

**WARRANTY DISCLAIMER**

Due to the nature of performance applications, the parts sold by MAHLE Motorsports, Inc. are sold without any express warranty or any implied warranty of merchantability or fitness for any particular purpose. MAHLE Motorsports shall not, under any circumstances, be liable for any special, incidental or consequential damages, including, but not limited to, damage or loss of property or equipment, loss of profits or revenues, cost of purchased or replacement goods, or claims of customers of the purchaser which may arise and/or result from the sale, installation or use of these parts. MAHLE Motorsports, Inc. reserves the right to make product improvements or changes without notice and without incurring liability with respect to similar products previously manufactured. These parts are designed primarily for off-highway use. Check State and Federal laws and emission regulations.



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www.mahlemotorsports.com

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**IMPORTANT INFORMATION PLEASE READ**

We appreciate your purchase of MAHLE Performance Rings.

Please take a minute and read this information sheet before you begin installing your new rings. It is packed with helpful information and tips to help you get maximum performance and reliability from your purchase.

At MAHLE Motorsport our top priority is customer satisfaction. While this sheet is designed to answer the most common questions, don't hesitate to give us a call with your specific questions

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**PREPARING THE RINGS** Drop in ring sets typically require no adjustment to end gaps, but MAHLE recommends that the rings be checked for minimum end gap. File fit rings require individual gap adjustments to the top and second rings. This allows you to set the ring gap precisely to your exact needs. The following chart gives suggested minimum ring end gaps for various applications. If running aggressive boost or nitrous applications it may be necessary to increase end gaps.

**PROPER RING GAP MEASUREMENT** (See chart) A torque plate is highly recommended to insure correct measurements. The ring should be square in the bore, 1 inch down from the deck. Measure the end gap with a feeler gauge or other measuring device.

Application	Top Ring	Second Ring	Oil Ring Rail
High Performance Street - NA	Bore x 0.0045"	Bore x 0.0040"	Min 0.015"
Circle Track, Drag Racing - NA	Bore x 0.0050"	Bore x 0.0060"	Min 0.015"
Nitrous up to 200HP (25HP/cyl)	Bore x 0.0060"	Bore x 0.0050"	Min 0.015"
Nitrous over 200HP (25HP/cyl)	Bore x 0.0070"	Bore x 0.0070"	Min 0.015"
Turbo/Supercharged up to 15lb	Bore x 0.0060"	Bore x 0.0050"	Min 0.015"
Turbo/Supercharged over 15lb	Bore x 0.0070"	Bore x 0.0070"	Min 0.015"
Diesel - Turbocharged	Bore x 0.0060"	Bore x 0.0055"	Min 0.015"

**OIL CONTROL RING TENSION** MMS highly recommends that all wet sump or aluminum block applications use standard tension. Standard tension (3mm) expander sets are available to supplement the "ML-043" sets which are low tension.

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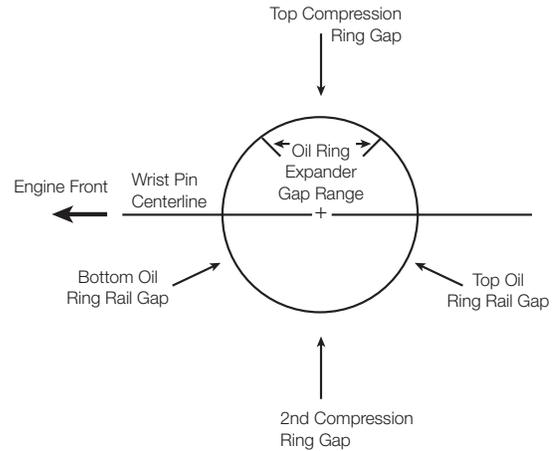
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## PROPER RING FILING

The ring gap should be filed using the proper ring gap filing tool. Ring gap should only be filed in an inward direction and square to the ring sides.

## PROPER RING ALIGNMENT



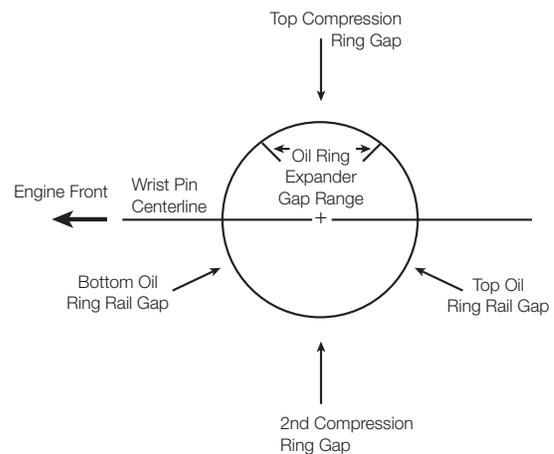
*Due to the nature of performance applications, this information should not be considered absolute. Final decisions concerning the installation and use of these products is ultimately the responsibility of the customer.*

**WARNING: Tight ring gap clearances may cause major engine damage.**

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