



FORD A4LD SUN GEAR, SUN GEAR SHELL, DIRECT CLUTCH DRUM, FORWARD CLUTCH DRUM, AND CENTER SUPPORT CHANGES

CHANGE: Beginning in model year 1990, and continuing through the 1993 model year on 4.OL models, many running changes have occurred to all of the parts listed above. These changes have created confusion in the aftermarket, and they do affect the interchangeability of all of the parts listed above.

REASON: Improved transmission lubrication, improved durability, and improved assembly line process.

PARTS AFFECTED:

(1) **SUN GEAR** - Both bushings, inside the sun gear, were eliminated to allow full lubrication flow to the front planetary (See Figure 1).

(2) **SUN GEAR SHELL** - “Snap Shell” was introduced in 1993 4.OL models, and has two retaining tabs stamped into the sides 180° apart, as shown in Figure 2. These tabs are used to retain the new direct clutch drum in the sun gear shell.

(3) **DIRECT CLUTCH DRUM** - The “Lug” area where the direct clutch drum engages the sun gear shell, was machined approximately .200” thinner, and a -.050” deep groove was machined into the drum to accommodate the added retaining tabs on the “Snap Shell” (See Figure 3). This now allows the sun shell and the direct drum to “Snap” together for easier assembly (See Figure 4). This change also allows the elimination of the number 4 thrust washer, located between the direct clutch drum and center support.

(4) **CENTER SUPPORT** - When the “Snap Shell” was introduced in 1993, the number 3 thrust washer was eliminated (See Figure 5), and number 3 thrust bearing was added (See Figure 6). The addition of the number 3 thrust bearing required machining the surface deeper to accommodate the bearings added thickness (See Figure 6). The new design center support also has a machined recess at the base of the sealing ring hub to accommodate the newly added number 5 thrust bearing (See Figure 8). Remember, the number 4 thrust washer was eliminated when this change occurred (See Figure 7).

There are four easy ways to identify the new design center support:

1. Machined recess for added number 3 thrust bearing (See Figure 6).
 2. Machined recess for added number 5 thrust bearing (See Figure 8).
 3. Machined hole for turbine speed sensor getting ready for 4R55E (See Figures 6 and 8).
- NOTE: Some new design center supports are cast for, but no hole has been machined.
4. Casting number on new design center support is 92GT-7L328-AA.

(5) **FORWARD CLUTCH DRUM** - Was machined at the base of the sealing ring hub to eliminate the chamfer, and provide a flat surface to accommodate the added number 5 thrust bearing, as shown in Figure 9.



Technical Service Information

INTERCHANGEABILITY:

- (1) The new design sun gear WITHOUT bushings WILL retro-fit back to all previous models (See Figure 1).
- (2) The previous design sun gear WITH the bushings CANNOT be used forward into the 4.0L models (See Figure 1).
- (3) The new design “Snap Shell” must only be used with the direct clutch drum that is machined to accept the retaining tabs (See Figure 3).
- (4) The direct clutch drum WITH the machined groove for the “Snap Shell” WILL retro-fit back to ALL previous models (See Figure 3).
- (5) The new design level center support CANNOT be used in ANY previous models, unless updated with ALL of the parts listed above (See Figures 6 and 8).
- (6) The previous design center support CANNOT be used forward into ANY model that is using the “Snap Shell” (See Figure 5).
- (7) The new design forward clutch drum WILL retro-fit back on ALL previous models. (See Figure 9).
- (8) The previous design forward clutch drum CANNOT be used in 1993 and later models, as the chamfered area at the base of the hub will not let the number 5 bearing seat properly (See Figure 9).

