

**IF MY TOOLS COULD TALK PRE-INSPECTION PAPERWORK**

N# \_\_\_\_\_, Tach Time \_\_\_\_\_, ACTT, \_\_\_\_\_ Date \_\_\_\_/\_\_\_\_/\_\_\_\_

Airworthiness Certificate\_\_ Registration \_\_ P.O.H./AFM. \_\_ W&B \_\_\_\_ Year of MFG \_\_\_\_\_

	Make	Model	Serial number	Time in service
Airframe				
Engine				
Propeller				

Prop Max/Min Diameter \_\_\_\_\_/\_\_\_\_\_ Prop Max Speed \_\_\_\_\_ Min \_\_\_\_\_ RPM

Appliances	Make	Part Number	Serial number	Time in service
Starter				
Electric Fuel Pump				
Engine driven Fuel Pump				
Fuel Servo/Carb				
Magneto Left				
Magneto Right				
Vacuum Pump				
Main Battery				
#2 Battery				
ELT				
ELT Battery Due Replacement				
Alternator				

Notes: 91.411/ 4.13 check Last Inspection date. \_\_\_\_/\_\_\_\_/\_\_\_\_

Last Inspection Completed: \_\_\_\_\_

Notes:

Applicable Airworthiness Directives

AD Number	O	R	System effected
Last complied with Date/Tach/How			Next time due Date/Tach/How
AD Number	O	R	System effected
Last complied with Date/Tach/How			Next time due Date/Tach/How
AD Number	O	R	System effected
Last complied with Date/Tach/How			Next time due Date/Tach/How
AD Number	O	R	System effected
Last complied with Date/Tach/How			Next time due Date/Tach/How
AD Number	O	R	System effected
Last complied with Date/Tach/How			Next time due Date/Tach/How

Service Bulletins:

SB #	System effected	Date Completed

Chapter 4 Time limited items.

Product	Part Number	Serial number	Time Due

Chapter 5 Recommended Replacement Items

Product	Part Number	Serial Number	Recommended Replacement time

Supplemental Type Certificates installed:

STC #	337 Y/N	System	ICA action needed

Notes:

Control surface information. Temp Chart \_\_\_\_\_ Current air temperature \_\_\_\_\_

Cable Tensions	Deflections
Aileron Carry Thru _____	Left Up _____ Dwn _____ Right Up _____ Dwn _____

Elevator _____	Up _____ Dwn _____
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Elevator-Trim _____	Up _____ Dwn _____
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Rudder _____	Lt _____ Rt _____ Inches _____
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Flaps Full up Tension \_\_\_\_\_ Full down tension \_\_\_\_\_

Flaps Full Dwn Degrees \_\_\_\_\_ Nxt up \_\_\_\_\_ Nxt up \_\_\_\_\_ Fully Retracted \_\_\_\_\_

Discrepancies'

Preliminary Inspection:

Inspect all systems for Improper installation, Poor condition, apparent defects, and insecurity of attachment.

**This Inspection is on a Non-Complex aircraft without ice protection. For that information see the manufacturer ICA.**

Walk around. Notes:;

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Take a sample from all tanks and Sumps. Clear and bright? \_\_\_\_\_

Notes:

## Run up Check list:

Engine and landing gear washed, \_\_\_\_\_,

Oil/Fuel/Hydraulic leaks- ENG \_\_\_\_\_ /LDG \_\_\_\_\_

Checked engine oil, \_\_\_\_\_. Tested brakes, \_\_\_\_\_

Check Controls free movement, \_\_\_\_\_ Instrument Check \_\_\_\_\_

Tumbler check \_\_\_\_\_.

### POWER UP!

Flap Check Down \_\_\_\_\_ Up \_\_\_\_\_ Battery \_\_\_\_\_ V \_\_\_\_\_ amp's

Fuel Level \_\_\_\_\_ Left \_\_\_\_\_ Right Tank

Fuel Selector \_\_\_\_\_

Check brakes \_\_\_\_\_ Locate Oil Pressure gauge \_\_\_\_\_

### CLEAR PROP!!

Start engine. Watch the oil pressure gauge.

Kill engine if no oil pressure in 10 seconds

Check engine gauges alive \_\_\_\_\_ Oil Pressure \_\_\_\_\_ PSI

Vacuum at Idle \_\_\_\_\_ 1000rpm \_\_\_\_\_

Set DG to wet compass. \_\_\_\_\_

Avionics ON \_\_\_\_\_

Check Both mags for function L \_\_\_\_\_ R \_\_\_\_\_ OFF \_\_\_\_\_ Back ON \_\_\_\_\_

Check brakes again ready to taxi.

### TAXI SLOW

Find run up area.

### SET BRAKES

Check Ground and aircraft reference points \_\_\_\_\_

Radio Check using PTT Left side, COM 1 \_\_\_\_\_ COM 2 \_\_\_\_\_

Right side, COM 1 \_\_\_\_\_ COM 2 \_\_\_\_\_

Audio panel Check headset jacks at all positions

Pilot \_\_\_\_\_ Copilots \_\_\_\_\_ Back seat Left \_\_\_\_\_ Right \_\_\_\_\_

Alternator OFF Listen \_\_\_\_\_ Alternator ON \_\_\_\_\_

Release brakes, Brake check \_\_\_\_\_

Set Parking brake \_\_\_\_\_

Check trim full travel Y, N.

Engine controls Movement Throttle \_\_\_\_\_ Mixture \_\_\_\_\_ Propeller \_\_\_\_\_ Cushion \_\_\_\_\_

Scan Instruments Check each for operation.

