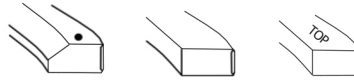




# General Ring Installation Instructions

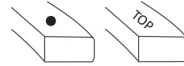
## Groove 1 - Compression Rings:

- Rings with Top, Pip Mark or Dot installed with marking up.
- Rings with no markings and no inner bevel can be installed either way.



## Groove 2 - Scraper Rings:

- Second rings are always directional. Top, Pip Mark or Dot installed with marking up.



## Groove 3 - Oil Ring Groove:

- **3-piece** designs without tabbed rails are not directional and can be installed either direction. Designs with either one or two tabbed rails that are used to prevent rail rotation require the tabs to be installed with the tabs in the recesses of the oil ring groove. Consult the piston or engine manufacturers for specific installation information. \*FIG 1
- **3-piece** oil ring expander points should always be installed up to prevent impingement with oil ring groove drain features used on some pistons. The expander ends must butt and cannot overlap. \*FIG 2
- The expanders of **3-piece** oil rings should be installed first followed by the rails which can be spiraled into the groove. Oil rail end gap specification is .015 - .055" per SAE standard.
- **2-piece** oil rings can be directional or non-directional. The Top, Pip Marks or Dots need to be installed up towards the top of the piston. Install the coil expander into the groove first followed by the oil ring body.
- The gap of the coil expander springs of **2-piece** oil ring designs needs to be positioned 180 degrees from the gap of the oil ring body. \*FIG 3
- Many coil expander springs have a variable pitch design that has an area with reduced spacing between the wire of the expander coils. This area needs to be centered at the gap of the ring body. \*FIG 4. End gap specification is .010-.020"

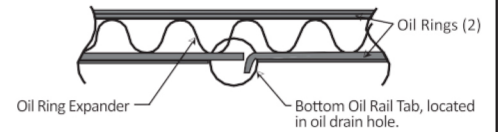


FIG. 1

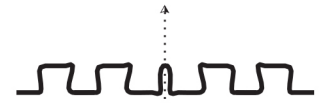


FIG. 2

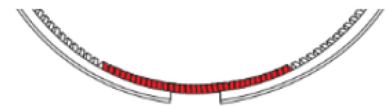


FIG. 4

## Checking Ring to Piston Ring Groove:

All rings when installed and pushed all the way back into the groove should not protrude past the edge of the piston ring lands. \*FIG 5

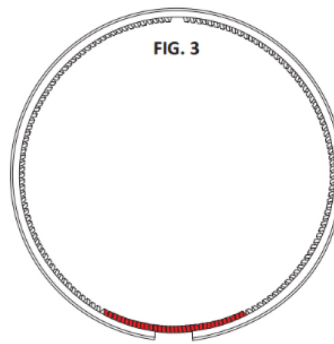
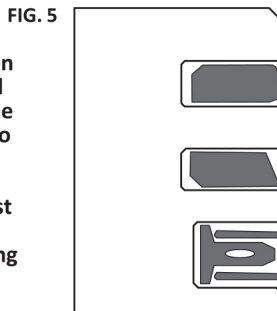
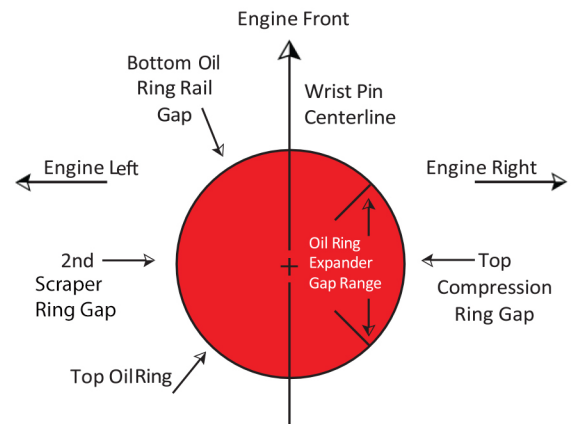


FIG. 3

## Ring Gap Orientation Diagram



## RING END GAPS

End gaps vary depending on piston alloy and operating conditions.

OEM pistons - Refer to manufacturer's recommendations.  
 Silvolite, KB and Icon brands - refer to instruction sheets.  
<https://www.uempistons.com/rt-3-installation-instructions.html>  
 or scan QR code



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