

PRODUCT KNOWLEDGE

NEW PRODUCTS

Q: What piston to wall clearance do I run?

A: Proper piston to wall clearance depends on the power level of the engine. Use the chart to the right as a guideline. Minimum clearances are fine for naturally aspirated street, however the clearance should be increased for higher output engines, especially with nitrous and forced induction.

Q: Where do I measure the piston skirts?

A: For the most accurate measurement place your micrometer at .500" from the bottom of the skirt 90 degrees from the pinhole.

Q: How deep are the Valve reliefs?

A: The valve pocket depths vary by make and application. Most FPS Series forged pistons have valve reliefs that are .030 deeper than stock. The SRS series are designed for camshafts in the .640" to 670" lift range for small blocks and about .780" lift for big blocks. This can vary somewhat due to camshaft lobe ramp rates and centerlines of the camshafts.

Q: Can Probe pistons take NOS (how much)?

A: ABSOLUTELY! Standard weight Probe FPS and SRS Series are manufactured with sufficient deck thickness to handle even large nitrous systems. The ring lands are moved down to provide additional strength in that area.

PISTON CLEARANCE CHART

BORE	FPS SERIES		SRS SERIES	
	MIN	MAX	MIN	MAX
3.000-3.631	.0010	.0040	.0020	.0060
3.625-3.999	.0015	.0045	.0025	.0065
4.000-4.199	.0020	.0050	.0030	.0070
4.200-4.500	.0025	.0055	.0035	.0075



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Q: CAN PROBE PISTONS TAKE BOOST? (HOW MUCH)

A: This is the same area as the Nitrous. As the minimum thickness is .200" in the standard weight pistons they are normally used in the 15 to 17 lbs. range with no problems. The same caveat applies for a lean out.

Q: HOW MUCH HORSEPOWER CAN PROBE PISTONS HANDLE?

A: There really is no limit. Probe forged pistons are machined on 2618-T61 blanks and can handle as much horsepower as you can throw at it. It's really all about the tune-up. If the mixture and timing are correct you'll never have a problem.

Q: WHAT WILL LIGHTER PISTONS DO FOR ME?

A: Light pistons have several benefits. They reduce stress on the rotating assembly and block, especially at high rpm. They allow quicker wind up of the engine, much the same as a light flywheel would. They make balancing easier, reducing or eliminating the need for expensive Mallory metal.

Q: WHAT RING END GAP SHOULD I RUN?

A: Proper ring end gap is essential to achieve maximum power output. Too large a gap can allow combustion pressure to escape past the rings. Too small a gap can cause the rings to end-butt and damage the rings and cylinder walls. Both conditions will reduce the performance level of the engine. The proper end gap increases with the power output of the engine. Please use the following formula.

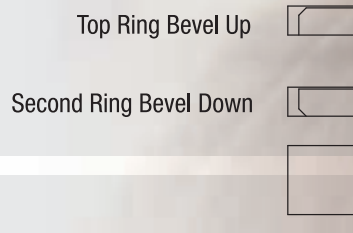
Top ring multiply the bore size by .004 (i.e. 4.000 x .004 = .016)

Second ring add .003 to top ring calculation (i.e. 4.000 x .004 + .003 = .019)

For power adders increase gap by .005

Q: WHICH WAY DO THE RINGS GO?

A: The easiest way to tell is to look at the bevel on the inside edge of the ring. The next process is to decide the direction the ring is going when it does its work. So the bevel on the inside edge of the top ring should face the top of the piston, which will force the ring out under compression. The second ring is there to scrape oil off the cylinder wall as it travels down. Therefore install the second ring with the bevel facing the bottom of the piston.



Q: HOW MANY SPIRO-LOCKS DO THEY TAKE?

A: With the exception of a few specialty pistons, all Probe pistons use two spiro-locks per side. Never leave one out. That would allow the pin to hammer its way out of the piston.

Q: HOW DO YOU INSTALL SPIRO-LOCKS?

A: Firmly grasp the ends of the Spiro-locks and pull them apart until the lock looks sort of like the threads on a screw. Put one tip into the receiving groove of the piston and twist it in. It sounds a lot easier than it is, but be patient and make sure they are each fully seated in the groove.

Q: HOW DO YOU REMOVE SPIRO-LOCKS?

A: Use a scribe, or the sharpened point of a small screwdriver to get behind the tab on the end of the spiro-locks. Pry the tip out and simply pull it straight out of the groove.

Q: HOW FAR DOWN IS THE TOP RING?

A: Where it is physically possible, the standard is a minimum of .200" for small block and .350 for Clevalands, Chevy and Ford Big Blocks. **If this dimension is a cause for concern please call our techs for more information.**

Q: HOW THICK IS THE DECK OF THE PISTON?

A: The FPS Series Pistons normally run deck thicknesses in the .350" + range. The SRS series usually utilizes a deck of about .200".

Q: HOW MUCH RPM CAN PROBE PISTONS HANDLE?

A: There is no practical limit for RPM. In general the higher the RPM the lighter the piston should be (33 ounces at 10,000 rpm is 20 TONS). For the SRS Series pistons 8,500 rpm is common.