

# 100-Hour/Annual Inspection Checklist (GA)

Part 23, CAR 3 Aircraft

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## Reference Data:

FAA [Orders 2150.3A](#) Compliance and Enforcement Program, 8130.2, CAR-3, CFR 21 Certification, CFR 23 Airworthiness Standards, CFR 43 Maintenance, CFR 45 Markings, CFR 47 Registered properly, CFR 91 Pilot Responsibility, CFR 36 Noise, CFR 33 engines, CFR 39 AD's, CFR 145 Repair Stations and AC 43.13-1B, 2A Major Repair and Alterations, Manufacturer Maintenance Manuals.

## INTERPRETATION OF THE TERM "AIRWORTHY"

The aircraft must conform to its type certificate.

When aircraft configuration and the components installed are consistent with drawings, specifications, and other data that are part of the type certificate (T/C), and include any supplemental T/C and field approval alterations incorporated into the aircraft.

The aircraft must be in condition for safe operation.

Aircraft relative to wear and deterioration

i.e., corrosion, fluid leaks, tire wear, window delimitation/crazing.

**NOTE:** *If one or both of these conditions are not met, the aircraft would be considered unairworthy.* Order 8130.2F Para 9

**NOTE:** This is only a guide and should not be considered FAA approved data for 100 hour or annual inspection checklist. Consult, CFR 43 subpart D, for scope and detail of items to be included for 100 hour or annual inspections. **This checklist is not exhaustive and does not supersede Manufacture's publications and is up-dated periodically!**

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**Aircraft Data**

N \_\_\_\_\_

Date: \_\_\_\_\_

	Manufacturer	Model	Serial Number	Year	Time	SMOH
<b>Aircraft</b>						
<b>Engine #1</b>						
<b>Engine #2</b>						
<b>Propeller #1</b>						
<b>Blades</b>						
<b>Propeller #2</b>						
<b>Blades</b>						

**Time at last annual:** \_\_\_\_\_ **Time since last annual/overhaul:** \_\_\_\_\_

Airframe Type Certificate	No.	Rev.	Sat.
ASTM	No.	Rev.	Sat.
Certification Basis:	CAR	FAR	

**Engine Parts**

Category	Manufacturer	Part Number	Serial Number
Alternator 1			
Alternator 2			
Air Filter			
Carburetors			
Servo Fuel Injector			
Batteries			
Brake Assemblies			
Fuel Pump			
Generator			
Magneto Left			
Magneto Right			
Oil Cooler			
Oil Filter			
Pre-Oiler			
Oil Separator			
Spark Plugs			
Starter			
Turbocharger			
Vacuum Pump 1			
Vacuum Pump 2			

**Electronics and Instruments**

Category	Manufacturer	Part Number	Serial Number
Auto-pilot			
Autopilot Servo			
ELT–Battery Due:			
Engine Monitor			
Fuel Totalizer			
Airspeed Indicator			
Altimeter			
Attitude Indicator			
Horizontal Sit Ind-HSI			
Heading Indicator			
Radio Magnetic Indicator			
Turn Coordinator/Turn and Bank			
Vertical Speed Indicator VSI			
Radio 1			
Radio 2			
OBS 1			
OBS 2			
Intercom/System			
Audio Panel			
Multi-Function Display			
DME-Dist Measuring			
LORAN			
Transponder			

**A comprehensive Equipment List is at the end of this document.**

N/A	Not Sat.	Sat.	STC/TSO/PMAs and Form 337 additions	

N/A	Not Sat.	Sat.	<b>Airman Attitude</b>	
			Has a constructive attitude toward compliance	Order 2150.3A par. 205
			Verify A&P/IA certificate number and picture ID	CFR 65.91
			Verify Pilots certificate number and picture ID	CFR 61.3

N/A	Not Sat.	Sat.	<b>Aircraft Data</b>	
			FAA-approved maintenance manuals available	CFR 43.13.
			Alterations IAW approved STC/TSO/PMA Field approval or other FAA data, (337's)	CFR 21.97/101/113
			Instructions for Continued Airworthiness	CFR 21.31, 21.50, 23.1529
			Type Certificate Data Sheet (TCDS)	CAR 3.15, CFR 21.41
			Aircraft Flight Manual/Pilot Operating Hand book AFM/POH Date _____ Rev. No. _____	CAR 3.72, CFR 21.5
			Data plate aircraft	CFR 45.13
			Data plate aircraft manufactured before March 7, 1988 Make/model, S/N	CFR 45.11(d)
			Data plate engine on engine make and model/serial number	CFR45.11,21.182
			Data plates critical components	CAR 3.18, CFR 45.15
			Data plates Life Limited parts	CFR 45.16

N/A	Not Sat.	Sat.	<b>Aircraft Records</b>	
			Registration current and in aircraft	CAR 3.792, CFR 91.9
			Airworthiness Certificate in aircraft. Dated and signed	CFR 91.203(a), 21.175
			Reduced Vertical Separation Minimums (RVSM) with Letter of Authorization (LOA)	CFR 91.706
			<b>Previous Annual inspection completed:</b>	CFR 43.11, 91.417, 65.91
			Date _____ Total time _____ Description of work accomplished y/n IA Name _____ Signature y/n Certification No. _____	
			145 Repair station sign off date Repair Station number _____	
			<b>Progressive Inspection</b>	CFR 91.409(d), 91.409(d)(1)
			Last Progressive Inspection phase sign off date Phase inspection dated and signed by A&P/IA	
			145 Repair station number _____	CFR 145.5/107/201/204
			<b>100-hour inspection.</b>	CFR 91.405(b)
			Date _____ Total time _____	
			145 Repair station number _____	CFR 145.5/107/201/204
			A&P sign off date _____ Certification No, _____	CFR 43.15, 65.85, 91.409
			A&P/IA Signature _____	CFR 43.11, 91.417
			Equipment list current and in aircraft	CAR 3.73, CFR 23.29, 91.9
			Equipment list up-dated to match conformity of aircraft	CAR 3.777, CFR 91.9
			Status of Life Limited parts Effective April 15, 2002	CFR 43.10
			Manufactured after 3-1-1979:	
			Current approved flight manual in aircraft	CFR 21.5/23.1581, 91.9
			Manufactured before 3-1-1979:	CAR 3.778