Oil temp above 100 F \_\_\_\_\_ if turbo charged 130F. \_\_\_\_\_

Check the fuel selector. Will it starve engine of fuel Y N

### **IDLE Power checks**

RPM \_\_\_\_\_ Oil Temp/Psi \_\_\_\_\_/\_\_\_\_\_ CHT/ EGT \_\_\_\_\_/\_\_\_\_\_

Vacuum psi \_\_\_\_\_ Voltage/Amperage \_\_\_\_\_/\_\_\_\_\_ Fuel Flow \_\_\_\_\_

Magneto check RPM per P.O.H \_\_\_\_\_

RPM Drop Left \_\_\_\_\_ Right \_\_\_\_\_

### **Full Power Checks**

Max RPM P.O.H. \_\_\_\_\_ RPM, Actual \_\_\_\_\_ RPM

Oil Temp/Psi \_\_\_\_\_/\_\_\_\_\_ CHT/ EGT \_\_\_\_\_/\_\_\_\_\_ Vacuum psi \_\_\_\_\_

Voltage/Amperage \_\_\_\_\_/\_\_\_\_\_ Fuel Flow \_\_\_\_\_ Alt air check \_\_\_\_\_

Check Compass/DG. \_\_\_\_\_

Altimeter Baro 29.92 is it indicating field elevation? \_\_\_\_\_

### **Auto pilot checks Engage and disengage.**

Yoke \_\_\_\_\_ Control head \_\_\_\_\_ HDG does the bug follow Y/N

ALT in select bars up and down does Elevator trim follow Y N.

Radios Hot Y/N Glove box hot Y/N

Cowl flaps \_\_\_\_\_

Fresh air vents open and close. Defroster \_\_\_\_\_

Windshield clear \_\_\_\_\_ Side windows \_\_\_\_\_ Rear Window \_\_\_\_\_

Return to hangar

**KILL ENGINE WITH FUEL SELECTOR.**

Idle RPM rise at cut off. \_\_\_\_\_ RPM

Assemble all known discrepancies and make a current estimate.

Talk to the owner \_\_\_\_\_ Order parts \_\_\_\_\_ Start servicing aircraft \_\_\_\_\_

### START INSPECTION

Compression check. 1\_\_\_\_ 3\_\_\_\_ 5\_\_\_\_  
2\_\_\_\_ 4\_\_\_\_ 6\_\_\_\_ /80PSI

Wash The engine\_\_\_\_\_

Check oil filter/Screen\_\_\_\_ Oil leaks\_\_\_\_ Hydraulic leaks\_\_\_\_ Fuel Leaks\_\_\_\_

Change the oil\_\_\_\_\_

### Start visual inspection Propeller Annual/100 Hour inspection.

Remove spinner\_\_\_\_\_

Check Part number and serial number on propeller\_\_\_\_\_

Check AD list for applicable AD's\_\_\_\_\_

Check spinner/bulkhead for cracks, dents and irregulars\_\_\_\_\_

Check mounting hardware \_\_\_\_\_ Bolts/Nuts\_\_\_\_\_ Oil Leaks\_\_\_\_\_

Check each blade for chips \_\_ Cracks\_\_\_\_ Nicks \_\_\_\_\_,

Proper radius\_\_\_\_\_ Blade Diameter\_\_\_\_\_ Inch's

Torque check mounting hardware \_\_\_\_\_

Safety Propeller\_\_\_\_\_

Fix speed Propellers Check blade for looseness and rotation,

Binding\_\_\_\_\_ Grease or Die on blade\_\_\_\_\_

Does propeller need service \_\_\_\_\_

Notes:

## Engine Annual/100 hour Inspection.

Check Data plate. P/N \_\_\_\_\_ Serial number \_\_\_\_\_ Timing \_\_\_\_\_  
Check Ad list for applicable AD's \_\_\_\_\_

Check cowling Cracks \_\_\_ Defects \_\_\_ All Fasteners \_\_\_\_\_  
Receptacles \_\_\_\_\_

Perform Borescope inspection results.

Piston head clean. Cylinder walls Scored/ Hone/oil. Valves. Intake/ Exhaust.

Cyl #1. Yes/NO Scored/ Hone marks/ Oil \_\_\_\_\_/ \_\_\_\_\_

Cyl #2. Yes/NO Scored/ Hone marks/ Oil \_\_\_\_\_/ \_\_\_\_\_

Cyl #3. Yes/NO Scored/ Hone marks/ Oil \_\_\_\_\_/ \_\_\_\_\_

Cyl #4. Yes/NO Scored/ Hone marks/ Oil \_\_\_\_\_/ \_\_\_\_\_

Cyl #5. Yes/NO Scored/ Hone marks/ Oil \_\_\_\_\_/ \_\_\_\_\_

Cyl #6. Yes/NO Scored/ Hone marks/ Oil \_\_\_\_\_/ \_\_\_\_\_

### **ALL Systems for improper installation, poor general condition, defects, and insecure attachment.**

Inspect Baffles Hard/ Soft. \_\_\_\_\_ Inner Cyl baffles \_\_\_\_\_

Check propeller Governor:

Base/Plate for oil leaks \_\_\_ Hardware/Security of mount \_\_\_\_\_

Shaft Oil leaks \_\_\_ Control arm full travel \_\_\_ Proper operation \_\_\_\_\_

#### **Inspect cylinders:**

Fins cracking \_\_\_ Heads \_\_\_\_\_ Base \_\_\_ Nuts \_\_\_ Studs \_\_\_\_\_

Torque check \_\_\_ Plug holes \_\_\_ Staining \_\_\_\_\_

#### **Valve covers:**

Torque check screws \_\_\_ Leaks \_\_\_\_\_

Push rods tubes, Oil leaks \_\_\_ Curved \_\_\_ Seals \_\_\_ Washers \_\_\_\_\_

Injectors clean if needed \_\_\_\_\_

Clean and Bomb check spark plugs \_\_\_\_\_

Accessory case Bolts/Nuts \_\_\_ Torque check \_\_\_ Oil Leaks \_\_\_\_\_

ALL Accessories: Apparent defects \_\_\_ Security of mounting \_\_\_\_\_

#### **Magnetos:**

500 time in service \_\_\_ Engine to mag timing \_\_\_ Base seals for oil leaks \_\_\_\_\_

Fuel pump Oil leaks \_\_\_\_\_ Fuel leak \_\_\_\_\_

**Alternator:**

Hardware \_\_\_\_\_ Electrical Connections \_\_\_\_\_ Belt tension \_\_\_\_\_

Gear driven coupling \_\_\_\_\_

**Starter:**

Hardware \_\_\_\_\_ Electrical Connection \_\_\_\_\_ Wire cap \_\_\_\_\_ Lube shaft \_\_\_\_\_

**Vacuum Pump:**

Wear \_\_\_\_\_ Oil leak \_\_\_\_\_ Security of hardware \_\_\_\_\_ Fittings/hoses \_\_\_\_\_

