

Wiseco Piston Installation Guide

1.) CYLINDER PREPARATION & SUGGESTED CLEARANCES:

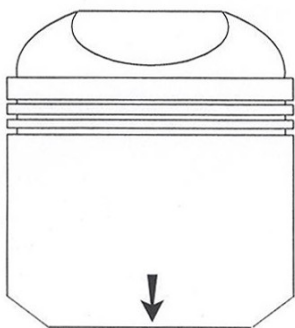
Most cylinders must be bored and honed before piston kit can be assembled.

WISECO pistons have a special diamond turn finish. **To check for clearances measure pistons across thrust faces 90° from the wrist pin hole at the base of piston.** Recommended procedure is to check piston size and hone cylinder for the desired clearance.

Each cylinder should be deburred on top and generously chamfered on bottom for ease of piston and ring installation. Finish hone with a 280-400 grit hone. A good cross hatch finishing pattern is important for best results. **CAUTION: Wash cylinder assembly with soap and water, then swab with new # 10 oil on a clean rag until all tendency of rag discolor is gone. Washing in solvent will not remove the abrasive from finished cylinder walls.**

Suggested Piston to cylinder wall Clearance .003" - .0035"

Excessive clearances will cause severe engine noise



1.) To check for clearances measure pistons across thrust faces 90° from the wrist pin hole at the base of piston as illustrated.

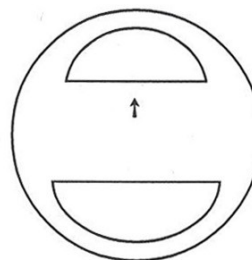
These clearances are for normal operation and conditions. Improper timing, and abusive operating conditions can cause higher than normal piston temperatures. Under these conditions minimum piston clearances may not be sufficient. Pistons used for racing or special applications may require additional clearances.

MINIMUM RING END GAP IS .004" FOR EVERY INCH OF BORE SIZE.

Example: 3.000" Bore = .012" Ring End Gap

PISTON INSTALLATION

2.) THE ARROW ON TOP OF A PISTON SHOULD POINT TOWARDS EXHAUST SIDE OF CYLINDER AFTER INSTALLATION. PISTON TO CYLINDER FIT IS CRITICAL. FOLLOW ADVISED CLEARANCES GIVEN ABOVE FOR BEST RESULTS. ALWAYS USE NEW GASKETS AND TORQUE CYLINDER HEAD TO MANUFACTURER'S SPECIFICATIONS. IN SOME INSTANCES CYLINDER HEADS MAY HAVE TO BE RE-TORQUED AFTER BREAK-IN TO INSURE PROPER HEAD GASKET SEAL.



**Top View
of Piston**

3. MODIFIED CAMS OR ALTERED CAM TIMING

Most Wiseco pistons are machined with valve pockets that are deeper and larger than stock. These pockets provide adequate valve clearance for most modified or high lift cams. **It is very important that valve to piston clearance be checked with every modified cam installation.** This is necessary due to the many variations in cam profile and the tuners selected cam timing.

V-Twin Mfg.
Cylinder and Piston Kit
Evolution Big Twin or Sportster

Proper Installation of any Evolution Big Twin or Sportster Piston that is not marked with arrows.

All Evolution pistons have wrist bore that are offset in the piston for proper loading during operation.

To determine the correct way to install a non-marked piston:

1. Measure from wrist pin bore to back of edge of piston.
2. Measure from wrist pin bore to front edge of piston.

The shorter distance of the two goes to the back of the motor.
Procedure is the same for both front and rear piston.



Shop Tip Piston Installation

Caution: Do not install piston pin without lubricating it first with motor oil or assembly lube. Touch up outer edges of piston pins with emery cloth before installation.

1. Refer to applicable service manual for proper installation methods.
2. Piston should be measured front-to-rear at the base of piston skirt, perpendicular to wrist pin.
3. Piston should be set-up with the following tolerances:

Recommended piston/cylinder running clearances:

	Minimum	Maximum	Preferred
Evolution) Models (Aluminum Cylinders)	.0015	.0022	.002
Big Twin Models (Cast Iron Cylinders)	.0015	.003	.0025
Sportster Models (Cast Iron Cylinders)	.003	.004	.0035

Specifications for ring end-gap are supplied with the ring sets and vary by type and size.

Note: Run engine at moderate speeds for at least 500 miles, avoiding excessive running in lower gears, in order to properly break-in new pistons and rings.