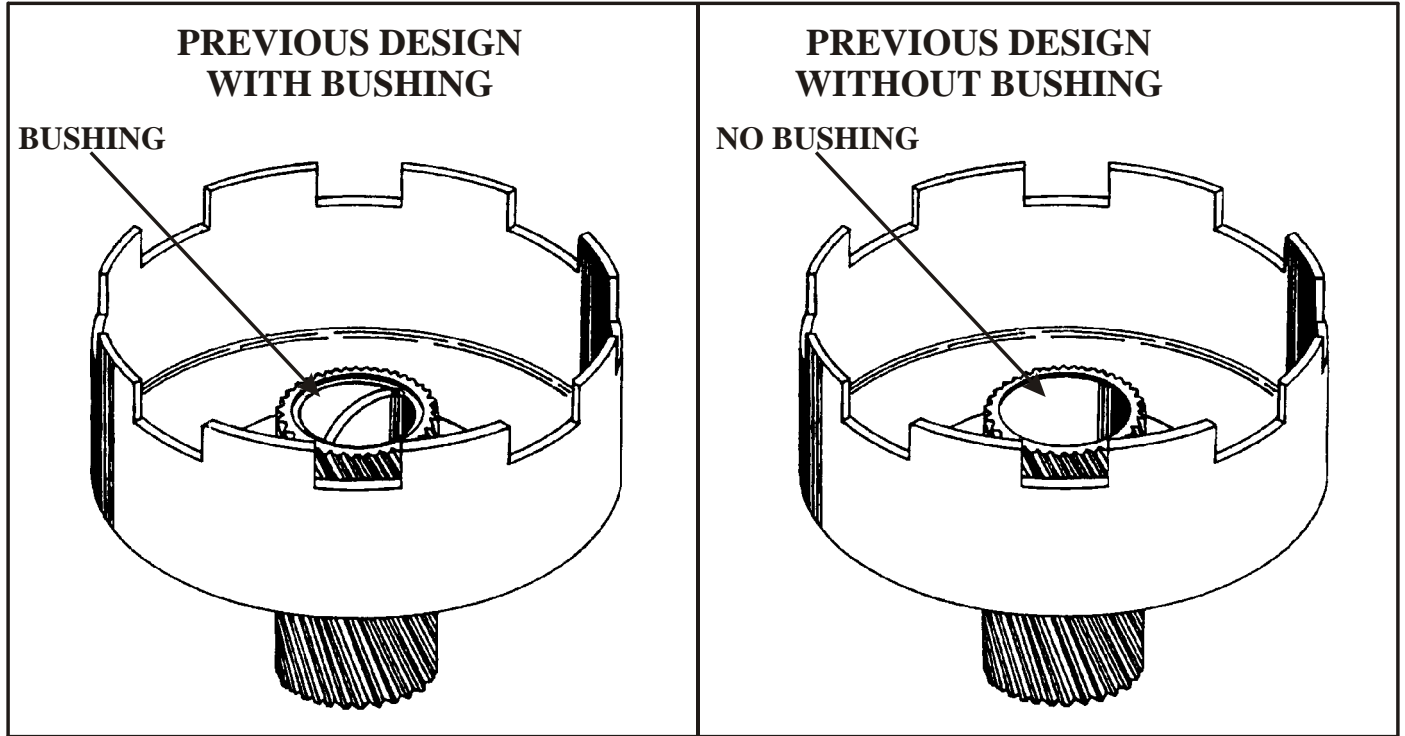


Figure 1

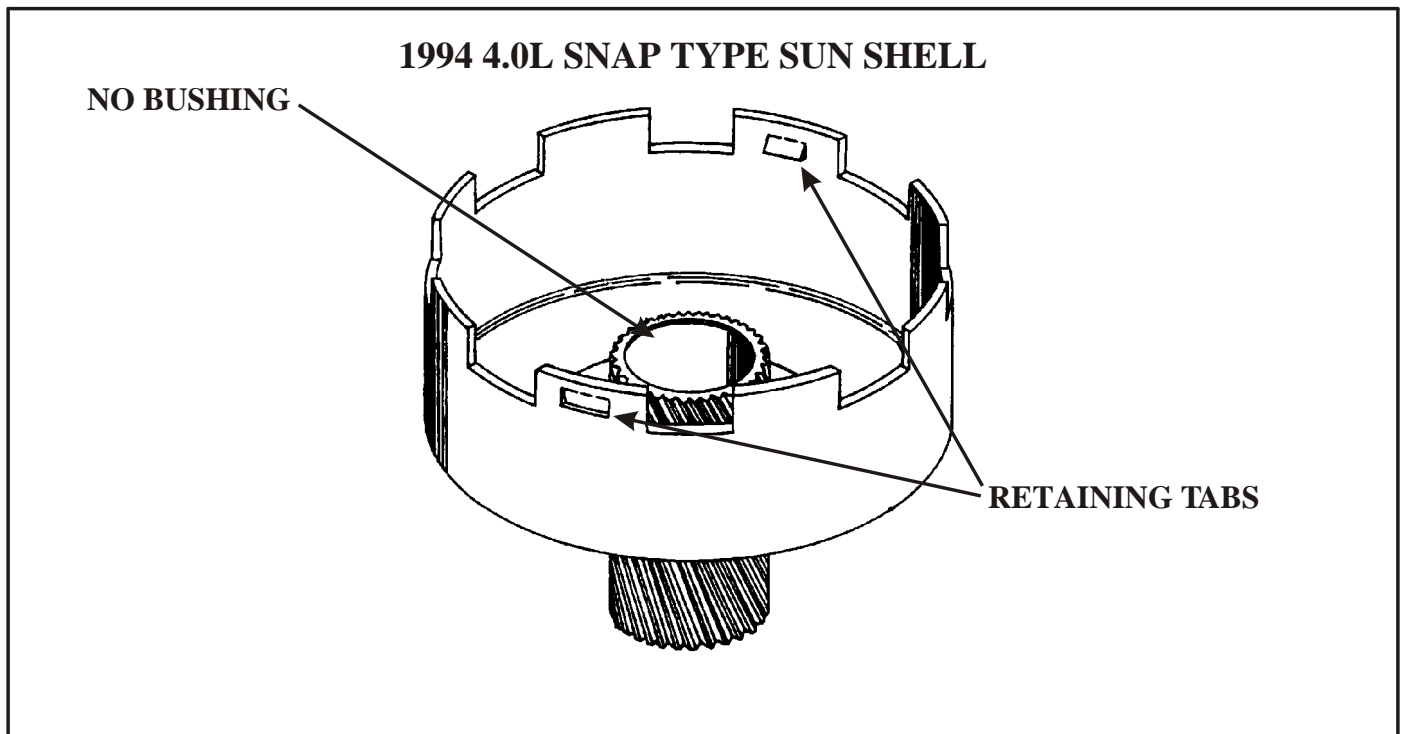


