

Annual / 100 Hour Inspection (Airframe)

AIRCRAFT REG. NO.	MAKE	MODEL	Date:
AIRCRAFT SERIAL NO.	T.T.	TACH	SMOH
ENGINE SERIAL NO.	T.T.	MODEL	SMOH

Inspection: Add Initials if item inspected was found to be Airworthy
 ► Symbol indicates need for Inspector and Mechanic or Pilot Signature
 Add N/A if item is not applicable to this aircraft
 Add the Word **Failed** if item inspected was found to be Unairworthy and
 List Reason for Failure in Discrepancy Record on page 5.

► PRE-INSPECTION

Airworthy

1. AD's / Airframe / Engine / Propeller / Appliances. FAR 91.417(a)(2)(v)
2. Manufacturer's Bulletins.
3. Current Registration & Airworthiness Certificate I/A/W 91.203
4. Weight / Balance and Equipment List.
5. FCC / Radio Station License if required.
6. Aircraft Modifications include proper paperwork. (337's, etc.)
7. Aircraft Registration Markings / Flight Manual I/A/W FAR 91.9
8. Necessary Inspection Aids Available.
9. Remove / Open inspection plates, access door, fairing, & cowlings.
10. Aircraft thoroughly cleaned.

► WINGS

Airworthy
L R

1. Inspected for general condition, deterioration, distortion & corrosion.
2. Inspected for evidence of failure and insecurity of attachment.
3. Spar Attachments
4. Strut Attachments
5. Skin and structure condition
6. Pitot tube and plumbing
7. Stall Warning Operation
8. Landing Lights
9. Fuel Vents
10. Fuel Caps and Placards
11. Drain Tank Sumps (Tail Low)
12. Check for Fuel Leaks
13. Electrical Wiring
14. Tips and Nav Lights
15. *Ailerons:*
 - a. Cables, Pulleys, Turnbuckles
 - b. Bellcranks, Pushrods, inspected & Lubed
 - c. Travel and Operation
 - d. Balance Weights
 - e. Inspected Hinges, **Cotter Pins** and Attachments, Lubed
 - f. Skin and Structure
16. *Flaps:*
 - a. Cables, Pulleys, Turnbuckles
 - b. Bellcranks, Pushrods, inspected & Lubed
 - c. Travel and Operation
 - d. Bearings and Tracks, Inspected and Lubed
 - e. Skin and Structure
 - f. Motor and Drive Mechanism Inspected and Lubed

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➤ EMPANAGE

Airworthy

1. Elevator Hinges, inspected, Bearings Lubed
2. Elevator Travel and Operation inspected
3. Elevator Cables, Bellcranks, inspected & Lubed
4. Elevator Skin and Structure
5. Rudder Hinges, Bearings-lubed
6. Rudder Travel and Operation
7. Rudder Cables, Horn and Turnbuckles
8. Rudder Skin and Structure
9. Trim Hinges and Jacks
10. Trim Travel, Operation and lubed.
11. Trim Horn and pushrod
12. Trim Cables, Pulleys and Chains
13. Trim Tab Skin and Structure
14. Stabilizer Skin, Spar & Attachment
15. Fin Skin, Structure, & Attachment
16. Antennas and Wiring
17. Nav. Light
18. Beacon Security

➤ CABIN / COCKPIT

Airworthy

1. Rudder, Pedals, Torque Tubes, Cables, and Springs, Inspected & Lubed
2. Nose Gear Steering Mechanism Inspected and Lubed
3. Master Cylinders, Fluid Level, Hoses and Mountings
4. Parking Brake
5. Main Gear Attachments
6. Fuel Selector, Plumbing and Placards
7. Hydraulic Plumbing
8. *Control Cables, Pulleys and Turnbuckles:*
 - a. Behind Panel
 - b. Under Floor
 - c. In Door Posts
 - d. Above Headliner
9. Control Yoke & Wheels, Inspected and Lubed
10. Elevator Pushrod and Bellcrank lubed
11. *Electrical Wiring:*
 - a. Behind Panel
 - b. Under Floor
12. Cabin Internal Structure, for loose equipment, cleanliness
13. Seats and Seat Rails for poor condition and apparent defects, AD's
14. Seat Belts, Safety Restraints for Condition and proper operation, AD's
15. Windows and windshields for deterioration and breakage
16. Sun Visors for condition
17. Doors, seals inspected & latches lubed and checked for proper operation.
18. Instrument Mounts & Shock mounts, condition, proper installation
19. Instrument Markings
20. Instrument Plumbing
21. Instrument Filters
22. Batteries for proper installation, cleanliness, and proper charge.

