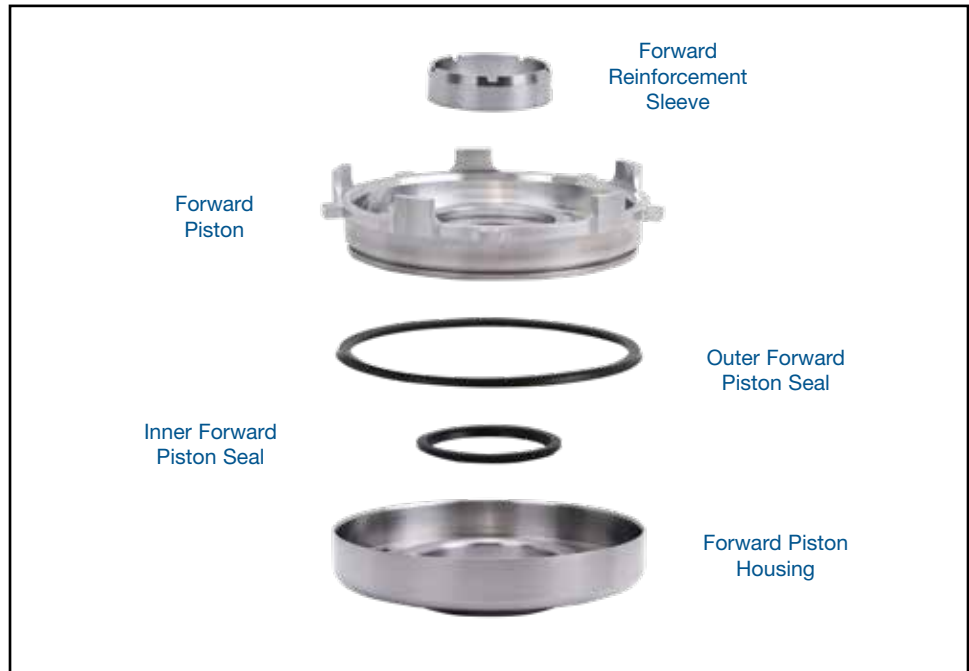# GM 4L60, 4L60-E, 4L65-E, 4L70-E

Input Housing Forward Sleeve Kit

Part No.
77733-52K

- Forward Piston
- Forward Reinforcement Sleeve
- Forward Piston Housing
- Outer Forward Piston Seal
- Inner Forward Piston Seal

Patent No. 11,906,043

Forward Reinforcement Sleeve

Forward Piston

Outer Forward Piston Seal

Inner Forward Piston Seal

Forward Piston Housing

WARNING: This kit must be used with a Sonnax overrun sleeve and compatible overrun piston. These components are available separately in input housing overrun sleeve kit **77733-51KA** and Smart-Tech input housing kits **77733-06KA, 77733-10KB, 77733-11KB** and **77733-12KB**.
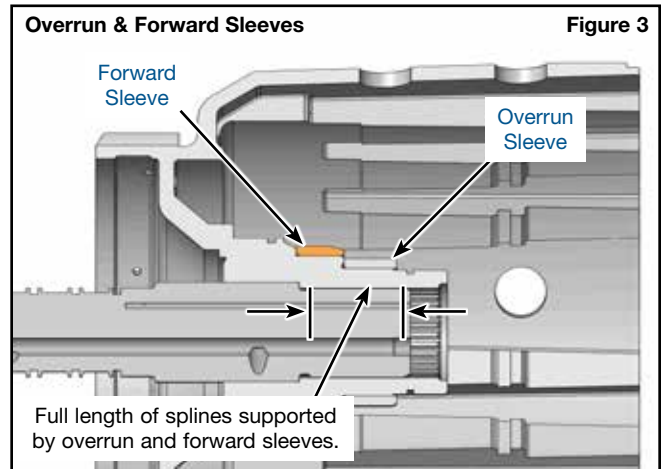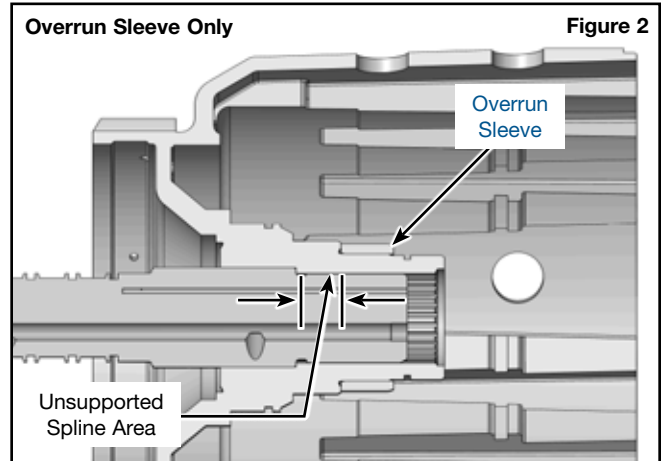
If you're refreshing an old build that already has an overrun sleeve installed, it's critical to verify you have the correct style piston. Older overrun sleeve kits and Smart-Tech input housings did not come with this piston. Compatible pistons have an identification groove on the underside (**Figure 1**).

