

## VFS Modulator Control Sleeve & Valve Kit

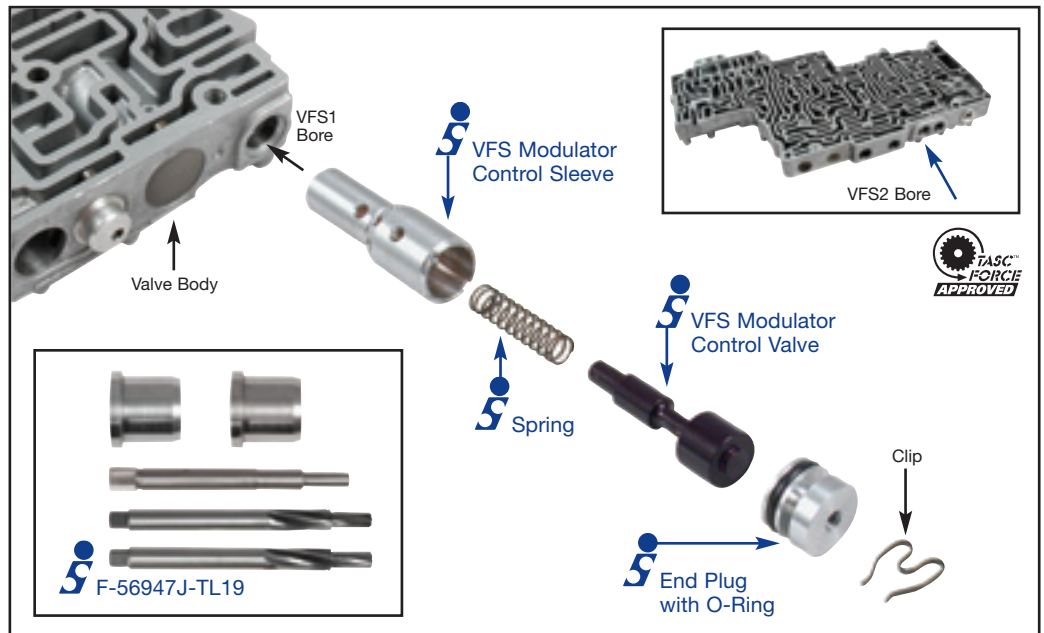
### 56947J-19K

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



### F-56947J-TL19

- 1 Guide Pin
- 2 Reamers
- 2 Reamer Jigs



### DISASSEMBLY:

Remove all components from the bore.

Discard all parts except the end plug retaining clip.

### REAMING INSTRUCTIONS:

#### Prep and Set-up:

Refer to **VB-FIX** instructions for general fixture procedures.

Remove all components from the VFS modulator bore and thoroughly clean the valve body in solvent tank.

#### Reaming:

##### Step A

1. Lubricate guide pin with cutting fluid, and place in VFS modulator bore. Make sure pin slides in and out freely.
2. Put valve body on base of **VB-FIX** reaming fixture. Do not clamp in place at this time.
3. Install first reamer jig (**F-56947J-RJ19**) into inner race of reaming fixture.
4. Install guide pin into reamer jig.
5. Align casting so guide pin fits into the bore, leaving wing nuts on fixture loose. Place casting bore opening close to the reamer jig.
6. Check fit of guide pin. The pin should slide smoothly in the bore, with no binding.
7. Lightly tighten all three wing-nuts, recheck guide pin fit, then tighten wing-nuts securely by hand. Do not use pliers or tools to tighten wing-nuts. Do not overtighten one wing-nut, as this will pull the fixture out of alignment.
8. Recheck to see if guide pin slides smoothly in bore. If guide pin does not slide smoothly, loosen the wing-nuts and realign.

### Step B

1. Remove the guide pin and install first reamer (F-56947J-RM19).
2. The pilot (narrow middle diameter) should fit into the first bore to be cut.
3. Ream casting using standard procedure.
4. Remove first reamer and reamer jig, **but do not alter position of fixture or casting.**

### Step C

1. Install the second reamer jig (F-56947J-RJ20) into inner race of reaming fixture.
2. Install the second reamer into the jig. The pilot (narrow middle diameter) should fit into the first bore to be cut.
3. Ream casting using standard procedure.

### INSTALLATION:

1. Push the enclosed spring over the small spring stem on the valve/sleeve assembly.
2. Push the sleeve/valve/spring assembly into the reamed bore, spring end first, until the sleeve stops against the casting wall midway through the bore.
3. Place the o-ring in the end plug groove. Lubricate and roll on the bench to size.
4. Push the o-ringed end plug into the bore, o-ringed end first. The threaded end can be used to help install. Secure with OEM retaining clip.
5. If the retaining clip does not fit, a small amount of material may have to be removed from the notched end of the sleeve by flat-sanding on the bench.

### VERIFICATION:

#### Wet Air Test:

Test at location shown below. There should be no leakage out of the adjacent port.

#### Vacuum Test:

Test at location shown below. A vacuum test with the new kit installed should reach 20" of vacuum.

For more information on valve body testing procedures, go to [www.sonnax.com](http://www.sonnax.com).