**Oil Cooler**

Fittings \_\_\_\_\_ Mounting flanges \_\_\_\_\_ Hardware \_\_\_\_\_ Cracks \_\_\_\_\_

Clean fins with solvent \_\_\_\_\_

Oil temperature sensor \_\_\_\_\_ Oil pressure sensor \_\_\_\_\_

Manifold pressure restrictive orifice \_\_\_\_\_

**Battery:**

Improper installation \_\_\_\_\_ Remove battery \_\_\_\_\_ Top charge Battery \_\_\_\_\_

Capacity check Battery \_\_\_\_\_ Fully Charge Battery \_\_\_\_\_ box condition \_\_\_\_\_

Drain tube \_\_\_\_\_ Drain mast for security \_\_\_\_\_

**Engine Bay**

Check all Lines/Hoses/Clamps for: Chafing and Security \_\_\_\_\_ Leaking \_\_\_\_\_

Integrity/cracking \_\_\_\_\_ Improper condition \_\_\_\_\_ Looseness \_\_\_\_\_

Check all wiring for chafing and security \_\_\_\_\_ Clamps \_\_\_\_\_ Hardware \_\_\_\_\_ Positive connections for caps Master \_\_\_\_\_ Starter Relay \_\_\_\_\_ EXT PWR \_\_\_\_\_

Check external Power Hook up \_\_\_\_\_

Check Firewall holes \_\_\_\_\_ Wrinkles \_\_\_\_\_ Staining \_\_\_\_\_

**Flexible Engine Mounts:**

Condition \_\_\_\_\_ Deterioration \_\_\_\_\_ Check for leaking \_\_\_\_\_ Sag \_\_\_\_\_ Torque

check engine mount bolts \_\_\_\_\_ Looseness \_\_\_\_\_

**Engine mount frame:**

Check each weld condition \_\_\_\_\_ Tubing for cracks \_\_\_\_\_

Looseness of mounting \_\_\_\_\_ Defects \_\_\_\_\_

Torque check, Hard mount attachment to firewall Bolts/Nuts \_\_\_\_\_

Check bonding strap engine to mount \_\_\_\_\_ Mount to fire wall \_\_\_\_\_

**Exhaust Stack:**

Proper Attachment/Torque Check\_\_\_ Studs/Nuts\_\_\_ Defects\_\_\_

Flange to head gaps\_\_\_ Slip joints\_\_\_ Pipes- Cracks\_\_\_ Bulges\_\_\_

Muffler\_\_\_ Heat exchanger\_\_\_ Condition\_\_\_ Defects\_\_\_

Inspect all scat tubing, Chaffing\_\_\_ Security\_\_\_ Integrity\_\_\_

**Intake manifold:**

Check for air leaks/staining at Cylinder\_\_\_ Manifold\_\_\_

Fuel servo/Carburetor\_\_\_ Air filter\_\_\_ Air box\_\_\_ Fuel finger filter\_\_\_ Airframe Fuel  
strainer\_\_\_

**Engine controls:**

Full movement: Stop to stop\_\_\_ Mixture\_\_\_ Throttle\_\_\_ Propeller Governor\_\_\_

Proper Hardware\_\_\_ Improper Installation\_\_\_ Improper Operation\_\_\_ Safety\_\_\_

Notes:

## AIRFRAME ANNUAL INSPECTION

Inventory all items that have come out of the aircraft. \_\_\_\_\_

# of drilled out screws \_\_\_\_\_

# of bad nut plates that need replacement \_\_\_\_\_

**Condition of aircraft skin** any Deterioration \_\_\_ Distortion \_\_\_

Failure of attachment \_\_\_ Defects \_\_\_ Insecure fittings \_\_\_

**All Windows/Windshield** Condition and Integrity \_\_\_ Cracking \_\_\_ Breakage \_\_\_

**Antennas:** Poor condition \_\_\_ Insecure Mounting \_\_\_ Improper operation \_\_\_

Check all required placards \_\_\_\_\_

**ALL System and components for improper installation *poor general condition***

*Apparent defects, Unsatisfactory Operation*

### Cockpit seats:

**Pilot**-Frames \_\_\_\_\_ Rollers/Locks \_\_\_\_\_ Height adjustment \_\_\_\_\_ Recline \_\_\_\_\_ Seat belt

Chaffing \_\_\_\_\_ Inertia reel \_\_\_\_\_ Latch/Engagement \_\_\_\_\_ Security \_\_\_\_\_

**Copilot**-Frames \_\_\_\_\_ Rollers/Locks \_\_\_\_\_ Height adjustment \_\_\_\_\_ Recline \_\_\_\_\_ Seat belt

Chaffing \_\_\_\_\_ Inertia reel \_\_\_\_\_ Latch/Engagement \_\_\_\_\_ Security \_\_\_\_\_

**Rear bench seat**-Frames \_\_\_\_\_ Height adjustment \_\_\_\_\_ Recline \_\_\_\_\_

Seat belt Chaffing \_\_\_\_\_ Inertia reel \_\_\_\_\_ Latch/Engagement \_\_\_\_\_ Security \_\_\_\_\_

**All Panels opened up ready for inspection** \_\_\_\_\_ Clean Belly \_\_\_\_\_

### From under A/C Inspected in each panel.

FOD \_\_\_ Leaks Fuel/ Hydraulics \_\_\_ Pulleys \_\_\_ Cables \_\_\_ Lubricate \_\_\_\_\_

Antennas Poor condition \_\_\_ Insecure Mounting \_\_\_ Improper operation \_\_\_\_\_

Dents in skin \_\_\_ Drain holes \_\_\_\_\_ Landing gear attach points \_\_\_\_\_

### Lower Strut attach point:

Fairing \_\_\_\_\_ A/C skin \_\_\_\_\_ Hardware secure \_\_\_\_\_

**Pilot/Copilots vent:** Open \_\_\_\_\_ Close \_\_\_\_\_ Hinge \_\_\_\_\_

Cable attach point \_\_\_\_\_ Condition of scat tube \_\_\_\_\_

### Pilot Door:

Hinges- Upper \_\_\_\_\_ Lower \_\_\_\_\_ Pins \_\_\_\_\_ Attach points \_\_\_\_\_ Lock \_\_\_\_\_

