

AIRCRAFT MAINTENANCE MANUAL

TEMPORARY REVISION 05-01

FILING INSTRUCTIONS: Print this Temporary Revision on double sided 8.5 X 11 inch yellow paper. Put this Temporary Revision facing page 203 of 05-20-00 (which is a permanent pageblock).

Record the incorporation of this Temporary Revision on the yellow **RECORD OF TEMPORARY REVISIONS** sheet at the front of the manual.

Keep this Temporary Revision until normal revision service incorporates the information into the DA42 L360 Aircraft Maintenance Manual.

DESCRIPTION: This Temporary Revision adds the inspection requirements for the fuel emergency pumps and the fuel pump failure indication on the fuel pump switch.

SCHEDULED MAINTENANCE CHECKS - MAINTENANCE PRACTICES

1. Maintenance of Checklist Zones

Do the applicable checks in each of the zones that follow:

A. Engine Compartments

(1) LH Engine

Inspection Items, LH Engine	Interval					
	50	100	200	1000	Time	Initials
<p><u>WARNING:</u> MAKE SURE THAT THE EXHAUST SYSTEM IS COOL BEFORE YOU DO MAINTENANCE ON THE ENGINE. THE EXHAUST SYSTEM CAN BE HOT AND THIS CAN CAUSE INJURY TO PERSONS.</p>						
1. Remove the top and bottom cowlings. Examine the cowlings. Make sure that the fasteners are serviceable. Look for cracks and areas that have got too hot.	X	X	X	X		
<p><u>WARNING:</u> DO NOT GET OIL ON YOU. OIL CAN CAUSE SKIN DISEASE.</p> <p><u>WARNING:</u> DO NOT GET FUEL ON YOU. FUEL CAN CAUSE SKIN DISEASE. DO NOT ALLOW FIRE NEAR FUEL. FUEL BURNS AND CAN CAUSE INJURY TO PEOPLE AND DAMAGE THE EQUIPMENT.</p>						
2. Examine the engine for oil/fuel leaks.	X	X	X	X		

Inspection Items, LH Engine	Interval					
	50	100	200	1000	Time	Initials
3. Clean the engine and engine compartment. (Refer to AMM # 7.02.01 Chapter 12-30).		X	X	X		
4. Remove the oil drain plug. Drain the engine oil into an approved container (with the engine warm). (Refer to Chapter 79-00).	X	X	X	X		
5. Examine the oil suction screen: <ul style="list-style-type: none"> - Remove the oil suction screen from the oil sump - Look for particles of metal. If the screen contains particles of metal, refer to the Lycoming Maintenance Manual - Replace the gasket - Install the oil suction screen to the oil sump. 		X	X	X		
6. Install the drain plug. <ul style="list-style-type: none"> - Tighten the drain plug. Torque to 160 lbf-in (18 Nm) - Lock the drain plug with the safety wire. 	X	X	X	X		
7. Replace the oil filter. (Refer to Chapter 79-00).	X	X	X	X		
8. Cut open the used oil filter. Look for particles of metal. If the filter contains particles of metal, refer to the Lycoming Maintenance Manual.	X	X	X	X		
CAUTION: YOU MUST USE THE ENGINE OIL THAT AGREE WITH THE SPECIFICATION IN LYCOMING SERVICE INSTRUCTION NO. 1014.						
9. Fill the engine with new oil.	X	X	X	X		
NOTE: Drain the engine oil and fill with straight mineral oil 25 hours after a new engine is installed. Change to an ashless dispersant oil at the next 50 hour check. Refer to Lycoming Service Instruction No. 1014 for details of acceptable oils.						
10. Do a compression test with the engine warm and the throttle open. Do the compression test on the four cylinders. Use 5.5 bar (80 psi). Maximum permitted decrease 1.4 bar (20 psi). Record the compression test results: 1 _____ 2 _____ 3 _____ 4 _____		X	X	X		

Inspection Items, LH Engine	Interval					
	50	100	200	1000	Time	Initials
11. Remove the spark plugs. <ul style="list-style-type: none"> - Examine the spark plugs. Look specially for damaged electrodes - Clean the spark plugs (refer to spark plug manufacturer's instructions) - Do a spark plug gap test (Refer to the manufacturer's specified spark plug gap). 		X	X	X		
12. Install the spark plugs. Use a thread lubricant approved by the spark plug manufacturer: <ul style="list-style-type: none"> - Install the spark plugs - Torque to 35 lbf-ft. (47 Nm) - Refer to Lycoming Service Instruction No. 1042 for approved spark plugs. 		X	X	X		
13. Examine the ignition harness and cables. Examine the sleeve nut on each spark-plug connector for cracks.	X	X	X	X		
14. Inspect the ignition system. <ul style="list-style-type: none"> - Do a 100 hrs/500 hrs check of the SlickSTART system and the magnetos. Refer to the SlickSTART Installation, Operation, Maintenance and Troubleshooting Manual L-1492 (latest issue). 		X	500 hrs			
NOTE: The inspection of ignition system at 500 hrs is indicated under the 200 hrs interval column.						
15. Examine each cylinder. Look specially for broken fins and heat damage.		X	X	X		
16. Examine the rocker-box covers. Look specially for signs of oil leaks.	X	X	X	X		
17. Examine the valves and rockers: <ul style="list-style-type: none"> - Remove the rocker covers - Look specially for abnormal wear and broken parts in the areas of: <ul style="list-style-type: none"> - Valve tips - Valve keepers - Springs - Spring seats. - Install the rocker covers. Refer to the Lycoming Maintenance Manual.			X			

