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TRANSMISSION PARTS

Instructions

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

Oversized 4-3 Sequence Valve Kit

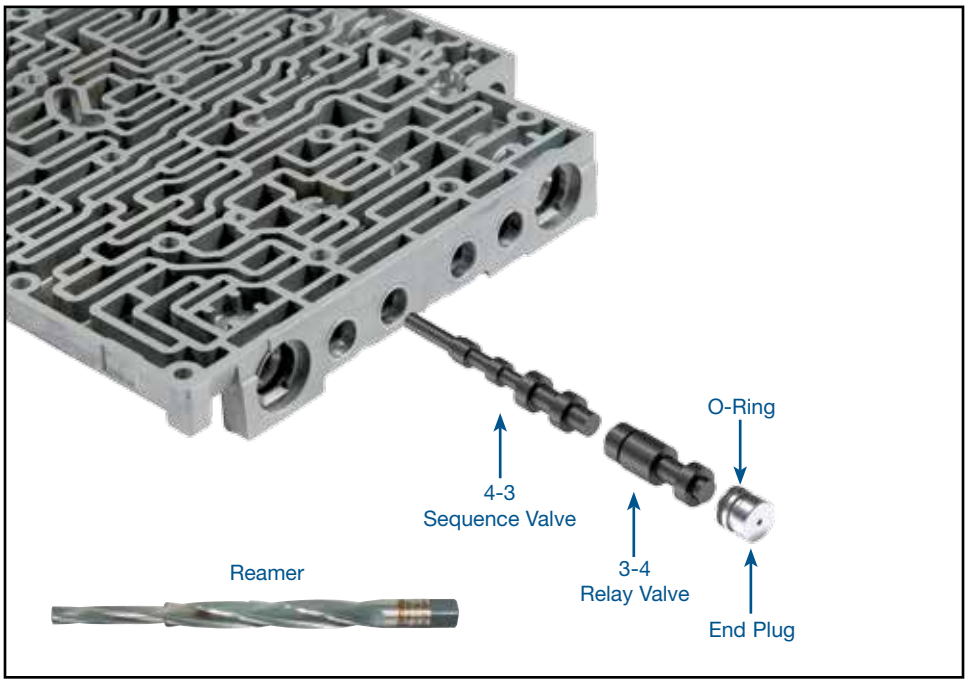
TOOL REQUIRED

Part No.
77964-04K

- 3-4 Relay Valve
- 4-3 Sequence Valve
- End Plug
- O-Ring

Reamer

Part No.
77964-RM2



1. Disassembly

Remove OE valve lineup and save spring and retaining clip for reuse. Discard all other parts.

2. Bore & Reaming Preparation

a. Clean the bore thoroughly in a solvent tank.

b. Securely clamp the housing to a bench or vise, making sure not to clamp directly over the bore to be reamed.

CAUTIONS AND SUGGESTIONS:

- The reaming action must be clockwise in a smooth and continuous motion.
- Turning the reamer backward will dull it prematurely.
- Pushing on the reamer results in poor surface finish and inadequate and sporadic material removal.
- Never use a crescent wrench, ratchet or pliers to turn the reamer.
- A dull reamer will cut a smaller hole. Reamers can be sharpened, but this should only be done by a professional tool sharpener. Actual life of a Sonnax reamer before resharpening or replacing averages 50-70 bores.

3. Reaming

a. Generously lubricate the bore and reamer with cutting fluid (i.e. 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.

b. Gently insert the reamer into the bore until the cutting tip contacts the first land to be reamed.

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c. Use a loose fitting reamer socket and a wobble adapter to ream the bore. The reamer can be turned by using a speed handle or with a low-RPM, high-torque air drill regulated to a maximum of 200 RPM. The reaming actions must be clockwise in smooth and continuous motion at 60-200 RPM. Continue reaming until the reamer stop is reached.