Internal linkage \_\_\_\_\_ Full engagement \_\_\_\_\_ Door frame \_\_\_\_\_ Spur gear \_\_\_\_\_ Window \_\_\_\_\_

Frame \_\_\_\_\_ Latch \_\_\_\_\_ Hinges \_\_\_\_\_ Spring arm \_\_\_\_\_ Lube \_\_\_\_\_ All hinges \_\_\_\_\_ Linkages \_\_\_\_\_

Hinges \_\_\_\_\_

Inside aircraft cabin:

Seat belts\_\_\_\_ Inertia Reels\_\_\_\_ Smooth\_\_\_\_ Locking\_\_\_\_

Seat Rails\_\_\_\_ Holes\_\_\_\_ Cracks\_\_\_\_ Missing hardware\_\_\_\_

### **Pilots Instrument panel:**

Check every Instrument, switch, circuit breaker on the panel. Proper attaching hardware\_\_\_\_

Cracks\_\_\_\_ Movement of glass\_\_\_\_ Looseness\_\_\_\_ Correct operation\_\_\_\_

Check each control\_\_\_\_ Proper movement\_\_\_\_ Cushion\_\_\_\_

Glareshield Security\_\_\_\_ Compass for Fluid level\_\_\_\_ Leakage\_\_\_\_

Compass card for legibility\_\_\_\_ Radios for proper mounting\_\_\_\_

### **Pilots behind instrument panel:**

Heat vent\_\_\_\_ Scatt tubing\_\_\_\_ Side wall wire harness\_\_\_\_

Rudder Pedals\_\_\_\_ Security\_\_\_\_ Coordinating movement\_\_\_\_

Proper support and installation of all Radios\_\_\_\_ Avionics\_\_\_\_

Insecure Mounts\_\_\_\_ Bonding/Shielding for Improper installation\_\_\_\_

Poor condition\_\_\_\_ Clearance to all controls\_\_\_\_

### **Brake Actuators:**

Fluid level\_\_\_\_ Security\_\_\_\_ Lines/Fitting\_\_\_\_ Control tubes\_\_\_\_

Retaining caps\_\_\_\_ Below floor pedals\_\_\_\_ Clean all Debris\_\_\_\_

### **Behind center pedestal:**

Rudder cable spring\_\_\_\_ Lube\_\_\_\_ Vacuum Filter\_\_\_\_ Relief filter\_\_\_\_ Clean Debris\_\_\_\_

**Yoke controls:** Improper Installation\_\_\_\_ Improper Operation\_\_\_\_ Chain\_\_\_\_

Sprocket\_\_\_\_ Linkages\_\_\_\_ Hardware\_\_\_\_ Pulleys\_\_\_\_ Cables\_\_\_\_

Tension\_\_\_\_ Clearance\_\_\_\_ Chaffing\_\_\_\_ Binding\_\_\_\_ Check movement for

coordinated movement pilot/copilots\_\_\_\_ Lube controls\_\_\_\_

Vacuum Hoses\_\_\_\_ Fittings\_\_\_\_ Clamps\_\_\_\_ Connections\_\_\_\_ Support\_\_\_\_

### **Notes:**

**Wire Harness:**

Chaffing\_\_\_\_ Support\_\_\_\_ Connectors\_\_\_\_ Termination\_\_\_\_ Grounding\_\_\_\_  
Circuit Brakers\_\_\_\_ Switches\_\_\_\_ Buss bar\_\_\_\_ Terminals\_\_\_\_  
General Security of firewall\_\_\_\_ Leaks from windshield\_\_\_\_ Plenum\_\_\_\_

**POWER UP!!** Turn Master on \_\_\_\_ Circuit Breakers in\_\_\_\_

Instruments Condition\_\_\_\_ Mounting\_\_\_\_ Markings\_\_\_\_ Operation\_\_\_\_

**Light check:**

Interior-Overhead\_\_\_\_ Instrument panel\_\_\_\_ Center Pedestal\_\_\_\_ Map light\_\_\_\_  
Gauges- Fuel\_\_\_\_ Engine\_\_\_\_ Compass\_\_\_\_ Radios\_\_\_\_  
Exterior-Courtesy\_\_\_\_ Landing\_\_\_\_ Taxi\_\_\_\_ Navigational\_\_\_\_ Beacon\_\_\_\_  
Check electric trim Left\_\_\_\_ Right\_\_\_\_ Up\_\_\_\_ Down\_\_\_\_ Full travel\_\_\_\_/\_\_\_\_

**Power down**-Turn off master\_\_\_\_

Fuel selector- Detent\_\_\_\_ Shaft Safety\_\_\_\_ Fuel leaks\_\_\_\_

**Copilot's Instrument panel:**

Vent system\_\_\_\_ Defrost lever\_\_\_\_ Heat control\_\_\_\_ Heat box open/close\_\_\_\_  
Lube each control\_\_\_\_ Both sides\_\_\_\_

Vacuum gage\_\_\_\_ Fuel Level\_\_\_\_ Engine Instruments\_\_\_\_  
ELT remote\_\_\_\_ Battery due date\_\_\_\_ Glove compartment\_\_\_\_

**Copilot- Behind instrument panel**

Heat vent\_\_\_\_ Scatt tubing\_\_\_\_ Side wall wire harness\_\_\_\_  
Rudder Pedals\_\_\_\_ Security\_\_\_\_ Coordinating movement\_\_\_\_  
Brake Actuators: Fluid level\_\_\_\_ Security\_\_\_\_ Lines/Fitting\_\_\_\_  
Control tubes\_\_\_\_ Retaining caps\_\_\_\_ Below floor pedals remove all debris\_\_\_\_  
Proper support and installation of all Radios\_\_\_\_ Avionics\_\_\_\_  
Insecure Mounts\_\_\_\_ Bonding/Shielding for Improper installation\_\_\_\_  
Poor condition\_\_\_\_ Clearance from controls\_\_\_\_

**Behind center pedestal:**

Rudder cable spring\_\_\_\_ Remove all debris\_\_\_\_

**Yoke control:**

Chain\_\_\_\_ Sprocket\_\_\_\_ Linkages\_\_\_\_ Hardware\_\_\_\_ Pulleys\_\_\_\_ Cables\_\_\_\_  
Tension\_\_\_\_ Clearance\_\_\_\_ Lube\_\_\_\_ Chaffing\_\_\_\_ Binding\_\_\_\_ Check movement  
W/Pilots\_\_\_\_

