

100 HOUR / ANNUAL INSPECTION CHECKLIST

Single Engine

Date: _____ Customer: _____

Tail #: _____ AC S/N: _____ Tach: _____
 Make: _____ AC TT: _____ Next Due: _____
 Model: _____ Hobbs: _____

Eng Make/Model: _____ Prop Make/Model: _____
 Eng S/N: _____ Prop S/N: _____
 Eng TT: _____ Prop TT: _____
 Eng SMOH: _____ Prop SMOH: _____

Description / Misc:

*In accordance with Appendix D to Part 43—Scope and Detail of Items (as Applicable to the Particular Aircraft):
 To Be Included in Annual and 100-Hour Inspections*

Pass/ Fail	Subject	Initials	
		Mechanic	Inspector
	ENGINE RUN-UP:		
	Engine temperatures and pressures		
	Static RPM		
	Magneto drop (<i>note particularly any difference between the drop on the two magnetos</i>): Left _____ Right _____ Difference _____		
	Engine response to changes in power		
	Any unusual engine noises		
	Propeller response through pitch range		
	Fuel tank selector or shut-off valve (<i>operate engine on each tank and off positions long enough to make sure the valve functions properly</i>)		
	Idling speed and mixture Proper idle cut-off		

	Generator warning light or ammeter		
	Suction gage		
	Fuel flow Indicator		
	Magneto switch shutoff at Idle (<i>checking for grounding</i>)		
	NOTES:		
	ENGINE COMPARTMENT:	Mechanic	Inspector
	Oil cooler (<i>security, leaks, obstructed air passages</i>)		
	Induction air filter (<i>servicing</i>)		
	Entire engine assembly (<i>cleanliness</i>)		
	Induction airbox (<i>internal cleanliness, cracks, and security</i>) Doors (<i>operation and sealing</i>) Controls (<i>security and operation</i>)		
	Cold air and Hot air flexible hoses (<i>security, kinks, holes, chafing, burnt spots</i>)		
	Engine baffle (<i>security, sealing, cracks, metal deformation, attachment of sealing strips</i>)		
	Cylinders (<i>security, cracks, broken cooling fins</i>) Rocker box covers Push rod housings (<i>security, oil leaks, cracks, dents</i>)		
	Crankcase Oil Pan Accessory Section (<i>security, oil leaks, safetying</i>) Front Crankshaft Seal (<i>oil leakage</i>)		
	Check oil filter (<i>contaminates</i>) Install new filter		
	All Lines and Hoses (<i>security, leaks, deteriorated hoses, and loose or corroded clamps</i>) Drain lines and hoses (<i>security, leaks, and chafing</i>)		
	Intake system (<i>security, leaks, deteriorated hoses, and loose or corroded clamps for security, leaks and chafing</i>)		
	Exhaust system (<i>security, leaks, cracks, and burned-out spots, check for internal flame arrester cones</i>)		
	Ignition harness (<i>security, chafing, burning, defective insulation, and loose or broken terminals</i>)		
	Spark plugs (<i>proper gap, cleanliness, and evidence of reliable operation</i>)		
	Crankcase and vacuum system breather lines for (<i>security, obstructions, corrosion, cracks and chafing</i>)		
	All electrical wiring in Engine Compartment (<i>security, chafing, defective insulation, and loose or broken terminals</i>)		
	Vacuum pump (<i>security, oil leaks, and safetying</i>)		
	Vacuum relief valve (<i>security and the inlet filter for cleanliness, holes, corrosion, and safetying</i>)		