Inspection Items, LH Engine	Interval					
	50	100	200	1000	Time	Initials
18. Examine the inlet manifolds.	X	X	X	X		
19. Examine the fuel injector. Remove and clean the inlet finger filter.		X	X	X		
20. Examine the fuel flow-divider.	X	X	X	X		
21. Remove and clean the fuel injector nozzles: - Refer to Lycoming Service Instruction 1275 (latest issue).			X	X		
22. Examine the fuel pump drain pipe.		X	X	X		
23. Do a functional test of the fuel emergency pumps to test the operation of the FUEL PUMP switches. (Refer to Chapter 28-20)		X	X	X		
24. Do an operational test of the failure indication that will show on the FUEL PUMP switch. (Refer to Chapter 28-20).		X	X	X		
WARNING: MAKE SURE THE EXHAUST SYSTEM IS COOL BEFORE YOU DO MAINTENANCE ON THE EXHAUST SYSTEM. THE EXHAUST SYSTEM CAN BE HOT AND THIS CAN CAUSE INJURY TO PERSONS.						
25. Do a detailed visual inspection of the exhaust system especially within the heat exchanger section.		X	X	X		
Replace all components displaying cracking or general distortion with new parts or repair in accordance with the latest approved revision of AC 43.13. - Check for holes, cracks, and burned spots. Especially check areas adjacent to welds. Look for unusual tube discoloration. This may indicate an exhaust leak. - Remove the heat shroud to the extent necessary to visually inspect the inside of the heat exchanger section. - Visually inspect the tailpipe insert (baffle) in place by shining a flashlight up the tailpipe. - Replace the insert if any visible damage or collapse is observed.		X	X	X		
	X	X	X	X		

Inspection Items, LH Engine	Interval					
	50	100	200	1000	Time	Initials
<ul style="list-style-type: none"> - Inspect for ball joint freedom of movement by disconnecting the exhaust hangar strap. The tailpipe should be free to move in all directions by applying minimal force. - At 500 hours or annual intervals, in addition to above inspection, lubricate all riser slip joints with high temperature anti-seize compound - While disassembled, inspect for surface abnormalities such as galling or wear marks. 		X	X	X		
<p>26. Examine the cabin heat system.</p> <ul style="list-style-type: none"> - Remove the worm drive clamp from the flexible hose at the cabin-heat selector-valve - Examine the flexible hose for damage - Examine the cabin-heat selector-valve - Connect the flexible hose to the cabin-heat selector-valve - Install the worm drive clamp. 		X	X	X		
<p>27. Examine the engine baffles. Look specially for cracks and incorrect attachment.</p>	X	X	X	X		
<p>28. Examine the alternator mounting bracket and electrical connections.</p>	X	X	X	X		
<p>29. Examine the alternator belt. (Refer to Chapter 24-30).</p> <ul style="list-style-type: none"> - Look for abnormal wear - Do a test for correct adjustment. 	X	X	X	X		
<p>30. Examine the air hoses. Look specially for signs of leakage and damage. Make sure the air hoses are correctly attached.</p>		X	X	X		
<p>31. Examine the cable ties and all electrical connectors. Look specially for rub marks and damage. Pull lightly to make sure they are not loose.</p>	X	X	X	X		
<p>32. Examine the fuel and oil hoses. Look specially for signs of leakage and damage. Make sure the fuel and oil hoses are correctly attached.</p>		X	X	X		
<p>33. Examine the oil breather line. Look specially for blockage.</p>		X	X	X		
<p>34. Examine the oil cooler. Look specially for leakage and damage. Make sure the cooling fins are not blocked.</p>		X	X	X		