N/A	Not Sat.	Sat.	<b>Aircraft Records</b>	
			Current flight manual POH in aircraft	
			Revision number/date _____ Limitations and placards	CFR 21.5, 21.1559, 23.1581, 91.9
			Current weight, balance report, Dated and signed	CAR 3.71, CFR 23.1519, 23.1581, 91.9
			Identification data plate secured to A/C fuselage exterior	CFR 45.11
			Minimum Equipment List (MEL) if applicable:	CFR 91.213
			a. MEL: Issued by N-number and serial number to the aircraft operator	
			b. MEL: A Letter of Authorization (LOA) from a district office;	
			c. Check deferred items for placards and dates	
			Maintenance Records for each Engine, Propeller, Airframe and Appliances in accordance with CFR	CFR 91.417
			Deferred items under Part 91.213 for Day VFR	CFR 91.213
			a. Is the item placarded	
			b. Is there a maintenance record entry	
			c. Is the item disabled or removed	

N/A	Not Sat.	Sat.	<b>Aircraft Records 24 Month and 12 Month Tests</b>	
			ELT TSO-C91a /TS0-C126 every 12 months Date:	CFR 91.207
			ATC transponder 24 calendar months check. Date:	CAR 23.1301, CFR 91.413,
			Altimeter system and altitude reporting test: 24 months. Date:	CFR 91.411, 43 App E
			Pitot static test: 24 months Date:	CAR 23.1301, CFR 91.411, 43 App. F

N/A	Not Sat.	Sat.	<b>Aircraft Records ADs</b>	
			All AD's, recorded in maintenance records and check recurring AD's	CFR 39, 91.417
			Airframe	
			Engine	
			Propeller	
			Appliances Check for a list of items	

N/A	Not Sat.	Sat.	<b>Cockpit Inspection</b>	
			Placards read correctly Instrument, placards are correctly located per POH/AFM & TCDS	CFR 23.1541-1567/ CAR 3.755, CFR 91.31
			<b>INOP placards</b>	CFR 91.213
			a. INOP instruments disabled or removed by an A&P	CFR 91.213
			b. Equipment list up-dated	CFR 91.213
			c. Maintenance record entry	CFR 91.213
			d. Weight and balance record updated	CFR 91.9
			e. Minimum Equipment List (MEL) for aircraft	CFR 91.213(a)(1)

N/A	Not Sat.	Sat.	Cockpit Inspection	
			Vacuum indicating system, Life limited pump	CFR 23.1301
			Compass card present and readable	CAR 3.385, CFR 23.1547, 25.1547
			Additional instruments not on equipment list or Form 337	CAR 3.661, CFR 21.113
			Type of clock installed original analog or digital working	AC 20-94
			Nav Radio 1: P/N _____, 2: P/N _____ matches equipment list	
			Conforms to Type Certificate (TC) per POH/AFM see items list in previous lines.	
			Cockpit fuel smell	CAR 3.440, CFR 23.863
			Data plate information matches registration	CFR 45.11/13, 47.3
			Intercom jack, how many any extra _____ and required Form 337	
			Fire extinguisher gage Green Red	CFR 23.1199
			Fire Extinguishing Agent commuter category installed	CFR 23.1197
			Fire extinguisher easy access to pilot	CFR 23.851
			Oxygen equipment and supply lines condition	CFR 23.1441-1453
			Oxygen bottle if required Green Red	CFR 23.1441
			Hydro AA 5 years HT 3 year retire at 24 years	AC 43.13-1b Para 9-51
			Instrument filter covers installed	
			Yoke chain safety wired, loose or corrosion present	CFR 43.13
			Cockpit control knob shape correct type	CAR 3.384, CFR 23.781
			Flap, gear, knobs installed	CAR 3.384, CFR 23.781
			Electrical wiring more than ½ inch slack	AC 43.13-1B Para 11-118
			Electrical wiring clamps/markings as required	AC 43.13-1B sec. 11
			Tie-wraps items of mass in the cabin	CFR 23.561
			Loose wires under dash not clamped	CFR 23.1351
			Fuel selector moves to all positions and placarded	CAR 3.364, CFR 23.951
			Brake master cylinder leaking R/H L/H	CRF 43.13
			Thoroughly clean the aircraft and aircraft engine	CFR 43 App D
			Cargo tie downs or nets if installed	CFR 91.525
			General, uncleanness and loose equipment that might foul the controls, apparent and obvious defects and insecurity of attachment.	CRF 43 App D
			Stall warning system horn works	CAR 3.120, CFR 23.1323
			Windshield STC for one piece	CFR 43 App A
			Windows tinted	TCDS/Equipment list
			Sun visor installation or STC with form 337	CFR 43.13
			Windshield and windows conditions	CAR 3.382, CFR 23.775
			Windscreen clear scratches cracks crazing	Reference, CFR 23.775 AC 43.13-1b and MIL-P-5425
			Windows stopped drilled, cracked, or crazed	CAR 3.382, CFR 23.775, AC 43.13-1B Chap 3 Para 318 (a)(2), and MIL-P-5425

N/A	Not Sat.	Sat.	<b>Aircraft Instruments— Minimum Required Under Old Certification Rules</b> CAR 3.655, CFR 23.1303
			Air speed indicator
			Altimeter
			Direction indicator

N/A	Not Sat.	Sat.	<b>Aircraft Instruments— Minimum Required for VFR Day</b> CAR 3.655, CFR 91.205(b) and CAR 3.672 (MP Gauge)
			Air speed indicator
			Altimeter
			Magnetic direction indicator
			Tachometer for each engine
			Oil pressure gauge for each engine using pressure system
			Manifold pressure gauge for each altitude engine
			Fuel gauge indicating the quantity of fuel in each tank
			Landing gear position indicator, if retractable

