

## 4th Gear Super Hold Dual Servo Assembly

### Part No.

**77767K**

- Servo Assembly
- Steel Washer

U.S. Patent No. 5,944,627

### Also Available

#### Replacement Seal Kit

**77767K-SK**

#### Servo Release Check Valve

**77701-076**

#### 2nd Gear "Corvette" Ratio

#### Servo Kit

**77701-04K**

#### 2nd Gear Super Hold Servo Kit

**77911-03K**

## GM 4L60, 4L60-E, 4L65-E, 4L70-E



### Tools Required

- Dial indicator or GM servo pin length checking tool # J33037
- Small, flat-blade screwdriver
- Pry bar
- Assembly lube

### Installation Tips

- To prevent case damage, do NOT reuse servo-to-case retaining ring with the flat sides (MY 2004 up to mid-April 2004, see GM Bulletin # 04-07-30-025A).
- If servo travel is insufficient, the band will not be able to fully release. Doublecheck by looking up into the case near the manual shaft while turning the output shaft. The band drum should rotate inside the band.
- To cushion the 1-2 shift and reduce the 3-2 downshift clunk, install additional cushion spring (GM part # 8681195).

### Disassembly

- a. Remove the original servo assembly.
- b. Discard the 4th piston and cover.

### Assembly

- a. Assemble 4th gear super hold servo and steel washer onto 2nd gear servo assembly. Do not install any seals at this time. Make sure the servo release spring is on the pin.

**NOTE:** The Sonnax super hold servo is compatible with all OE 2nd gear piston assemblies. If any other type of 2nd apply piston is used, clearance for the outer diameter of the Sonnax steel washer over the full travel of the apply pin must be verified.

- b. Set pin travel using one of the two methods outlined below.

#### Method 1, Set Pin Travel (With Dial Indicator)

- a. Install the 2nd gear servo assembly, 4th gear servo assembly and retaining ring into case.
- b. Set up the dial indicator as shown in **Figure 1**.
- c. Depress the servo cover and measure the distance the cover travels.
- d. Grind the pin tip as necessary to achieve .075–.125" of servo travel.

**NOTE:** It is important to maintain a spherical tip radius when grinding the pin. The inner hole of a 3/8" flat washer cut in half makes a good gauge for this (**Figure 2**).



Figure 1

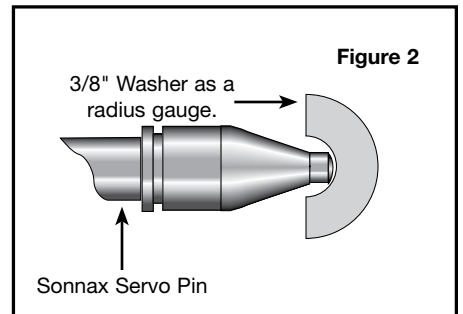


Figure 2

#### Method 2, Set Pin Travel (Using GM Tool # J33037)

- a. When using GM part # J33037, follow the instructions included with the tool.
- b. **WARNING:** The Sonnax 4th gear super hold servo 77767K will reduce pin travel by .050" (**Figure 3**). Therefore it is necessary to compensate when using GM tool # J33037. For example, change pins or grind pin tip to set pin length so gauge line is near the outside edge (short pin) side of the window on GM tool # J33037 (as if the pin was the shortest allowable). When assembled, the resulting pin travel will be .075". From this point, measure the length of the pin with calipers and remove up to .050" additional material to set pin travel in the desired range of .075–.125".

**When using GM pin checking tool # J33037, the tool gauge slot window represents about .050" in pin travel.**

Line Location	OE 4th Gear Servo	Sonnax Super Hold 4th gear servo 77767K
White line at short pin side of window	.125" travel	.075" travel
White line at center of window	.100" travel	.050" travel
White line at long pin side of window	.075" travel	.025" travel

Figure 3

### Final Assembly

- Install and lubricate all seals.
- Install and lubricate 4th servo O-ring.
- Install the 2nd and 4th servo assemblies into the case.
- Install the servo retaining ring (see Installation Tips on page 1).
- Verify retaining ring is fully seated in case.

### Air Test Servo

- 1) When air checking during overhaul (and pump removed), check for leaks of 3rd clutch oil at the OE 3rd accumulator checkball capsule (No. 2 in **Figure 4**).
- 2) No. 1 in **Figure 4** is orifice to spray lube oil onto 2-4 band. Some leakage here is normal.

**NOTE:** If using Sonnax super hold 4th gear dual servo assembly, do not air test 4th apply unless band and drum are in place, otherwise 4th apply seals may come out of position.

### Illustration Reference

- A. 2nd Feed
- B. 3d Accumulator
- C. 4th Feed
- D. Exhaust