Figure 2

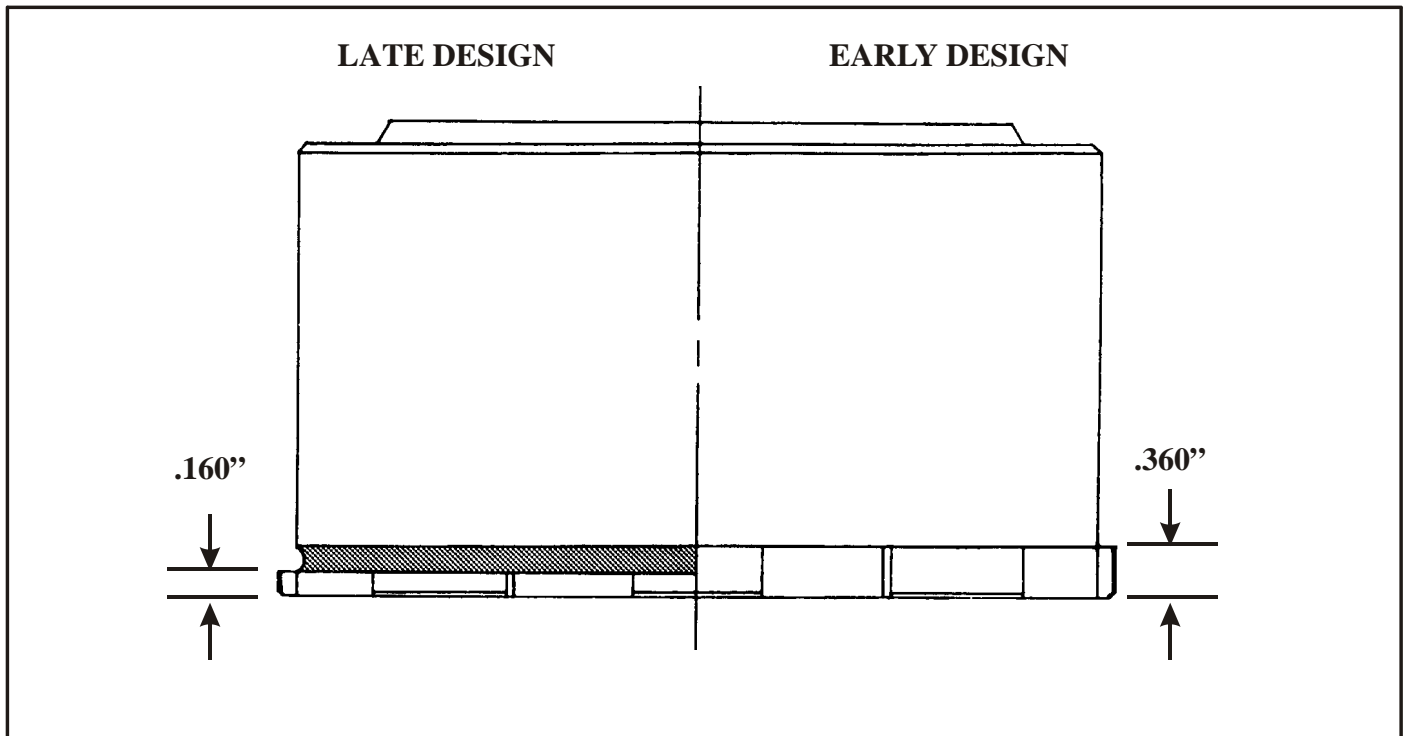


Figure 3