N/A	Not Sat.	Sat.	<b>Aircraft Instruments— Minimum Required for IFR Rules</b> CFR 91.205(c) and CAR 3.668 (Gyroscopic Rate of Turn Indicator)
			Two-way radio communications and navigation equipment
			Gyroscopic rate-of-turn indicator
			Slip-skid indicator
			Sensitive altimeter adjustable for barometric pressure
			Clock displaying hours, minutes, and seconds with sweeping second hand pointer or digital presentation
			Generator or alternator of adequate capacity
			Gyroscopic pitch and bank indicator (artificial horizon)
			Gyroscopic direction indicator (directional gyro)

N/A	Not Sat.	Sat.	<b>Instrument Arrangement</b> CAR 3.661, CFR 23.1321, CFR 23.1547 (Magnetic Direction Indicator)
			Attitude indicator on panel top center position
			Airspeed indicator adjacent to and directly to left of the instrument in the top center position.
			Altitude indicator adjacent to and directly to right of the instrument in the top center position.
			Magnetic direction indicator placard must state whether the calibrated with radio receivers on or off.
			Magnetic direction indicator more than 10 degrees off

N/A	Not Sat.	Sat.	<b>Instrument Markings</b> CAR 3.755, CFR 23.1543
			Marking on cover glass must be in alignment with face
			Each arc and line must be clearly visible to pilot
			All related instruments must be calibrated in compatible units

N/A	Not Sat.	Sat.	Electrical System	
			CAR 3.694, CFR 23.1367	
			<b>Switches</b>	
			a. Able to carry rated current	CAR 3.682, CFR 23.1367
			b. Enough distance or insulating material between current carrying parts and the housing so that vibration will not cause shorting	CAR 3.681, CFR 23.1367
			c. Labeled as to operation and circuit controlled	CFR 23.1367
			<b>Circuit Breakers/Fuses</b>	
			a. Circuit protection	CAR 3.690, CFR 23.1357
			b. Each resettable circuit trip free cannot be overridden	CFR 23.1357
			c. Fuses readily available and spare	CAR 3.692, CFR 23.1357
			d. Breakers labeled and rating	CAR 3.691, CFR 23.1357
			<b>Master Switch</b>	
			a. Wired to disconnect each electrical power source from the distribution systems	CAR 3.688, CFR 23.1361
			b. Switch is easily discernible and accessible to crew	CAR 3.695, CFR 23.1361
			<b>Wiring inspection</b>	CAR 3.681, CFR 23.1351, AC43.13 Chap 11
			a. Chafed or frayed wires	
			b. Insulation penetration	
			c. Outer insulation cracking	
			d. Damage or exposed wires	
			e. Evidence of over heating	
			f. Evidence of arcing	
			g. Evidence of chemical contamination	
			<b>Wire Marking</b>	CFR 23.1351,,AC43.13 Chap 11
			a. Gage, circuit, and gage size	
			b. Marked 15 inched maximum intervals	
			<b>Grounding Points</b>	CFR 23.1351, 43.13 Chap 11, AC 25-16, 25-10
			a. Tightness of nuts (torque)	
			b. Cleanliness of attach points	
			c. Corrosion	
			<b>Sleeving and Conduits</b>	CFR 23.1351, AC 43.13 Chap 11, AC 25-16, 25-10
			a. Damages outer surfaces (kinks, holes, flats spots, etc.)	
			b. Wear	
			c. Adequate drain holes	
			<b>Clamping Points</b>	CFR 23.1351, AC 43.13 Chap 11, AC 25-16, 25-10
			a. Improper installation	
			b. Clamp/wire damage	
			c. Clamp cushion migration	
			d. Loose wires	

N/A	Not Sat.	Sat.	Equipment Furnishings	
			Equipment installed functions properly	CAR 3.622, CFR 23.1301(d)
			Flight manual correct for aircraft	TCDS
			Trim tab indicator readable and functions properly	CFR 43.13
			Emergency brake handle installed	CFR 21.31

N/A	Not Sat.	Sat.	Equipment Furnishings	
			Batteries proper installation. charging	CAR 3.683, CFR 23.1353
			Battery vented overboard	CAR 3.683, CFR 23.1353 AC 43.13-1B Para 11-22
			Battery NiCad gage for thermal run away	CFR 23.1353
			Thermal/Noise insulation	CFR 23.853
			Relief tube, corrosion areas	CFR 43.13
			New interior material Certs.	CAR-3.388, CFR 23.853/25.853
			Interior replaced Yes No New	
			Have Burn Certifications	
			Seat covers, sheep skin material Certs.	CAR-3.388, CFR 23.853
			Seat covers ( <b>automotive</b> ) require burn certification	CFR 23.853
			Worn seat material	CFR 25.853 For a CAR-3.388 aircraft Part 91, 23.853, AC 43.13-1B Para 9-61
			Has interior been altered or material substituted	CFR 21.303/43.11
			Seat back locks broke	CAR 3.390, CFR 23.785
			Seat rails holes elongated Yes No Check AD.	CFR 39
			Seating configuration, how many seats allowed	TCDS
			Head rest missing and not on equipment list	CFR 91.9
			Seat belts for stitching, cuts, or frayed	CFR 91.107, 23.785
			Seat belts proper storage and marking	CAR 3.715 TSO-22, 23.785
			Seat Belts Plastic locking ring missing, FWD AFT	CFR 45.14
			Seat belt secured when not is use	CFR 23.785(d)
			TSO C-22 marking on seat belts CAR 3.390/715	CFR 45.15, CFR 91.205(b)(13,14)
			<b>Shoulder harness required after July 18, 1978</b>	CFR 23.785(g)(1)
			<b>Shoulder harness required after Sept. 16, 1992(PAX) helicopter</b>	
			Cabin divider(s)/Curtains/Door(s)	CFR 23.853
			Heating system/AD's/decay test	CAR 3.388, CFR 23.859
			Cabin cooling (air conditioning), Ck	CAR 3.393, CFR 23.831
			Outflow/Safety/Dump valve(s)condition	CAR 3.394, CFR 23.843
			Pressurization seals /boots /gaskets condition	CAR 3.396, CFR 23.831
			Glare shield painted flat black	CFR 23.773
			<b>Door latches lock</b>	CFR 23.783
			a. Door sprung	CAR 3.389, CFR 23.783
			b. Door Seals worn	CAR 3.387, CFR 23.783
			c. Door slide track lock broken	CAR 3.387, CFR 23.783

