

N297SU– R44 Cadet - Inspection/Engine Run Checklist

Examination performed by Kerry J Shumway, Aviation Safety Inspector, Salt Lake City FSDO on October 14, 2022.

Visual inspected engine for external damage:

- Carburetor ✓
- Airbox ✓
- Exhaust ✓
- Magnetos ✓
- Oil coolers ✓
- Ignition harness ✓
- Alternator ✓
- Cooling fan ✓

Visual inspect electrical system.

- Pulled all circuit breakers and place all switches in the OFF position, disengage clutch and pull mixture control knob up. ✓
- Check condition of battery and cables. ✓
- Push in the following circuit breakers; GOV, HORN/START, CLUTCH/START, GAGES, WARNING LTS and E TACHS.
 - Found no issues with circuits.
- Turn BATT switch ON. Ensure no issues with electrical system. Turn BATT switch OFF. ✓
- Inspect rotor brake switch on the main rotor gearbox located above the input yoke. ✓
- If undamaged, release rotor brake. ✓

Visual inspect fuel system

Added 5 gallons of fuel to main tank.

- Fuel valve is open. ✓
 - No fuel leaks noted.

Inspect sprag lock and function.

- Using a paint marker, place a V shaped arrow across all four V-belts pointing forward. ✓
- Cut and remove V-belts. ✓
- Rotate upper sheave by hand, ensure smooth rotation and sprag locks on shaft – checks good.

Inspect general condition of engine

- Remove lower spark plugs. ✓
- Rotate crankshaft by hand using the cooling fan
 - Found smooth rotation and no anomalies.
- Check thumb suction and compression on all cylinders – checks good.
- Reinstall spark plugs and secure ignition harness. ✓
- Check oil level. ✓

- Manipulate throttle grip and mixture control. ✓
- Ensure full movement at carburetor
 - Throttle stopped at detent both directions.
 - Carburetor heat checks good.

Engine start/run inspection

- Start the engine following normal procedures with the exception of engaging the clutch. ✓
- Ensure normal operation at idle, no warning lights and normal indications on gages. ✓
- Allow to idle for two minutes. ✓
- Increase throttle to 70% and perform magneto check (per checklist). ✓
Increase throttle to 100%. ✓
- Ensure normal operation, no warning lights and normal indications on gages. ✓
- Allow to run for at least two minutes or until cylinder head temp stabilizes. ✓
- Checked cylinder head and exhaust temperatures with digital laser thermometer.
 - Temperature check - good.
- Switch GOV on. ✓
- Reduce throttle to 80% and allow GOV to control throttle. ✓
- Ensure smooth throttle control. ✓
- Repeat a second time. ✓
- Reduce throttle to idle. ✓
- Pull mixture control knob and move start key to OFF. ✓
- Turn all switches off. ✓
- Inspect intake tube for delamination of inner liner – tube is the upgraded version.