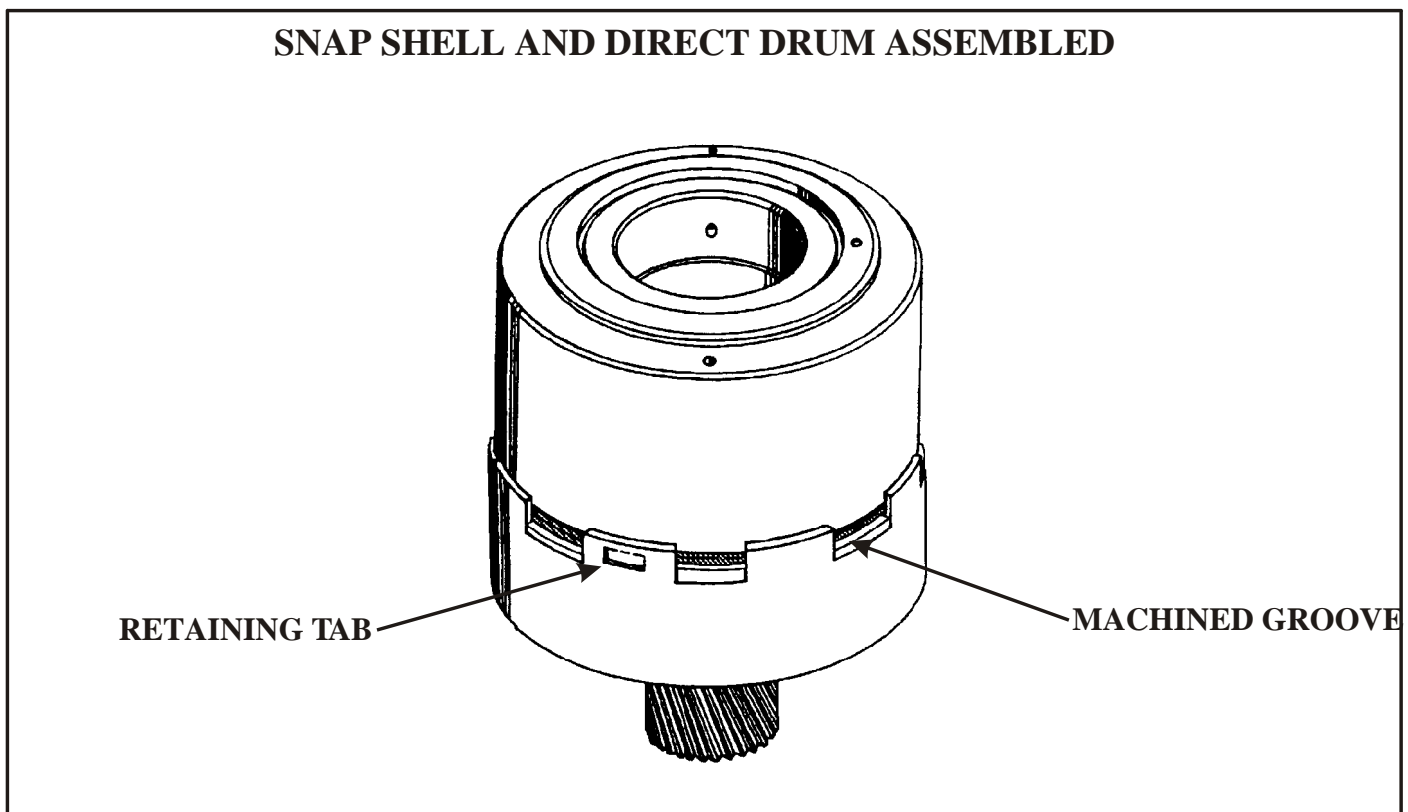


Figure 4

PREVIOUS DESIGN CENTER SUPPORT

