

EMBEDDED O-RING SELF-SEALING FASTENER SYSTEM VS. O-RING and WASHER SEALING TECHNIQUES

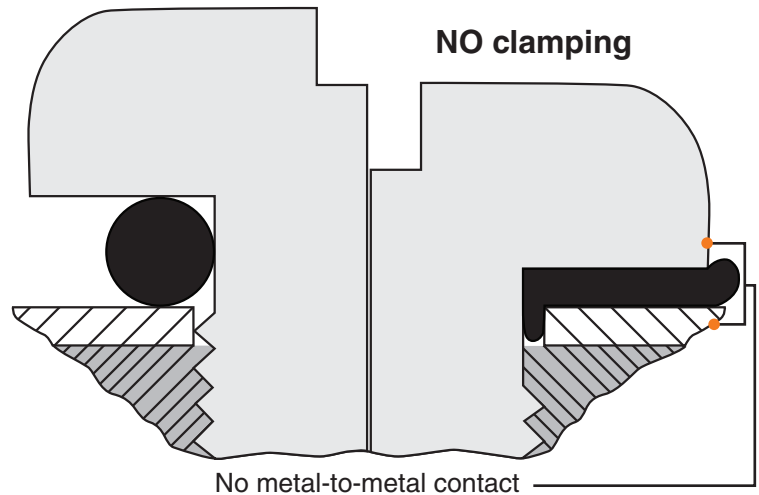
TWO-STEP O-RING TECHNIQUE

ACTION: Crush & Fill

POOR

RESULTS:

- NOT able to meet full torquing requirements without compromising seal
- Contact surface has NO metal-to-metal contact
- Inconsistent/low pressure sealing capacity & possible seal rupture
- NO elastomeric flow-control
- NOT reusable – high probability of O-ring damage
- Two-step technique requires stocking 2 separate parts & 2 SKUs



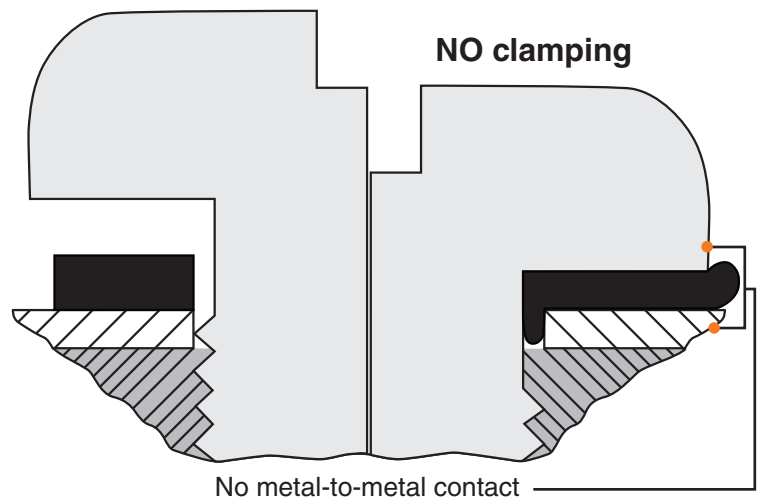
TWO-STEP WASHER TECHNIQUE

ACTION: Crush & Fill

POOR

RESULTS:

- NOT able to meet full torquing requirements without compromising seal
- Contact surface has NO metal-to-metal contact
- Inconsistent/low pressure sealing capacity & possible seal rupture
- NO elastomeric flow-control
- NOT reusable – high probability of washer damage
- Two-step technique requires stocking 2 separate parts & 2 SKUs



ONE-STEP EMBEDDED O-RING-IN-A-GROOVE EXCELLENT TECHNIQUE

ACTION: Predetermined size O-Ring embedded in an asymmetrical groove. Partially compressed (20%) into countersunk-threaded area.

RESULTS:

- System allows full torquing with sealing integrity
- 360° metal-to-metal head-panel contact
- Seals to 20,000 psig against internal/external gas/liquid leakage
- Multiple reusability due to minimum O-ring friction
- Temperature range -160°F to +500°F (-106°C to +260°C)
- UL Recognized