**Vacuum Hoses**\_\_\_\_ Fittings\_\_\_\_ Clamps\_\_\_\_ Connections\_\_\_\_ Support\_\_\_\_

**Wire Harness:**

Chaffing\_\_\_\_ Support\_\_\_\_ Connectors\_\_\_\_ Termination\_\_\_\_ Grounding\_\_\_\_

Improper routing\_\_\_\_ Insecure mounting\_\_\_\_ Obvious defects\_\_\_\_

Circuit Brakers\_\_\_\_ Switches\_\_\_\_ Buss bar\_\_\_\_ Terminals\_\_\_\_

General security of firewall\_\_\_\_ Leaks from windshield\_\_\_\_ Plenum\_\_\_\_

**Copilot's door:**

Hinges- Upper\_\_\_\_ Lower\_\_\_\_ Pins\_\_\_\_ Attach points\_\_\_\_ Lock\_\_\_\_ Internal linkage\_\_\_\_

Full engagement\_\_\_\_ Door frame\_\_\_\_ Spur gear\_\_\_\_ Window\_\_\_\_ Frame\_\_\_\_ Latch\_\_\_\_

Hinges\_\_\_\_ Spring arm\_\_\_\_ Lube\_\_\_\_ All hinges\_\_\_\_ Linkages\_\_\_\_

**Inspect each window:**

Clarity\_\_\_\_ crazing\_\_\_\_ Cracking\_\_\_\_ Sealing\_\_\_\_

Open head liner: Inspect Spar Corrosion\_\_\_\_ Antenna connections\_\_\_\_

Upper door frame\_\_\_\_ Fuel feed/Vent lines\_\_\_\_ Chaffing\_\_\_\_

Rubber connections\_\_\_\_ Fittings\_\_\_\_

**Cable tensions**, Flaps up\_\_\_\_ Down\_\_\_\_, Aileron\_\_\_\_

Elevator Up\_\_\_\_ Down\_\_\_\_ Elevator trim Up\_\_\_\_ Down\_\_\_\_

Rudder Left\_\_\_\_ Right\_\_\_\_ Rudder trim Left\_\_\_\_ Right\_\_\_\_

Remove battery for service\_\_\_\_.

If no discrepancy's\_\_\_\_ Close head liner\_\_\_\_

Under floor boards:

Inspect in each panel- Header tanks Left\_\_\_\_/Right\_\_\_\_ Electric fuel pump\_\_\_\_

Flight Control Bell crank-Safety\_\_\_\_ Chaffing\_\_\_\_ Integrity\_\_\_\_ Lube\_\_\_\_

Control wires-Fraying\_\_\_\_ Grooved/Broken pulleys\_\_\_\_ Lube\_\_\_\_

F.O.D.\_\_\_\_ Corrosion\_\_\_\_

### **Clean each area under floor**

Vacuum\_\_\_ Wipe down\_\_\_ Drain holes\_\_\_  
Wire Harness for Chaffing\_\_\_ Proper support\_\_\_ Terminations\_\_\_  
Fuel/Hydraulic lines- Leaks\_\_\_ Chaffing\_\_\_  
Rivets Bulkheads Stringers\_\_\_  
Lower spar-Inspect for corrosion\_\_\_ Landing gear attach points\_\_\_

### **Baggage door-**

Frame\_\_\_ Integrity\_\_\_ Lock\_\_\_ Hinges\_\_\_ Seal\_\_\_

**Aft Bulkhead**\_\_\_ Remove\_\_\_ Clean\_\_\_

### **ELT:**

Remove from Aircraft. (May want to call Local Tower)

Check per FAR 91.207(d): Battery\_\_\_ Due Date\_\_\_/\_\_\_/\_\_\_

Internal Corrosion\_\_\_ G switch\_\_\_ Proper Radiation\_\_\_

Signal\_\_\_ Reset\_\_\_ Install ELT\_\_\_

Hook up antenna/remote\_\_\_

Remote switch\_\_\_ When was last Battery replaced\_\_\_/\_\_\_/\_\_\_

Record discrepancy's\_\_\_ Save Photos\_\_\_

### **EMPENNAGE Section:**

Inspect all components and systems for poor condition\_\_\_ skin deterioration\_\_\_

Distortion\_\_\_ evidence of failure\_\_\_ insecure attachment\_\_\_

Improper component installation\_\_\_ improper component operation\_\_\_

### **Rear Bulkheads:**

Ribs\_\_\_ Stringers\_\_\_ Rivet lines\_\_\_ Control cables\_\_\_ Pulleys\_\_\_

**Forward Bulkhead** to Horizontal Attach points-

Upper Left\_\_\_/Right\_\_\_ Lower\_\_\_ L\_\_\_/R\_\_\_

**Aft Bulkhead** to Horizontal Attach points-

Upper Left\_\_\_/Right\_\_\_ Lower L\_\_\_/R\_\_\_

Pulley attach points\_\_\_ Radius of bulkhead attachment\_\_\_ Stringers\_\_\_

Counter weights\_\_\_ Arms\_\_\_ Springs\_\_\_ Linkages\_\_\_ Grommet's\_\_\_

Wires-Support\_\_\_ Integrity\_\_\_ Tail Tie down attach point- Integrity\_\_\_

Bird Nest\_\_\_ Wasp/Bug nest\_\_\_

**Horizontal:**

Leading edge/Skin dents\_\_\_ Paint\_\_\_ Oil can\_\_\_\_\_

Smoking rivets\_\_\_ Trim pulleys\_\_\_ Chain\_\_\_

Trim actuator- Integrity\_\_\_ Play\_\_\_ Linkage\_\_\_

**Elevator Left:**

Bearings\_\_\_ Hardware\_\_\_ Safety\_\_\_ Base attach hardware\_\_\_ Tips\_\_\_

Bonding wire\_\_\_ Static wicks\_\_\_ Ohm age to ground\_\_\_\_\_.

