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SERVICE INSTRUCTION

DATE: December 21, 2010

Service Instruction No. 1483A
 (Supersedes Service Instruction No. 1483)
 Engineering Aspects are
 FAA (DER) Approved

SUBJECT: Valve Leak Check with Engine Cylinder Removed (Field Procedure)

MODELS AFFECTED: All Lycoming reciprocating aircraft engines

TIME OF COMPLIANCE: In the field, anytime the intake or exhaust valves are removed from a cylinder that has been removed from the engine, the following valve leak check procedure must be done after the valves (new, repaired, or re-used) are assembled with the valve springs and the valves installed in the cylinder

NOTE

Incomplete review of all the information in this document can cause errors. Read the entire Service Instruction to make sure you have a complete understanding of the requirements.

VALVE LEAK CHECK PROCEDURE:

1. After the intake and exhaust valves are installed on the engine cylinder, put the cylinder assembly on a table with the open end of the barrel toward the operator. If both valves are installed in the same direction (as shown in Figure 1), put the cylinder in the orientation with the open ports of the valve facing upward. For cylinders with intake and exhaust valves installed in opposite directions, you will need to do the leak test one valve at a time and change the cylinder position to let the other valve face upward to do the leak test on the other valve.
2. Temporarily install a plug in the primer/fuel nozzle holes.
3. Fill each port on the valve with Varsol or equivalent to cover the valve face (Figure1).
4. Look for valve leakage through the cylinder barrel into the combustion chamber area (Figure 1).
5. If leakage is found at any valve:
 - a. Clean the cylinder bore and combustion chamber until they are dry. Do step 3 again and monitor the rate of leakage. Seating is satisfactory if seepage does not increase into a run within 5 seconds.
 - b. If leakage occurs within 5 seconds, try to make the valve go into its seat by installing a wooden hammer handle against the tip of the valve. Hit the hammer with the palm of the hand. No other means may be used. Do steps 3 and 4 again and monitor the leakage.
6. Remove the plug from the primer/fuel nozzle.



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Repair any cylinder assembly with leaky intake or exhaust valves in accordance with the instructions in the applicable Lycoming Engine Overhaul Manual.

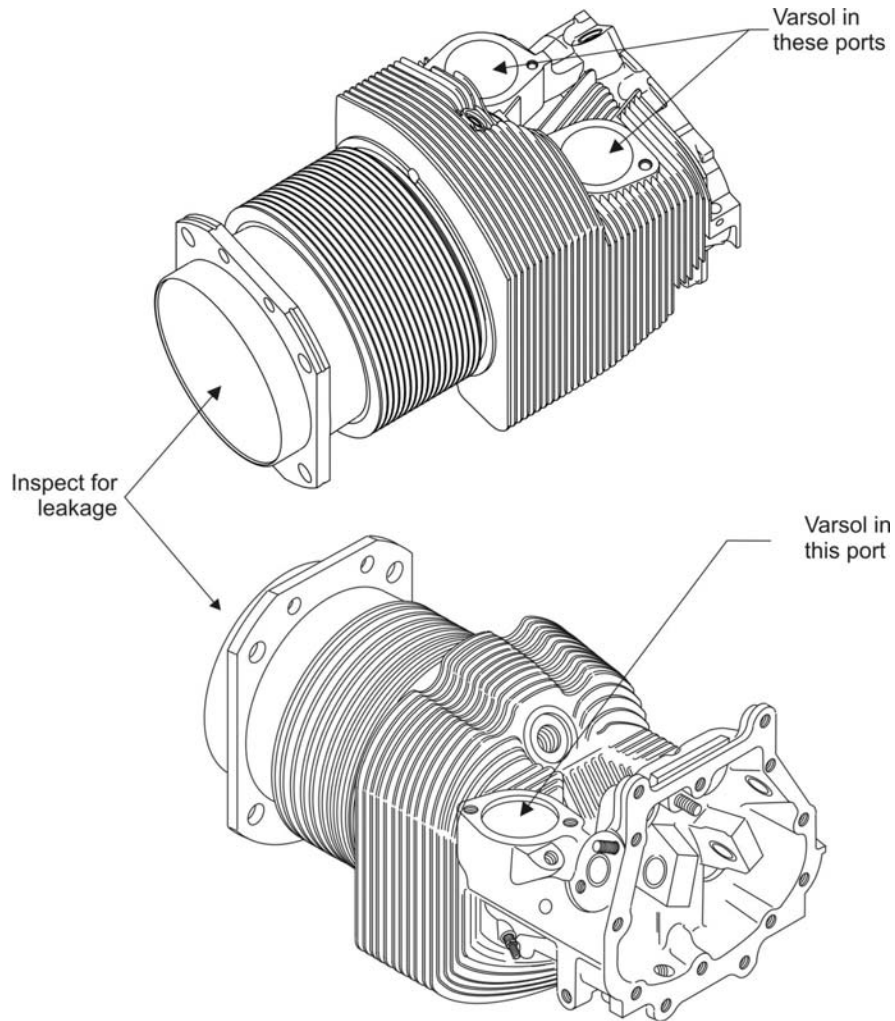


Figure 1
Inspection Area and Varsol Fill Area

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