

SmartShell™

Part No.

77749-02K

- Heavy Duty Reaction Shell
- Bearing Race (2)
- Needle Bearing Assembly
- Modified OEM Roller Clutch Race

Patent Pending

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



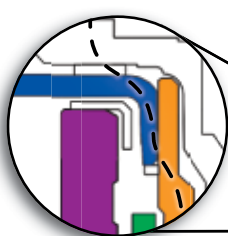
Features & Benefits

- High strength shell kit
- Added bearing takes load off planet bearing
- Improved rear planet durability

The Sonnax SmartShell 77749-02K is a heavy duty reaction shell kit with revised thrust loads. Stripped or cracked shells are a problem in 4L60/E units, however an equally common problem is a failed rear planet captured bearing. The SmartShell is the only heavy duty shell to address both issues. The SmartShell is made of thicker material and the hub area is strengthened further with a steel collar that is precision welded to the shell. The splines are heat treated with a tested process to ensure strength and longevity. The lugs that engage the reverse drum are heat treated as well to avoid flaring. By replacing the black plastic washer with a thrust bearing and controlling the height of the modified OEM race, the SmartShell reroutes thrust loads away from the captive planet bearing and sun gear. The rerouted end play/thrust loads pass through the new thrust bearing and modified roller clutch race directly to the rear planet carrier, completely bypassing the vulnerable captive planet bearing. See details below.

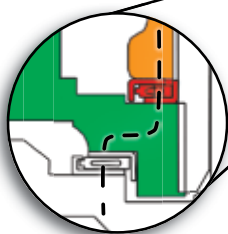
OEM

In addition to torque load damage, thrust load flexes & breaks shell at the bend.



OEM

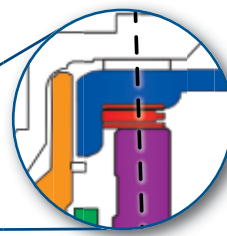
Thrust load passes from shell through sun gear, then overloads the small captured planetary bearing.



Shell
Race
Carrier
Sun Gear
Key Bearings
Thrust Load Path

SmartShell™

Reinforced shell withstands torque load. Large bearing supports shell to withstand thrust load.



SmartShell™

Thrust load passes directly to the carrier from the shell through the large bearing & race, bypassing the small captured planetary bearing.

