

## **Wiseco Piston Ring Terminology**

**Axial Clearance:** The distance between the ring axial height and the piston ring groove width.

**Axial Height:** The width (thickness) of the ring in the axial direction.

**Back Clearance:** Distance between the inside diameter of the ring and the back of the ring groove when the ring is flush with the ring land.

**D-Wall:** A specification established by the Society of Automotive Engineers (S.A.E) that dictates the radial width of a standard automotive piston ring using this formula: Bore Diameter divided by 22 = radial thickness (3.386 divided by 22 = .0154)

**End Gap:** The end gap clearance when the ring is compressed to the bore diameter.

**Gas Nitrided:** A process used to harden the perimeter of a ring where nitrogen atoms penetrate the base material and form an extremely hard outer layer that provides excellent wear and scuff resistance.

- A. Neutral Barrel: A term used to describe a piston ring that has no torsional bias or twist.
- B. Positive Twist: An asymmetric change in the ring cross-section that causes it to twist in an upward direction (toward the piston crown) aiding ring sealing of the top and bottom of the ring groove. Positive twist is used only on top compression rings.
- C. Reverse Twist: An asymmetric change in the ring cross-section causing the ring to twist downward (toward the piston skirt) that enhances the second compression ring's oil scraping properties.

**Radial Width:** The ring width in the radial direction.

**Ring Axial Sides:** The top and bottom surfaces of the ring.

**Ring Face:** The section that contacts the cylinder wall.

**Torsional Twist:** The installed position of the ring due to a chamfered area on either ring side that helps the ring cross-seal.