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➤ CABIN / COCKPIT CONTINUED

Airworthy

23. Suction Regulator
24. Flight and Engine Controls for proper installation and operation
25. Radio Mount in Panel
26. Switches and Circuit Breakers
27. Flap Control Mechanism
28. Trim Control Mechanisms
29. Cabin Vents
30. Ashtrays, for cleanliness, corrosion
31. Spare Fuses if needed
32. Required Plackards – Per Type Certificate Data Sheet and AD's if req.

➤ FUSELAGE

Airworthy

1. *In-Tail Assembly:*
 - a. Structure, for condition, corrosion, deterioration, defects, attachments.
 - b. Control Cables, Pulleys and Turnbuckles inspected and lubed.
 - c. Electrical Wiring & Equipment, routing, insecure mounting, condition
 - d. Bonding and shielding – for improper installation and poor condition.
 - e. Radio Equipment and Rack, proper installation, secure mounting
 - f. Antenna Mounts, condition, secure mounting
2. *External:*
 - a. Skin for deterioration, distortion, corrosion, failure, defects, attachments
 - b. Antennas for condition, secure mounting and proper operation
 - c. Static Ports, obstructions, cleanliness
3. *Battery:*
 - a. Box Security, proper installation
 - b. Box Cleanliness – Drain Open and not obstructed
 - c. Water Level
 - d. Specific Gravity Check
 - e. Cables and Solenoids, condition, security
4. *Fuel System:*
 - a. Low Point Drains
 - b. Gascolator

➤ MAIN LANDING GEAR

Airworthy

1. Tires and Tubes for wear, cuts and proper inflation.
2. Wheels and Axles inspected for cracks, defects and condition.
- ▶ 3. Wheel Installed and **Safetied**.
4. Bearings checked and packed.
5. Brakes, Lining, Disc, Cylinder, condition, and proper adjustment.
6. Gear Legs
7. Strut Level
8. Torque Links
9. Brake Fluid Level
10. Brake Lines for leakage, proper routing and condition.
11. Shock absorbing devices for improper oleo fluid level if installed.
12. Retracting and locking mechanism for proper operation if installed.
13. Electrical System for chafing and improper operation of switches.
14. Floats and Skis for insecure attachment and defects if installed.

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➤ TAIL LANDING GEAR

Airworthy

1. Security in Attachment to Fuselage.
2. Steering Cables and Pulleys
3. Swivel – Clean and lubed
4. Tire and Tube condition.
5. Wheels inspected for cracks, defects and condition.
- ▶ 6. Wheel Installed and **Safetied**.
7. Bearings checked and packed.
8. Tire for proper inflation

Airworthy

➤ PROPELLER ASSEMBLY

1. Inspected for cracks, nicks, binds and oil leakage.
- ▶ 2. Inspected bolts for improper **torquing** and lack of **safetying**.
3. Inspected control mechanisms for improper operation, insecure mounting.
4. Inspected control mechanisms for restricted travel.
5. Inspected Anti-icing devices for improper operation and defects if installed.

