



DLK Aviation
2601 Cessna Lane
Kennesaw, GA 30144
770-427-4954
www.dlkaviation.com

Pre-Purchase Evaluation Report – N928CS

Date: 02/28/2021

Current Hobbs: 2411.6

Current Flight Meter: 1993.3

Airframe, Engine, and Propeller Total Time – 1993.3

Introduction

A pre-purchase evaluation of N928CS was performed using a checklist based on the Cirrus annual inspection checklist. The following report contains findings from each of the areas outlined in the checklist.

The airplane has been parked in a hangar and not operated for over 2 years. The batteries are very weak. A new #1 battery was installed prior to starting the inspection. The cylinders were pre-oiled and the propeller was pulled through in order to lubricate the engine. The engine was started and ran at idle for several minutes. In addition to inspection, we confirmed as many of the findings found on the inspection in 2018.

The findings are outlined in the report. A separate estimate to prepare the airplane for flight as well as costs to repair the airworthy and recommend items will be also be provided. Parts pricing will be at retail cost and hourly labor rate is \$125.

Records Review

Aircraft records and logs were reviewed to determine if any Airworthy Directives, Mandatory (OEM Designated) Service Bulletins, Chapter 4, Chapter 4, and DOT inspection items as well as items required by 14CFR91-4.11 & 91.4.13 were reviewed to determine if any were outstanding. Below is a detail of the review by item:

Aircraft Records

The aircraft POH, airworthiness certificate, and registration were not found in the airplane.

Airworthiness directives

An Airworthiness Directive (AD) search was completed and no open ADs.

- AD2020-16-11 – Cylinder inspection/modification is due.

- AD93-05-06 Ignition Servicing Due in 6.7 flight hours.

Service Bulletins

A Mandatory Service Bulletin search was completed. There are eight mandatory service bulletins have been issued since the last annual inspection:

- SB2X-95-23R1 CAPS Aft Grain Replacement
- SB2X-74-02 Ignition Switch Security
- SB2X-52-08R2 Catcher/Diverter and Gas Strut Rod End Replacement
- SB2x-42-17 Perspective Software Update v0764.37
- SB2X-34-29R1 Pitot and TKS Line Routing Inspection
- SB2X-32-25 Oleo strut inspection
- SB2X-79-10Turbocharger Oil Check Filter Installation
- SB2X-71-27R1 Alternate Air Box Bracket Inspection

Chapter 4 Items

The following chapter 4 items will need to be completed:

- CAPS Line Cutters are overdue.
- ELT battery replacement due
- Seat belt EMA Controller replacement overdue
- CO detector replacement over due (CO service CAS message illuminates).

DOT Items

- The oxygen bottle hydrostatic inspection is due.

Chapter 5 Items

The items below are called out in the Cirrus maintenance manual and are recommended to be completed:

- 500-hour Magneto Inspection Due
- 2-Year/500-Hour Battery #2 replacement Due
- 2-year/500-hour Alternator #1 Inspection Due
- 2-year/500-hour Alternator #2 Inspection Due

- 5-year/500-Hour Cabin Air Control Assembly Inspection Due
- 1000-Hour Electrical Shielding and Bonding Inspection Due in 6 Hours
- 3-Year/1000-Hour Pitch and Roll Servo Inspection Due
- 3-Year/1000-Hour Yaw Servo Inspection Due
- 2-Year Magnetometer Calibration Due
- 2-Year/1200-Hour De-Ice Filter Replacement Due
- 2000-Hour replacement of #1 alternator due in 6.7 hours
- 2000-Hour replacement of #1 alternator due in 6.7 hours
- SB 15-3A Oil Sump Assembly Inspection

14CFR91-4.11 & 91.4.13 Items

- 2-Year IFR Certification Overdue

Engine Operational and Functional Check

An operational and functional check, at idle, was completed using the Cirrus Airplane Operational & Functional Checklist. The only CAS message that illuminated was the CO Detector needing to be serviced.

We performed a button test on all of the Garmin components and verified they were working as designed. We ground tested the autopilot and all electric items to ensure proper operation. No issues were noted during these checks.

Airframe Evaluation

A visual inspection of the airframe was completed. The airplane is dirty and exhibits the standard wear and tear for an airplane with almost 2000 hours of flight time.

- The nose landing gear oleo strut is compressed. The propeller is below minimum height. The strut can be serviced but, I'm thinking it will have to be replaced.
- Several placards are worn and/or faded and will need to be replaced in the near term.
- The erosion strip around the TKS panels is worn and chipped.
- There is evidence of some sort of surface repair under the pilot door.
- The brakes are soft and reservoir is low.
- All brake linings are below serviceable limits.
- R/H brake disc is below serviceable limits.
- L/H nose wheel pant mounting bracket is cracked.

- The landing light has a section of lamps that are inoperative.
- L/H horizontal stabilizer fairing cracked and stop drilled.

Engine Evaluation

We pre-oiled the cylinders and turbos prior to starting the engine. The engine did start after a few attempts and ran normally at idle. We did not run the engine above 1000 RPM because of the condition of the nose landing gear oleo strut. The following list of items were verified and will need to be repaired/replaced. A lot of these items can be overlooked if the engine is overhauled or replaced.

- The starter is weak and will need to be replaced soon
- Alternator #1 is leaking oil through exhaust.
- Alternator #2 harness is chafing.
- L/H airbox is cracked.
- Replace R/H turbo transition
- Replace center, R/H, and Right Rear engine baffle.
- Properly install alternate air valve
- Replace #3 fuel injection line
- Install new spark plugs
- Replace L/H forward upper deck line seals
- Replace magneto pressurization line
- Replace clamp on #3 fuel line.
- Manifold pressure controller leaking
- Oil leak on crank case spine.
- L/H turbo induction heat shield chafed.
- Replace A/C turnbuckle
- Replace magnetos
- Replace intercooler scat hose
- Oil sump gasket leaking
- Rocker covers leaking
- Overhaul L/H & R/H Turbos

Propeller Evaluation

An inspection of the propeller verified the findings of the last inspection:

- The propeller hub is leaking at the seams.
- There is propeller blade play around rotational axis.
- Propeller de-ice slinger ring cracked/broken.

The propeller will need to be repaired/overhauled. A quote for overhaul will be included in the estimate.

Interior

The interior shows pretty well. The interior exhibits typical wear and tear for 2000 hours of flight time.

- The pilot bolster panel is broken at the lower L/H corner.
- The bolster panel is worn and scratched.
- The environmental controls operated but, the recirculation function does not work and the cabin fan is extremely weak.
- The glareshield is faded and needs to be painted.

Conclusion

N928CS is in good condition despite the findings of this evaluation. The airplane can be made airworthy for a ferry permit pretty quickly. The engine and propeller issues need to be addressed by either replacing components or having them overhauled. A factory rebuilt engine is also an option but the lead-time may be rather long. You can contact Mac Little at 770-427-4954 if you have questions about this report.