

The
Commander
Inspection
Program

INSPECTION GUIDE ONLY

USE MAINTENANCE MANUAL FOR SPECIFIC GUIDANCE/INSTRUCTIONS

© Commander Aircraft Company
Bethany, OK

Aircraft Data

OWNER:

COMMANDER MODEL: _____ SERIAL No.: _____ REG #: _____

ENGINE MODEL: _____ ENGINE S/N: _____

PROP MODEL & S/N: _____

TACH TIME: _____ ENGINE TT: _____ PROP TT: _____

OIL: _____	_____	_____	_____
Brand	Type	Weight	Quantity/QTS

NON-DETERGENT DETERGENT

GENERAL ITEMS

1. Check log books and verify last Pitot/Static and Transponder certification, ELT battery replacement and recommended time life items. _____

2. Certificate of Registration in aircraft and properly displayed. _____

3. Certificate of Airworthiness in aircraft and properly displayed. _____

4. Aircraft equipment list, Weight & Balance, and FAA req'd placards in aircraft. _____

Engine and engine compartment		
1. Run up engine in accordance w/ maintenance manual and note all discrepancies.		
2. Remove entire engine cowling. Inspect engine and equipment for signs of fluid leakage. Note suspect areas and clean engine. Inspect cowling for wear and cracks to include fasteners and cowl flaps. Record as necessary.		
3. Perform and record a hot engine differential compression check. Cyl - 1: Cyl - 2: Cyl - 3: Cyl - 4:		
4. Drain oil (ref Lycoming Service letter L121)		
5. Remove and clean suction screen. Particle check. Reinstall screen and safety wire.		
6. Replace oil filter element and safety. Particle check.		
7. Remove fuel screen from gascolator/strainer assembly. Clean & reinstall using new gaskets. Check drain function. Safety wire.		
8. Spark plugs - inspect, clean, gap, test and reinstall or replace as appropriate. Install using 360 - 420 in lbs. torque. Lyc SI 1042.		
9. Check magneto, point condition and timing. 500 hr service if appropriate.		
10. Check induction air filter and alternate air valve. Replace filter element (Brackett) and reinstall.		
11. Remove & clean injector finger screen. Reinstall and safety.		
12. Remove, clean, & replace injector nozzles		
13. Inspect following items for condition, security, cleanliness, and operation: Spark plug leads (high tension lead test) Manual priming system and lines Intake system All studs and nuts All fluid carrying lines and fittings All wiring and connectors Engine controls and linkage (condition and travel) Lube engine controls & linkages		

ENGINE & COMPARTMENT CONTINUED

Firewall and all firewall mounted components
 Engine mount and attach structure
 Crankcase, accessory section & all accessories
 Cylinders, hold downs, push rod housings
 Engine baffling and baffle seals
 Alternator, connections and drive belt. Check belt tension.
 Cowl flap condition and operation
 Prop governor and governor oil line
 Blast tubes, heat and cooling hoses

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|--|--|--|
| 14. Condition notes for ongoing observation or future consideration (non airworthiness or discrepancy items) | | |
| 15. Install lower cowling, assure oil cooler to cowling baffle seal is properly in place and landing light wiring connected. | | |
| 16. Insure lower cowling cowl flap support brackets secured. | | |
| 17. Install upper cowling. Check for proper positioning of engine baffle seals. | | |

PROPELLER

- | | | |
|---|--|--|
| 1. Remove prop spinner | | |
| 2. Inspect spinner & bulkhead for cracks or dents | | |
| 3. Inspect propeller hub, bolts, & control mechanisms for security & condition. | | |
| 4. Inspect prop blades nicks, cracks, abrasions, and tracking. | | |
| 5. Verify prop OVHL due date/time against time in service. Next OVHL due _____ TT ____/____/_____ | | |
| 6. Reinstall prop spinner | | |

AIRFRAME

- | | | |
|--|--|--|
| 1) Inspect exterior of the fuselage | | |
| 2) Remove all inspection panels. Inspect wings, all control surfaces, trim tabs, & flaps for dents, cracks, distortion, security and general condition. Give special attention to condition, security & internal clearances of all control surface hinges and condition of hinge attachment points | | |
| 3) Inspect cabin windows and windshield for security, cracks, & cleanliness. | | |

INSPECTION CHECKLIST

MECHANIC | INSPECTOR

4) Inspect cabin doors and door seals for condition, security, and operation		
5) Inspect baggage door, door seal, and interior		
6) Inspect landing light, lens, & assembly		
7) Inspect static wicks for condition, security, & cleanliness		
8) Remove wing and fuselage inspection panels and inspect following items for leaks, condition, & cleanliness: a) All electrical wiring and connectors b) All fluid carrying lines c) All internal structures d) Ventilating ducts e) Front landing light and lens f) Nose wheel structure		
9) Inspect wing to fuselage attachments		
10) Inspect fuel cell area for external leakage & verify operation of gage transmitters, sump drains, & tank selector valve.		
11) Verify operation, condition, & fit of fuel vent lines, fuel caps, fuel tank anti-siphon flaps. Verify appropriate fuel placards.		
12) Inspect all control surfaces and trim tabs for operation, & proper travel. Ref Maintenance Manual figure 7-13 Record: LT Flap _____ RT Flap _____ LT Aileron _____ RT Aileron _____ Elevator _____ Elevator Trim _____ a) Check all control surface cable tensions. Record: Aileron _____ Rudder _____ Elevator _____ Elevator trim _____ b) Check all rod ends and actuating mechanisms c) Check rudder aileron interconnect rigging d) Check aircraft rigging to factory specs		