N/A	Not Sat.	Sat.	Miscellaneous Fuselage	
			Cabin pressure controller service compressor 24 months	CAR 3.395, CFR 23.843
			Pressurization seals /boots /gaskets, voids, and cracks	CFR 23.843
			Antenna installation doubles per	AC 43.13 2A, CFR 23.571/572
			Corrosion on antenna's	CAR 3.395, CFR 23.609
			Fabric covered aircraft condition good poor	AC 43.13-1B Chap 2
			Emergency exit placards	CAR 3.768, CFR 23.1557(d)
			Any addition mirrors installed on wings requires Form 337	CFR 43 App A
			Condition of paint, is corrosion present NOT allowed	CAR 3.295, CFR 23.609

N/A	Not Sat.	Sat.	Aircraft exterior inspection	
			Wash and clean all oil, grease and dirt from aircraft	CFR 43 App D
			Nationality and registration marks per, CFR 45.29 Check 3 inch marking per date Jan. 1, 1983 and repaint. Over 30 years 2 or 12 inch	CFR 45.22(b)
			Rotating beacon installation proper doubler Required after 08-11-71,	CFR 23.1401
			Anticollision light system installed	CAR 3.705, CFR 91.209(b),23.1401
			Anticollision light installed after 03/11/1996 Red or white,	CFR 91.206(b)(11)
			AFT nav light proper color white	CAR 3.702, CFR 23.1385-1399
			Panel seams miss match, extra paint in front of static port	CFR 23.1325
			Static ports paint in hole or other things L/H R/H	CAR 3.665, CFR 23.1325
			Static vent painted over L/H R/H	L/H R/H CAR 3.665, CFR 23.1325
			Pitot heat indicator amber light	CFR 23.1326
			Pitot heat element operational	CFR 23.1326
			Pitot tube worn around hole	
			a. Air Speed Last inspection date _____	CFR 23.1325
			<b>Static wicks</b>	CFR 23.867
			a. Right wing	
			b. Left wing	
			c. Right elevator	
			d. Left elevator	
			e. Rudder	

N/A	Not Sat.	Sat.	Landing Gear	
			Correct tire and wheel for the aircraft	CAR 3.362 CFR 23.733
			Tire service Main ____ R L Nose Tire	CAR 3.362 CFR 23.733
			Tires condition wear, cuts, or weather cracking L/H R/H NLG	AC 43.13 para 9-14
			Landing Gear struts leaking L/H R/H NLG	AC 43.13 par 9-2/4
			Landing gear struts extension L/H _____ R/H _____	AC43.13 para 9-2/4
			Landing gear fairing condition L/H ____ R/H ____ Nose ____	CFR 23.607, CFR 23.1193
			Fairing cracked , Hardware missing .	CFR 23.607/1193
			Landing gear fairings missing, check equipment list and W&B	CFR 21.29
			Steering shimmy dampener leaking, won't track	CFR 23.745

N/A	Not Sat.	Sat.	Landing Gear	
			Brake pads worn. L/H R/H 0.100 in-thickness min.	CAR 3.363 CFR23.735
			Brake lines condition, frayed, corrosion on fittings L/H R/H	CFR 23.735
			Brake rotor corrosion, warped, or under size L/H RH	CFR 23.735
			MLG strut / axle / torque links L/H condition	CFR 23.721
			MLG strut / axle / torque links R/H condition	CFR 23.721
			NLG strut / axle / torque links L/H condition	CFR 23.721
			MLG L/H door actuating system / Hoses condition	CFR 23.1435
			MLG R/H door actuating system / Hoses condition	CFR 23.1435
			NLG door actuating system / Hoses condition	CFR 23.1435
			MLG L/H Landing gear actuator switch(s) condition	CFR 23.729
			MLG R/H Landing gear actuator switch(s) condition	CFR 23.729
			Repack wheel bearings R/H Main _____ L/H Main _____ Nose Gear _____	CRR 43 Appendix D
			Wheel nut cotter pin proper length and installed correctly	AC 43.13-1-B
			NLG Landing gear actuator switch(s) condition	CFR 23.729
			Land gear strut chrome damaged	reference manufacture maintenance manual
			Landing light covers cracked, missing hardware L/H R/H	CFR 23.729
			Position / Warning / Safety squat switch or (WOW) switch	CFR 23.729
			Emergency extension / blow down	CAR 3.358 CFR 23.729
			Gear Emergency operation does it work	CAR 3.357 CFR 23.729
			Landing Gear Retract/Extension System	CAR 3.356 CFR 23.729
			Main landing gear locking mechanism for operation	CRR 43 Appendix D
			Main gear trunion strut bushings for wear L/H R/H	CFR 43.13
			Main gear bungee cord condition L/H R/H Manufacture manual	
			Main landing & nose gear lubrication while on jacks L/H R/H	CFR 43.13
			Lube type of grease used per manufacture _____	CFR 43.16
			Floats and skis for security and defects	CRR 43 Appendix D

Landing Gear	Specification			Actual		
Actuator cushion	Up ____	Down ____		Up ____	Down ____	
Down lock over center	N __	L __	R __	N __	L __	R __
Down Lock clearance	N __	L __	R __	N __	L __	R __
Up lock clearance	N __	L __	R __	N __	L __	R __
Up lock cable tension	N __	L __	R __	N __	L __	R __