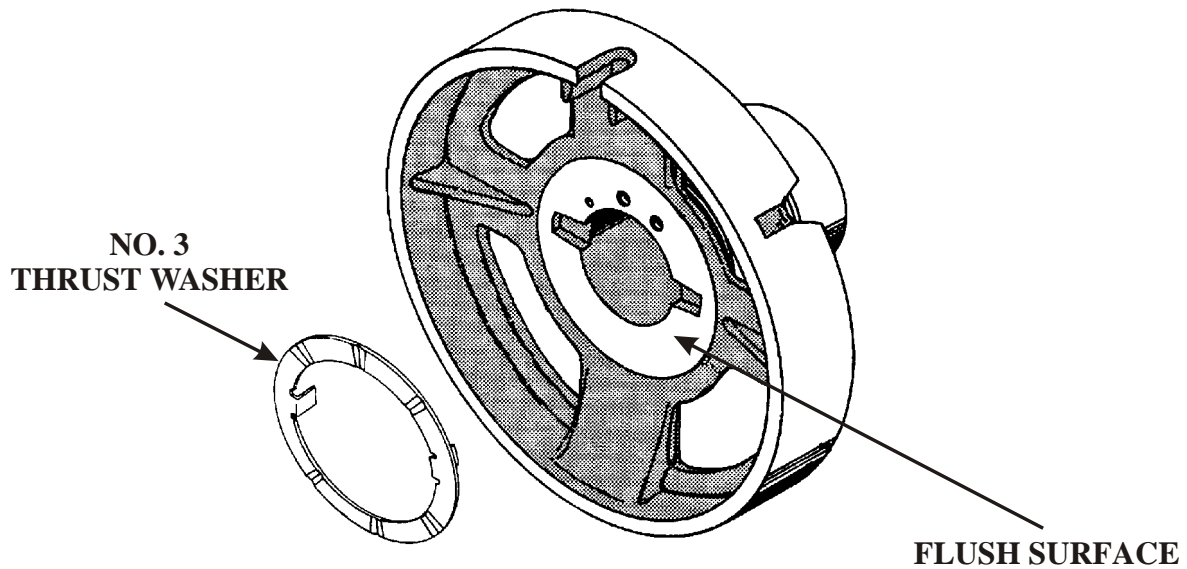


Figure 5

NEW DESIGN SNAP SHELL CENTER SUPPORT