Aluminum Tape of lighting holes\_\_\_\_\_ Counter weight\_\_\_ Chaffing\_\_\_

**Elevator Right:**

Bearings\_\_\_ Hardware\_\_\_ Safety\_\_\_ Base attach hardware\_\_\_ Tips\_\_\_

Bonding wire\_\_\_ Static wicks\_\_\_ Ohm age to ground\_\_\_\_\_.

Aluminum Tape of lighting holes\_\_\_\_\_ Counter weight\_\_\_ Chaffing\_\_\_

**Vertical-Leading edge/Skin:**

Dents\_\_\_ Paint\_\_\_ Oil can\_\_\_\_\_ Smoking rivets\_\_\_

Beacon Security\_\_\_ Antenna security\_\_\_\_\_

**Rudder**

Rudder-Bearings\_\_\_ Hardware\_\_\_ Safety\_\_\_ Base attach hardware\_\_\_\_\_

Bonding wire\_\_\_ Static wicks\_\_\_ Ohm age to ground\_\_\_\_\_ Chaffing\_\_\_

Aluminum Tape of lighting holes\_\_\_\_\_ Counter weight\_\_\_\_\_

Notes:

## WINGS

### Power On!! Master on

Digital level in hand. Time to check and record control deflections, all Control surfaces. Lube all attach points, bearings, hinges, bell cranks, and jack screw.

When flaps are down Inspect flap tracks \_\_\_\_ Bearings \_\_\_\_ Spacers \_\_\_\_

Inspect Flap wells Cracking \_\_\_\_

Flap track attach points \_\_\_\_

Transition Flaps-

Left Full down \_\_\_\_ One notch up \_\_\_\_ one more up \_\_\_\_

Flaps up \_\_\_\_

Right Full down \_\_\_\_ One notch up \_\_\_\_ one more up \_\_\_\_ Flaps up \_\_\_\_

**Power off.** Turn Master off \_\_\_\_

**Ailerons-** Left Up \_\_\_\_ Down \_\_\_\_ Right Up \_\_\_\_ Down \_\_\_\_

**Elevator** Up \_\_\_\_ Down \_\_\_\_ **Trim tab** UP \_\_\_\_ Down \_\_\_\_ T/O \_\_\_\_ (If listed)

Rudder Left \_\_\_\_ Right \_\_\_\_ Trim Tab Left \_\_\_\_ Right \_\_\_\_

### Wing Inspection:

**With flaps up, aft wing above flap well, check last row of rivets for stress cracks.**

Left \_\_\_\_ Right \_\_\_\_

Inspect the wings in each panel. Start at wing base and work forward to aft.

Look for Poor condition \_\_\_\_ Skin deterioration \_\_\_\_ Distortion \_\_\_\_ Evidence of failure \_\_\_\_

Insecurity of attachment \_\_\_\_

#### Left wing:

Duct \_\_\_\_ Scatt tubing \_\_\_\_ Wiring \_\_\_\_ Connectors \_\_\_\_ Chaffing \_\_\_\_ Corrosion \_\_\_\_

Fuel Lines \_\_\_\_ Rubber connection Hoses \_\_\_\_ Fittings \_\_\_\_ Chaffing \_\_\_\_

Control cables \_\_\_\_ Chaffing \_\_\_\_ Pulleys \_\_\_\_

In each hole inspect: Rivets \_\_\_\_ Bulkheads \_\_\_\_ Stringers \_\_\_\_

Wing Attach points \_\_\_\_ Control cables \_\_\_\_ Safety's \_\_\_\_ Bell cranks \_\_\_\_

Upper/Lower doublers \_\_\_\_ Fuel tank/Fittings Leaks \_\_\_\_

Chafing lines \_\_\_\_ Proper support \_\_\_\_ Wiring Chaffing \_\_\_\_

Proper support \_\_\_\_ Connections. \_\_\_\_ Flaps and proximity switches \_\_\_\_

Check stall warning\_\_\_\_\_ Leading edges- Paint \_\_\_\_\_ Dents \_\_\_\_\_  
Upper strut fittings Hardware\_\_\_\_ Integrity\_\_\_\_\_ Fuel vents \_\_\_\_\_  
Remove wing tips and check Lights\_\_\_\_\_ Nut plates\_\_\_\_\_ Power pack \_\_\_\_\_

**Aileron:**

Inspect Dents\_\_\_\_\_ Oil can\_\_\_\_\_ Rod ends-at Control Surface \_\_\_\_\_  
Bell crank\_\_\_\_\_ Attach points Hinges\_\_\_\_\_ Bearings\_\_\_\_\_ Install tip.  
Clearance to Tips\_\_\_\_\_ Flaps\_\_\_\_\_ Bond wire \_\_\_\_\_

**Right wing:**

Duct\_\_\_\_ Scatt tubing\_\_\_\_\_ Wiring\_\_\_\_ Connectors\_\_\_\_\_ Chaffing\_\_\_\_ Corrosion \_\_\_\_\_  
Fuel Lines\_\_\_\_\_ Rubber connection Hoses\_\_\_\_\_ Fittings\_\_\_\_\_ Chaffing\_\_\_\_\_

Control cables\_\_\_\_\_ Chaffing\_\_\_\_\_ Pulleys\_\_\_\_\_

In each hole inspect: Rivets\_\_\_\_\_ Bulkheads\_\_\_\_\_ Stringers\_\_\_\_\_

Wing Attach points\_\_\_\_\_ Control cables\_\_\_\_\_ Safety's\_\_\_\_\_ Bell cranks \_\_\_\_\_

Upper/Lower doublers\_\_\_\_\_ Fuel tank/Fittings Leaks \_\_\_\_\_

Chafing lines\_\_\_\_\_ Proper support\_\_\_\_\_ Wiring Chafing\_\_\_\_\_

Proper support\_\_\_\_\_ Connections. \_\_\_\_\_ Flaps and proximity switches \_\_\_\_\_

Check stall warning\_\_\_\_\_ Leading edges- Paint \_\_\_\_\_ Dents \_\_\_\_\_  
Upper strut fittings Hardware\_\_\_\_ Integrity\_\_\_\_\_ Fuel vents \_\_\_\_\_  
Remove wing tips and check Lights\_\_\_\_\_ Nut plates\_\_\_\_\_ Power pack \_\_\_\_\_

