

Service Instruction for tool number MC-483

SUBJECT: Propeller Oil Control Leak Test Procedure for Lycoming Direct Drive engines with hydraulic propeller governor. (With Propeller Installed on Engine)

Engine Applications: All Lycoming Direct Drive aircraft engines equipped with a propeller governor.

WHEN TO TEST:

1. Whenever sluggish propeller action is reported.
2. Whenever the engine does not hold RPM during cruise, climb or descent.
3. Whenever the engine is going into feather during landing roll out with reduced throttle setting.

Front and rear mounted propeller governors are used on Lycoming engines. The purpose of the air pressure check to the propeller governor system is to determine if the governor oil passages have openings (excessive clearance), leaks or restrictions, or blockages (tight clearance).

The air pressure check will show the condition of the governor oil passages, front bearing clearance, and positioning of the governor circuit oil plug. The governor oil plug is located in the end of the crankshaft behind the governor oil transfer tube.

The procedure for the air pressure test is as follows:

1. Remove propeller governor from engine. Carefully remove governor gasket # MS9144-01 (GOVERNOR GASKET WITH FILTER SCREEN)

NOTE In the following steps, to avoid an air leak, governor gasket P/N 72053 must be used with test plate P/N MC-483.

2. Front mounted governors: Place the gasket and the test plate MC-483, on the governor pad with the air fitting lined up with the governor oil passage that goes to the front bearing (forward hole) or left side of mounting facing the pad. **Refer to Figure 1.**
3. Rear mounted governors: The left side bottom hole on the test plate goes to the front bearing and crankshaft transfer tube. **Refer to Figure 1.**

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MC-483 Lycoming Direct Drive
Engine Propeller Governor Test
Plate Instructions

Image 1. MC-483 Test Plate (unassembled unit)

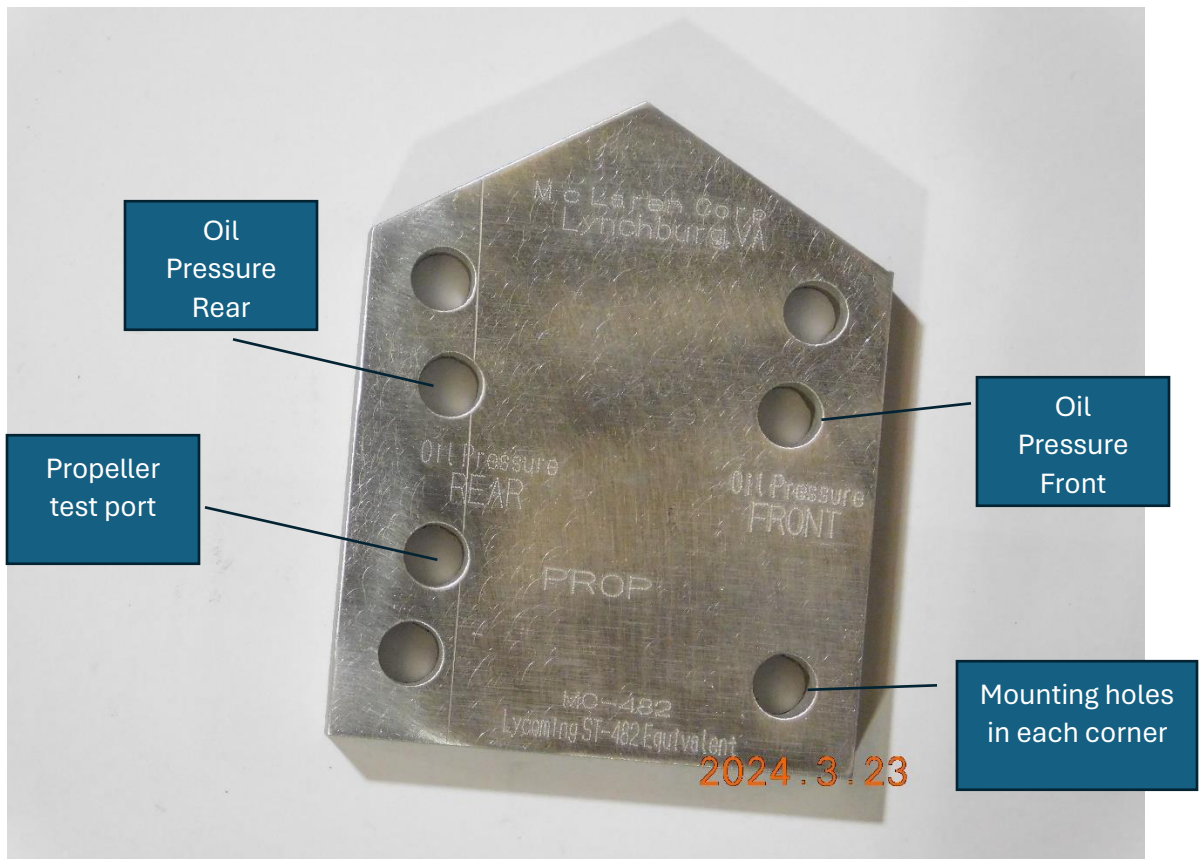


Image 2. MC-483 Test Plate (assembled with quick connect adapter with ¼ turn shut off valve)



Contact us at 434-845-8769 or via www.mclarencorporation.com

Image 3. MC-483 Test Plate (assembled with quick connect adapter with ¼ turn shut off valve)



4. Install quick connect adapter with ¼ turn shut off valve on the prop circuit port.

Connect a calibrated oil pressure gauge (0-100 psi included in kit) to the engine oil pressure port on the test plate.

