



Inside the box, your rings will be wrapped with paper in three sets. Unwrap the three paper bundles and lay the rings on top of their corresponding paper, being careful not to mix them up. The groove name for each set is printed on the outside of the paper wrapping as follows:

**Top groove:** (contains 4 compression rings, for the top groove in 4 pistons)

**Second groove:** (contains 4 compression rings, for the second groove in 4 pistons)

**Oil ring groove:** There are two different types of oil rings that may be included with your set.

- **3 piece oil ring set option:** (contains 4 spacers (corrugated rings), and 8 rails (thin oil rings), for the bottom groove in 4 pistons)
- **Single oil ring with spring option:** (contains 1 oil ring, and one spring, for the bottom groove in 4 pistons)



Lay the rings on top of their corresponding paper, being careful not to mix them up. It is critical the correct ring goes in the correct groove.

### Oil groove, rings installation (two options that may be included with your set):

**Single oil ring with spring option:** If you received the “single oil ring with spring” set, start by installing the spring in the oil ring groove, which is the lowest and widest piston groove. The spring has no up or down and will only partially wrap the piston. There is no standard location for the gap. Next, using the ring expanding pliers gently expand the oil ring until it is wide enough to go over the piston and into the bottom groove over the spring. Be careful not to over expand the ring with the pliers as the rings can break. There is no top or bottom for the single oil ring. The oil ring gap alignment is not critical in relation to the top and second compression ring gaps.

**3 piece oil ring set option:** If you received the “3 piece oil ring set”, start by installing the corrugated spacer ring in the oil ring groove, which is the lowest and widest piston groove. Neither the corrugated spacer ring or the thin oil rings have an up or down and can be installed by hand without the use of any tools. Gently wrap, or “spiral” the corrugated ring into the bottom groove, taking note where the ring seam ended up. Next, spiral one of the thin oil rings above the corrugated ring placing the gap at least 1” to the right of the corrugated ring seam. Now, spiral another thin oil ring below the corrugated ring placing the gap at least 1” to the left of the corrugated ring seam. You should now have a 3 ring sandwich filling up the bottom groove.

### Single oil ring with spring option



Wrap oil groove spring around and push into bottom groove. Orientation is not important.



Using ring pliers, carefully expand oil ring and release into lower groove on top of spring. Gap alignment with the spring is not important.

### 3 piece oil ring set option



Wrap corrugated spacer ring into bottom groove, taking note of the seam location.



Spiral thin oil ring above corrugated spacer, then repeat with another thin oil ring below spacer.



When done you will have a 3 ring sandwich. Make sure the bottom and top thin oil ring gaps are staggered at least 1" to the left and right of the corrugated spacer ring center seam.

**Second groove, compression ring installation:** Using a flashlight, find the tiny stamped dot on the ring. It will be approximately  $\frac{1}{2}$ " to the left of the ring gap. The ring should be installed with the dot facing up, or towards the top of the piston. In this orientation, you will notice a notch running around the bottom outside edge of the ring. Using a ring expanding pliers, gently expand the compression ring over the piston and release into the second groove. Be careful not to over expand the ring with the pliers as the rings can break.

**Top groove, compression ring installation:** Using a flashlight, find the tiny stamped dot on the ring. It will be approximately  $\frac{1}{2}$ " to the left of the ring gap. The ring should be installed with the dot facing up, or towards the top of the piston. In this orientation, you will notice a bevel running around the top inside edge of the ring. Using a ring expanding pliers, gently expand the compression ring over the piston and release into the top groove. Be careful not to over expand the ring with the pliers as the rings can break.

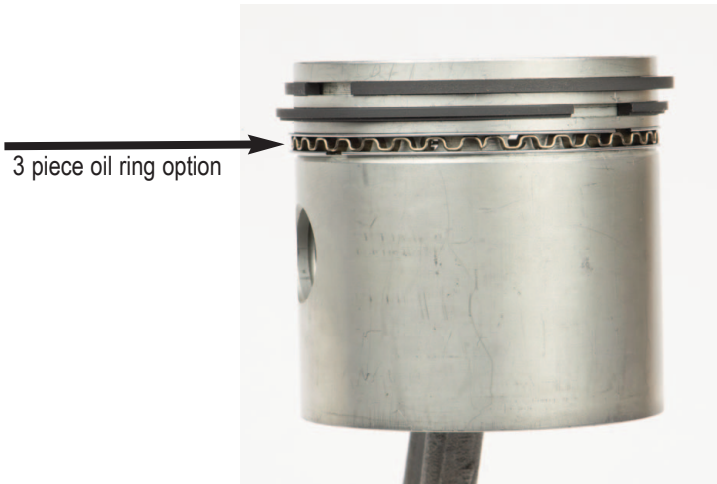
**Compression ring gap alignment:** The top and second compression ring gaps should not line up. Stagger them at least 2" inches apart.



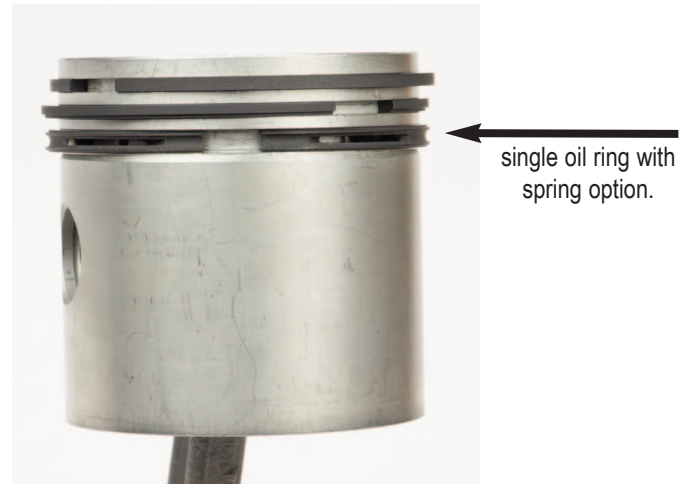
Using ring pliers gently expand the second ring over the piston and release into the second groove.



Using ring pliers gently expand the top ring over the piston and release into the top groove.



Finished ring install, using the 3 piece oil ring option. Top and second ring gaps have been staggered approximately 2".



Finished ring install, using the single oil ring with spring option. Top and second ring gaps have been staggered approximately 2". The oil ring gap location is not critical.