	Engine and propeller controls and linkage (<i>security, proper rigging, binding, excessive wear, cracks, misalignment, corrosion, safetying and chafing</i>)		
	Engine shock mounts (<i>security, safetying, deterioration</i>) Engine mount (<i>cracks, corrosion, dents, bends, and evidence of overheating</i>) Ground straps (<i>security, corrosion, fraying of braided straps, and cracking of metal straps</i>)		
	Cabin heater valve and door (<i>proper operation, sealing, cracks, and deformation</i>) Controls (<i>security, binding, proper rigging, and alignment</i>)		
	Starter (<i>security, oil leaks, tight electrical connections</i>) Engagement lever (<i>proper rigging and return spring tension</i>)		
	Alternator (<i>security and oil leaks if generator is fastened to accessory case</i>) Drive belts (<i>cuts, fraying, and excessive wear</i>) Electrical connections (<i>security</i>)		
	Carburetor (<i>security, cracks, corrosion, fuel leaks, cleanliness of inlet screen and proper safetying</i>)		
	Engine cowling (<i>cleanliness, proper fit, security, cracks, dents, cuts, tears, loose or broken hinges, defective latches or fasteners, and deteriorated paint</i>)		
	Cowl flaps: condition and operation (<i>cleanliness, proper fit, security, cracks, dents, cuts, tears, loose or broken hinges, and deteriorated paint</i>) Control (<i>security, proper rigging and binding</i>)		
	Compressions: #1 #2 #3 #4 #5 #6		
	NOTES:		
	MAGNETOS:	Mechanic	Inspector
	Breaker points (<i>security, pits, burns, and carbon deposits</i>)		
	Cam followers (<i>correct lubrication</i>)		
	Ventilator screens (<i>cleanliness and security</i>)		
	Magnetos (<i>correct timing to engine, and security of attachment</i>)		
	NOTES:		
	PROPELLER:	Mechanic	Inspector
	Constant-speed propellers (<i>nicks, cracks, corrosion, bends, dents, loose nuts and bolts, oil leaks, freedom of blade movement, excessive looseness of blades, security, and proper safetying</i>)		
	Governor (<i>security, safetying, cracks, oil leaks</i>) Control (<i>correct rigging, security, binding, and proper safetying</i>)		

	Spinner and spinner bulkhead (<i>cracks, dents, alignment, security, and condition of paint</i>)		
	NOTES:		
	FUEL SYSTEM:	Mechanic	Inspector
	Fuel strainer (<i>internal cleanliness, security, leaks, and safetying</i>) Drain valve and control (<i>proper rigging, operation, leaks, and security</i>)		
	Fuel tank sump drains (<i>water and sediment, leaks, security, and safetying</i>) Quick-drain valves (<i>proper operation</i>)		
	Underside of wings (<i>evidence of fuel leaks</i>) Fuel tank filler cap placards (<i>legibility</i>) Caps (<i>leaks and security</i>)		
	Fuel vents (<i>obstructions, operation of check valve, leaks, security, and proper position of vent behind wing strut</i>)		
	Fuel selector valve, or shut-off valve (<i>proper operation, security, leaks, positive detent positions, and legibility and correct indexing of placard</i>)		
	All fuel lines (<i>security, chafing, leaks, cracks, dents, kinks and corrosion</i>)		
	Fuel line and selector valve drains (<i>servicing, security, leaks, and safetying</i>)		
	Fuel quantity gages (direct-reading), electrical fuel quantity gages, and fuel quantity electrical transmitters (<i>security, correct indication, defective wiring, cracked glass, legibility, and leaks</i>)		
	Engine primer (<i>proper operation, leaks</i>)		
	NOTES:		
	LANDING GEAR:	Mechanic	Inspector
	Brakes (<i>proper operation, sponginess, failure to hold pressure, and fluid level</i>)		
	Master cylinders, brake lines, and hoses (<i>security, leaks, cracks, dents, and chafing</i>)		
	Brake linings (<i>wear, cleanliness, chips, cracks and security</i>)		
	Brake disks (<i>scoring, warping, excessive wear, and loose or broken brake-clips</i>)		
	Wheel and brake assembly (<i>cracks, dents, corrosion, leaks, loose bolts, defective paint, freedom of moving parts, and excessive wear</i>)		
	Axles (<i>security, cleanliness, cracks, bends, defective threads</i>) Axle nuts (<i>proper adjustment and safetying</i>)		
	At tire rotation or replacement remove the wheel bearings and inspect (<i>cleanliness, rust, cracks, pits, scoring, brinelling, discoloration, excessive wear, and lubrication</i>)		
	Main landing gear spring (<i>security, cracks, bends, deep scratches, dents, chipped or peeling paint, loose brake lines</i>)		

