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# SERVICE INSTRUCTION

DATE: July 10, 2003

Service Instruction No. 1462A  
(Supersedes Service Instruction No. 1462)

SUBJECT: Propeller Oil Control Leak Test Procedure (With Propeller Installed on Engine)

MODELS AFFECTED: All Lycoming Direct Drive aircraft engines equipped with a propeller governor.

TIME OF COMPLIANCE:

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 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.

## NOTE

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

2. Front mounted governors: Place the gasket and the test plate P/N ST-483, or equivalent 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.

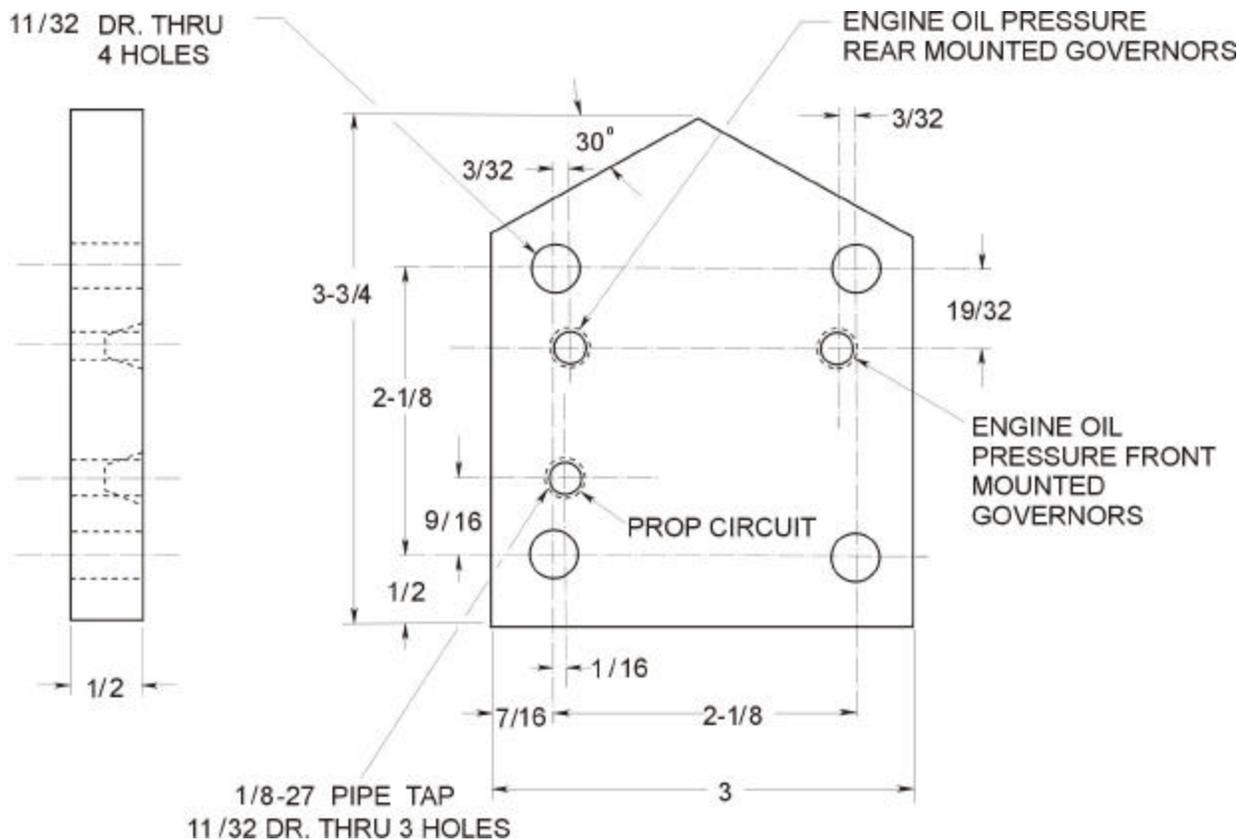


Figure 1. ST-483 Test Plate

4. Connect a calibrated oil pressure gauge (0-100 psi) to the engine oil pressure port on the test plate. Cap off the prop circuit port.
5. Start and warm-up 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.

