



# POWERED SAILPLANE INSPECTION REPORT

## APPENDIX D: JET ENGINE AND SYSTEMS

AIRCRAFT TYPE/MODEL:..... S/NO:.....VH-.....

ENGINE TYPE/ MODEL:..... S/NO:.....

ITEM	CHECKED (initial)	REMARKS
1. Check engine required placards		
2. Remove, clean and inspect engine access panels, doors and hinges, tensioning cords, shutters, baffles, seals and fasteners. Lubricate as required.		
3. Aircraft with fixed fuselage mounted jet engines, inspect the engine air intake ducting, exhaust and associated structure.		
4. Inspect engine bay/firewall for defects and sealing. Ensure drain is clear; hoses and control cables that pass through are protected from wear and damage.		
5. Inspect fuel carrying metal tubing and hoses for damage, wear, leaks and security.		
6. Inspect engine mount assembly, bolts, rubber isolators and pylon for condition, cracks, wear, heat damage and security.		
7. Inspect jet engine intake, diffuser, burner housing and exhaust nozzle sections for security, damage, cracks, leaks and signs of overheating.		
8. Inspect engine compressor and turbine for cracks, damage, end play, freewheeling/friction or binding, signs of overheating and general condition.		
9. Inspect engine accessories including fuel pump and starter motor. Inspect for security, free play, condition, leaks, wear, loose or missing nuts, bolts or screws.		
10. Inspect engine controls for security, damage, check function and travel.		
11. Inspect fuel shut off valve for security, condition, detents and function.		
12. Clean or replace in line fuel filters as required.		
13. Drain water from fuel tank sump and/or water trap.		
14. Inspect fuel tank, vents, valves and fuel caps.		
15. Inspect and check engine and fuel tank electrical bonding.		
16. Move fuel selector to the on position. Pressurize fuel lines after any disassembly and inspect for fuel leaks.		
17. Inspect for condition and function of engine extension/retraction system, including stops, gas struts, and position limit switches. Inspect needle bearings in cam, lubricate.		
18. Inspect engine system battery for security and service. Clean terminals and check for correct torque.		
19. Inspect electronic boxes fuel, air pressure and temperature sensors, probes and systems for security and condition.		
20. Inspect engine electrical system, wiring/cabling, insulation, terminals, circuit breakers and fuses for security and damage.		
21. Check igniter/glow plug for condition and security.		

22. Inspect ignition harnesses, plug connectors, and switch leads for security and damage.		
23. Inspect engine instruments, check operation on engine run. Inspect and test fire warning system (if fitted).		
24. Inspect/ replace CO Sensor as required (jet engines fixed/ fuselage mounted).		
25. Perform applicable General and Specific engine ADs.		
26. Ensure tooling, rags and foreign objects are removed.		
27. Perform engine run and record parameters on engine run sheet. Check correct operation of engine and instruments. (It may be necessary to verify engine maximum power in flight).		
28. Adjust engine parameters as required referencing manufacturer's instructions.		
29. Perform Independent Control Check on any engine control disconnection/ reconnection.		
30. Complete worksheets and logbook entry.		

\* NOTE 1: Only complete applicable fields in schedule. If not applicable, insert N/A

\* NOTE 2: Any Airworthiness Directive takes precedence over Appendix D schedule

\* NOTE 3: Refer to manufacturers maintenance instructions for specific tasks

## 27. GFA POWERED SAILPLANE JET ENGINE RUN SHEET

### GROUND FUNCTIONAL CHECK:

- Record battery voltage prior to engine start
- Record barometric pressure, ambient temperature and airfield elevation
- Record idle speed of engine and EGT
- Run engine at full power and record RPM and EGT
- Compare the above values with previous recordings
- Check time for extending and retracting engine is near the same with previous recordings

ENGINE TIME SINCE NEW:-.....ENGINE TIME SINCE OVERHAUL:-.....

MANUFACTURERS TBO:-.....RECONDITION CARRIED OUT:-.....

BATTERY VOLTAGE:-.....

IDLE RPM:-.....EGT.....

FULL POWER RPM:-.....EGT.....

OAT:-.....QNH:-.....AIRFIELD ELEVATION:-.....

ENGINE EXTENSION TIME:-.....RETRACTION TIME:-.....

Remove magnetic plug. Contaminants: - No ☐ Yes ☐

REMARKS:- .....

SIGNED:-.....PRINT NAME:-.....DATE:-.....

GFA MEMBERSHIP NO:- M-.....GFA MEMBERSHIP EXPIRY DATE:-.....

THIS INSPECTION SCHEDULE MUST BE SIGNED BY A QUALIFIED GFA AIRWORTHINESS INSPECTOR

**THIS INSPECTION REPORT IS TO BE RETAINED BY THE OWNER AND FILED WITH THE AIRCRAFTS RECORDS**

## **GUIDELINES for the APPENDIX D INSPECTION.**

1. For inspection purposes "powered sailplane" also means "power assisted sailplane".
2. The GFA System of Maintenance (SoM) is the default system. A logbook statement is only required if electing an alternate maintenance system.
3. Light Sports Aircraft (LSA) and electrically powered sailplanes must be maintained to the manufacturer's maintenance schedule. These types require a logbook statement.
4. A Registration Holder (RH) may elect to maintain the airframe and/or jet engine to the manufacturer's maintenance schedule. The election may be mixed eg the airframe maintained to the manufacturers SoM and the engine to the GFA. These maintenance instructions should be clearly identified in the aircrafts logbook statement.
5. Refer to logbook statement located at the front of the aircrafts logbook (if applicable) for the maintenance schedule nominated, and:
  - a. Where the GFA Appendix D engine maintenance schedule is nominated, carry out in accordance with MOSP 3 requirements
  - b. Where the powered sailplane and/or engine manufacturer's schedule is elected, carry out maintenance IAW that schedule/maintenance system
  - c. The Registered Operator (RO) must ensure that the most current manufacturer's schedule is used. This may be obtained from the Maintenance Manual or applicable Service Bulletin.
  - d. The Appendix D Engine Run Sheet Item 27 must be completed.
6. Make comments in the remarks column for future reference. This will assist in determining trends and add value if and when applying for an engine overrun.
7. Powered sailplanes with engines permanently mounted in the fuselage:-
  - a. Must have no gaps or unsealed holes in the firewall. (Seal with "3M Firebarrier 2000")
  - b. Must have a cockpit mounted CO Sensor.
  - c. Fuel and oil lines in the engine compartment must be protected with fireproof sleeving and routed as far as practicable from hot spots.
8. On retractable engines, pay particular attention to electrical looms and flexible hoses in the bend area.
9. Check fuel, oil, coolant systems thoroughly for contamination, signs of chafing or rubbing of pipes & hoses, security of clamps & fittings. (Fuel leak check must be done with boost pump ON after any maintenance involving replacement of a component/ disconnection.)
10. Bonding between the external earth point, fuel tank, engine mount, etc must be checked for continuity. All components should be at the same electrical potential.
11. The engine run must be carried out to determine the engine performance. Record all parameters on the Powered Sailplane Engine Run Sheet which then forms part of the engine records. Engine performance history will be required if or when applying for an 'on condition' engine life extension or overrun approval. Note that any sailplane involved in 'Charter Operations' are not eligible for life extension.