



# Technical Service Information

## THM 4L80-E CENTER GEAR BOX CHANGES FOR 1999 MODELS ("REVISED INFORMATION")

**CHANGE:** Beginning at the start of production for all 1999 model THM 4L80E transmissions, the planetary pinions on both carriers were produced 10% thicker than the previous models, as shown in Figure 1. This engineering change required the addition of a .041" shim in the gear train to re-center the sun gear in the new planetary pinions and affected several internal parts, that may create some confusion, and thus some mis-assembly concerns.

**REASON:** Increased durability and reliability.

### PARTS AFFECTED:

- (1) PLANETARY PINION GEARS - Were increased in length by approximately .075" in both front and rear carriers, as shown in Figure 1, for increased durability.
- (2) ADDED .041" SHIM - There was a .041" shim added between the thrust bearing and the rear internal ring gear, to re-center the sun gear in the revised planetary pinion gears, as shown in Figure 2.
- (3) CENTER SUPPORT - Required a .041" recess to be machined into the center support bearing surface, to accommodate the sun gear being re-centered in the revised planetary pinion gears, as shown in Figure 3.

**SPECIAL NOTE:** *Sometime in 2000 GM. eliminated the only visual identification from the updated center support and it now "Requires" measurement for identification, as shown Figure 3.*

- (4) SUN GEAR SHAFT - Required that .041" be removed from the bottom of the rear bushing journal, to accommodate the re-centering of the sun gear in the revised planetary pinion gears, as shown in Figure 4. Notice that revised sun gear shaft can be identified with a groove cut into the shaft splines, as shown in Figure 4.

### INTERCHANGEABILITY:

None of the parts listed above will interchange with any of the previous design level parts, and none of the previous design level parts can be used in the 1999 and later units.

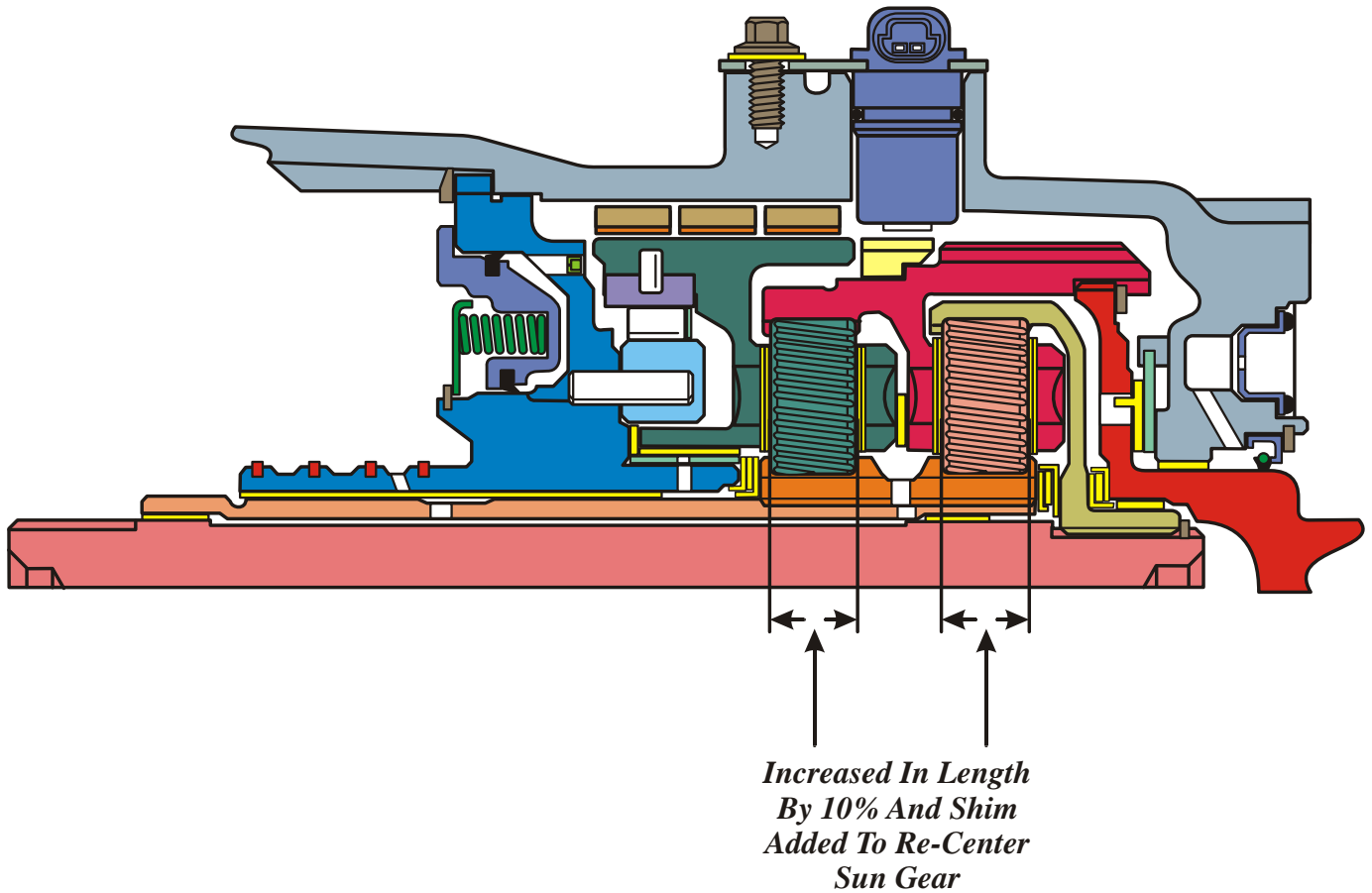
However, when all pieces listed above are used as a service package, they can be used to back service "Center Lube" model 4L80-E transmissions.

