

VG LX Reverse Taper Actuator Assembly

Supplement



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Original Instructions

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Introduction

This supplement describes how to assemble, install, remove and maintain VG LX reverse taper valve stem and piston assemblies. Use this information in addition to the *Service Manual* for the hot runner.

Assembling and Installing a VG LX Reverse Taper Valve Stem and Piston Assembly

To install a reverse taper valve stem and piston assembly, do the following:

NOTE: This procedure must be repeated for every valve stem and piston assembly.

1. Install an interior O-ring seal into the seal groove by rolling it over the thinner rim of the piston. No tools are required.



Figure 1-1 Double Delta Inner Seal Installed on Piston

2. Place the seal installation tool on top of the piston.
3. Install the outer O-ring seal by pushing the seal over the seal installation tool until it sits over the interior O-ring seal.
4. Remove the seal installation tool.
5. Make sure the outer seal is uniform around the circumference of the piston.
6. Place the piston on a workbench with the thinner rim on the bottom.
7. Carefully press the seal compression tool over top of the piston.



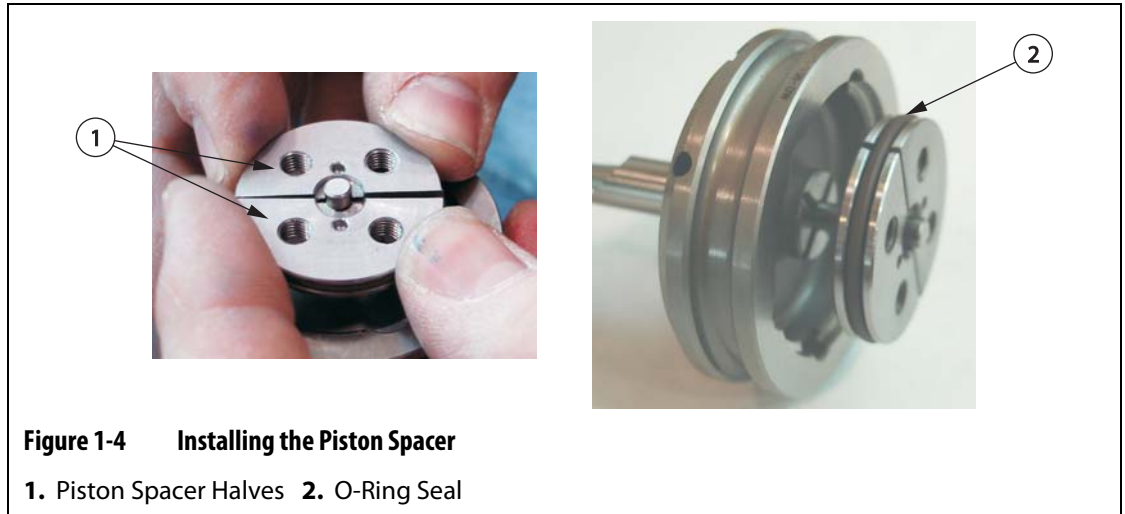
Figure 1-2 Installing the Seal Compression Tool

8. Turn the seal compression tool upside down so the piston is at the top of the tool.
9. Using a plastic dowel, push the piston down the length of the seal compression tool until it makes contact with the bench.

