2-59. INSPECTION TIME LIMITS (Model R182 & TR182 Airplanes)

			EACH 50 HOURS	EACH 100 HOURS	EACH 200 HOURS	SPECIAL INSPECTIONS HOURS	SPECIAL INSPECTIONS YEARS
K	10	Fuel Quantity Indicators – Check for damage and security of installation.					EACH 1
K	11	Fuel quantity indicating system operational test is required every 12 months. Refer to Section 15 for detailed accomplishment instructions.					EACH 1
L		**Propeller and Propeller Governor (Section 13).**					
L	1	Propeller Governor and Control – Inspect for oil and grease leaks. If leakage is evident, refer to McCauley Service Manual.	•				
L	2	Proper Mounting – Check for security of installation.	•				
L	3	Propeller Blades – Inspect for cracks, dents, nicks, scratches, erosion, corrosion, or other damage.	•				
L	4	Spinner – Check general condition and attachment.	•				
L	5	Spinner and Spinner Bulkhead – Remove spinner, wash and inspect for cracks and fractures.		•			
L	6	Propeller Mounting Bolts – Inspect mounting bolts and safety-wire for signs of looseness. Retorque mounting bolts as required.			•		
L	7	Propeller Hub – Check general condition			•		
L	8	Propeller Governor and Control – Check for security and operation of controls.			•		
L	9	Propeller Assembly – Overhaul (See McCauley Service Manual; refer to list of publications).				O	
M		**Utility Systems (Section 14).**					
M	1	Ventilation System – Inspect clamps, hoses and valves for condition and security.				400	EACH 1
M	2	Heater Components, Inlets and Outlets – Inspect all lines, connections, ducts, clamps, seals and gaskets for condition, restriction and security.		•			
M	3	Cabin Heat and Ventilation Controls – Check freedom of movement through full travel. Check friction locks for proper operation.			•		
M	4	Pitot Tube and Stall warning Vane – Check for condition and obstructions.	•				
M	5	Pitot Tube Heater Element – Perform operational check.	•				
M	6	Propeller Anti-ice Slip Rings, Brushes and Boots – Inspect for condition and security. Perform operational check.	•				
M	7	Heated Windshield Panel – Check operation, security of installation, electrical wiring and condition of storage bag.			•		
M	8	Oxygen System – Inspect masks, hoses, lines and fittings for condition, routing and support. Test operation and check for leaks.			•		
M	9	Oxygen Cylinder – Inspect for condition, check hydrostatic test date and perform hydrostatic test, if due.					EACH 5
N		**Instruments and Instrument Systems (Section 15).**					
N	1	Vacuum System – Inspect for condition and security.		•			

2-59. INSPECTION TIME LIMITS. (Model R182 & TR182 Airplanes)

			EACH 50 HOURS	EACH 100 HOURS	EACH 200 HOURS	SPECIAL INSPECTIONS HOURS	SPECIAL INSPECTIONS YEARS
N	2	Vacuum System Hoses – Inspect for hardness, deterioration, looseness or collapsed hoses.		•			
N	3	Vacuum Pump – Check for condition and security. Check Vacuum system breather line for obstructions, condition and security.		•			
N	4	Vacuum System Air Filter – Inspect for damage, deterioration and contamination. Clean or replace, if required. NOTE: Smoking will cause premature filter clogging.		•		P	
N	5	Vacuum System Relief Valve – Inspect for condition and security.		•		Q	
N	6	Instruments – Check general condition and markings for legibility.		•			
N	7	Instrument Lines, Fittings, Ducting and Instrument Panel Wiring – Check for proper routing, support and security of attachment.			•		
N	8	Static System – Inspect for security of installation, cleanliness and evidence of damage.			•		
N	9	Navigation Indicators, Controls and components – Inspect for condition and security.			•		
N	10	Airspeed Indicator, Vertical Speed Indicator and Magnetic Compass – Calibrate.					EACH 2
N	11	Altimeter and Static System – Inspect in accordance with FAR Part 91.411.					EACH 2
N	12	Instrument Panel Mounted Avionics Units (Including Audio Panel, VHF Nav/Com(s), ADF, Transponder, DME and Compass System) – Inspect for deterioration, cracks and security of instrument panel mounts. Inspect for security of electrical connections, condition and security of wire routing.			•		
N	13	Avionics Operating Controls – Inspect for security and proper operation of controls and switches and ensure that all digital segments will illuminate properly.			•		
N	14	Remote Mounted Avionics – Inspect for security of units and electrical connectors, condition and security of wire routing. Also check for evidence of damage and cleanliness.			•		
N	15	Microphones, Headsets and Jacks – Inspect for cleanliness, security and evidence of damage.			•		
N	16	Magnetic Compass – Inspect for security of installation, cleanliness and evidence of damage.			•		
O		**Electrical Systems (Section 16).**					
O	1	General Airplane and System Wiring – Inspect for proper routing, chafing broken or loose terminals, general condition, broken or inadequate clamps or sharp bends in wiring.			•		
O	2	Instrument, Cabin, Navigation, Beacon, Strobe, and Landing Lights – Check operation, condition of lens and security of attachment.		•			
O	3	Circuit Breaker and Fuses – Check operation and condition. Check for required number of spare fuses.		•			
O	4	Battery – Check general condition and security. Check level of electrolyte.		•		R	
O	5	Battery Box and Cables – Clean and remove any corrosion. Check cables for routing, support and security of connections.		•			

