

B4 Release Valve Kit

59947-26K

1 Release Valve
1 Spring
1 End Plug
2 O-Rings



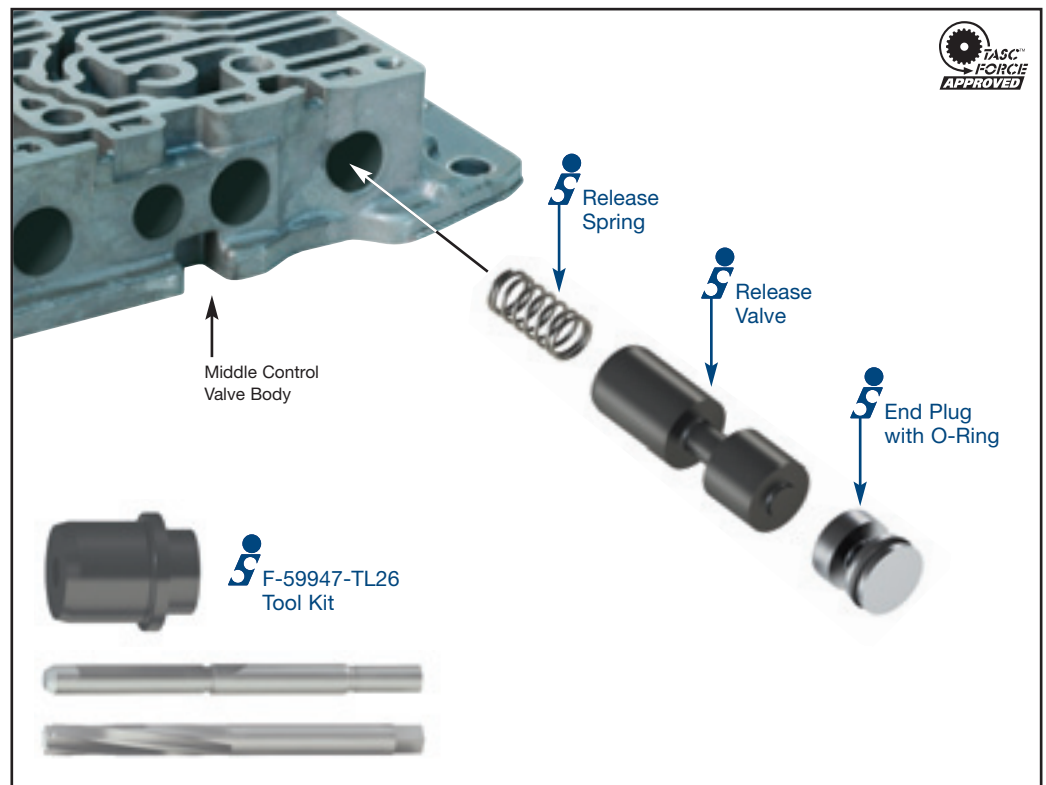
(1 Extra)

F-59947-TL26

1 Reamer
1 Guide Pin
1 Reamer Jig



Note: For information on proper vacuum test procedures, go to www.sonnax.com, click on "Technical Information" and go to Vacuum Testing Guidelines Instructions.



Prep and Set-Up:

1. Remove all components from the bore.
2. Clean the bore thoroughly in a solvent tank.
3. Align the valve body on the fixture according to VB-FIX instructions:

Important Note: Once alignment is complete, do not loosen wing nuts or unclamp valve body from fixture until entire reaming process is completed.

4. We strongly recommend a continuous flow of reaming fluid to remove chips, improve bore finish and extend reamer life. Two water soluble reaming fluids are Mobilmet S-122 and Lubegard 80903. Lubegard Bio-Tap is another alternative.
5. Gently insert the reamer through the jig and into the bore until the cutting tip contacts the first bore to be reamed.
6. Select the correct sized socket to fit the square shank of the reamer, & attach it to a swivel socket drive.

Reaming:

Note: We recommend you review the Sonnax reaming DVD or go the Sonnax website for a video preview of reaming.

1. The reamer should be turned by a low rpm, high torque air drill regulated to a maximum of 200 rpm or by hand using a speed handle.
2. The reaming action should be clockwise in a smooth and continuous motion, at 60-200 rpm. The reamer should actually pull itself through the bore, so little or no forward force should be applied.
3. Continue reaming until the reamer bottoms in the bore.

Finish and Clean-Up:

1. Using low air pressure, blow the chips free before removing the reamer.
2. To remove the reamer, turn clockwise while slowly pulling outward on the reamer.
3. Remove any remaining debris from the bore with low air pressure and clean in a solvent tank.
4. Examine the bore after cleaning for surface finish, debris, and burrs. Flashing and burrs on the exit side of the casting bores can be carefully removed with a piece of Scotchbrite on the end of a long wire.
5. Clean the reamer after each use and store in its protective tube.

Cautions and Suggestions:

1. Turning the reamer backward will dull it prematurely.
2. Pushing on the reamer will result in a poor surface finish and inadequate and sporadic material removal. The leading cutting edge will hold material if inward force and turning speed are incorrect. If a burr occurs, remove it by drawing a tool along the edge of the flute from the rear of the tool toward the tip.
3. Never use a crescent wrench, ratchet or pliers to turn the reamer.
4. A dull reamer will cut a smaller hole. Reamers can be sharpened, but should only be done by a professional machine tool sharpener.

Installations/Assembly Steps:

1. After the bore has been reamed it is necessary to prepare the opening for the o-ring end plug. A portion of the bore opening has a contour to it and does not have a chamfer like the rest of the opening. A small chamfer should be added to this contoured section. The sharp edge on the ID of the chamfer needs to be smoothed out so as not to damage the o-ring during installation. The recommended method is to use a $\text{Ø}3/8$ " flap wheel chucked in a miniature die grinder. If the sharp edge is not eliminated it will damage / destroy the o-ring.
2. Thoroughly clean and be certain all debris has been removed from the valve bores and valve body.
3. Install the new Sonnax spring, valve and end-plug.
4. Use a small amount of O-Lube, Trans-lube, or new ATF to lubricate the o-ring, end plug and valve body chamfer. O-Lube is the recommended lubricant.
5. Start the end plug into the bore with the o-ring outboard. The o-ring seals on the first land just inside the bore opening.
 - Use a small flat bladed screwdriver, inserted through the retainer post cavity, to control the movement of the end plug as the o-ring compresses into the bore.
 - Do not allow the o-ring to travel beyond the first segment of the bore, as the o-ring will be destroyed by the sharp edges of the intersecting retaining post cavity.
 - Use a brass or wood drift to press the end plug into the bore. Use a hammer on the back of the drift and tap repeatedly to ease the o-ring into the bore. Do not seat the end plug with one mighty whack or damage will occur to the o-ring.
6. Install the retainer post.

Final Verification Steps:

Vacuum tests at the ports indicated should hold 18" or more.

