

**SECTION 2
SPECIFICATIONS**

**LYCOMING OPERATOR'S MANUAL
O-235 AND O-290 SERIES**

SPECIFICATIONS (CONT.)

O-235-F, -G, -J

FAA Type Certificate	223
Take-off horsepower	125
Take-off RPM	2800
Rated horsepower	125
Rated RPM	2800
Bore, inches	4.375
Stroke, inches	3.875
Displacement, cubic inches	233.3
Compression ratio	9.7:1
Prop. drive ratio	1:1
Prop. driven rotation (viewed from rear)	Clockwise
Firing orders	1-3-2-4
Spark occurs, BTC	25°
Rocker clearance, cold	.007/.009

O-235-N, -P

FAA Type Certificate	223
Take-off horsepower	116
Take-off RPM	2800
Rated horsepower	116
Rated RPM	2550
Bore, inches	4.375
Stroke, inches	3.875
Displacement cubic inches	233.3
Compression ratio	8.1:1
Prop. drive ratio	1:1
Prop. driven rotation (viewed from rear)	Clockwise
Firing orders	1-3-2-4
Spark occurs, BTC	20°
Rocker clearance, cold	.007/.009

O-235-K, -L, -M

FAA Type Certificate	223
Take-off horsepower	118
Take-off RPM	2800
Rated horsepower	118
Rated RPM	2800
Bore, inches	4.375
Stroke, inches	3.875
Displacement, cubic inches	233.3
Compression ratio	8.5:1
Prop. drive ratio	1:1
Prop. driven rotation (viewed from rear)	Clockwise
Firing orders	1-3-2-4
Spark occurs, BTC	20°
Rocker clearance, cold	.007/.009

CAUTION

AFTER ALL CYLINDER BASE NUTS HAVE BEEN TIGHTENED, REMOVE ANY NICKS IN THE CYLINDER FINS BY FILING OR BURRING.

- (9) Assemble each push rod in its respective shroud tube, and assemble each rocker in its respective position by placing rocker between bosses and sliding valve rocker shaft in place to retain rocker.
- (10) *O-290-D2 Series* – Be sure that the piston is at top center compression stroke and that both valves are closed. Check clearance between the valve stem tip and the valve rocker. In order to check this clearance, place the thumb of one hand on the valve rocker directly over the end of the push rod and push down so as to compress the hydraulic tappet spring. While holding the spring compressed, check valve clearance, which should be between .028 and .080 inch. If the clearance does not come within these limits, remove the push rod and insert a longer or shorter push rod, as required to correct clearance.

NOTE

Inserting a long rod will cause a decrease in valve clearance.

- (11) *O-235, O-290-D Series* – Be sure that the piston is at top center compression stroke and that both valves are closed. Assemble adjusting screw in valve rockers and using clearance gage adjust the clearance between the valve tip and valve rocker. Adjust in the following manner:

Set tappets with .007 in. - .009 in. clearance cold. Recheck tappet clearance after run-in, clearance should be from .006 in. to .012 in. After adjusting, lock the adjusting screw in place with the locknut.

- (12) *All Engines* – Install gaskets and rocker box covers, intake pipes, drain tubes and exhaust manifold. Install spark plugs and ignition harness.

5. *GENERATOR DRIVE BELT TENSION.* Check the tension of a new belt 25 hours after installation. Refer to latest revision of Service Instruction No. 1129 for methods of checking generator drive belt tension.