Annual / 100 Hour Inspection (Airframe Continued)

AIRCRAFT REG. NO. _____ MAKE _____ MODEL _____ Start Date: _____
AIRCRAFT SERIAL NO. _____ T.T. _____ TACH _____ SMOH _____
ENGINE SERIAL NO. _____ T.T. _____ MODEL _____ SMOH _____

➤ POST INSPECTION

Airworthy

- ▶ 1. Remove All Tools, Etc.
- ▶ 2. Close Up Aircraft
- 3. Radio / Electrical Units, Checked
- 4. Flashlite Condition
- 5. First Aid Kit Condition
- 6. ELT for Proper Installation, Corrosion, Operation I/A/W FAR 91.207(d)(a)
- 7. Fire Extinguisher Charge
- 8. Headset
- 9. Microphones
- 10. Alternate Static Source
- 11. New Oil – Inspection Sticker
- 12. Aircraft and Windows Cleaned
- ▶ 13. Log Book Entries and Inspection Forms Completed (Including Engine)
- 14. Return to Service Form Prepared

Mechanic's
Signature _____

Date Inspection
Completed _____

(Pilot authorized to perform Preventive Maint.)

Inspector's
Signature _____

Date Inspection
Completed _____

NOTES or DISCREPANCIES RECORDED / REMEDY

Date: _____

Aircraft Reg: _____ Aircraft S/N _____ Total Time: _____ Tach Time: _____

I certify that this aircraft has been inspected in accordance with an annual inspection and was determined to be in an airworthy condition.

Signature: _____

Annual / 100 Hour Inspection (Engine)

Date: _____

AIRCRAFT REG. NO. _____	MAKE _____	MODEL _____
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➤ PRE-INSPECTION

- | | |
|---|-----------|
| | Airworthy |
| 1. AD's Engine / Appliances. FAR 91.417(a)(2)(v) | _____ |
| 2. Manufacturer's Bulletins. | _____ |
| 3. Current Registration & Airworthiness Certificate I/A/W 91.203 | _____ |
| 4. Necessary Inspection Aids Available. | _____ |
| 5. Remove / Open inspection plates, access door, fairing, & cowlings. | _____ |
| 6. Engine thoroughly cleaned. | _____ |
| 7. Pilot Discrepancies Checked. | _____ |

➤ FUNCTION REPORT

Airworthy Prelim Run-up	Airworthy Finish Run-up
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- | | | |
|---------------------------|-------|-------|
| 1. Cowl Flap Operation | _____ | _____ |
| 2. Oil Pressure at Start | _____ | _____ |
| 3. Flight Control Check | _____ | _____ |
| 4. Avionic Check | _____ | _____ |
| 5. Flight Instruments | _____ | _____ |
| 6. Fuel Gauges | _____ | _____ |
| 7. Cylinder Head Temp. | _____ | _____ |
| 8. Oil Temperature | _____ | _____ |
| 9. Cabin Heat & Vents | _____ | _____ |
| 10. Brakes – Steering | _____ | _____ |
| 11. Mag Switch Ground Ck | _____ | _____ |
| 12. Carb. Air Temperature | _____ | _____ |

➤ FUNCTION REPORT Continued

Airworthy Prelim Run-up	Airworthy Finish Run-up
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- | | | |
|-------------------------------|-------|-------|
| 13. Mag Drop @ _____ RPM | _____ | _____ |
| 14. Car Heat @ _____ RPM | _____ | _____ |
| 15. Prop Cycle @ _____ RPM | _____ | _____ |
| 16. Suction Gage @ _____ RPM | _____ | _____ |
| 17. Oil Pressure @ _____ RPM | _____ | _____ |
| 18. Gen. Output @ _____ RPM | _____ | _____ |
| 19. Fuel Pressure @ _____ RPM | _____ | _____ |
| 20. Ex. Gas Temp. Guage | _____ | _____ |
| 21. Max Static RPM | _____ | _____ |
| 22. Max Static MAP | _____ | _____ |
| 23. Throttle Operation | _____ | _____ |
| 24. Idle Mixture Cut-Off | _____ | _____ |