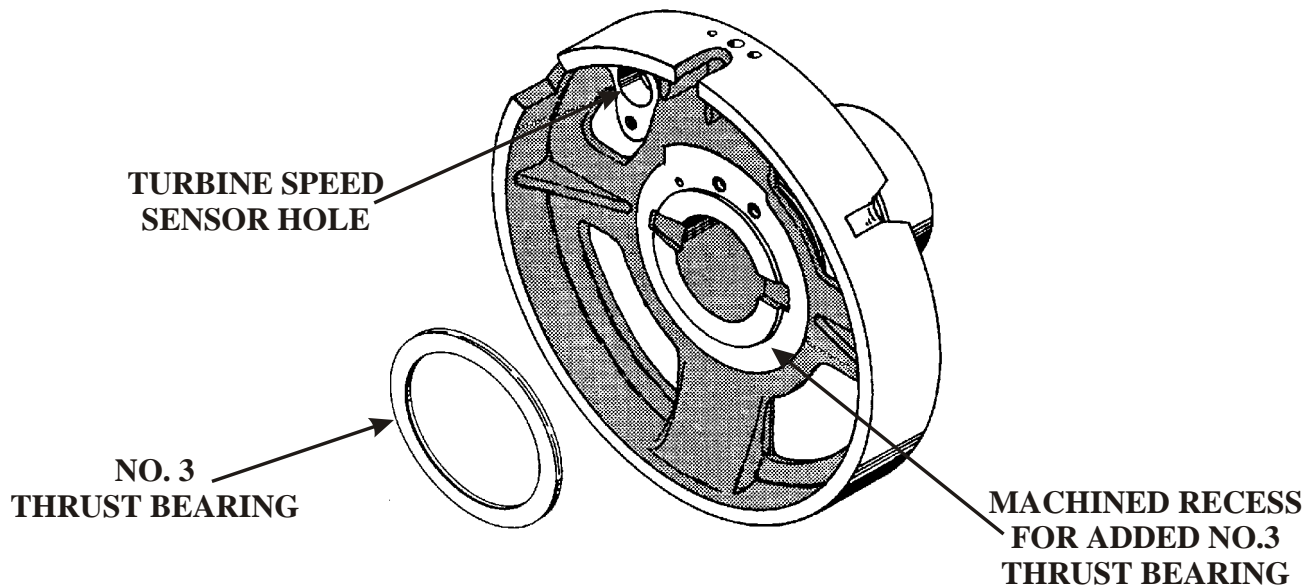


Figure 6

PREVIOUS DESIGN CENTER SUPPORT

