

100 HOUR / ANNUAL INSPECTION CHECKLIST

Twin Engine

Date: _____ Customer: _____

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

LEng S/N: _____ REng S/N: _____
 LEng TT: _____ REng TT: _____
 LEng SMOH: _____ REng SMOH: _____

LProp S/N: _____ RProp S/N: _____
 LProp TT: _____ RProp TT: _____
 LProp SMOH: _____ RProp 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	Pass/ Fail	Subject	Initials	
			Mechanic	Inspector
Left	Right	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:		
Left	Right	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: L: #1_____ #2_____ #3_____ #4_____ #5_____ #6_____ R: #1_____ #2_____ #3_____ #4_____ #5_____ #6_____		
		NOTES:		
Left	Right	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:		
Left	Right	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:		
Left	Right	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 Punk 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,</i>		

		<i>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 safetying 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 safetying 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 safetying 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 of 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

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Release:

Name: _____ Certification #: _____

Signature: _____ Date: _____