

**Service Letter**

Technical Aspects are FAA Approved

**Number: L05-01 A**  
**INITIAL RELEASE**

**Date:** 02/11/2005

**Subject:** Superior PMA replacement Piston Ring gap information for Lycoming engines with straight (no choke) steel cylinder bores.

**Engine Application:**

Make	Models
Lycoming	320, 340, 360 and 540 series

**Compliance:** Any time new Superior piston rings are installed:

Superior Piston Rings:

The applicable engine models, when equipped with straight steel (no choke) bore cylinders and three ring pistons, use the following piston ring part numbers:

**Caution:** These straight steel bore cylinders must not be confused with choked steel cylinders manufactured by Superior Air Parts or other PMA manufacturers.

Engine Models	Ring Part Numbers and Location
320, 340, 360 and 540 series	SL74989 - Top Compression Ring SL74989 - Second Compression Ring SL73857A - Oil Control Ring

Note: These rings also are available in plus .010 and plus .020 oversizes. The ring gap data in this document applies to standard, plus .010 and plus .020 Superior piston rings.

**Piston Ring Gaps:**

The table below provides the correct gaps for new Superior piston rings when installed in the cylinder bore.

Part No.	Ring Type	Ring Gap.	Maximum-Used Cylinder
SL74989	Compression	.020 - .030 in.	.047 in.
SL73857A	Oil Control	.015-.030 in.	.047 in.

The ring should be inserted into the cylinder bore and pushed in to the first 4.0 inches of the barrel, using a piston (Superior recommends measuring the gap at approximately 1.2 inches from the bottom of the cylinder barrel, because the bore is normally most round in the flange area). Always apply a small amount of engine oil to the cylinder bore and ring face before inserting it in the cylinder bore. Use of a piston will assure the ring is square with the cylinder bore. If the ring is not squared up in the bore, erroneous readings will occur. Measure the gap using a feeler gage. The oil control ring gap is measured

without the expander spring installed. As a cautionary measure it is recommended that the gap also be checked near the top of the ring travel to assure that the cylinder does not have choke. Gap at the top of ring travel must be within the Table Limits.

If a ring gap is below the minimum limit at either the 1.2 to 4.0 location or at the top of the ring travel locations, it must be dressed until the acceptable gap is reached. It is recommended that a ring gap dressing tool be used. These are available from most mechanic tool suppliers. If a file is used for this purpose, care must be exercised to keep the ends of the ring square and true. After dressing the ring gap, break the edges very slightly (.005 inch or less) to remove sharp edges and burrs, using a fine flat file.