	MECHANIC	INSPECTOR
<p>13) Aircraft battery:</p> <p>a) GENERAL: - Remove applicable inspection panels and inspect battery compartment for corrosion and general condition.</p> <p>b) Check battery vent clear of obstructions, terminal connections, electrolyte specific gravity and service battery (if applicable)</p>		
14) Check hydraulic power pack fluid level and clean filter lines (if applicable)		
<p>15) Inspect following items for condition, security, & operation:</p> <p>a) Engine and Flight instruments, instrument panel, & markings</p> <p>b) Check behind instrument panel. Verify all wiring, hoses, etc. are properly secured. Verify there is no interference w/ flight control movements.</p>		
16) Inspect seats, seat locks, shoulder & seat belts for condition and security.		
17) Change vacuum system filter (@ 500 hours or as needed)		
18) Change suction relief valve filter (@ 500 hours or as needed)		
19) Check Pitot/static lines and fittings for proper routing, security, and moisture content. Check Pitot and static ports for obstructions and security. Check Pitot heat.		
20) Inspect antennas and all other items of installed equipment and/or systems for condition, security, cleanliness, and operation.		
21) Check and/or service ELT. Check date of expiration. ELT expiration date: 08 / 02		
22) Remove applicable panels and tailcone assembly and inspect empennage for dents, cracks, distortion, and general condition. Check drain holes. Lubricate equipment as req'd.		
23) Check anti-collision lights, position lights, and wiring in addition to other items of installed equipment for condition, security, cleanliness and operation.		

LANDING GEAR & BRAKE SYSTEM

MECHANIC INSPECTOR

<p>1) Check landing gear properly down and locked.</p>		
<p>2) Ensure parking brake is disengaged and chock aircraft. Secure tail stand to tail tie down ring. Lubricate all recommended fittings and areas. Ref. Maintenance manual Fig. 2-15 and associated Figures. (incl zerk ftg on nose gear and 14641 & gear actuator rod ends</p>		
<p>3) Check all landing gear struts for proper hydraulic fluid, servicing, and inflation.</p> <p>Nose Gear: 90 PSI Main Gear: 150 PSI</p>		
<p>4) Inspect following items for condition (undue/excessive wear, fatigue, distortion), security, and cleanliness:</p> <ul style="list-style-type: none"> a) Nose & Main landing gear struts b) Sidebraces & Scissors c) Microswitches and Wiring d) Landing gear doors and linkage e) Landing gear actuating cylinders, hydraulic lines and attach points f) Shimmy damper (service if req'd), nosewheel steering/cylinder and cables. g) Landing/taxi lights, lens, and assembly (if installed on gear) 		
<p>5) Perform a complete landing gear rigging and operational check including the emergency gear extension system.</p> <p>NOTE: Ensure gear warning system lights (4), gear warning bell, overcenter limits in drag braces, squat safety switch and proper closing of gear doors are checked.</p> <p>W/ gear in UP position the warning horn should actuate when the throttle is reduced to between 12 and 15 inches of MP or the wing flaps are extended to 22.5 (+/- .5) degrees or more.</p>		
<p>6) Inspect wheels and brakes (including brake lines) for wear and condition. Repack wheel bearings (MIL-G-3545 bearing grease or equivalent.) Clean & lube slide pins.</p>		

INSPECTION CHECKLIST

MECHANIC | INSPECTOR

	MECHANIC	INSPECTOR
7) Ensure parking brake is disengaged and remove tailstand from aircraft. Remove aircraft from jacks.		
8) Check tires for condition and inflate to: Nose wheel: 31 PSI Mains Wheels: 29 PSI		
9) Check & service brake system as required using MIL-H-5606 hydraulic fluid		
10) Inspect parking brake system for proper operation		

OPERATION TEST & FINAL INSPECTION CHECK

MECHANIC INSPECTOR

1) Reinstall and secure all removed panels, stinger, etc.		
2) Check upper and lower cowling properly installed and secure (note: confirm attachment of cowl door hinge support brackets)		
3) Start and warm-up engine per maintenance manual. Remove top cowling		
4) Inspect for oil or fuel leaks in engine compartment. Correct any discrepancies.		
5) Lubricate all recommended fittings and areas		
6) Re-install and secure top cowling.		
7) Complete static system leak check		