➤ ENGINE INSPECTION

Airworthy

- | | |
|--|-------|
| 1. Perform Compression Check Engine Hot. (Circle Direct or Differential)
1. _____ # 2. _____ # 3. _____ # 4. _____ # 5. _____ # 6. _____ | _____ |
| 2. Inspect Engine for Oil, Fuel, Hydraulic or Exhaust Leaks | _____ |
| 3. Drain Oil | _____ |
| 4. Remove and Inspect Engine Oil Screen and/or Oil filter, if Applicable | _____ |
| ▶ 5. Clean Safety Oil Screens and Reinstall (Install New Filter & Safety) | _____ |
| ▶ 6. Reinstall and Safety the Oil Drain Plug | _____ |
| 7. Refill with Proper Type and Quantity of Oil – Type _____ Qty _____ Qrts. | _____ |
| 8. Inspect Cowling for Cracks, Fasteners, Cowlflap, Hinges, Intake Duct | _____ |
| 9. Remove, Clean, Gap, Test and Rotate Sparkplugs | _____ |
| 10. Inspect Mag Interior and Points – Inspect Ignition Harness | _____ |
| 11. Check Mag Timing according to Engine Specs | _____ |
| 12. Reinstall and Torque Spark Plugs – Reconnect Ignition Harness | _____ |
| 13. Wash-Down Enigne, Firewall, Propeller and Cowling | _____ |

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➤ ENGINE INSPECTION CONTINUED

Airworthy

- ▶ 14. Drain Carburetor Float Bowl – **Safety** plug (180)
- ▶ 15. Remove Fuel Inlet Screen from Carb or Injection Throttle Body Clean, Inspect Reinstall and **Safety**
- 16. Inspect Injectors and lines, clean as necessary
- ▶ 17. Remove Gascolater Bowl, Inspect Screen, Reinstall, **Safety** and Check for Leaks.
- 18. Inspect EFS System, Valve , Hoses, Control, Clean Inline Filter (206)
- 19. Inspect and Service Intake Air Filter
- 20. Inspect Intake Air Box and or Alternate Air System
- 21. Inspect Exhaust System - for cracks in tubing, Exhaust Gaskets for leaks, attachment, Remove Heat Muffs – Inspect and Reinstall
- 22. Inspect all Aeroducting, Blast Tubes and Breather Lines for Obstruction, Condition, Security and Chafing
- 23. Inspect Engine Baffles for Security, Position and Chafing
- 24. Inspect Engine Mounts / Vibration Dampeners for Cracks, Security, Corrosion and Condition of Shock Mounts
- 25. Inspect Generator / Alternator Mounting, Brushes and Belt Tension
- 26. Inspect Starter Brushes, Mounting, Drive and Seals, where applicable
- 27. Inspect all Electrical Harness and Terminals/Shielding for Condition, Position, Proper Routing and Security.
- 28. Inspect Batter Box for cleanliness & Condition-Vent for obstructions
Check Battery Electrolyte Level & Condition of Cables & Terminals
- 29. Inspect Hoses, Lines, Clamps Fittings, for leaks, condition, looseness.
- 30. Inspect Vacuum Pump Mounting, Seals, Lines, Regulator & Pump Drive
- 31. Inspect Suction Regulator Filter for Cleanliness
- 32. Inspect Prop Governor for Security and Condition
- ▶ 33. Propeller – Tight on Shaft – Check **Safties** where used
- 34. Check Propeller Blade Track
- 35. Prop Hub Condition, Seals, Lubrication
- ▶ 36. Check all Engine Controls for Proper Travel and Ease of Movement, Check for Improper **Safties**, Lube where applicable
- ▶ 37. Re-install Prop Spinner
- 38. Inspect Accessories for apparent defects in security of mounting
- 39. Inspected Studs and nuts for improper torquing and obvious defects.

Annual / 100 Hour Inspection (Engine Continued)

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TACH
MODEL

SMOH
SMOH

➤ POST INSPECTION

Airworthy

1. Perform Finish Run Up – Check For Leaks
2. All tools/equipment collected and accounted for
- ▶ 3. Final Check, **Safeties**
4. Re-Install Cowl
- ▶ 5. Log Book Entries and Inspection Forms Completed
6. Return to Service Form Prepared

Mechanic's
Signature

Date Inspection
Completed

(Pilot authorized to perform Preventive Maint.)

Inspector's
Signature

Date Inspection
Completed

NOTES or DISCREPANCIES RECORDED / REMEDY