Bond wire\_\_\_\_\_

**Aileron:**

Inspect Dents\_\_\_\_\_ Oil can\_\_\_\_\_ Rod ends-at Control Surface \_\_\_\_\_

Bell crank\_\_\_\_\_ Attach points Hinges\_\_\_\_\_ Bearings\_\_\_\_\_

Install tip. Clearance to Tips\_\_\_\_\_ Flaps\_\_\_\_\_ Bond wire \_\_\_\_\_

Upper wing/ Fuselage

Dents\_\_\_\_\_ Smoking rivets\_\_\_\_\_ Skin Gaps \_\_\_\_\_

Antennas Poor condition\_\_\_\_ Insecure Mounting\_\_\_\_ Improper operation \_\_\_\_\_

Windshield Seal\_\_\_\_ Windshield for Cracks \_\_\_\_\_

**Fuel system:**

Fuel leaks Panel\_\_\_\_ Screw\_\_\_\_ Tank seams\_\_\_\_  
Fuel caps Seals\_\_\_\_ Proper venting\_\_\_\_ Tightness\_\_\_\_ Chain to wing\_\_\_\_  
Placards Proper fuel\_\_\_\_ Av Mo gas STC?\_\_\_\_ Tank Quantity in Gallons\_\_\_\_  
Fuel Color Clean and bright\_\_\_\_ Smell correct?\_\_\_\_ Debris\_\_\_\_  
Finger strainer\_\_\_\_ Check all fuel sumps for leaks\_\_\_\_ Safety\_\_\_\_

**Landing gear:**

Chock Mains Left\_\_\_\_ Right\_\_\_\_ Pad Horizontal\_\_\_\_ Drop tail\_\_\_\_ Rudder faired\_\_\_\_  
Rudder pedals matched\_\_\_\_ nose wheel straight\_\_\_\_

**Nose gear Inspection:**

Strut truss/members for insecurity of attachment\_\_\_\_  
Undue or excessive wear\_\_\_\_ Wear/Fatigue/Distortion\_\_\_\_  
Inspect strut for chips\_\_\_\_ Missing chrome\_\_\_\_  
Strut sleeve\_\_\_\_ Steering rods/boots: Left\_\_\_\_ Right\_\_\_\_  
Remove cap and valve\_\_\_\_  
Compress strut- Does it need serviced with new fluid? Yes\_\_\_\_ NO\_\_\_\_  
Torque links- Upper\_\_\_\_ Middle\_\_\_\_ Bottom\_\_\_\_ Lube all fittings\_\_\_\_  
Steering bolt\_\_\_\_  
Weight on wheels switch\_\_\_\_ Service Strut with fluid/Nitrogen\_\_\_\_  
Nose tire wear\_\_\_\_ Cuts\_\_\_\_ Cracking\_\_\_\_ Dry rot\_\_\_\_  
Wheel halves\_\_\_\_ Bearings\_\_\_\_ Service bearings\_\_\_\_  
Service tire\_\_\_\_ Inflation PSI\_\_\_\_ Stem\_\_\_\_  
Install Nose tire\_\_\_\_ Set bearing\_\_\_\_ Safety\_\_\_\_  
Remove tail weight\_\_\_\_ Check horizontal\_\_\_\_

**Notes:**

**Main Gear Left:**

Chock Nose \_\_\_\_\_ Opposite main \_\_\_\_\_  
Check Gear tire for cracks and integrity \_\_\_\_\_ Condition \_\_\_\_\_ Attachment \_\_\_\_\_  
Hardware \_\_\_\_\_ Step \_\_\_\_\_ Jack point \_\_\_\_\_  
Linkages, Trusses, and members-for Undue or Excessive wear \_\_\_\_\_  
Fatigue \_\_\_\_\_ Distortion \_\_\_\_\_  
Jack Aircraft/Side of service \_\_\_\_\_  
Remove brake pads \_\_\_\_\_ Bolts move free \_\_\_\_\_ Clean brake \_\_\_\_\_  
Leak check Caliper \_\_\_\_\_ Remove tire \_\_\_\_\_  
Inspect Brake line/Fittings Chaffing \_\_\_\_\_ Leaks \_\_\_\_\_  
Does the brake assembly move freely in the guide? \_\_\_\_\_  
Brake rotor thickness/Minimum \_\_\_\_\_ / \_\_\_\_\_ Cracks \_\_\_\_\_  
Brake pads Serviceable Yes \_\_\_\_\_ / No \_\_\_\_\_  
Tire Tread wear even Yes \_\_\_\_\_ / No \_\_\_\_\_  
Serviceable Yes \_\_\_\_\_ No \_\_\_\_\_ Cuts \_\_\_\_\_ Cracks \_\_\_\_\_  
Dry rot \_\_\_\_\_ Defects \_\_\_\_\_ Tire pressure \_\_\_\_\_  
Wheel Bearings Condition/Serviceable? Yes \_\_\_\_\_ No \_\_\_\_\_  
Service bearings \_\_\_\_\_  
Wheel halves Serviceable? Yes \_\_\_\_\_ No \_\_\_\_\_  
Install wheel \_\_\_\_\_ Set bearings \_\_\_\_\_ Cotter key \_\_\_\_\_  
Install brakes \_\_\_\_\_ Torque Brake bolts \_\_\_\_\_ Safety if needed \_\_\_\_\_  
Will wheel free spin \_\_\_\_\_ Pump brakes does wheel stop \_\_\_\_\_  
Does brake move/ Flex when applied \_\_\_\_\_ Improper adjustment \_\_\_\_\_

**Main Gear Right:**

Chock Nose \_\_\_\_\_ Opposite main \_\_\_\_\_  
Check tire for cracks and integrity \_\_\_\_\_ Condition \_\_\_\_\_ Attachment \_\_\_\_\_  
Hardware \_\_\_\_\_ Step \_\_\_\_\_ Jack point \_\_\_\_\_  
Linkages, Trusses, and members-for Undue or Excessive wear \_\_\_\_\_  
Fatigue \_\_\_\_\_ Distortion \_\_\_\_\_  
Jack Aircraft/ Side of service \_\_\_\_\_  
Remove brake pads \_\_\_\_\_ Bolts move free \_\_\_\_\_ Clean brake \_\_\_\_\_  
Leak check Caliper \_\_\_\_\_ Remove tire \_\_\_\_\_