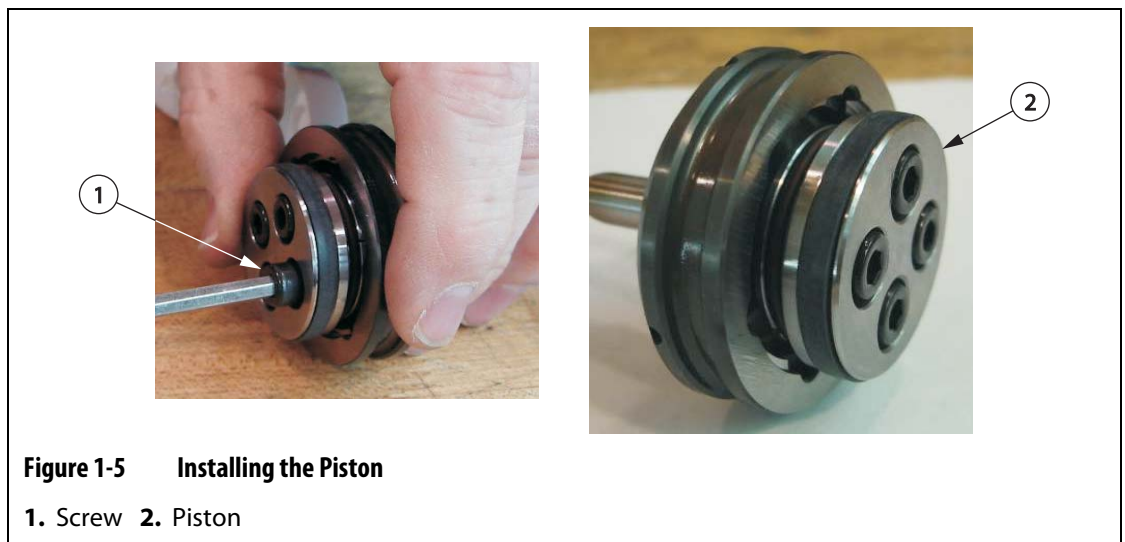


Figure 1-3 Compressing the Double Delta Seals

10. Remove the seal compression tool by pulling it up over the plastic dowel.
11. Secure together the two pieces that make the piston spacer using an appropriate O-ring seal.
12. Push the valve stem through the valve bushing until the stem head is visible.
13. Install the piston spacer over the valve stem at the notch below the stem head.
Make sure the counterbore holes in the piston spacer face in the opposite direction of the valve bushing.

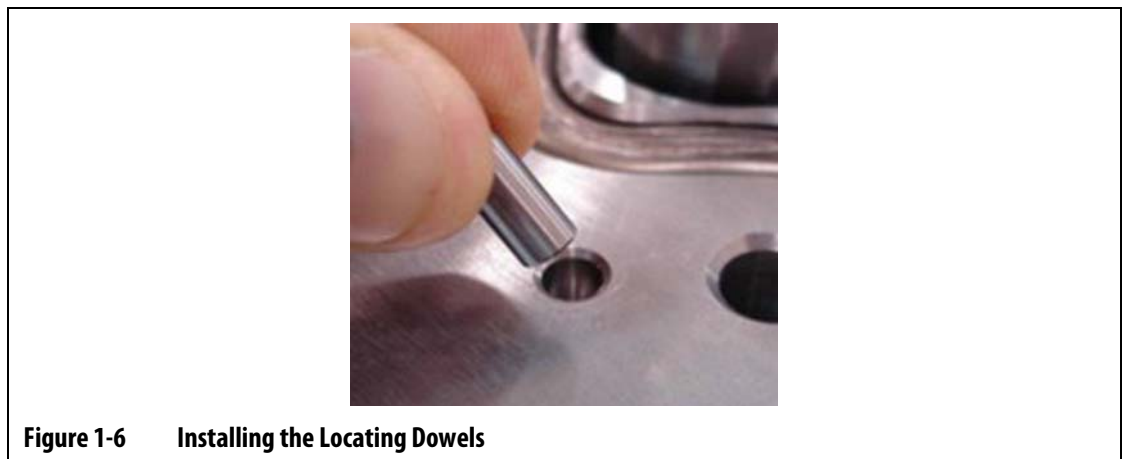


14. Apply a high temperature anti-seize lubricant to four screws.



15. Use the screws to attach the piston to the piston spacer. Hand tighten the screws only.

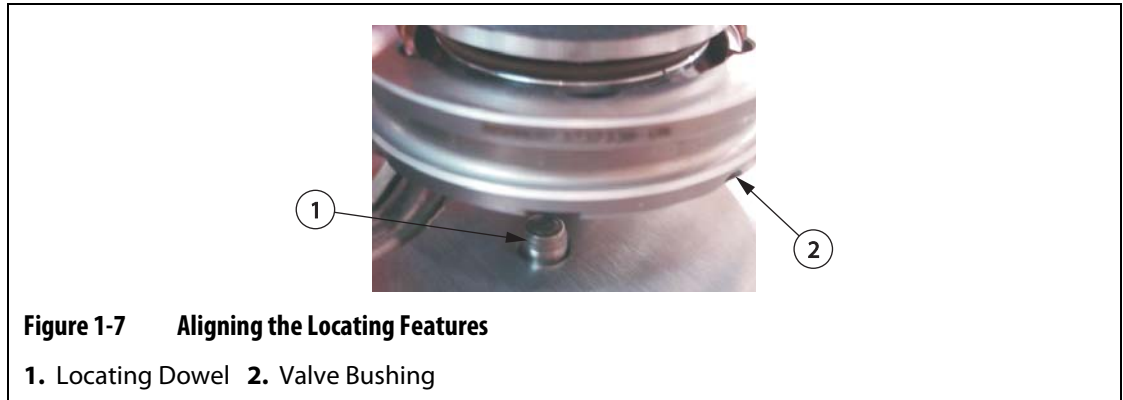
16. Install locating dowels into the manifold.



