

Chrysler 47RE, 47RH, 48RE

Extreme Duty Intermediate Shaft Kit

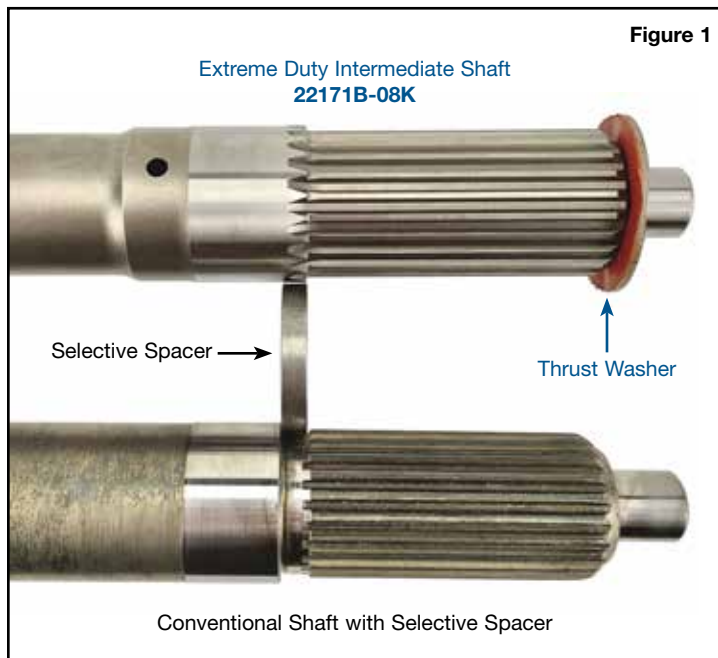
Part No.

22171B-08K

- Shaft
- Thrust Washer PTFE Coated



NOTE: Intended for competition applications only. Machining is required.



The rear spline on the Sonnax **22171B-08K** extreme duty intermediate shaft is optimized by increasing the spline minor diameter (root of the spline), which increases the cross-sectional area of the shaft and its ultimate strength. As a result, the minor diameter (inner tips of the teeth) in the overdrive planetary carrier and overrun clutch inner hub must be machined slightly for clearance so they will fit this shaft. This does not reduce the spline-to-spline flank contact because the major diameter of the shaft splines is also increased slightly.

The shaft rear spline is further optimized by eliminating the undercut where the selective spacer is located on a conventional shaft. With Sonnax **22171B-08K** material is added at this location that approximates the thickness of the red .0193" thick selective spacer (**Figure 1**). Like the selective spacer, this step-feature of the shaft still seats against the front of the overdrive planet, but due to the tail-out of the shaft splines cutting through the step-feature, there is less contact area compared to the selective spacer. To provide additional control of the rearward movement of the shaft, a Sonnax PTFE-coated washer is added between the end of the Sonnax intermediate shaft and the output shaft (**Figures 2 & 7**). As a result, there are no additional selective options for the intermediate shaft at this location. Any endplay adjustments must be made with the selective pump washer.