	Tires (<i>proper inflation, sufficient tread, cleanliness, cuts, blisters, breaks, and uneven wear</i>) Check wheel alignment if tires show uneven wear		
	Tailwheel (<i>lubrication, security, cracks</i>) Tire (<i>proper inflation, cuts, sufficient tread, breaks, and blisters</i>) Tailwheel spring, steering and anti-swivel mechanism (<i>security, proper operation, cracks, frayed cables, and worn links</i>)		
	Parking brake for (<i>proper operation, correct adjustment, security, excessive wear, and full release</i>)		
	P Pongk attach bolts for (<i>security & integrity</i>)		
	Retractable Landing Gear: Physical retraction (<i>both normal retraction and emergency gear down</i>)		
	Retractable Landing Gear: Gear lights		
	Retractable Landing Gear: In transit light		
	Retractable Landing Gear: Gear horn on throttle		
	Retractable Landing Gear: Oil in Gear Box OR in Hydraulic Reservoir		
	NOTES:		
	AIRFRAME:	Mechanic	Inspector
	Pitot and static ports (<i>obstructions</i>) Pitot and static lines (<i>security, cracks, kinks, chafing, and moisture</i>) Pitot tube (<i>alignment</i>)		
	Aircraft exterior (<i>cracks, metal distortion, broken spot welds, loose or missing rivets, screws, and bolts, corrosion, condition of paint, and any other apparent damage or defects especially check wing and empennage tips for damage</i>)		
	Aircraft structure (<i>corrosion, cracks, metal distortion, loose or missing rivets, screws, and bolts, and evidence of excessive loads</i>)		
	Windows and windshield (<i>cleanliness, proper attachment, sealing, crazing, cracks, deep scratches, and discoloration</i>)		
	Door and window hinges and latches (<i>lubrication, alignment, proper operation, cracks, distortion, binding, and security</i>)		
	Seats (<i>ease of movement, positive locking, security</i>) Seat stops Seat upholstery (<i>rips, tears, holes and cleanliness</i>) Seat structure (<i>cracks, bends, and corrosion</i>) Seat rails (<i>security, cracks and damage</i>)		
	Safety belts (<i>for security, proper latching, cuts, tears, fraying, and broken stitching</i>) Attaching parts (<i>cracks, deformed metal, and excessive wear</i>)		
	Control column (<i>security, binding, cracks, looseness, and restricted travel</i>) Bearings, sprockets, and pulleys (<i>cleanliness, lubrication, binding, security, and excessive wear</i>) Cables and chains (<i>security, cleanliness, corrosion, fraying, binding, broken links, and misalignment</i>) Turnbuckles (<i>safetying</i>)		

	Bell-cranks (<i>cracks, distortion, and binding</i>)		
	Control wheels (<i>alignment, binding, security, bent tube, and excessive wear</i>) Control lock (<i>proper operation and availability</i>)		
	Instruments (<i>cracked glass, security, proper operation, cleanliness, and legibility of markings</i>) Gyro instrument air filters (<i>replacement</i>)		
	Magnetic compass (<i>security, fluid discoloration, leaks, lighting, and proper operation</i>) Compass card (<i>legibility</i>)		
	Instrument wiring and plumbing (<i>security, chafing, leaks, cracks, kinks, defective insulation, loose terminals, and interference with control column travel</i>)		
	Instrument panel (<i>security, deteriorated shock mounts, cracks, damaged decorative cover, and legibility of all decals and labeling</i>)		
	Defrosting, heating, and ventilating systems (<i>proper operation, security, chaffing, and deterioration</i>) Controls (<i>proper rigging, binding, and security</i>) Ram air inlets (<i>obstructions</i>)		
	Cabin upholstery and trim (<i>cleanliness, rips, tears, holes, and security</i>) Sun visors (<i>security and proper operation</i>)		
	Area beneath floor (<i>cleanliness, chafing and security of lines, hoses, and electrical wires</i>) Control cables (<i>fouling</i>)		
	Stall warning horn (<i>proper operation and security</i>)		
	Electrical switches, circuit breakers, and fuses (<i>security, proper functioning, and legibility of placards</i>) Spare fuses (<i>availability</i>)		
	Instrument and cabin lights (<i>proper operation, security, and cleanliness</i>) Instrument light rheostat (<i>proper functioning</i>)		
	Radios and radio controls (<i>proper operation and security</i>)		
	Battery (<i>servicing, security, and corroded terminals</i>) Battery cables (<i>condition of terminals, security, and defective insulation</i>) Battery box (<i>cracks, corrosion, damaged mounting brackets, and security</i>) Vent line (<i>corrosion, security, and obstructions</i>)		
	Firewall (<i>proper sealing, security of grommets and shields, cracks, dents, wrinkles, loose or missing rivets, screws, or bolts, and evidence of excessive loads</i>)		
	Radio antennas (<i>cleanliness, security, proper connections, corrosion, and cracked housings</i>)		
	Navigation lights, landing lights, flash beacon and strobes (<i>proper operation, security, cleanliness, and cracked glass</i>)		
	Pitot heaters (<i>proper operation</i>)		
	Door Stewards (<i>attachment and security</i>)		
	NOTES:		