Special Inspections Legends:

A. First 100 hours and each 500 hours thereafter. More often if operated under prevailing wet or dusty conditions.
B. At first 50 hours, first 100 hours, and each 500 hours thereafter, or one year, whichever comes first.
C. Each 500 hours, and whenever improper operation is suspected. Replace brushes when worn to .25 inch or less.
D. Serial R18200001 thru R18200583 and FR18200001 thru FR18200025: Each 5 years. Serial R18200584 and On and FR18200026 thru FR18200070: Overhaul components and replace rubber goods on-condition basis.
E. Each 600 hours or 1 year, whichever comes first.
F. Lubrication of the actuator is required each 1000 hours or 3 years, whichever comes first. See figure 2-5 for grease specification.
G. Lubricate each 100 hours (except in extreme dusty conditions). These controls are not repairable and should be replaced every 1500 hours or sooner if required.
H. Clean filter per paragraph 2-25. Replace paper filters at least each 500 hours.
I. Inspect each 500 hours.
J. For Prestolite starters only, inspect the commutator and brushes every 1500 hours.
K. At the first 25 hours, first 50 hours, first 100 hours and thereafter at each 100 hours, the contact breaker point compartment and magneto-to-engine timing should be inspected and checked. If magneto-to-engine timing is correct within plus zero degrees to minus two degrees, internal timing need not be checked. If timing is out of tolerance, remove magneto and set internal timing, then install and time to the engine. Refer to Section 11 or 11A and the magneto manufacturers service instructions for magneto timing procedures.
L. Replace engine compartment rubber hoses (Cessna installed only) every five years or at engine overhaul, whichever comes first. This does not include drain hoses. Hoses which are beyond these limits and are in a serviceable condition, must be placed on order immediately and then be replaced within 120 days after receiving the new hose(s) from Cessna. Replace drain hoses on condition. Engine flexible hoses (Lycoming installed) (Refer to Lycoming Maintenance Manual and Lycoming Engine Service Bulletins).
M. First 25 hours: Refill with straight grade mineral oil and use until a total of 50 hours have accumulated, or oil consumption has stabilized. Change oil, replace filter, and refill sump with recommended grade of ashless dispersant oil. Change oil and replace filter at least every six months, regardless of accumulated hours.
N. Each 1000 hours.
O. See McCauley Service Manual; refer to list of publication.
P. Replace every 500 hours.
Q. Replace filter each 100 hours.
R. Check electrolyte level and clean battery box each 100 hours or 90 days.

2-60. COMPONENT TIME LIMITS

1. General

   A. Most components listed throughout Section 2 should be inspected as detailed elsewhere in this section and repaired, overhauled or replaced as required. Some components, however, have a time or life limit, and must be overhauled or replaced on or before the specified time limit.

      NOTE: Overhaul - Item may be overhauled as defined in FAR 43.2 or it can be replaced.

      NOTE: Replacement - Item must be replaced with a new item or a serviceable item that is within its service life and time limits or has been rebuilt as defined in FAR 43.2.

   B. This section provides a list of items that must be overhauled or replaced at specific time limits. Table 1 lists those items that Cessna has mandated must be overhauled or replaced at specific time limits. Table 2 lists component time limits that have been established by a supplier to Cessna for the supplier's product.

   C. In addition to these time limits, the components listed herein are also inspected at regular time intervals set forth in the Inspection Charts, and may require overhaul/replacement before the time limit is reached based on service usage and inspection results.

2. Cessna-Established Replacement Time Limits.

   A. The following component time limits have been established by Cessna Aircraft Company.

      Table 1: Cessna-Established Replacement Time Limits

COMPONENT	REPLACEMENT TIME	OVERHAUL
Restraint Assembly Pilot, Copilot, and Passenger Seats	10 years	NO
Trim Tab Actuator	1,000 hours or 3 years, whichever occurs first	YES
Vacuum System Filter	500 hours	NO
Vacuum System Hoses	10 years	NO
Pitot and Static System Hoses	10 years	NO
Vacuum Relief/Regulator Valve Filter (If Installed)	500 hours	NO
Engine Compartment Flexible Fluid-Carrying Teflon Hoses (Cessna-Installed) Except Drain Hoses (Drain hoses are replaced on condition)	10 years or engine overhaul, whichever occurs first (Note 1)	NO
Engine Mixture, Throttle, and Propeller Controls	At engine TBO	NO
Engine Compartment Flexible Fluid-Carrying Rubber Hoses (Cessna-Installed) Except Drain Hoses (Drain hoses are replaced on condition)	5 years or engine overhaul, whichever occurs first (Note 1)	NO