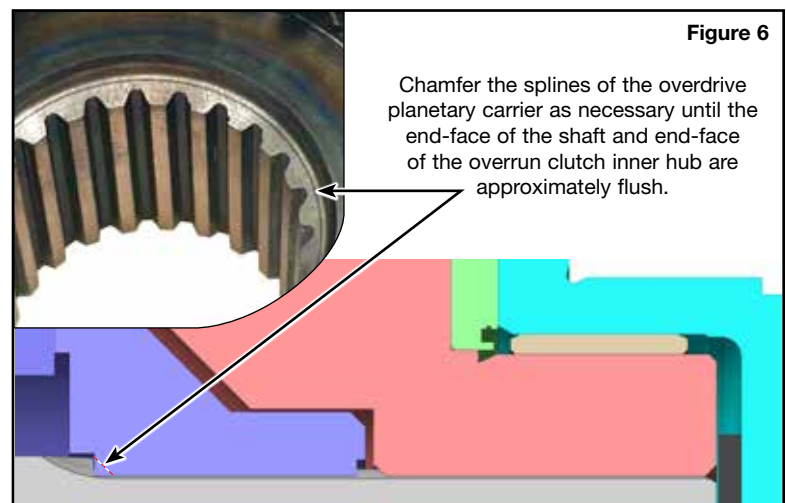
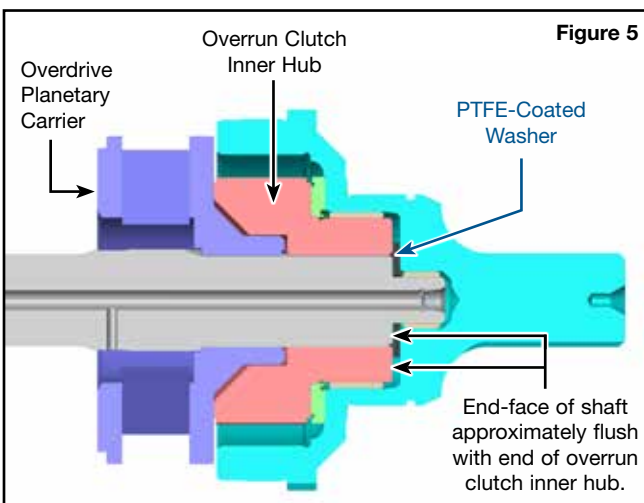
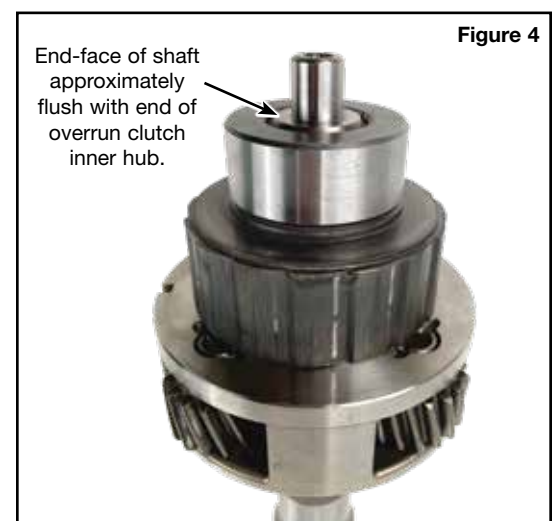
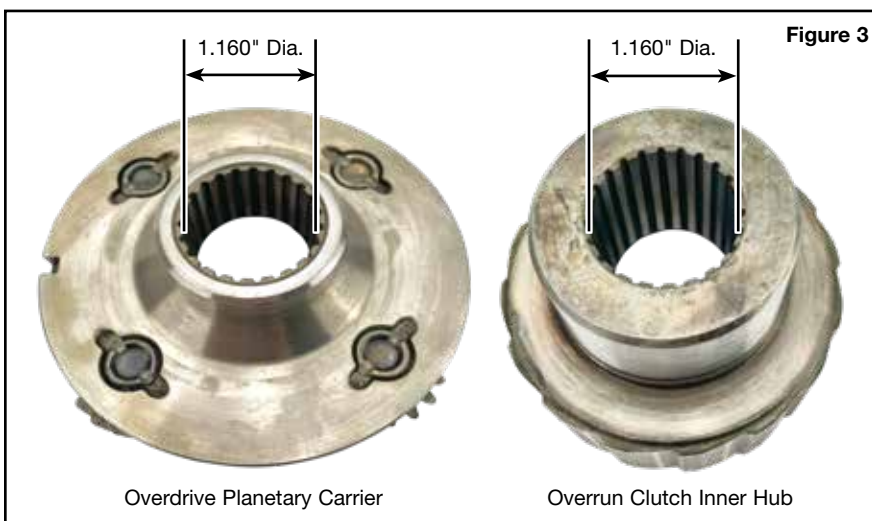
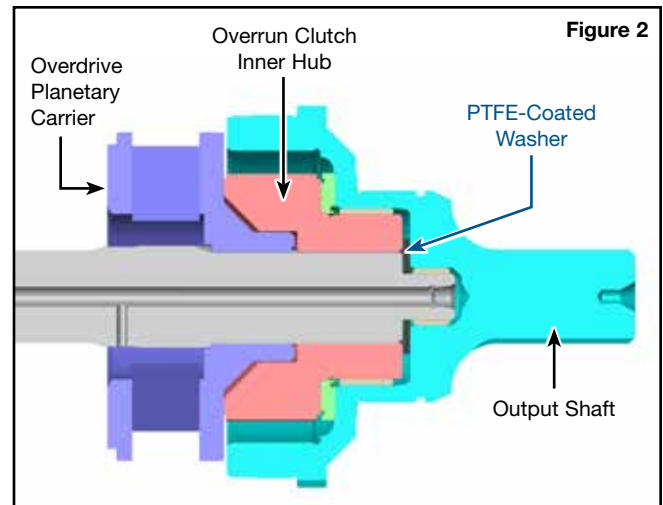
1. Machining

Machine the splines of both the overdrive planetary carrier and the overrun clutch inner hub to a diameter of 1.160" (Figure 3).

NOTE: The OE inner roller clutch cam/race is at least 55 HRC hardness so a good quality Cubic Boron Nitride (CBN) cutter insert designed for heavy interrupted cuts coupled with a 3/4" boring bar for rigidity is recommended. Follow the feed/speed/depth of cut recommendations of the insert manufacturer.

2. Fit the Shaft to the Overdrive Planetary Carrier & Overrun Clutch Inner Hub

Place the overdrive planetary carrier and the overrun clutch inner hub onto the shaft (Figure 4) and check the location of the end-face of the shaft relative to the end-face of the overrun clutch inner hub. They should be approximately flush (Figures 4 & 5). If the end-face of the shaft is recessed it will be necessary to chamfer the splines of the overdrive planetary carrier (Figure 6).



3. Assembly

- a. Install the Sonnax PTFE-coated washer into the output shaft (**Figure 7**).
- b. The remainder of overdrive section assembly and transmission assembly does not change from standard procedures.