N/A	Not Sat.	Sat.	Hydraulic System	
			Hydraulic Distribution/Hoses condition/life limit	CAR 3.726, CFR 23.1435
			Hydraulic pressure relief valve	CFR 23.1435
			Hydraulic accumulator charge	CAR 3.728, CFR 23.1435
			Hydraulic reservoir/venting	CFR 23.1435
			Hydraulic filter change life limit	CFR 23.1435
			Hydraulic electric motor brushes and condition	CFR 23.1351

N/A	Not Sat.	Sat.	Left Wing	
			Wing attach fittings for cracks, elongated bolt holes	CAR 3.317, CFR 23.572
			Wing dents, cracks, Loose rivets, Corrosion,	
			Nav light red	CFR 23.603/1385
			Wing Fuel Vent(s) direction check AD's	CFR 23.975
			Flaps cracks _____, loose hardware _____,	CAR 3.339
			Properly installed _____	CFR 23.655/697
			Flap track width AD complied with	
			Aileron cracks _____, loose hardware _____,	
			Properly installed _____	
			Stop drilled cracks properly done	

N/A	Not Sat.	Sat.	Right Wing	
			Wing attach fittings for cracks, elongated bolt holes	CAR 3.317, CFR 23.572
			Wing dents, cracks, Loose rivets, Corrosion,	
			Nav light green	CFR 23.603/1385
			Wing Fuel Vent(s) direction check AD's	CFR 23.975
			Flaps cracks _____, loose hardware _____,	CAR 3.339
			Properly installed _____	CFR 23.655/697
			Flap track width AD complied with	
			Aileron cracks _____, loose hardware _____,	
			Properly installed _____	
			Stop drilled cracks properly done	

N/A	Not Sat.	Sat.	Rigging	
			Cable rigging loose Annual/100 hour inspection	CAR 3.337, CFR 23.655/685/689
			Deicer boots condition worn, holes, debonded, type	CAR .7127, CFR 23.1416/1419
			Rudder moves up, down, bearing loose, cracks, repairs	CAR 3.332, CFR 23.685
			Rudder/trim tab attach fittings condition, loose	CAR 3.337, CFR 23.685
			Lubrication, systems lube per manufactures recommendations	CFR 43.13
			Electrical bonding straps broken or frayed	CAR 3.337-1, CFR 23.867
			L/H Horizontal Stab cracks , Loose rivets , Hardware installation and safetied , Stop drill cracks Stops _____,	CFR 23.572 CFR 23.675
			R/H Horizontal Stab cracks Loose rivets Hardware installation and safetied Stop drill cracks Stops _____,	CFR 23.572, CFR 23.675
			<b>Elevator</b>	
			Stopped drilled holes in elevator without doublers R/H	CFR 23.572
			Stopped drilled holes in elevator without doublers L/H	CFR 23.572
			Elevator trim control system rigging	CAR 3.337, CFR 23.659
			Elevator trim indicator control works	CAR 3.337, CFR 23.677(a)
			Elevator/trim tab attach fittings L/H	CAR 3.337, CFR 23.572
			Elevator/trim tab attach fittings R/H	CAR 3.337, CFR 23.572
			Elevator trim/servo tab structure L/H	CAR 3.337, CFR 23.572
			Elevator trim/servo tab structure R/H	CAR 3.337, CFR 23.572
			Control surface attach fittings condition	CAR 3.328, CFR 23.572
			Control surface balancing all primary controls after repair or paint	CAR 3.159, CFR 23.659
			STOL devices/control system condition	CFR 23.572
			Boundary layer control/vortex generators, cracks and condition	CFR 23.572
			Flight Control Surface Travels/Cable Tension	CAR 3.345, CFR 23.143
			Gust lock, condition, worn holes	CAR 3.341, CFR 23.572
			Autopilot trim indicator annual/100 hour check rigging	CAR 3.343, CFR 23.143
			Autopilot system condition	CFR 23.143
			Yaw damper condition	CAR 3.347, CFR 23.143
			Electric trim rigging and condition	CAR 3.343, CFR 23.143
			<b>Flight Controls</b>	
			Flight control pulleys worn, broken, or frozen up	CAR 3.345, CFR 23.689
			Flight control cables broken strands/rust	FR 23.689 Reference AC 43.13C
			Flight control Surface Travel/Cable Tension	CAR 3.345, CFR 23.391–23.459

# Rigging

Ambient Air Temperature: \_\_\_\_\_

	Travel - Left			Travel - Right		
	Spec	As Found	As Left	Spec	As Found	As Left
Control Column						
Aileron	↑	↑	↑	↑	↑	↑
	↓	↓	↓	↓	↓	↓
Aileron Trim Tabs	↑	↑	↑	↑	↑	↑
	↓	↓	↓	↓	↓	↓
Elevator/Stabilator	↑	↑	↑	↑	↑	↑
	↓	↓	↓	↓	↓	↓
Elev/Stab Trim	↑	↑	↑	↑	↑	↑
	↓	↓	↓	↓	↓	↓
Elev/Stab Tab(s)						
Flaps	↑	↑	↑	↑	↑	↑
	↓	↓	↓	↓	↓	↓
Moveable Stabilizer						
Rudder						

Tension	Spec	As Found	As Left	Notes:
Control Column				
Aileron				
Elevator/Stabilator				
Elev/Stab Trim				
Flap				
Moveable Stabilizer				
Rudder				
Autopilot Servo				

## Flaps

	@ 0°		@ 10°		@ 20°		@ 30/40°	
	As Found	As Left	As Found	As Left	As Found	As Left	As Found	As Left
Spec	↑		↑		↑		↑	
	↓		↓		↓		↓	
Left	↑	↑	↑	↑	↑	↑	↑	↑
	↓	↓	↓	↓	↓	↓	↓	↓
Right	↑	↑	↑	↑	↑	↑	↑	↑
	↓	↓	↓	↓	↓	↓	↓	↓