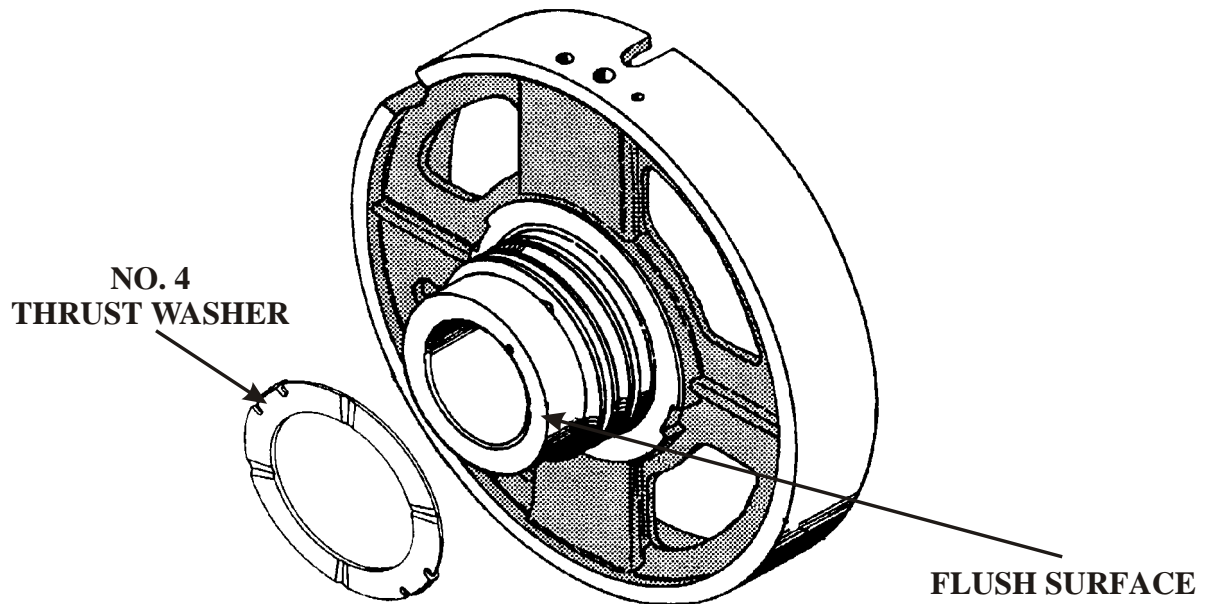


Figure 7

NEW DESIGN SNAP SHELL CENTER SUPPORT