17. If necessary, install C-rings onto the manifold at each drop location. Refer to the *Section View Assembly* drawing to determine if they are required.
18. Make sure the manifold surface and valve bushing are clean and free of debris.
19. Carefully guide the completed valve stem and piston assembly into the manifold, gently pushing by hand until the manifold bushing contacts the manifold.

Make sure the locating features in the valve bushing align with the locating dowel.

NOTE: There should be no resistance on the valve stem. If there is resistance make sure no debris is present by running a pipe cleaner or brass brush through the manifold and blowing it out with compressed air.



20. Finish tightening the screws that secure the piston to the piston spacer as follows:

NOTE: Instead of using angled needle nose pliers, the reverse taper LX piston installation and removal tool (part number 2442551) is available through your nearest Husky Parts Distribution Center.

- a. Insert the tips of angled needle nose pliers into two of the screws and hold them stationary.
- b. Tighten the other two screws and then switch until all four screws are tightened.

21. Place a piston cylinder over the valve stem piston assembly. Make sure the cylinder is parallel with the manifold surface to prevent damage to the double delta seal.



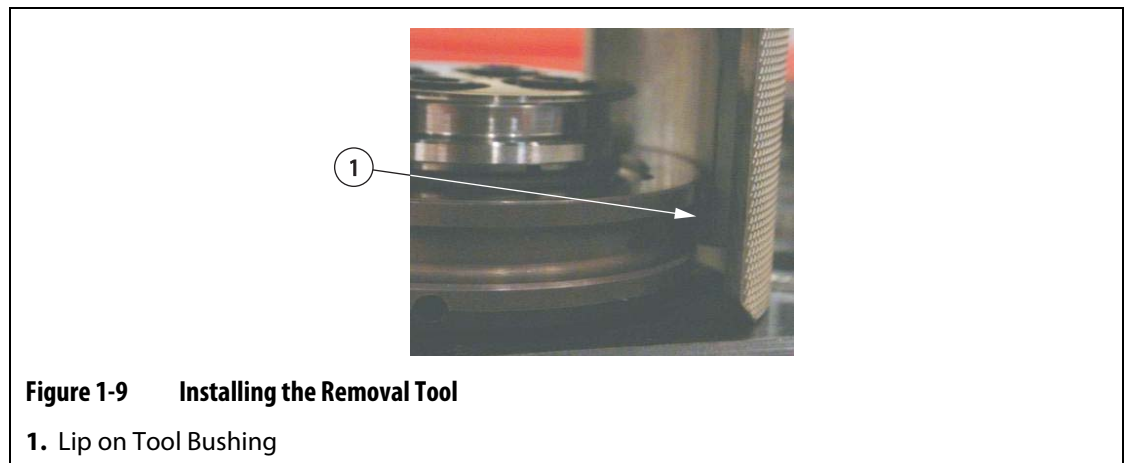
22. Apply even pressure to the piston cylinder until it bottoms out on the valve bushing.

23. Rotate the piston cylinder and make sure there are no frayed edges visible on the inside of the piston cylinder from the outer O-ring seal.
If fraying is visible, replace the outer O-ring seal.
24. Measure the preload.

Removing a VG LX Reverse Taper Valve Stem and Piston Assembly

To remove a reverse taper valve stem and piston assembly, do the following:

1. Remove the piston cylinder.
2. Secure the removal tool to the valve bushing. Make sure the lip on the tool bushing fits into the groove on the valve bushing.



3. Make sure the support tube is making contact with the manifold surface.
4. Hold the support tube steady and with a 1" wrench, rotate the nut on top of the removal tool clockwise. Continue to rotate the nut until there is little or no resistance.
5. When a gap forms between the valve bushing and the manifold, carefully pull the removal tool up to remove the valve stem and piston assembly from the system.

Maintaining VG LX Reverse Taper Valve Stem and Piston Assemblies

When maintaining the reverse taper valve stems and piston assemblies, note the following:

- Inspect the hot runner for weepage after the first two weeks of production to determine the necessary weepage cleaning interval. The interval is different for every system.
- Replace all double delta seals every 1.5 million cycles or once per year, whichever comes first.
- Valve stems do not need to be removed when cleaning underneath the piston. The cylinder, piston and piston space can be easily removed to allow for easy access to the weeped material in this area.