Inspection Items, LH Engine	Interval					
	50	100	200	1000	Time	Initials
35. Examine the air filter. (Refer to Chapter 71-60). Replace the air filter at 500 hours interval.	X	X	X	X		
36. Examine the alternate air valve assembly. (Refer to Chapter 71-60).	X	X	X	X		
37. Examine the throttle and mixture controls. <ul style="list-style-type: none"> - Make sure that the connection to the control lever is tight - Make sure that the end fitting can turn in the control lever - Examine the outer cables. Look specially for wear and for kinks. 		X	X	X		
38. Examine the engine mounts. Look specially for: <ul style="list-style-type: none"> - Cracks or corrosion - Incorrect attachment and poor condition of the mounting bolts - Deterioration of the shock mounts - Incorrect torque value. (Refer to Chapter 71-20). 		X	X	X		

(2) RH Engine

Inspection Items, RH Engine	Interval					
	50	100	200	1000	Time	Initials
<p>WARNING: MAKE SURE THAT THE EXHAUST SYSTEM IS COOL BEFORE YOU DO MAINTENANCE ON THE ENGINE. THE EXHAUST SYSTEM CAN BE HOT AND THIS CAN CAUSE INJURY TO PERSONS.</p>						
1. Remove the top and bottom cowlings. Examine the cowlings. Make sure that the fasteners are serviceable. Look for cracks and areas that have got too hot.	X	X	X	X		
<p>WARNING: DO NOT GET OIL ON YOU. OIL CAN CAUSE SKIN DISEASE.</p> <p>WARNING: DO NOT GET FUEL ON YOU. FUEL CAN CAUSE SKIN DISEASE. DO NOT ALLOW FIRE NEAR FUEL. FUEL BURNS AND CAN CAUSE INJURY TO PEOPLE AND DAMAGE THE EQUIPMENT.</p>						
2. Examine the engine for oil/fuel leaks.	X	X	X	X		
3. Clean the engine and engine compartment. (Refer to AMM # 7.02.01 Chapter 12-30).		X	X	X		
4. Remove the oil drain plug. Drain the engine oil into an approved container (with the engine warm). (Refer to Chapter 79-00).	X	X	X	X		
5. Examine the oil suction screen: <ul style="list-style-type: none"> - Remove the oil suction screen from the oil sump - Look for particles of metal. If the screen contains particles of metal, refer to the Lycoming Maintenance Manual - Replace the gasket - Install the oil suction screen to the oil sump. 		X	X	X		
6. Install the drain plug. <ul style="list-style-type: none"> - Tighten the drain plug. Torque to 160 lbf-in. (18 Nm) - Lock the drain plug with the safety wire. 	X	X	X	X		
7. Replace the oil filter. (Refer to Chapter 79-00).	X	X	X	X		
8. Cut open the used oil filter. Look for particles of metal. If the filter contains particles of metal, refer to the Lycoming Maintenance Manual.	X	X	X	X		

Inspection Items, RH Engine	Interval					
	50	100	200	1000	Time	Initials
<p>CAUTION: YOU MUST USE ENGINE OILS THAT AGREE WITH THE SPECIFICATION IN LYCOMING SERVICE INSTRUCTION NO. 1014.</p>						
9. Fill the engine with new oil.	X	X	X	X		
<p>NOTE: Drain the engine oil and fill with straight mineral oil 25 hours after a new engine is installed. Change to an ashless oil at the next 50 hour check. Refer to Lycoming Service Instruction No. 1014 for details of acceptable oils.</p>						
<p>10. Do a compression test with the engine warm and the throttle open.</p> <p>Do the compression test on the four cylinders.</p> <p>Use 5.5 bar (80 psi). Maximum permitted decrease 1.4 bar (20 psi).</p> <p>Record the compression test results:</p> <p>1 _____ 2 _____ 3 _____ 4 _____</p>		X	X	X		
<p>11. Remove the spark plugs.</p> <ul style="list-style-type: none"> - Examine the spark plugs. Look specially for damaged electrodes - Clean the spark plugs (refer to spark plug manufacturer's instructions) - Do a spark plug gap test (Refer to the manufacturer's specified spark plug gap). 		X	X	X		
<p>12. Install the spark plugs. Use a thread lubricant approved by the spark plug manufacturer:</p> <ul style="list-style-type: none"> - Install the spark plugs - Torque to 35 lbf-ft. (47 Nm) - Refer to Lycoming Service Instruction No. 1042 for approved spark plugs. 		X	X	X		
<p>13. Examine the ignition harness and cables.</p> <p>Examine the sleeve nut on each spark-plug connector for cracks.</p>	X	X	X	X		
<p>14. Inspect the ignition system.</p> <ul style="list-style-type: none"> - Do a 100 hrs/500 hrs check of the SlickSTART system and the magnetos. Refer to the SlickSTART Installation, Operation, Maintenance and Troubleshooting Manual L-1492 (latest issue). 		X	500 hrs			
<p>15. Examine each cylinder. Look specially for broken fins and heat damage.</p>		X	X	X		