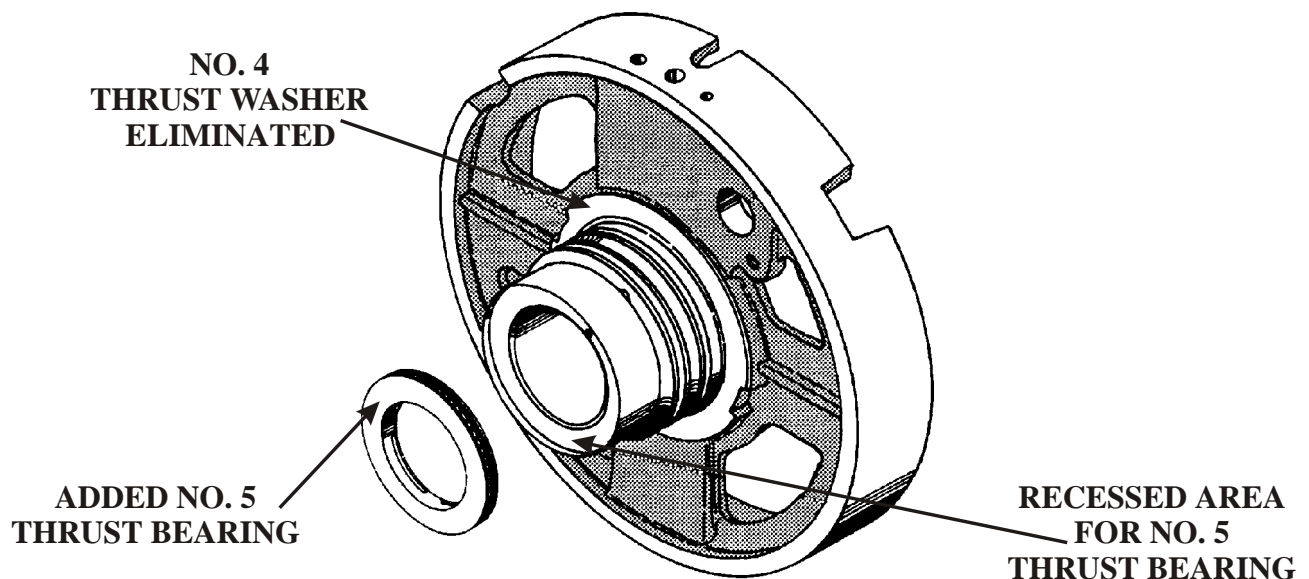


Figure 8

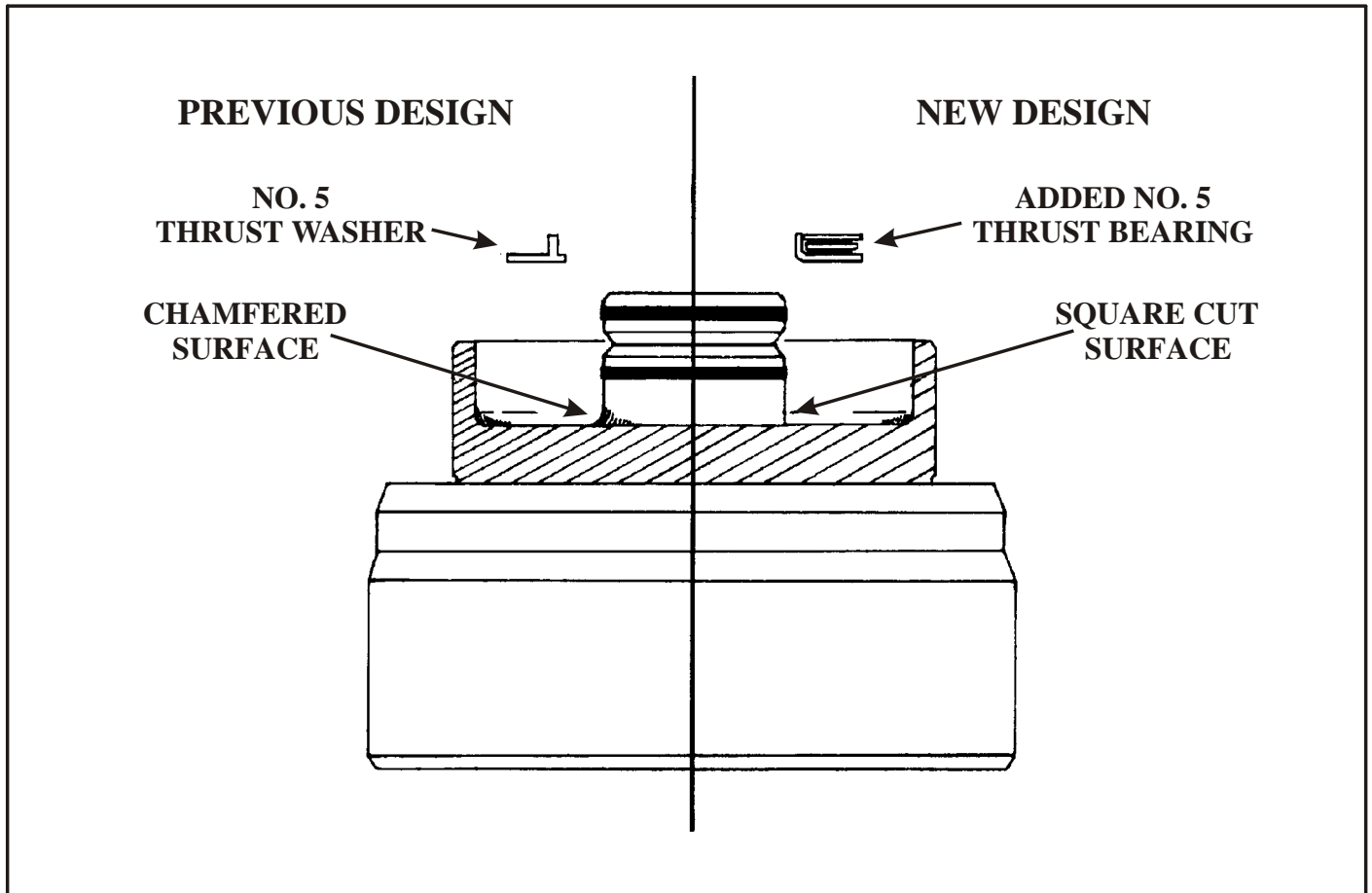


Figure 9