IMPORTANT! BE SURE THE ¼ TURN VALVE IS IN THE “SHUT OFF” POSITION!

5. Start and warm- up the engine until oil temperature is in the green.

NOTE !!!!

Oil pressure should not be more than 5 psi below the green arc when the engine RPM is in the normal operating range.

AFTER THIS TEST -SHUT DOWN THE ENGINE!!!!

6. **With the engine shut down**, remove the plug from the prop circuit port and install a differential pressure measuring device at the prop circuit fitting on the test plate.

7. Apply shop air to the differential pressure regulator and adjust it to 40 psi on the first gauge. With the engine at operating temperature, the pressure reading on the second gauge should read 6-35 psi if the system is operating properly.

Refer to Figure 4.

Upon completion of the test, reassemble in accordance with aircraft manufacturer's instructions.

NO. 1 GAUGE: 40 PSI IN.

NO. 2 GAUGE: 6 PSI TO 35 PSI ACCEPTABLE

ABOVE 35 PSI NOT ACCEPTABLE
BELOW 6 PSI NOT ACCEPTABLE

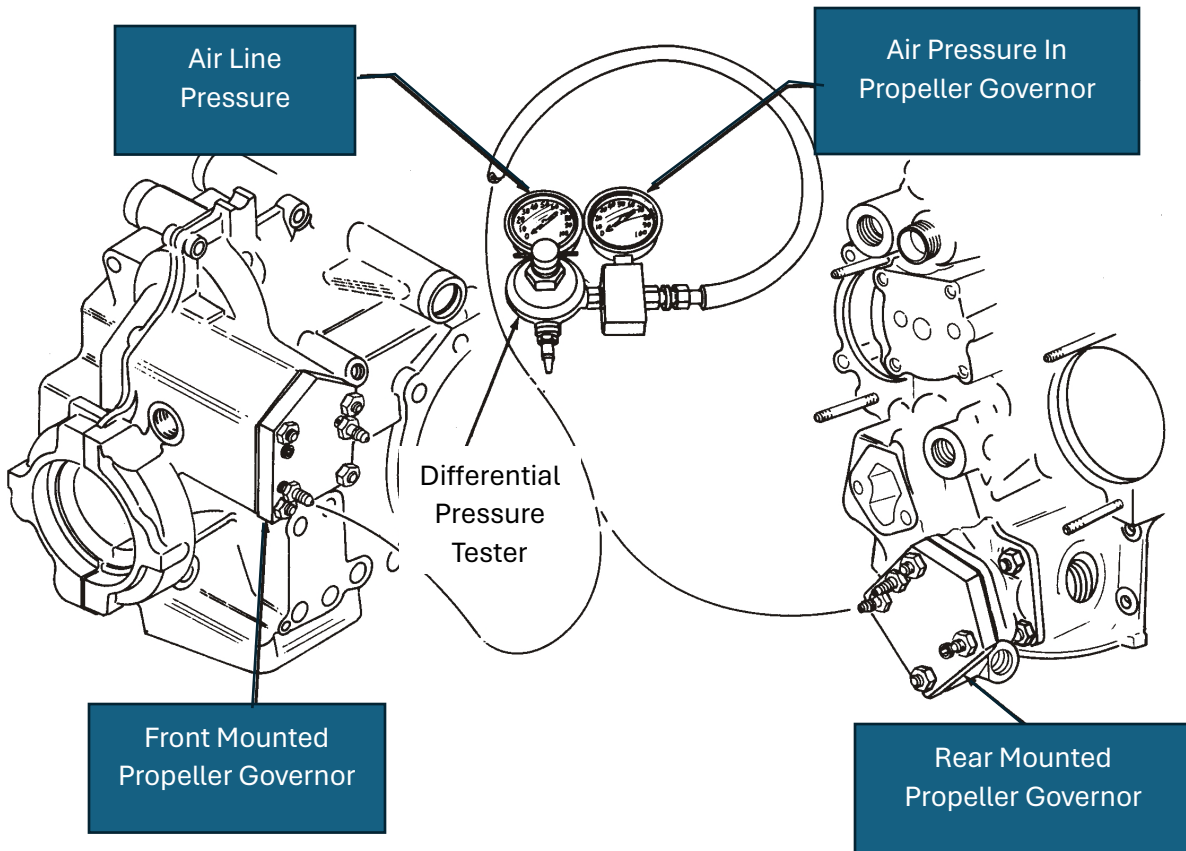


Figure 4. Propeller Governor Circuit Testing