Inspect Brake line/Fittings Chaffing\_\_\_ Leaks\_\_\_

Does the brake assembly move freely in the guide? \_\_\_

Brake rotor thickness/Minimum\_\_\_\_\_/\_\_\_\_Cracks\_\_\_\_\_

Brake pads Serviceable Yes\_\_\_/No\_\_\_

Tire Tread wear even Yes\_\_\_/ No\_\_\_

Serviceable Yes\_\_\_ No\_\_\_ Cuts\_\_\_ Cracks\_\_\_\_\_

Dry rot\_\_\_ Defects\_\_\_ Tire pressure\_\_\_\_\_

Wheel Bearings condition/Serviceable? Yes\_\_\_\_\_ No\_\_\_

Service bearings\_\_\_\_\_

Wheel halves Serviceable? Yes\_\_\_ No\_\_\_

Install wheel \_\_\_ Set bearings\_\_\_ Cotter key\_\_\_\_\_

Install brakes\_\_\_ Torque brake bolts\_\_\_ Safety if needed\_\_\_

Will wheel free spin\_\_\_ Pump brakes does wheel stop\_\_\_\_\_

Does brake move/ Flex when applied\_\_\_ Improper adjustment\_\_\_

Fill out Discrepanies\_\_\_\_\_ Talk to owner Get approvals\_\_\_\_\_

Order parts\_\_\_ Perform repairs\_\_\_\_\_

Final Inspect all discrepancies\_\_\_\_\_

Assemble Aircraft\_\_\_\_\_ Wash airframe\_\_\_\_\_

Leave cowling off\_\_\_\_\_

Post run up\_\_\_\_\_

## **POST RUN UP AFTER INSPECTION**

Run up Check list:

Checked engine oil,\_\_\_\_\_. Tested brakes,\_\_\_\_\_

Check Controls free movement, \_\_\_\_\_ Instrument Check \_\_\_\_\_

Tumbler check \_\_\_\_\_.

### **POWER UP!**

Flap Check Down \_\_\_\_\_ Up \_\_\_\_\_ Battery \_\_\_\_\_ V \_\_\_\_\_ amp's

Fuel Level \_\_\_\_\_ Left \_\_\_\_\_ Right Tank

Fuel Selector \_\_\_\_\_

Check brakes \_\_\_\_\_ Locate Oil Pressure gauge \_\_\_\_\_

### **CLEAR PROP!!**

Start engine. Watch the oil pressure gauge.

Kill engine if no oil pressure in 10 seconds

Check engine gauges alive \_\_\_\_\_ Oil Pressure \_\_\_\_\_ PSI

Vacuum at Idle \_\_\_\_\_ 1000rpm \_\_\_\_\_

Set DG to wet compass. \_\_\_\_\_

Avionics ON \_\_\_\_\_

Check Both mags for function L \_\_\_\_\_ R \_\_\_\_\_ OFF \_\_\_\_\_ Back ON \_\_\_\_\_

Check brakes again ready to taxi.

### **TAXI SLOW**

Find run up area.

### **SET BRAKES**

Check Ground and aircraft reference points \_\_\_\_\_

Radio Check using PTT Left side, COM 1 \_\_\_\_\_ COM 2 \_\_\_\_\_

Right side, COM 1 \_\_\_\_\_ COM 2 \_\_\_\_\_

Audio panel Check headset jacks at all positions

Pilot \_\_\_\_\_ Copilots \_\_\_\_\_ Back seat Left \_\_\_\_\_ Right \_\_\_\_\_

Alternator OFF Listen \_\_\_\_\_ Alternator ON \_\_\_\_\_

Release brakes, Brake check \_\_\_\_\_

Set Parking brake \_\_\_\_\_

Check trim full travel Y, N.

Engine controls Movement Throttle \_\_\_\_\_ Mixture \_\_\_\_\_ Propeller \_\_\_\_\_ Cushion \_\_\_\_\_

Scan Instruments Check each for operation.

Oil temp above 100 F \_\_\_\_\_ if turbo charged 130F. \_\_\_\_\_

### **IDLE Power checks**

RPM \_\_\_\_\_ Oil Temp/Psi \_\_\_\_\_ / \_\_\_\_\_ CHT/ EGT \_\_\_\_\_ / \_\_\_\_\_

Vacuum psi \_\_\_\_\_ Voltage/Amperage \_\_\_\_\_ / \_\_\_\_\_ Fuel Flow \_\_\_\_\_

Magneto check RPM per P.O.H \_\_\_\_\_

RPM Drop Left \_\_\_\_\_ Right \_\_\_\_\_

### **Full Power Checks**

Max RPM P.O.H. \_\_\_\_\_ RPM, Actual \_\_\_\_\_ RPM

Oil Temp/Psi \_\_\_\_\_ / \_\_\_\_\_ CHT/ EGT \_\_\_\_\_ / \_\_\_\_\_ Vacuum psi \_\_\_\_\_

Voltage/Amperage \_\_\_\_\_ / \_\_\_\_\_ Fuel Flow \_\_\_\_\_ Alt air check \_\_\_\_\_

Check Compass/DG. \_\_\_\_\_

Altimeter Baro 29.92 is it indicating field elevation? \_\_\_\_\_

### **Auto pilot checks Engage and disengage.**

Yoke \_\_\_\_\_ Control head \_\_\_\_\_ HDG does the bug follow Y/N

ALT in select bars up and down does Elevator trim follow Y N.

Radios Hot Y/N Glove box hot Y/N

Cowl flaps \_\_\_\_\_

Fresh air vents open and close. Defroster \_\_\_\_\_

Return to hangar

Cut engine with Mixture \_\_\_\_\_ Idle RPM rise at cut off. \_\_\_\_\_ RPM

Position aircraft for adjustments if needed

Set Idle Mixture \_\_\_\_\_ Set Idle RPM \_\_\_\_\_

Post run complete \_\_\_\_\_ Cowl Aircraft \_\_\_\_\_

Assemble paperwork \_\_\_\_\_ Make logbook entries-Prop \_\_\_\_\_ ENG \_\_\_\_\_ A/F \_\_\_\_\_

Present owner with Signed entries \_\_\_\_\_ Signed AD list \_\_\_\_\_

File paperwork for 2 years \_\_\_\_\_

Notes