

**Gapless® 2<sup>nd</sup> or  
Conventional Ring Sets**  
(Gapless Top Ring sets refer to green installation sheet.)

**NON FILE-TO-FIT  
Ring End Gap Supplement**



The specifications listed in the table are based on normal operating conditions. The ideal ring end gap varies and is dependent upon many factors. Additional clearance may be required on Nitrous, Forced Induction and Endurance applications due to increased combustion temperatures. Extra ring gap may be required in Marine, Solid and Filled block applications because of decreased block expansion and increased ring expansion.

For ring installation and placement, follow the instructions found on the installation sheet included with this ring set.

Due to the nature of performance applications and the many variables involved, this information should not be considered absolute. The decision and ultimate responsibility rests entirely with the customer.

**IF YOU ARE NOT SURE, ASK!!! Tech line: (623) 587-7400**

**SAE Recommended Ring Gap Clearances**

| Cylinder Diameter | Ring End Gap Clearances |
|-------------------|-------------------------|
| 1.0000 - 2.3624   | .006 - .014             |
| 2.3625 - 2.9524   | .008 - .016             |
| 2.9525 - 3.5424   | .010 - .020             |
| 3.5425 - 4.3299   | .012 - .022             |
| 4.3300 - 5.1174   | .014 - .026             |
| 5.1175 - 5.9049   | .016 - .030             |
| 5.9050 - 6.8899   | .020 - .035             |
| 6.8900 - 8.9999   | .024 - .041             |

TSS/91 Series and Classic Series Rings are Non File-To-Fit ring sets. End gaps are designed to fall within SAE specs.

**Note:** If the end gap is less than the minimum specified for your bore size, it may be necessary to increase the end gap by filing the ring ends. Follow the method described below.

**Proper Ring Gap Measuring Procedure**

- Torque plate should be attached to engine block and torqued to specifications (if available).
- Piston ring should be square in the bore 1" down from the deck.
- Measure ring end gap with feeler gauge or equivalent measuring device.

**Proper Ring Filing**

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

**Hypereutectic Piston Use**

- Follow the piston manufacturers ring end gap recommendations.

**An Important Fact**

Ring sets are manufactured to fit a specific bore size. Every .001" that the bore is larger than the specified bore size causes ring end gap to increase by .0035".

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Remember, your experience with your specific application may exceed ours. If our recommendations vary from what you've previously used, play it safe and use the larger of the two end gap sizes.

For ring installation and placement, follow the instructions found on the installation sheet included with this ring set.

Due to the nature of performance applications and the many variables involved, this information should not be considered absolute. The decision and ultimate responsibility rests entirely with the customer.

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**CAUTION... THESE ARE FILE-TO-FIT RINGS!!!**

**Proper Ring Gap Measuring Procedure**

- Torque plate should be attached to engine block and torqued to specifications.
- Piston ring should be square in the bore 1" down from the deck.
- Measure ring end gap with feeler gauge or equivalent measuring device.

**Proper Ring Filing**

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

| Application           | Top Ring      | Second Ring   | Oil Ring Rail |
|-----------------------|---------------|---------------|---------------|
| Street, Strip, Circle | Bore x .0045" | Bore x .0035" | Min. .015"    |
| Nitrous up to 150hp   | Bore x .006"  | Bore x .0045" | Min. .015"    |
| Nitrous over 150hp    | Bore x .008"  | Bore x .0055" | Min. .015"    |
| Blown Gas*            | Bore x .0055" | Bore x .0035" | Min. .015"    |
| Blown Alcohol*        | Bore x .0045" | Bore x .0035" | Min. .015"    |
| Blown Nitro*          | Bore x .0055" | Bore x .0035" | Min. .015"    |

\*Indicates any type of forced induction system.

**Hypereutectic Piston Use**

- Follow the piston manufacturers ring end gap recommendations.

**An Important Fact**

Ring sets are manufactured to fit a specific bore size. Every .001" that the bore is larger than the specified bore size causes ring end gap to increase by .0035".