



Wossner Piston Installation Instructions and ring end gap

Important: Inspect all of your pistons, pins, rings before installation or modification. Parts that are altered, scratched, or damaged are non-returnable.

Piston to Bore Clearance: Wossner pistons already have the recommended clearance built in. Skirt diameter is smaller than the recommended bore size (see sizing on box). Some applications: Nitrous, supercharged, turbo, and cold water marine engines may need more than the recommended clearance.

Wossner pistons are measured 90 degrees from the pin axis at the widest point on the piston skirt.

Wossner clearances are set before coating. Coatings are 0.012mm (0.00047") thick and should be deducted when measuring for piston to bore clearance.

Adding additional clearance then recommended may create extra engine noise (piston slap) upon start up and cold running. This can cause damage to the pistons and/or cylinder. Some piston noise is normal on engine start up and during cold running this will reduce when engine is at operating temperature. It is advisable to avoid high loads or high RPM during engine warm up.

Ring End Gap:

Application	Top Ring Gap in mm (Min)	2 nd Ring Gap in mm (Min)	Oil Ring Rail in mm
N/A Street	.004 x Bore	.005 x Bore	Min .4
N/A Race	.0045 x Bore	.0055 x Bore	Min .4
Turbo/Supercharged	.006 x Bore	.006 x Bore	Min .4
Dirt/ATV/Snow	.004 x Bore	.005 x Bore	Min .4
Nitrous	.007 x Bore	.0065 x Bore	Min .4
Circle Track/Drag Race	.0055 x Bore	.006x Bore	Min .4

Ring end gap should be measured with the ring square in the bore on a fresh hone. Cylinder should be free of any taper.

Wrist Pin Offset: Many Wossner piston have an offset wrist pin. These pistons need to be installed with the offset to the thrust side of the engine. On pistons with centered wrist pins, the smaller valve pocket(s) to the exhaust side of the engine except some five valve engines.

Piston to Valve Clearance: With the many cam profiles, gasket thicknesses, and deck clearances available it is important to make sure there is adequate clearance between the piston and the valve. Wossner recommends a minimum of 1.5mm (.060") Intake and 2.0mm (.080") Exhaust. Using Clay is the most common method.

Piston to Head Clearance (Squish): Wossner recommends a minimum of 0.7-1.0mm (.040") for naturally aspirated engines and 1.0-1.5mm (.040"-.060") for Turbo, Supercharged, or Nitrous applications.

Wrist Pin Clips: Most of Wossner pistons use a Round Wire type lock. Before installation check the lock groove for debris or burrs that will keep the lock from seating fully in the groove. Insert one end of the lock in the groove and spiral lock into groove. **DO NOT COMPRESS LOCK TOGETHER TO GET INTO THE GROOVE**, this will distort the lock and can cause lock failure.

It is good practice to check over piston crown and valve pockets for and sharp edges. Sharp edges should be removed to avoid potential "Hot Spots" on the piston.

Cleaning: Pistons should be cleaned with warm soapy water and dried before installation. We recommend a thin coating of oil on the piston skirt and cylinder wall. Avoid using Synthetic oil during engine break-in as this may keep the rings from properly seating. Lubricate wrist pins with oil or assembly lube before installation.

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