Check 90° main gear elbow for cracks (bottom side).
- Remove main gear at knuckle, check corrosion inside cross tube and spray with Corrosion-X® or other corrosion preventative.
- Check center cross tube bolts for wear and lubricate
- Refill struts with Mil-5606 fluid. See **Republic Service News #9** or **Owners Manual page 40** for procedure.

*****Ensure ALL AIRWORTHINESS DIRECTIVES ARE COMPLIED WITH*****

Recurring AD's:

Interval

- | | |
|--|--------------------|
| <input type="checkbox"/> <u>53-23-03</u> : Wing strut-attach fittings for corrosion | every 25 hr./6 mo. |
| <input type="checkbox"/> <u>76-07-12</u> : Bendix Ignition Switch-OFF position check
(May be signed off by the pilot) | every 100 hr. |
| <input type="checkbox"/> <u>2005-12-06</u> : Bendix Magneto impulse coupling-excessive wear every 500 hr.** | |

**Snap ring impulse coupling (part #: 10-40315), raises AD compliance to 500 hours TBI.

Yours may have other AD's so be sure you check with your Mechanic!!