# Engine Inspection

Engine Type Certificate Number T/C \_\_\_\_\_ Rev. \_\_\_\_\_

Engine Part Number \_\_\_\_\_ S/N \_\_\_\_\_

N/A	Not Sat.	Sat.	Reference CAR Subpart E, CFR 23 Subpart E Powerplant, and 43 App D
			Thoroughly clean the engine CFR 43 App. D
			Perform engine static run CFR 33.26, 43.15
			Perform engine idle run R.P.M. check CFR 33.26, 43.15
			Perform mag drop check CFR 33.37
			Mag "P" lead wires not cracked or broken CFR 33.28
			Shut down engine and check for engine oil and fuel leaks CFR 33.25
			Engine Data plate installed CAR 3.670, CFR 45.13
			L/H engine Make Model/Series matches TCDS CFR 45.13
			R/H engine Make Model/Series matches TCDS CFR 45.13
			Certification basic of components installed 337's CFR 45.15
			Instruments, CFR 23.1305 instruments
			Cylinder head temperature CFR 43.15
			Oil temperature check CFR 43.15
			Engine CFR 23.1301
			Accessories CFR 23.1301
			Engine cowl loose/missing hardware Location _____ CAR 3.625, CFR 23.1193
			Firewall bent, cracked, or missing fasteners CAR 3.623, CFR 23.1191
			Firewall wire and hose grommets condition CAR 3.623, CFR 23.1191(c)
			Firewall has corrosion CAR 3.624, CFR 23.1191(e)
			Engine mount structure for cracks, dents, etc. CFR 23.23
			Retorque cylinder base nuts and case half per manufacture recommendations
			Engine shock mount cracks, worn, hardware condition CFR 33.33
			Flex tubing condition weather cracking, worn, etc. CAR 3.638, CFR 23.1183
			Engine oil leaking Location _____ CAR 3.638, CFR 23.1183
			STC for Bracket air filter if installed, Form 337 CFR 21.111, 1091
			Air Filter dirty/foreign particles CAR 3.605, CFR 23.1107
			Condition of baffle seals and installation Good Poor Substituted type of baffle material CAR 3.625, CFR 33.15,17,21, CFR 23.1043
			Wire chafing, fuel lines, no wires clamped under them CAR 3.681 AC 43.13-1B
			Electrical wire Slack between supports Max 1/2 inch AC 43.13-1B Fig. 11.9
			Engine/Electric fuel pump condition wires, mounting Good/worn CFR 23
			Ignition harness condition Good _____ Worn _____ CFR 23
			Clean and gap spark plugs per engine manufactures recommendations
			Rotate spark plugs per manufacture recommendation (One gasket required)
			Starter ring broken teeth CFR 23
			Alternator/generator drive belts condition worn, cracked, broke CFR 23
			Cylinders cracked fins, rocker cover leaking 1 2 3 4 5 6
			Cylinders barrel cracked (Chrome) 1 2 3 4 5 6
			Cylinders check records for times, certifications 1 2 3 4 5 6
			Exhaust stacks cracks, defects, installation 1 2 3 4 5 6 CAR 3.615, CFR 23. 1121, 33.21

N/A	Not Sat.	Sat.	Reference CAR Subpart E, CFR 23 Subpart E Powerplant, and 43 App D
			Muffler cracked, location _____, Recurring AD's
			Muffler leak test to 2 psi internal pressure
			Rocker cover or push rods leaking oil past seals
			Preheater shroud condition cracks, vibration
			Carburetor heat box condition of holes
			a. Proper hardware screws and nuts
			Engine controls properly safetying travel
			Engine case nuts torqued and right side up
			Crankcase for cracks, leaks and security of seam bolts
			Engine mounts for corrosion, cracks NONE Allowed
			Cowl flap control and operational limitations
			Cowl flap check for cracks
			Alternate/ Ram air/Carb heat
			Turbo Waste gate (Non automatic)
			Vacuum pump lines, clamps condition Good Worn
			Supercharger overall condition Good Bad
			Electrical wiring cracked, burned, broken
			Oil filter opening placard
			Drain oil
			Clean oil screen
			Replace oil filter
			Check filter for metal particles in accordance with manufacture
			Oil drain plug/valve condition and positive locking
			Oil radiator supporting structure for security
			Oil tanks condition and free of vibration
			Hose inspection/replacement manufacture limits
			Mechanic has a master orifice for differential compression tester (MFG requirement)
			Differential Compression Test, 80 psi /60 psi cylinder 1 _____ 2 _____ 3 _____ 4 _____ 5 _____ 6 _____ If 25% difference check cylinder for problems. Hot/Warm/Cold Tach Time: _____ Master Orifice _____ Lbs Differential Pressure Tester Serial # _____ Calibration Due _____

N/A	Not Sat.	Sat.	Propeller Inspection
			Propeller Type Certificate Number T/C _____ Rev. _____
			Propeller Part Number _____ S/N _____
			Propeller Part number and serial number
			Is there a propeller maintenance record (log book)
			If no propeller log book sign 100-hour off in airframe record
			Propeller seal leaking
			Propeller for nicks, cracks, and damage
			File marks after dressing propeller NOT allowed
			Mechanic record entry after dressing nicks
			Propeller spinner had doubler added to repair cracks Not ALLOWED