	AILERON CONTROL SYSTEM:	Mechanic	Inspector
	Ailerons (<i>correct direction of movement when operated from the cabin</i>)		
	Pulleys (<i>security, cleanliness, binding, misalignment, cracks, cracked or deformed pulley brackets, and chipped or broken flanges</i>)		
	Cables (<i>cleanliness, security of terminals, corrosion, fraying, correct tension, and safeying of turnbuckles</i>)		
	Bell cranks and push-pull rods (<i>cleanliness, lubrication, security, binding, cracks, and distortion</i>)		
	Fairleads and cable guards (<i>security and excessive wear</i>)		
	Aileron system (<i>correct rigging and proper travel</i>)		
	Ailerons (<i>security of attachment, smooth operation, security of balance weights, cracks, corrosion, and skin or structural damage</i>)		
	NOTES:		
	FLAP CONTROL SYSTEM:	Mechanic	Inspector
	Pulleys (<i>security, cleanliness, binding, misalignment, cracks, cracked or deformed pulley brackets, and chipped or broken flanges</i>)		
	Cables (<i>cleanliness, security of terminals, corrosion, fraying, correct tension, and safeying of turnbuckles</i>)		
	Bellcranks and push-pull rods (<i>cleanliness, lubrication, security, binding, cracks, and distortion</i>)		
	Fairleads and cable guards (<i>security and excessive wear</i>)		
	Flap system (<i>correct rigging and proper travel</i>)		
	Flap control lever (<i>security, proper operation of latch, lubrication, and binding</i>) Flap decal (<i>legibility</i>)		
	Flaps (<i>security of attachment, smooth operation, binding rollers, cracked, bent, or loose tracks, corrosion, and skin or structural damage</i>)		
	NOTES:		
	ELEVATOR CONTROL SYSTEM:	Mechanic	Inspector
	Elevators: Correct direction of movement when operated from the cabin Pulleys (<i>security, cleanliness, binding, misalignment, cracks, cracked or deformed pulley brackets, and chipped or broken flanges</i>)		
	Cables (<i>cleanliness, security of terminals, corrosion, fraying, correct tension, and safeying of turnbuckles</i>)		
	Bellcranks and push-pull rods (<i>cleanliness, lubrication, security, binding, cracks, and distortion</i>)		
	Fairleads and cable guards (<i>security and excessive wear</i>)		

	Elevator system (<i>correct rigging and proper travel</i>)		
	Elevators (<i>security of attachment, smooth operation, security of balance weights, cracks, corrosion, and skin or structural damage</i>)		
	NOTES:		
	STABILIZER TRIM CONTROL SYSTEM:	Mechanic	Inspector
	Pulleys and sprockets (<i>security, cleanliness, binding, misalignment, cracks, cracked or deformed brackets and chipped or broken flanges or teeth</i>)		
	Cables and chains (<i>cleanliness, security of terminals, corrosion, fraying, correct tension, broken or damaged links, and safetying of turnbuckle</i>)		
	Fairleads, cable guards, and chain guards (<i>security and excessive wear</i>)		
	Trim control wheel (<i>lubrication, cleanliness, security, binding, and operation of friction stop and position indicator</i>) Indicator (<i>correct indexing and legible markings</i>)		
	Stabilizer actuators (<i>security, cleanliness, lubrication, proper operation, corrosion, cracks, and excessive wear</i>)		
	Trim control system (<i>correct rigging and proper travel</i>)		
	Movable stabilizer (<i>security of attachment, smooth operation, cracks, corrosion, and skin or structural damage</i>)		
	NOTES:		
	RUDDER CONTROL SYSTEM:	Mechanic	Inspector
	Rudder (<i>correct direction of movement when operated from the cabin</i>)		
	Rudder pedal assembly (<i>binding, cleanliness, lubrication, security, cracks, bent linkage, and excessive wear</i>)		
	Pulleys (<i>security, cleanliness, binding, misalignment, cracks, cracked or deformed pulley brackets, and chipped or broken flanges</i>)		
	Cables (<i>cleanliness, security of terminals, corrosion, fraying, correct tension on "closed" systems, and safetying of turnbuckles</i>)		
	Fairleads and cable guards (<i>security and excessive wear</i>)		
	Rudder system (<i>correct rigging and proper travel</i>)		
	Rudder (<i>security of attachment, smooth operation, security of balance weight, cracks, corrosion, and skin or structural damage</i>)		
	NOTES:		
	EMERGENCY LOCATOR TRANSMITTER:	Mechanic	Inspector
	ELT for proper function. Check remote "on" and "reset" buttons work correctly. Check battery replacement dates of ELT and in remote switch. Complete FAR 91.207(d)		

	NOTES:		
	MISC:	Mechanic	Inspector
	Research & Inspect for any Outstanding Instructions for Continued Airworthiness		
	NOTES:		

Release:

Name: _____

Certification #: _____

Signature: _____

Date: _____