

CESSNA 170 100 HOUR / ANNUAL CHECKLIST

FAA registration No: _____ Serial number: _____
Aircraft Year / Model: _____ Inspector: _____
Aircraft owner: _____ Address: _____
Aircraft tach time: _____ Hobbs Time: _____
Today's Date: _____ Airframe TT: _____

1. PRE-INSPECTION ENGINE RUN

- ☐ Engine primer – proper operation
- ☐ Starter – proper function
- ☐ Oil pressure – Idle: _____ & 1700 RPM: _____
- ☐ CHT: _____ EGT: _____ Oil temp: _____
- ☐ Fuel selector – operates in all positions
- ☐ Ammeter – proper function
- ☐ Generator/alternator for charge
- ☐ Carburetor and Cabin heat for operation
- ☐ Engine instruments for operations and markings
- ☐ Static RPM: _____ Max RPM: _____
- ☐ Magnetos for correct drop Left: _____ Right: _____
- ☐ Brakes and parking brake for operation
- ☐ Electrical system for operation
- ☐ Radio equipment for operation
- ☐ Idle cut-off

2. Make a pre-inspection walk around, checking for damage and previous repairs.

3. ENGINE AREA

- ☐ Check for evidence of oil, exhaust, or fuel leaks
- ☐ Drain engine oil
- ☐ Clean oil screen or replace external filter element if installed
- ☐ Check oil filler cap, dipstick, and drain plug
- ☐ Fill engine oil
- ☐ Replace / clean induction air filter element as required
- ☐ Inspect induction system and tighten intake pipes and adaptors
- ☐ Drain carburetor inlet chamber, clean screen and drain bowl
- ☐ Check cold and hot air hoses
- ☐ Check condition of engine baffles
- ☐ Check condition of cylinders, rocker box covers and push rod housings
- ☐ Remove muffler shrouds and check for cracks and leaks
- ☐ Check condition of ignition harness and electrical wiring
- ☐ Inspect spark plug terminal ends
- ☐ Clean, gap and rotate spark plugs
- ☐ Compression: 1. 80 / ____ 2. 80 / ____ 3. 80 / ____ 4. 80 / ____ 5. 80 / ____ 6. 80 / ____
- ☐ Check engine controls and linkages (inspect and lubricate)
- ☐ Check engine mounts and mount bushings for condition and security
- ☐ Check cabin heater valves and controls
- ☐ Check starter, solenoid, electrical connections and engagement lever
- ☐ Check generator / alternator and electrical connections
- ☐ Check magnetos, touching up points if necessary, and check timing:

Right Magneto 26° B.T.C. TSN: _____ TSOH: _____

Left Magneto 28° B.T.C. TSN: _____ TSOH: _____

- ☐ Install and inspect engine cowling

4. PROPELLER

- ☐ Check propeller assembly for cracks, bends, and nicks
- ☐ Check hub for defects, tightness, and safety
- ☐ Check propeller track
- ☐ Check spinner and backing plates for security and mounting

5. FUEL SYSTEM

- ☐ Check fuel tanks for leaks and security of mounting
- ☐ Drain sumps, clean fuel strainers and bowls
- ☐ Check all fuel lines for leaks at connections and security of mounting
- ☐ Check fuel tank vents, tank caps and gaskets
- ☐ Check condition and operation of fuel selector valve and placard legibility
- ☐ Check seal of fuel tank filler necks to internal structure

6. LANDING GEAR

- ☐ Inspect landing gear for general condition and security of attachment
- ☐ Visually inspect landing gear legs and tail wheel springs for cracks
- ☐ Check gear attachment bolts and wedges for condition and security
- ☐ Inspect hydraulic lines for chaffing, security, and leakage
- ☐ Inspect wheels and brakes for cracks, defects, adjustment and condition of bearings
- ☐ Check tires for wear and cuts
- ☐ Check brake puck or pad thickness
- ☐ Clean tail wheel assembly, check for alignment, security, and freedom of movement
- ☐ Check tail wheel tire and bearings for wear, cracks, and other defects
- ☐ Lubricate tail wheel assembly
- ☐ Check tire pressures and safety of axle nuts
- ☐ Check fluid level in Master cylinders
- ☐ If Cleveland brakes are installed clean caliper slides (do not lube, attracts dirt)