N/A	Not Sat.	Sat.	Propeller Inspection	
			Propeller spinner(s) cracks ____, NO cracks allowed nuts safety wired __ Missing screws from spinner None allowed ____ Reference Service Letters if cracked:	
			Sensenich See aircraft maintenance manuals	
			McCauley 1992-14C -part must be replaced	
			Hartzell HC-SL-61-91 Requires a Field Approval	
			Propeller grinding when rotating	AC 43.13-1B Para 8-2(c )(2)
			Corrosion pitting on blades or hub None Allowed	CFR A35.3
			Paint on propeller blades, type per manufacture manual	CAR 3.295, CFR 23.609
			If repainted after rework type of paint applied lacquer base or polyurethane enamel and was it recorded in the propeller maintenance record	CFR 43.5
			STC for different propeller than original per TCDS	CFR 21.111
			STC propeller check engine gages for new limitations	CFR A35.4
			Is the propeller the right diameter/width	CAR 3.416, CFR 23.45
			Propeller ground clearance	CAR 3.422, CFR 23.925
			Have the propeller tips been altered (rounded or square)	CFR 43 Append A
			Are there repairs in the propeller maintenance records	CFR 43.9
			Has the shotpeen been removed after reworked at hub	CFR 43.9
			Has the hub seal been replaced (service life)	CFR 43.9
			Prop Hub is oil/grease filled and/or leaking	CFR 35.3
			When was the last hub overhaul	CFR 35.3
			Pitting corrosion on Hub NONE ALLOWED	CFR 35.3
			Hub, blade clamps, and pitch change mechanisms should be inspected for corrosion NONE ALLOWED	CFR A35.3
			Were new propeller bolts installed	CFR A35.3
			Were new nuts used on the propeller bolts	CFR A35.3
			New cotter pins installed in retaining nuts per Manufacture	CFR A35.4
			Is the spinner shimmed to the spinner bracket if required	CFR A35.3
			Pitch change counterweights on blade clamps should be inspected for security, safety	CFR A35.3
			Adequate counterweight clearance within the spinner	CFR 23.925
			De-icer boots for signs of deterioration and security	CFR 23.929
			Propeller total time is recorded in propeller record	CFR 91.417(2)
			Propeller vibration rate	CAR 3.431, CFR 23.907
			Propeller clearance to ground and gear	CAR 3.417, CFR 23.925
			Check blade play and blade track.	CFR 43.13, 23.925
			Lubricate the propeller assembly. Refer to Hartzell Service Letter HC-SL-61-184 for procedure. (If you have a Hartzell)	CFR 43.13
			Propeller backing plate made of composite check propeller hub for pitting corrosion	

N/A	Not Sat.	Sat.	<b>Avionics Installed</b>
			Type of Avionics: List by part number and serial number. CAR 3.72 1
			ALTIMETERS
			ENCODING
			Mfg: ACK Model: ACK 30
			Type of Avionics: AUDIO PANEL
			Mfg: KING Model: KMA 20
			Type of Avionics: COLLISION AVOIDANCE SYSTEMS
			Mfg: RYAN INTERNATIONAL CORPORATION Model: ATS 7000
			Type of Avionics: GPS
			Mfg: KING Model: KLN 90
			Type of Avionics: RNAV
			Mfg: KING Model: KNS 80
			Type of Avionics: LOC
			Mfg: KING Model: KI 208
			Type of Avionics: NAV-COMM
			Mfg: KING Model: KX 170 B Channels: 720
			Type of Avionics: COMM
			Mfg: KING Model: KY 197 Channels: 720
			Type of Avionics: TRANSPONDERS
			Mfg: KING Model: KT 76A
			Type of Avionics: STORMSCOPE
			Mfg: 3 M Model: WX 1000+
			Type of Avionics: GS
			Mfg: KING Model: KI 201
			Type of Avionics: AUTOPILOTS
			Mfg: S-TEC Model: SYSTEM 60 PSS
			Mfg: CENTURY Model: CENTURY II B

N/A	Not Sat.	Sat.	<b>De-Icing Systems</b>
			Known Ice System: CFR 23.1416
			Ice Lights work and condition CFR 23.1416
			Prop De-Ice condition CFR 23.1416
			De-Ice Type: CFR 23.1416
			Wing Tail Boots condition CAR 3.712, CFR 23.1416
			Boots Condition: CAR 3.712, CFR 23.1416
			Windshield De-Ice condition CFR 23.1416
			Windshield Wipers condition CFR 23.1416
			Jet Intake De-Ice condition CFR 23.1416
			Pitot Heat condition CFR 23.1416

N/A	Not Sat.	Sat.	Additional Equipment	
			Dual Controls:	CFR 23.777
			Type: Yoke.	CFR 23.777
			Stall Warning System works	CFR 23.703
			Stick Shaker works	CFR 23.672
			Rotating Beacon works	CAR 3.703, CFR 23.1401
			Strobe Light works	CFR 23.1401
			Taxi Lights works	CAR 3.655, CFR 23.1383
			Navigation Light works	CAR 3.661, CFR 23.1389
			Long Range Fuel	CFR 23.959
			Aux Fuel Qty works	CFR 23.955
			Single Point Refuel condition	CFR 23.953
			Lavatory condition	CFR 23.1561
			Galley condition	CFR 23.1561
			Cabinetry condition	CFR 23.1561
			Other Equipment condition	CAR 3.725, CFR 23.1561
			Intercom System works	CFR 23.1561
			Entertainment equipment CD player check for alteration form	CFR 43 App. A
			Gap seal kit installed	CFR 43 App. A
			Brackett Aero Filter STC installed	CFR 43 App. A
			Air Filter replacement date Bracket air filter check hours	CFR 43 App. A

N/A	Not Sat.	Sat.	Special Inspections	
			Airworthiness Directives AD's	CFR 39
			Engine fuel and oil lines	
			Brake lines	
			Air filter engine	
			Air filter instruments	
			Wing structural areas	
			Hard and over weight landings	
			Lighting strike damage	
			Hail damage	
			Severe Turbulence Inspection	
			Corrosion damage Inspection	
			Radio Equipment	
			Emergency Locater Transmitter (ELT)	CFR 91.207
			Pitot Static	CFR 91.411
			Transponder	CFR 91.411
			Rigging checks	CFR 43 App. D
			New Weight and balance aircraft for compensation/hire	
			Magneto 200, 500 and etc. coil, contacts, etc. Inspection	
			Rigging Inspection	
			Oxygen bottles Inspection/Hydrostatic Tests	
			Lubrication Inspection	
			Hose Inspection Fuel and Hydraulic	
			Compass magnetic direction within 10°. Compass card	CFR 23.1327
			Airspeed indicator inspections	CFR 23.1323
			Remove the rocker box covers and check for freedom of valve rockers	