Overrun Pistons   **Figure 1**



NO

YES

Identification Groove
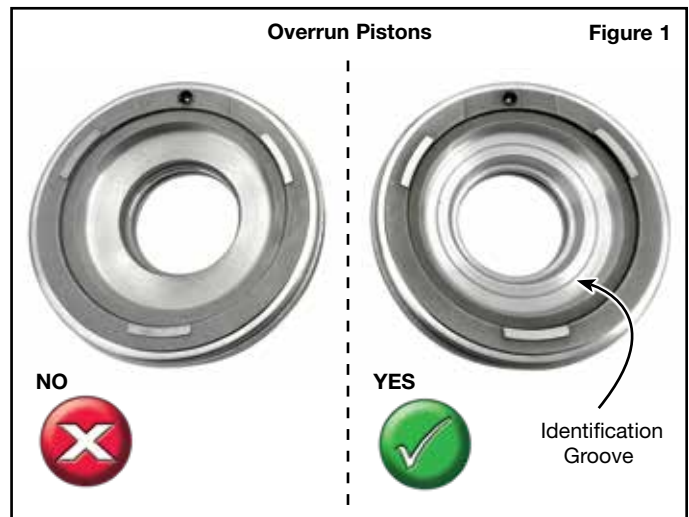
Housing has no sleeves installed.	➡	Install input housing overrun sleeve kit **77733-51KA**.	➡	Install input housing forward sleeve kit **77733-52K**.
Housing has overrun sleeve installed.	➡	Verify overrun piston is version with identification groove.	➡	Install input housing forward sleeve kit **77733-52K**.

The addition of an overrun sleeve improves input housing strength by adding a steel support around a portion of the aluminum housing near the input shaft and aluminum housing spline connection.

Even with an overrun sleeve, however, a large portion of the input shaft and aluminum housing spline connection remains unsupported (**Figure 2**), relying only on the aluminum to resist twisting and break out. Adding Sonnax input housing forward sleeve kit **77733-52K** nearly doubles the support in this area (**Figure 3**), greatly increasing the maximum strength of the input housing.

Overrun Sleeve Only   **Figure 2**

Overrun Sleeve

Unsupported Spline Area

Overrun & Forward Sleeves   **Figure 3**

Forward Sleeve

Overrun Sleeve

Full length of splines supported by overrun and forward sleeves.

NOTE: A spare 4L60 or 4L60-E rear sun gear can be used to install both the overrun sleeve (**Figure 4**) and the forward sleeve (**Figure 5**).

Figure 4

Rear Sun Gear

Overrun Sleeve

Figure 5

Rear Sun Gear

Forward Sleeve
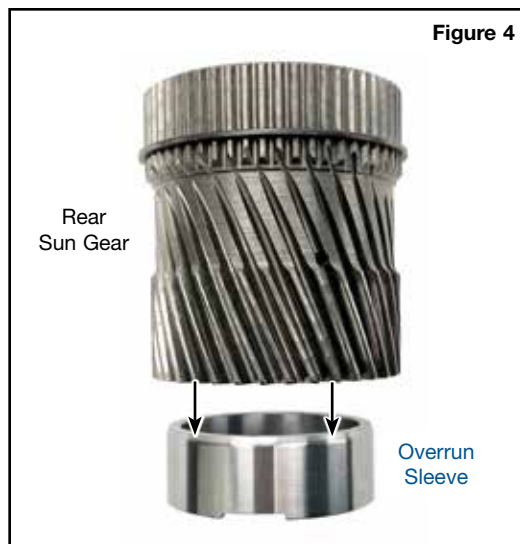
⚠️ **NOTE:** The input shaft must be installed before the sleeve(s) are installed.

1. Overrun Sleeve Installation

NOTE: If overrun sleeve is already installed, skip ahead to step 2.

a. Set the input drum into a suitable press. Support the aluminum housing as indicated (**Figure 6**) using an appropriate sized tube. A spare 4L60 stator shaft and selective spacer works well for this.

b. Coat the inside of the overrun sleeve with green threadlocking compound. Align the notch in the sleeve with the overrun feedhole in the housing (**Figure 7**). Set the sleeve into position on the input drum, keeping the notch in the sleeve aligned with the overrun feedhole in the housing.

⚠️ **CAUTION:** Failure to support the drum as indicated can result in damage to the housing.

c. Using the press, install overrun sleeve until just barely seated. Do not seat overrun sleeve with the full force of the press, since excessive pressure will ruin the housing. Do NOT hammer or pound the sleeve into place.

d. Verify overrun feedhole is not blocked by the sleeve.

2. Forward Sleeve Installation

a. With the housing supported as outlined in **Step 1a** and **Figure 6** coat the inside of the forward sleeve with green threadlocking compound. Set the sleeve into position on the input drum with the five notches facing up.

⚠️ **CAUTION:** Failure to support the drum as indicated can result in damage to the housing.

b. Using the press, install forward sleeve until just barely seated. Do NOT seat forward sleeve with the full force of the press, since excessive pressure will ruin the housing. Do NOT hammer or pound the sleeve into place (**Figures 3** & **8**).

3. Final Assembly

With both sleeves installed, the rest of the input housing uses regular assembly procedures.

Figure 6

Support housing on this surface.

Do NOT support housing on the end of the reverse spline.

Figure 7

Overrun Feedhole in Housing

Notch in Sleeve

Alignment Dot

Figure 8

Overrun and forward sleeves installed.