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.

## NOTE

The differential pressure measuring device is described in the latest revision of Lycoming Service Instruction No. 1191.

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 2.

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

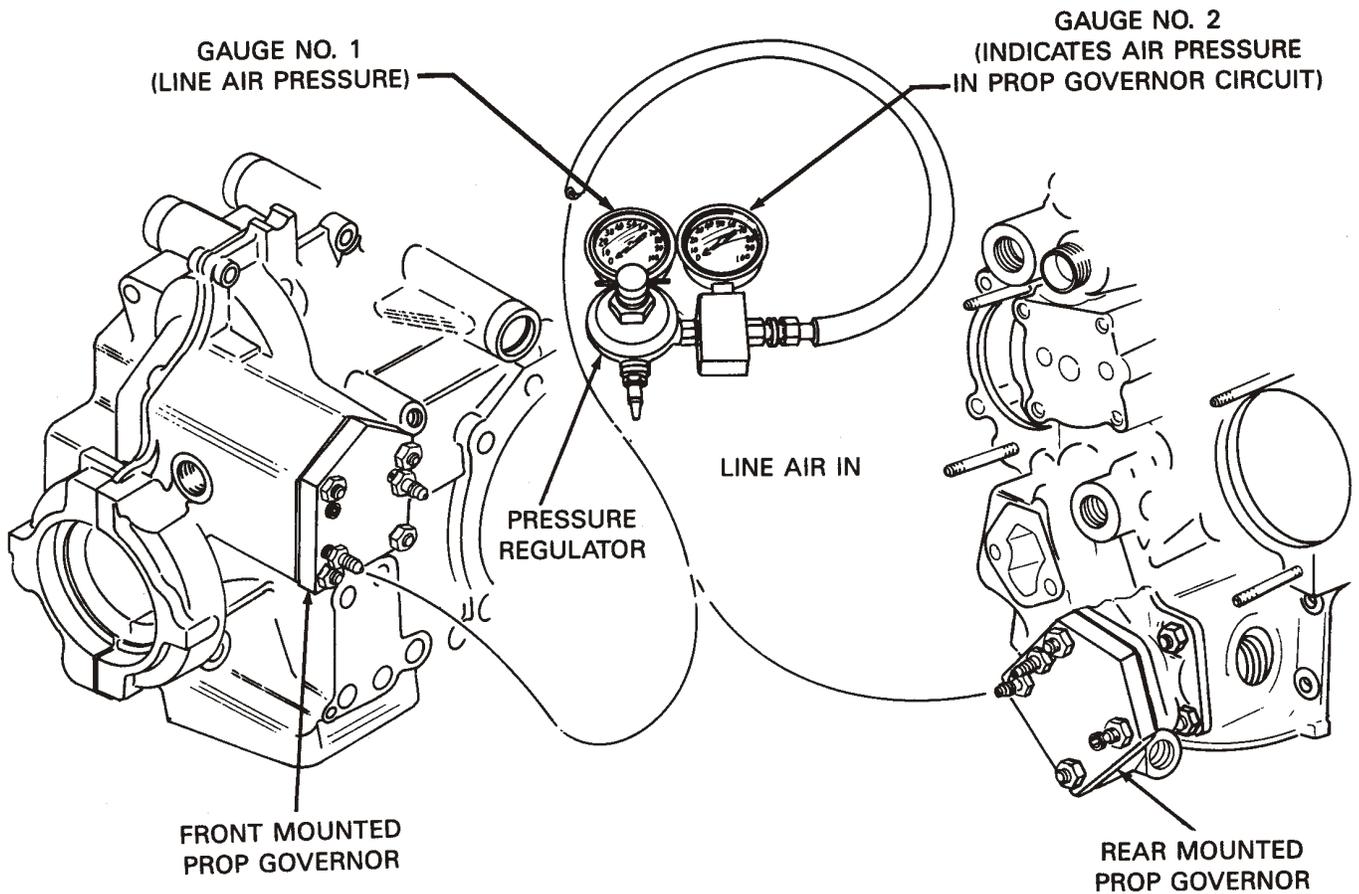


Figure 2. Propeller Governor Circuit Testing