4. Finish & Clean-up

a. Using low air pressure, blow the chips free before removing the reamer.

b. To remove the reamer, turn clockwise while slowly pulling outward on the reamer.

c. Examine the bore after cleaning for surface finish, debris and burrs. Flashing and burrs on the exit side of land and in bores must be carefully removed. A small piece of Scotch-Brite™ material attached to a wire and powered with a drill motor is ideal for the task. However, Scotch-Brite™ is a very abrasive material and all residual Scotch-Brite™ debris must be removed afterward to ensure particles do not migrate or remain embedded in the surface. Cleaning this material out should involve several progressive steps using solvent on a lint-free rag.

d. Clean the reamer after each use and store in its protective tube.

5. Installation & Assembly

a. Insert OE spring.

b. Lubricate and install Sonnax replacement valves, followed by Sonnax end plug and OE retaining clip (**Figure 1**).

6. Final Testing

A vacuum test at the ports indicated holds 16 in-Hg or more (**Figure 2**).

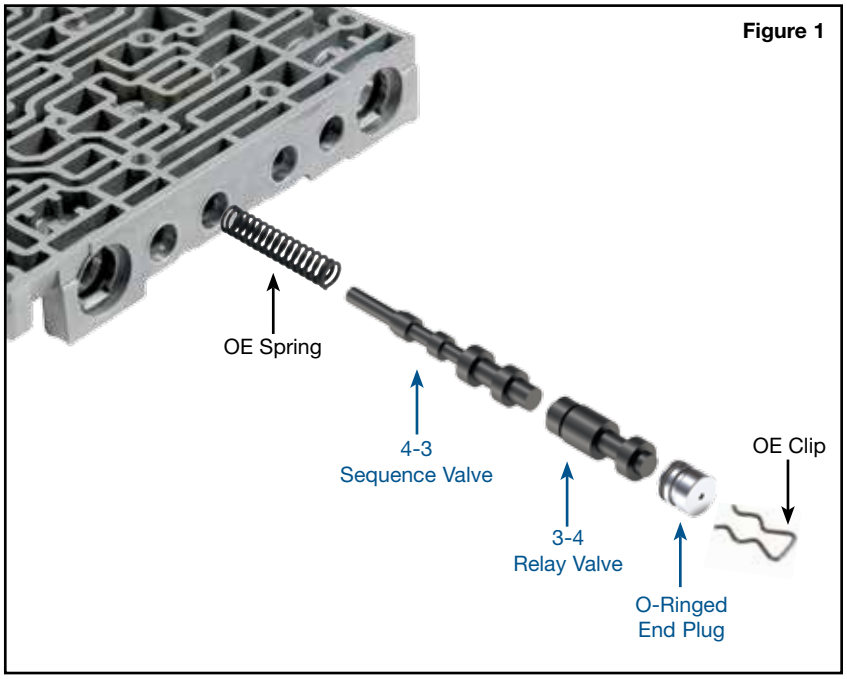

Figure 1

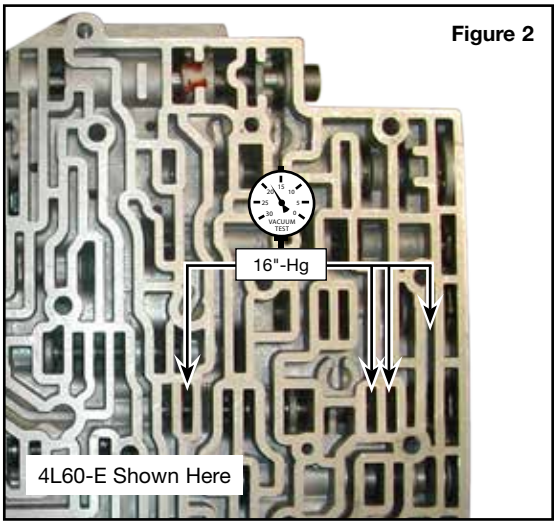

Figure 2

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