

A- & B-trim Valves & Springs & F-trim Spring

37000-12K

- 1 A-trim Valve & Spring
- 1 B-trim Valve & Spring
- 1 F-trim Spring



37000-TL12

- 1 A-trim Reamer
- 1 B-trim Reamer

Note: The F-trim sleeve, valve and spring illustrated are applicable to '04 and earlier valve body casting. All F-trim components are different in the later application, identified by the larger high frequency TCC solenoid. A-B trim valve update is applicable to all designs.

Disassembly:

1. Remove A-trim solenoid, reverse gain valve and spring, and A-trim valve and spring. Discard the trim valve and its spring only.
2. Remove B-trim solenoid, gain valve, and B-trim valve and its spring. Discard the trim valve and its spring only.
3. For 2002-2004 units only. Remove the TCC solenoid, F-trim sleeve, F-trim valve and spring.

Note: For best results, inspect the F-trim sleeve for wear and replace with the Sonnax F-trim valve end sleeve **37000-03** on 2002 and 2003 units only. You should also update to the OEM solenoid 24212690. The solenoid can be identified by its plastic snout.

Reaming Instructions:

Note: No reamer guide is required. The reamers will follow the OEM bore and stop when complete. Make sure you are using the correct reamer in the correct trim bore.

Prep and Set-up:

1. Remove all components from the bore.
2. Clean the bore thoroughly in a solvent tank.
3. Securely clamp the housing to the bench, making sure not to clamp directly over the bore to be reamed.
4. Soak the bore and reamer with cutting fluid (Mobilmet S-122, Lubegard Bio-Tap, Tap Magic™, etc.). For best results, provide a continuous flow of water-soluble cutting fluid (i.e. Mobilmet S-122) during the reaming process.

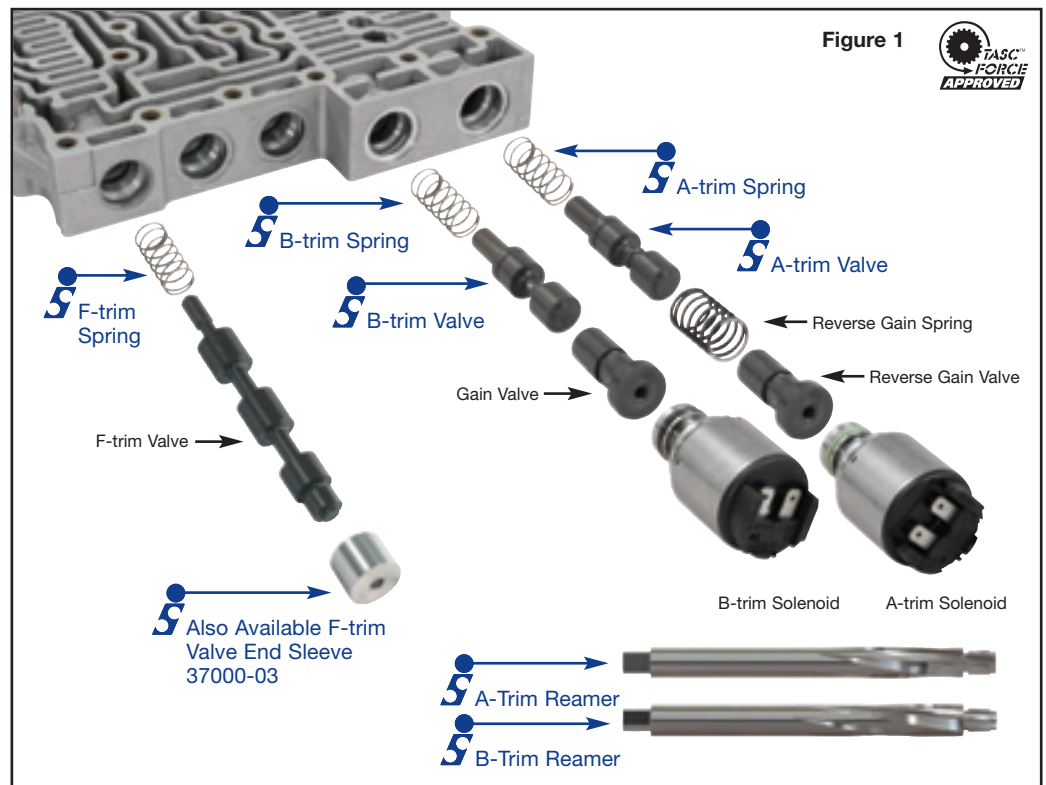


Figure 1



5. Gently insert the reamer into the bore until the cutting tip contacts the first bore to be reamed. (The A and B-trim reamers pilot off the OEM bore.)
6. Select the correct sized socket to fit the square shank of the reamer, and attach it to a swivel socket drive.

Reaming:

1. The reamer should be turned by hand using a speed handle or by a low rpm, high torque air drill regulated to a maximum of 200 rpm.
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 shoulder 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.

ALLISON 1000/2000/2400 ('02-UP)

PART NUMBERS 37000-12K, 37000-TL12

A- & B-trim Valves & Springs & F-trim Spring

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 tool sharpener. Actual life of a reamer before resharpening or replacing averages 50-70 bores.

Installation:

A-trim bore:

Note: The A-trim valve has an ID band on it to differentiate it from the B-trim valve (see Figure 1 on previous page.) The A- and B-trim springs are identical but differ from the F-trim spring.

Install the A-trim valve and spring, reverse gain valve and spring, and A-trim solenoid as shown.

B-trim bore:

Install the Sonnax spring and B-trim valve included with this kit, followed by the gain valve and B-trim solenoid as shown.

F-trim bore:

For 2002-2004 units only. Install the F-trim spring included in this kit or the spring and sleeve included in 37000-03. Reassemble the line-up as shown in Figure 1.

Separator plate modification

Drill the trim exhaust holes to .062" (see Figure 2).

Going larger than that can result in upshifts and downshifts shorter to harsh.

Note: This is a 2005 plate shown. The hole locations are similar on early plates.

Reset Adaptives:

After installation, all adapt cells and garage shift adapts must be reset with a Tech II or Snap-On or similar scanner. Fast adapt mode will then start with new trim valves and springs.

Engagements will be very short and firm until relearned. Do not be alarmed, this will go away. Do not have a plow, trailer or truck doors open during the initial fill, engagement or relearning process.

This relearn should include:

- 10 cycles-Park through Reverse to Drive, then back to Park etc. at idle speed engagements.
- 10 light throttle cycles of city-type driving from 0-50 mph up and coastdown shifts at light throttle.
- 10 cycles of heavy throttle upshifts and forced downshifts to include 5th and TCC apply.
- 10 tow-haul mode heavy throttle upshifts and forced downshifts to allow TCC to apply. Use both coast engine braking and brake pedal affected coastdown.

Verify fluid level again and that oil pan drain plug is tight.

Figure 2

Drill here