COMPONENT	REPLACEMENT TIME	OVERHAUL
Engine Air Filter	500 hours or 36 months, whichever occurs first (Note 9)	NO
Check Valve (Turbocharger Oil Line Check Valve)	Every 1,000 hours of operation (Note 10)	NO
Oxygen Bottle - Lightweight Steel (ICC-3HT, DOT-3HT)	Every 24 years or 4380 cycles, whichever occurs first	NO
Oxygen Bottle - Composite (DOT-E8162)	Every 15 years	NO
Engine Driven Dry Vacuum Pump Drive Coupling (Not lubricated with engine oil)	6 years or at vacuum pump replacement, whichever occurs first	NO
Engine Driven Dry Vacuum Pump (Not lubricated with engine oil)	500 hours (Note 11)	NO
Standby Dry Vacuum Pump	500 hours or 10 years, whichever occurs first (Note 11)	NO

3. Supplier-Established Replacement Time Limits

   A. The following component time limits have been established by specific suppliers and are reproduced as follows:

   Table 2: Supplier-Established Replacement Time Limits

COMPONENT	REPLACEMENT TIME	OVERHAUL
ELT Battery	(Note 3)	NO
Vacuum Manifold	(Note 4)	NO
Magnetos	(Note 5)	YES
Engine	(Note 6)	YES
Engine Flexible Hoses (Lycoming-Installed)	(Note 2)	NO
Auxiliary Electric Fuel Pump	(Note 7)	YES
Propeller	(Note 8)	YES

NOTES:

Note 1: This life limit is not intended to allow flexible fluid-carrying Teflon or rubber hoses in a deteriorated or damaged condition to remain in service. Replace engine compartment flexible Teflon (AE3663819BXXXX series hose) fluid-carrying hoses (Cessna-installed only) every ten years or at engine overhaul, whichever occurs first. Replace engine compartment flexible rubber fluid-carrying hoses (Cessna-installed only) every five years or at engine overhaul, whichever occurs first (this does not include drain hoses). Hoses which are beyond these limits and are otherwise in a serviceable condition, must be placed on order immediately and then be replaced within 120 days after receiving the new hose from Cessna.

Note 2: For Textron Lycoming engines, refer to latest Textron Lycoming Engine Service Bulletins.

Note 3: Refer to FAR 91.207 for battery replacement time limits.

Note 4: Refer to Airborne Air & Fuel Product Reference Memo No. 39, or latest revision, for replacement time limits.

Note 5: For airplanes equipped with Slick magnetos, refer to Slick Service Bulletin SB2-80C, or latest revision, for time limits.

For airplanes equipped with TCM/Bendix magnetos, refer to Teledyne Continental Motors Service Bulletin No. 643, or latest revision, for time limits.

Note 6: For Textron Lycoming engines, refer to Textron/Lycoming Service Instruction S.I. 1009AJ, or latest revision, for time limits.

Note 7: Refer to Cessna Service Bulletin SEB94-7 Revision 1/Dukes Inc. Service Bulletin NO. 0003, or latest revision.

Note 8: Refer to the applicable McCauley Service Bulletins and Overhaul Manual for replacement and overhaul information.

Note 9: The air filter may be cleaned. Refer to Section 2 of this service manual and for airplanes equipped with an air filter manufactured by Donaldson, refer to Donaldson Aircraft Filters Service Instructions P46-9075 for detailed servicing instructions.
The address for Donaldson Aircraft Filters is:

Customer Service
115 E. Steels Corners RD
Stow OH. 44224

Do not over-service the air filter. Over-servicing increases the risk of damage to the air filter from excessive handling. A damaged/worn air filter may expose the engine to unfiltered air and result in damage/excessive wear to the engine.

Note 10: Replace the turbocharger oil line check valve every 1,000 hours of operation (Refer to Cessna Service Bulletin SEB91-7 Revision 1, or latest revision).

Note 11: Replace engine driven dry vacuum pump not equipped with a wear indicator every 500 hours of operation, or replace according to the vacuum pump manufacturer's recommended inspection and replacement interval, whichever occurs first.

Replace standby vacuum pump not equipped with a wear indicator every 500 hours of operation or 10 years, whichever occurs first, or replace according to the vacuum pump manufacturer's recommended inspection and replacement interval, whichever occurs first.

For a vacuum pump equipped with a wear indicator, replace pump according to the vacuum pump manufacturer's recommended inspection and replacement intervals.