7. AIRFRAME

- ☐ Check general condition of skin for corrosion, distortion, cracks, or other defects
- ☐ Inspect internal condition of primary structure for damaged members, rust, or corrosion
- ☐ Inspect all control cables, turnbuckles, pulleys, guides, sheaves and bellcranks
- ☐ Inspect windows, windshield, and doors
- ☐ Inspect seats, seat stops, seat rail, upholstery, structure, and seat mounting
- ☐ Check condition of instruments wiring and plumbing
- ☐ Inspect vacuum system
- ☐ Inspect pitot and static system
- ☐ Check magnetic compass compensation card and for proper fluid level
- ☐ Check instrument panel, shock mounts, ground straps, cover, decals & labeling
- ☐ Check heating and ventilating systems and controls
- ☐ Check stall warning unit
- ☐ Check radios and radio controls
- ☐ Inspect radio antennas for attachment and condition

8. WINGS

- ☐ Check surface condition (fabric, dope, or skin) for general condition, corrosion, deterioration, distortion, cracks, and other evidence of failure
- ☐ Check wing attachment bolts and safety
- ☐ Inspect lift struts, fittings and attachment

- ❑ Inspect internal structure of wing
- ❑ Check flaps and ailerons, check all cables for clearances, safety and tension, bellcranks, brackets and actuating devices for condition and freedom of operation
 - Aileron travel 20° up 14° down.
 - Flaps travel $38^{\circ} + 2^{\circ}$ - 1° down.
- ❑ Check aileron and flap hinge brackets and hinge pins for looseness and condition
- ❑ Inspect pitot mast and airspeed lines
- ❑ Check all fairings and screws

9. EMPENNAGE GROUP

- ❑ Check surface condition of skin for general condition, corrosion, cracks, other evidence of failure and security of attachment
- ❑ Remove all fairings and inspect all surface attachments and adjacent areas
- ❑ Check cables for proper tension and safety
- ❑ Check trim tabs for adjustment mechanism for attachment excessive looseness and proper operation
- ❑ Inspect rudder and elevator hinge fittings, pins and horns for cracks, looseness, and proper installation
- ❑ Operate rudder and elevator and check for ease of operation and proper travel and stops
 - Elevator $26 + 1^{\circ}$ - 0° up and $20 \pm 1^{\circ}$ down.
 - Elevator tab $12 \pm 1^{\circ}$ up and $25 \pm 1^{\circ}$ down.
 - Rudder travel 16° right 16° left.
- ❑ Inspect and install fairings

10. ELECTRICAL SYSTEM

- ❑ Inspect battery for condition and terminals for tightness
- ❑ Inspect battery box drains and vents and paint if corroded by acid
- ❑ Check battery cables for corrosion and proper insulation from battery box cover
- ❑ Check navigation lights and landing lights
- ❑ Check electrical wiring for possible chafin, security and proper insulation
- ❑ Check electrical switches for operation and fuse box for burned fuses and spares
- ❑ Check position light flasher and or strobe for mounting and operation
- ❑ ELT check per FAR 91.207

11. ADDITIONAL CHECKS

- ❑ Check all applicable Ads for compliance
- ❑ Replace all panels, fairings, carpet, seats, and engine cowling
- ❑ Post inspection engine run-up, idle mixture adjustment, and leak check
- ❑ Logbooks and AD list signed off

SHOP NOTES

Signature: _____
License #: _____
Date: _____

Pay extra attention to the following:

Rudder circuit cables between the rudder and the aft bulkhead (inside the tail cone.) These are really hard to get to and so are highly-neglected, and frequently chafed/broken/corroded.

Front spar carry-through and internal wing attach blocks. (These blocks are inside the spar carry-through and the bolt that holds the wing to the fuselage pass through this block.) These suffer from 50 years of age in a high water collection spot.

Front/rear doorposts. These are the main strength of the cabin/fuselage and hard landings and high-speed flap abuse will deform them. The front doorposts are often overlooked by tricycle-gear mechanics, but that is where landing shock-loads are absorbed by the 170.

Be sure to have your inspector check the longeron on which the pilot's right brake master cylinder is attached (pivot point). It is pretty common for them to be cracked or broken. If it's broken, it'll need to have a doubler riveted, which takes ~8 hours.

Take a good look at the door and window hinges. A good negotiating tool if they are bad since it is not an easy fix.

Wrinkles in the skin between the landing gear could indicate bigger problems in the gear box.

Check for cracking and corrosion around the tail spring box.

References:

Aircraft Spruce had the following in 2005 (<http://www.aircraftspruce.com/>):

- ❑ 170B owner's manual \$12.
- ❑ The Illustrated Parts Catalogue \$37.
- ❑ Continental C-125/C-145/O-300 parts catalog \$62.
- ❑ Continental C-125/C-145/O-300 overhaul manual \$85.