N/A	Not	Sat.	Miscellaneous Items
			Aileron control cable not over pulley
			Aileron cable improperly installed in bellcrank/cable retaining pin was not installed
			Bolts loose on the vertical and horizontal stabilizer fin attachments
			Broken and cracked electrical terminals
			Control cable turnbuckles not safetied
			Flap follow-up cable chafing on brake line
			Foreign items in fuel cells/tanks
			Fuel lines twisted, bent, kinked, obstructing flow
			Fuel lines chafing - inadequate clamping
			Incorrect propeller bolts installed
			Jam nuts drilled but no safety wire installed
			Lock clips missing from control cable turnbuckles
			Loose rivets in horizontal stabilizer leading edge
			Main wheel tires do not clear wheel bays
			Numerous drill chuck marks in aft face of pressure bulkhead.
			Oil lines leaking at connections
			Primer line "T" fitting not installed
			Propeller blade retention ferrules under torqued
			Elevator trim cable wrapped around primary rudder control cable
			Rivet holes drilled but rivets not installed, different areas
			Rudder cable bellcrank attach bolts loose
			Rudder cable bolts fitted upside down
			Unreliable fuel quantity indications

## Life limits, CFR 43.10

**This checklist is not exhaustive and does not supersede  
Manufacture's publications and is up-dated periodically!**

Calendar/Hourly Life limited Items:	Years	Hours
<b>Airframe</b>		
Gyro air filters, central	5	500
Non-Teflon fuel, oil, and hydraulic hoses	15	3000
Teflon fuel, oil, and hydraulic hoses	20	4000
Seat belt/shoulder harness webbing	20	
Stabilizer attach bolts	25	6000
Wing bolts	25	6000
<b>Engine</b>		
Engine shock mounts	15	TBO
Non-Teflon fuel, oil, and hydraulic hoses	8	TBO
Teflon fuel, oil, and hydraulic hoses	15	TBO
Continental Engines		2000 SL 98-9
<b>Special Inspection Items:</b>	<b>Years</b>	<b>Hours</b>
<b>Airframe</b>		
Gyro air pump carbon vanes	6	500
Electric hydraulic pump motor	15	500-1500
Electro mechanical gear actuator	15	3000
Gear actuator motor brushes	2	250
Gear motor internal inspection/lubrication	15	3000
Flight control trim actuator(s)	15	4500
Electrical flap actuators/motors	20	4000
Stabilizer mounting bolts torque inspection	5	
Wing attach bolts torque inspection	5	
<b>Propeller</b>		
Fixed pitch propeller recondition	6	2000
Mounting hardware	20	2000
Constant speed propeller overhaul	6	2400
Prop governor reseal	15	1500
Governor (Woodward)	5	2400
Accumulators	5	1800

<b>Special Inspection Items:</b>	<b>Years</b>	<b>Hours</b>
<b>Engine</b>		
Alternator	500	
Gear drive alternator internal inspection	5	300
Belt driven alternator internal inspection	5	500
Internal magneto inspection	5	500
Valve inspection/dry lash clearance	15	TBO
Cam/cam follower inspection (TCM engines)	15	mid life
Bendix fuel injector servo overhaul	20	TBO
Pressure carburetor overhaul	20	TBO
Primer nozzles cleaned and spray pattern	5	
Continental unmetered fuel pressure check	2	400
Diaphragm fuel pumps overhaul	20	TBO
Internal starter inspection	5	mid-life
Turbocharger oil inlet check valve(s)	10	1000
Turbocharger oil scavenge check valves(s)	10	1000
Hydraulic wastegate actuator(s) resealing	10	1000

**This is only a guide and should not be considered FAA approved data for life limits. Consult the manufacture recommendations, type certificate data sheets (TCDS), AD's, or the limitations section of FAA-approved airplane or rotorcraft flight manuals.**

## Miscellaneous Parts

Category	Manufacturer	Part Number	Serial Number
Accumulators			
Air Conditioner			
Air Data Inertl Ref Unit			
Angle of Attack sensor			
Auxiliary Power Unit			
Ball/Swivel Quick Connctr			
Cabin Doors			
Cabin Superchargers			
Circuit Breakers			
Cockpit Voice Record			
Coffee Makers			
Combustion Heaters			
Cylinder Assemblies			
Cylinder, Propane			
Dusting/Spraying Ops			
EFIS-Elec Flight Inst Sy			
Emergency/Survival Equip.			
Emergency Pwr Supplies			
Engine Gage Units			
Fire Detectors			
Fire Ext Dischargers			
Fire Extinguishers			
Flight Data Recorder			
Flight Director Sys			
Flight Management Sy			
Floats			
Fuel Cells			
Fuel Flow Transmitter			
Fuel Injected System			
Fuel Selector Valve			
Fuel System			
GPWS(Gnd Prxmty Warn Sys)			
Gear Boxes			
Glass Fiber Fabrics			
Glider Tow Couplings			
Global Positioning System			
Governors			
Hardpoint Assemblies			
Hoists			
Hoses			
Ignition Switches			
Instrument Filters			
Integr. Avionics Computer			
Landing Gear			
Lavatory Receptacles			
Lighting			
Magnetic Compass System			

<b>Category</b>	<b>Manufacturer</b>	<b>Part Number</b>	<b>Serial Number</b>
Navigation Systems			
Oxygen Masks			
Oxygen System			
Parachutes			
Piston Pin			
Pistons			
Pitot Static Heater			
Protect Breathing Equip			
Push-pull Control			
Receiver(s)			
Refueling System			
Safety Belts			
Seat Track Fittings			
Seats			
Smoke Detectors			
Speaker(s)			
Standby Vacuum Systems			
Starting Vibrator			
TCAS Terrain Collision Avoidance			
Tires			
Traffic Advisory System			
Transducers			
Turbine Power Conversion			