Inspection Items, RH Engine	Interval					
	50	100	200	1000	Time	Initials
16. Examine the rocker-box covers. Look specially for signs of oil leaks.	X	X	X	X		
17. Examine the valves and rockers: <ul style="list-style-type: none"> - Remove the rocker covers - Look specially for abnormal wear and broken parts in the areas of: <ul style="list-style-type: none"> - Valve tips - Valve keepers - Springs - Spring seats - Install the rocker covers. Refer to the Lycoming Maintenance Manual.			X			
18. Examine the inlet manifolds.	X	X	X	X		
19. Examine the fuel injector. Remove and clean the inlet finger filter.		X	X	X		
20. Examine the fuel flow-divider.	X	X	X	X		
21. Remove and clean the fuel injector nozzles: <ul style="list-style-type: none"> - Refer to Lycoming Service Instruction 1275 (latest issue) 			X	X		
22. Examine the fuel pump drain pipe.		X	X	X		
23. Do a functional test of the fuel emergency pumps to test the operation of the FUEL PUMP switches. (Refer to Chapter 28-20)		X	X	X		
24. Do an operational test of the failure indication that will show on the FUEL PUMP switch. (Refer to Chapter 28-20).		X	X	X		
WARNING: MAKE SURE THE EXHAUST SYSTEM IS COOL BEFORE YOU DO MAINTENANCE ON THE EXHAUST SYSTEM. THE EXHAUST SYSTEM CAN BE HOT AND THIS CAN CAUSE INJURY TO PERSONS.						
25. Do a detailed visual inspection of the exhaust system especially within the heat exchanger section.		X	X	X		

Inspection Items, RH Engine	Interval					
	50	100	200	1000	Time	Initials
Replace all components displaying cracking or general distortion with new parts or repair in accordance with the latest approved revision of AC 43.13. <ul style="list-style-type: none"> - Check for holes, cracks, and burned spots. Especially check areas adjacent to welds. Look for unusual tube discoloration. This may indicate an exhaust leak. - Remove the heat shroud to the extent necessary to visually inspect the inside of the heat exchanger section. - Visually inspect the tailpipe insert (baffle) in place by shining a flashlight up the tailpipe. - Replace the insert if any visible damage or collapse is observed. - Inspect for ball joint freedom of movement by disconnecting the exhaust hangar strap. The tailpipe should be free to move in all directions by applying minimal force. - At 500 hours or annual intervals, in addition to above inspection, lubricate all riser slip joints with high temperature anti-seize compound - While disassembled, inspect for surface abnormalities such as galling or wear marks. 		X	X	X		
26. Examine the cabin heat system. <ul style="list-style-type: none"> - Remove the worm drive clamp from the flexible hose at the cabin-heat selector-valve - Examine the flexible hose for damage - Examine the cabin-heat selector-valve - Connect the flexible hose to the cabin-heat selector-valve - Install the worm drive clamp. 		X	X	X		
27. Examine the engine baffles. Look specially for cracks and incorrect attachment.	X	X	X	X		
28. Examine the alternator mounting bracket and electrical connections.	X	X	X	X		
29. Examine the alternator belt. (Refer to Chapter 24-30). <ul style="list-style-type: none"> - Look for abnormal wear - Do a test for correct adjustment. 	X	X	X	X		

Inspection Items, RH Engine	Interval					
	50	100	200	1000	Time	Initials
30. Examine the air hoses. Look specially for signs of leakage and damage. Make sure the air hoses are correctly attached.		X	X	X		
31. Examine the cable ties and all electrical connectors. Look specially for rub marks and damage. Pull lightly to make sure they are not loose.	X	X	X	X		
32. Examine the fuel and oil hoses. Look specially for signs of leakage and damage. Make sure the fuel and oil hoses are correctly attached.		X	X	X		
33. Examine the oil breather line. Look specially for blockage.		X	X	X		
34. Examine the oil cooler. Look specially for leakage and damage. Make sure the cooling fins are not blocked.		X	X	X		
35. Examine the air filter. (Refer to Chapter 71-60). Replace the air filter at 500 hours interval.	X	X	X	X		
36. Examine the alternate air valve assembly. (Refer to Chapter 71-60).	X	X	X	X		
37. Examine the throttle and mixture controls. <ul style="list-style-type: none"> - Make sure that the connection to the control lever is tight - Make sure that the end fitting can turn in the control lever - Examine the outer cables. Look specially for wear and for kinks. 		X	X	X		
38. Examine the engine mounts. Look specially for: <ul style="list-style-type: none"> - Cracks or corrosion - Incorrect attachment and poor condition of the mounting bolts - Deterioration of the shock mounts - Incorrect torque value. (Refer to Chapter 71-20). 		X	X	X		

Intentionally Left Blank