30 N. Gould Street, Suite 7491
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11/17/2024 Rev. 1

Cessna 177 Prebuy Evaluation Checklist – Scope and Detail

NOTE: This is a two-phase checklist. Please perform phase 1 items first and report results before proceeding with phase 2 items. If there are any high-cost issues noted during Phase1, we might need to terminate the prebuy examination early.

NOTE: Estimated labor hours to complete both phases of this checklist: 12 hours for fixed gear airplanes. 16 hours for retractable airplanes.

PHASE 1

1.1 Operational & Function Check

1.1.1. Perform Airplane Operational and Functional check IAW the applicable Aircraft Flight Manual.

1.2 Engine and Propeller

1.2.1. Before removing cowling, check spinner to cowl alignment.

1.2.2. Check cylinder compression hot. Report compression readings. Report location of audible air leakage (rings, exhaust valve).

1.2.3. Perform borescope examination per the Savvy Aviation Cylinder Borescope Evaluation Checklist. Label photos and upload to Savvy.

1.2.4. Spark plug examination. Report any abnormal color or appearance, particularly top spark plugs. Report brand and type of spark plugs installed, massive or fine wire.

1.2.5. Check all fuel and oil lines, wire bundles and ignition harness leads for chafing and security.

1.2.6. Check rocker area drain back tubes for chafe damage.

1.2.7. Remove oil filter, cut open and inspect for metal. If significant metal is found, please provide one or more high-resolution photographs of filter media, check with a magnet to determine whether metal is ferrous or non-ferrous, and save filter media in a zip-lock plastic bag in the event we need to send it out to a lab for microscopic examination.

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1.2.8. Check engine for cracks and oil leaks. Check front crankshaft seal for oil leaks. If any cracks or leaks are found, please provide high-resolution photos.

1.2.9. Check engine baffles for cracks. Check inter-cylinder baffles for proper position. Check flexible baffle seals for condition and proper orientation. Check for baffle rivet chafing on upper cowling.

1.2.10. Check engine mount for corrosion, heat damage and chafing. Check for sagging engine shock mounts.

1.2.11. Check for chafing on the propeller governor oil line.

1.2.12. Exhaust system examination for exhaust leaks, cracks, and bulges. Check for exhaust flange erosion. Check mufflers and flame cones for damage. Pressure test the exhaust system and heat exchanger.

1.2.13. Check propeller hub for cracks and leaks. Check prop blades for nicks, corrosion, areas of excessive filing. Check propeller spinner and spinner back plate for cracks.

1.3 Maintenance Records

1.3.1. Check for complete airframe, engine and propeller logbooks. Check for any damage history.

1.3.2. Check aircraft serial number matches the logbooks, registration, and airworthiness certificate. Check engine serial number matches logbooks.

1.3.3. Check to see if the main gear actuator rod end has been replaced with the newer design with no zerk fitting (stress point).

1.3.4. Provide AD compliance list. Report any applicable ADs for which compliance is not well documented.

1.3.5. Check for last 500-hour inspection or overhaul or replacement of magnetos.

1.3.6. Verify date of most recent 91.411 / 91.413 biennial certifications (static system, altimeter/encoder, transponder).

1.3.7. Confirm that aircraft is equipped as shown in equipment list.

1.3.8. Check for alterations that have mandatory ICA requirements.

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IMPORTANT: Please report your Phase1 findings to Savvy and obtain authorization to proceed with Phase 2.

PHASE 2

2.1 Landing Gear

2.1.1. Check tires for condition.

2.1.2. Check nose strut extension.

2.1.3. Check the condition of the brake calipers, hoses, discs and linings. If discs or linings look worn, measure thickness.

2.1.4. Check gear legs for corrosion.

2.2 Retractable Landing Gear

2.2.1. Place aircraft on jacks. Perform landing gear retraction test in the normal and emergency configurations. Check for abnormal noises, time the extension and retraction.

2.2.2. Check nose gear door hinges. Check nose gear door link and grommet.

2.2.3. Check shimmy damper for condition.

2.2.4. Check nose gear uplock arm bumper. Check uplock cam for proper orientation and evidence of previous damage.

2.2.5. Check nose gear retract brace for excessive play.

2.2.6. Check main gear leg well bumper pads for condition.

2.2.7. Check hydraulic power pack rigid line clearance to rudder cables.

2.2 Cabin

2.2.1. Check brake master cylinders and parking brake valve for leaks.

2.2.2. Check windows for condition. Check cabin door structure for cracks. Check cabin door frame to see if sagging cabin doors have caused chafing in the door frame. Door hinge up / down play should be less than ¼".

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2.2.3. Check engine controls for smooth operation and adequate cushion.

2.2.4. Check operation of flight controls, including rudder, brakes, and flaps. Check for excessive play in the control yoke universal joints.

2.2.5. Check all interior lights (including instrument lighting) for proper operation.

2.2.6. Check fuel quantity indicators for proper operation (Functional check only; please do not de-fuel the aircraft for this check.)

2.2.7. Pull back interior to check cabin side wall for cracks and condition.

2.2.8. Check headliner for evidence of leaks at the door. Check sidewalls and floor for evidence of leaks and water damage. Check for evidence of fuel leaks at the wing root area.

2.2.9. ELT, remove batteries, look for leaks and corrosion. Perform functional check. Report if expiration date is near.

2.3 Airframe

2.3.1. Check entire exterior of airframe for significant cosmetic flaws (e.g. cracks, missing or discolored paint), corrosion in exhaust trail area or battery box vent, antenna base cracks). Check wing leading edges for damage.

2.3.2. Check for corrosion in the spar cap area. Look for swelling or bumps.

2.3.3. Check tail tie down and aft vertical spar for evidence of tail strike damage.

2.3.4. Check stabilator for play. No play up / down or front / back. Check for stabilator counterweight steel brackets installed.

2.3.5. Check stabilator trim actuator rod for cleanliness and corrosion.

2.3.6. Check stabilator trim tab free-play

2.3.7. Check underside of wings for evidence of fuel leaks, with concentration at fuel quantity senders, access panels, and drains.

2.3.8. Check wing leading edges for damage.

2.3.9. Check inside wing for corrosion. Any significant corrosion, please note and provide pictures. Evidence of any treatments? (Corrosion X or ACF 50).

2.3.10. Check pitot heat for proper operation.

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2.3.11. Check wing flaps for excessive chafing. Flap tracks/rollers for excessive wear. Flap skins for cracks. (note if stiffener is installed on trailing edge)

2.3.12. Check flight controls for freedom of movement including trim systems. Check fuel vent tubes are secured with clamp away from aileron.

2.3.13. Check for required placards

2.3.14. Report any obvious modifications or repairs to the airframe. If so, are there corresponding 337's.

2.3.15. Check areas of any major repairs noted in logs for quality of work and correctly repaired.

2.3.16. Report any obvious mods to the aircraft, such as speed mods, etc. If installed, are Form 337 records available?

2.3.17. Check for required placards inside and out, including compass card.

2.3.18. Verify that aircraft cabin contains airworthiness certificate, registration certificate, POH, current W&B, applicable avionics operating manuals, hand microphone.

2.3.19. If equipped with engine monitor, download data and send data to Savvy.

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