The Sun Gear, Main Shaft, Rear Internal Ring Gear and all Thrust Bearings remained the same, as shown in Figures 5, 6, and 7.

**SPECIAL NOTE:** *Some mis-assembly examples are illustrated in Figure 8 with some dimensional checks to prevent this from happening to you.*

### SERVICE INFORMATION:

Reaction (Front) Carrier Assembly (99 Design Level) .....	24202051
Output (Rear) Carrier Assembly (99 Design Level) .....	24202052
Washer, .041" (99 Design Level) .....	24211821
Center Support Assembly (99 Design Level) .....	24217454
Sun Gear Shaft Assembly (99 Design Level) .....	24207264



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Figure 1

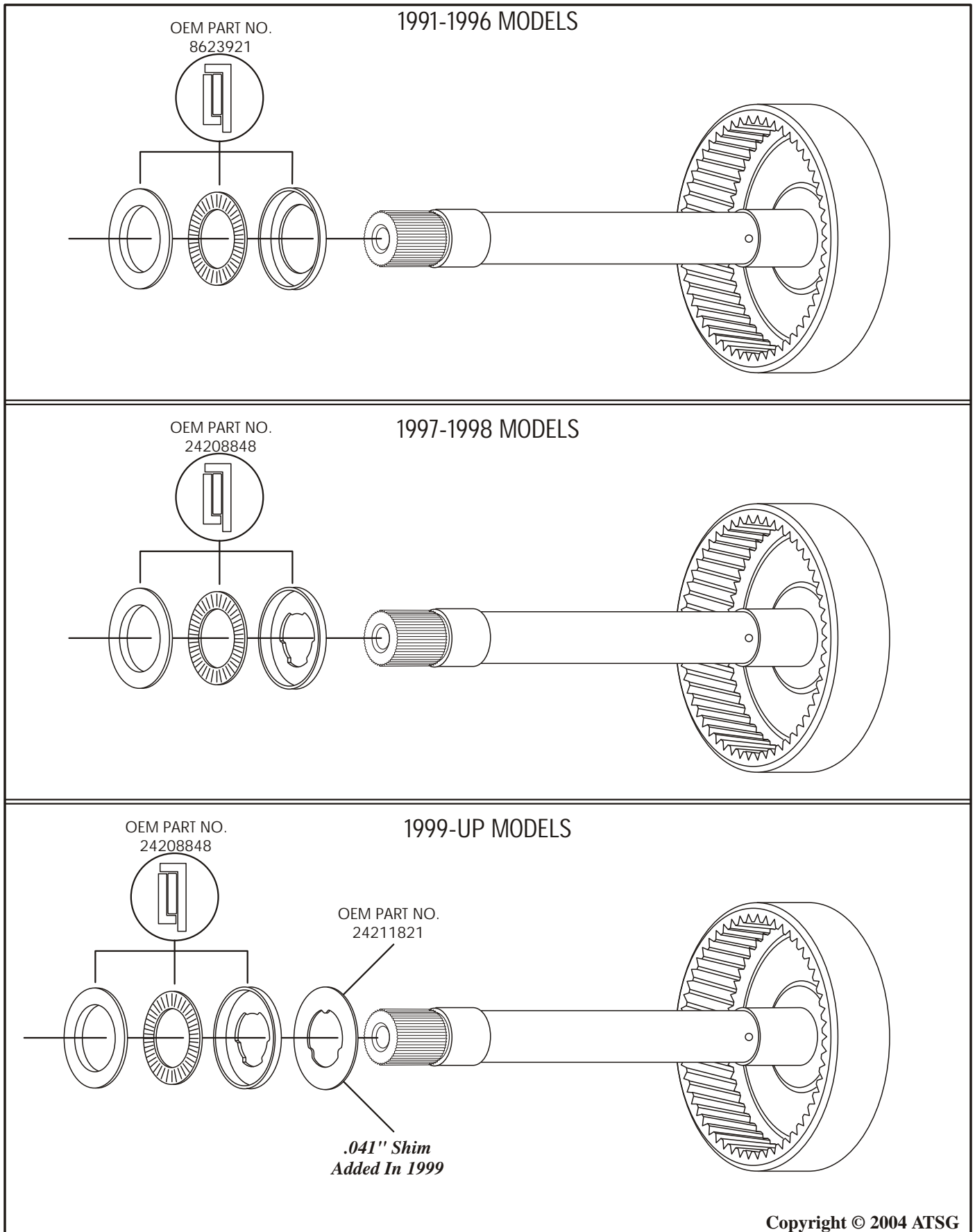


Figure 2

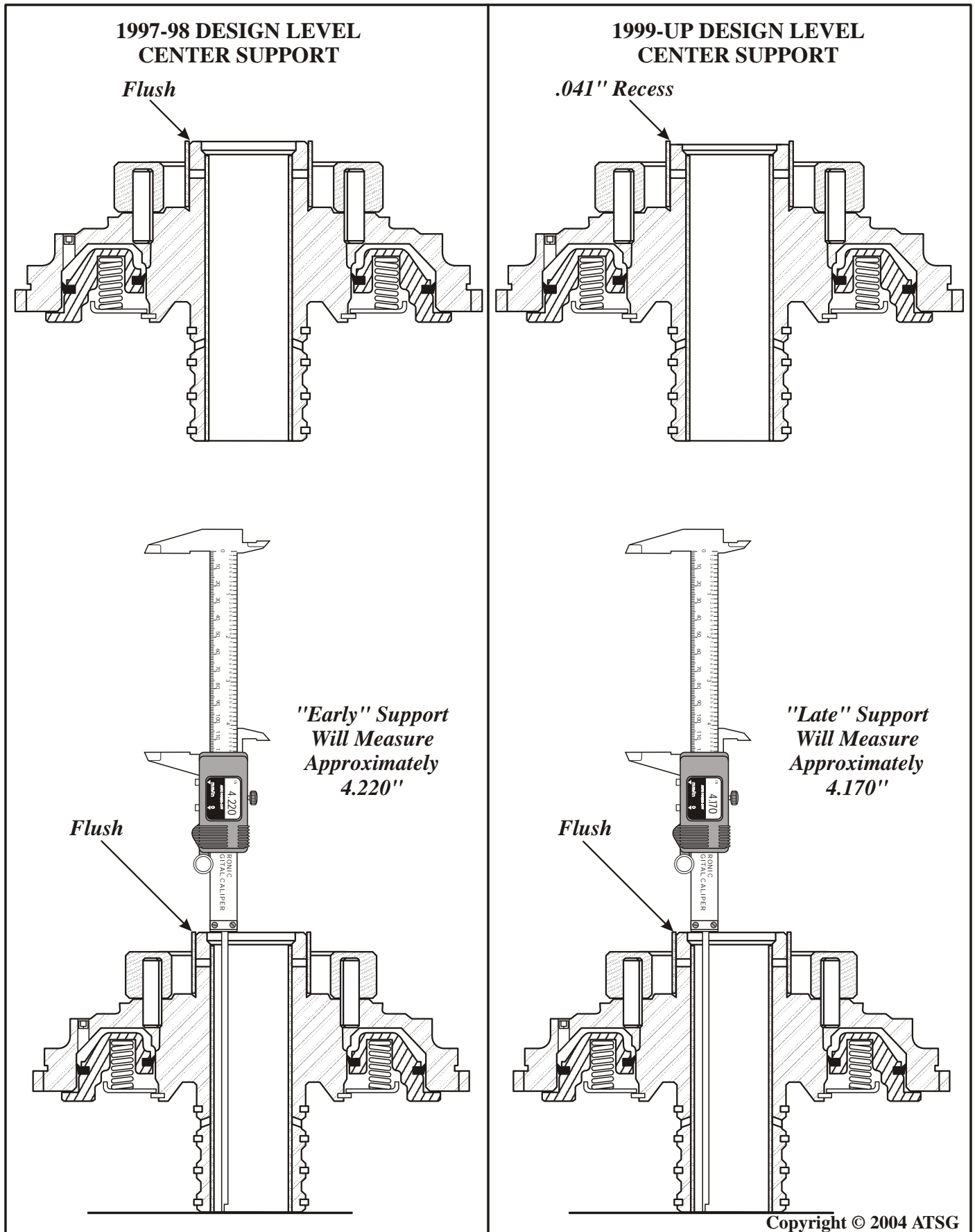


Figure 3

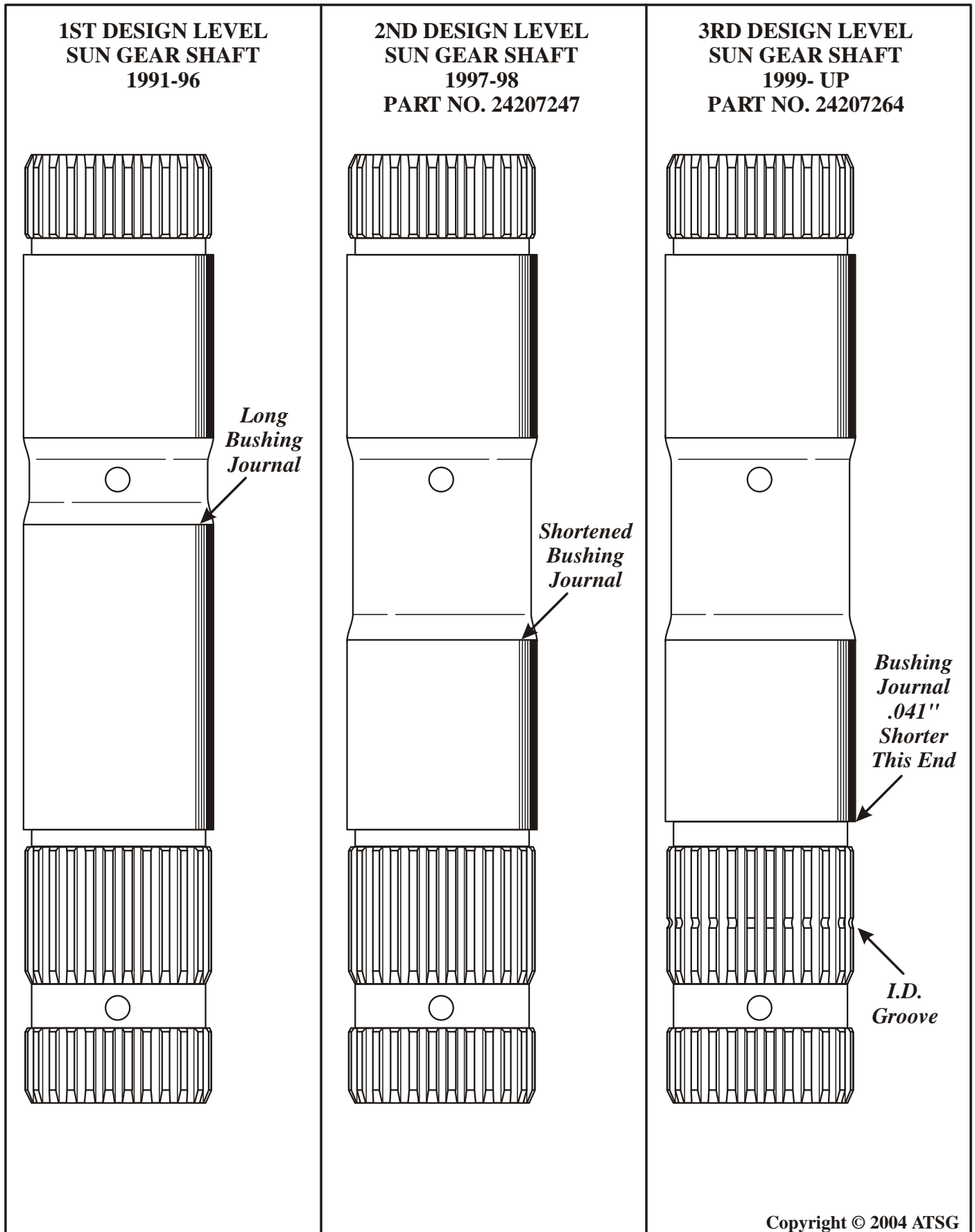


Figure 4

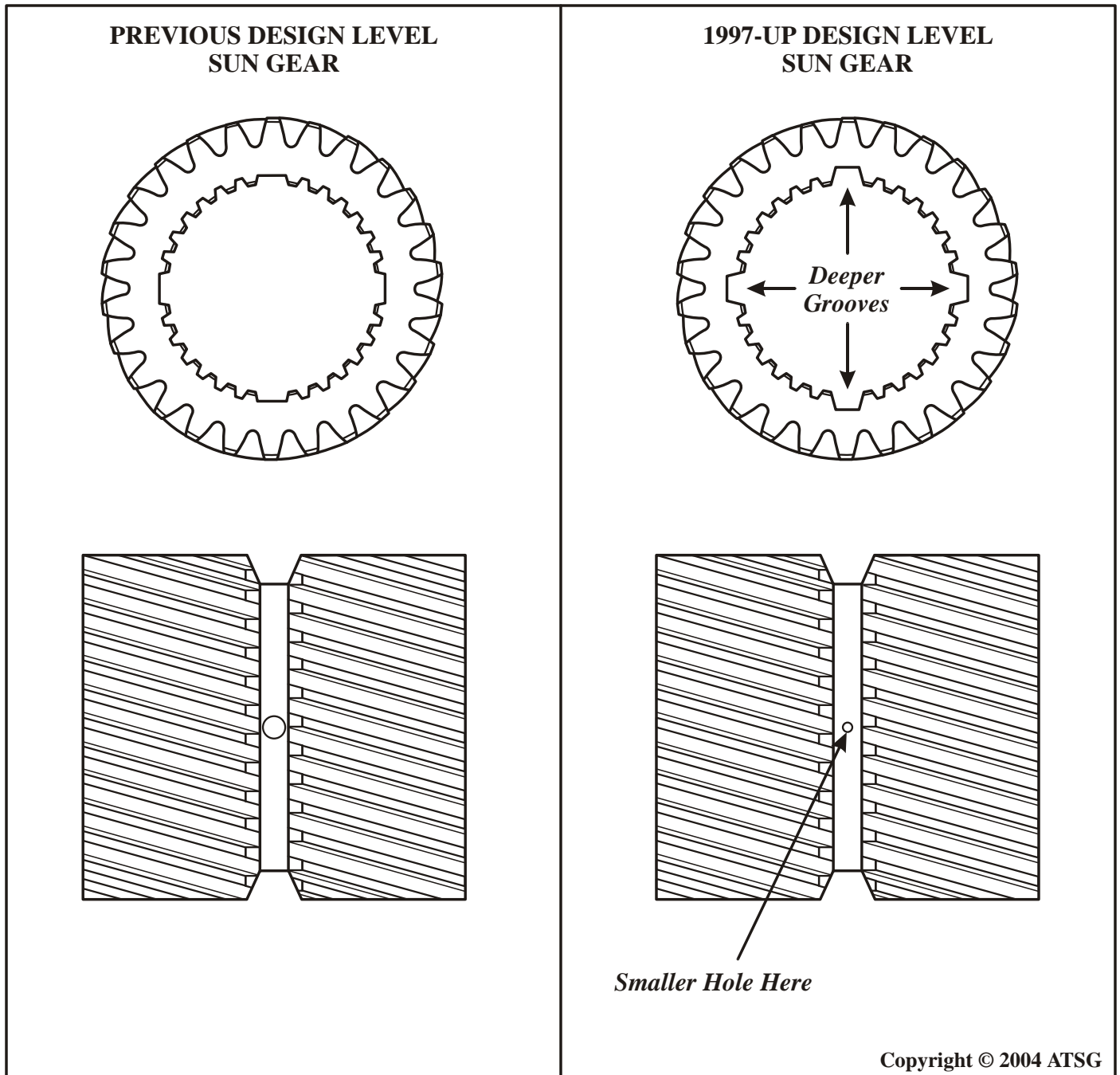
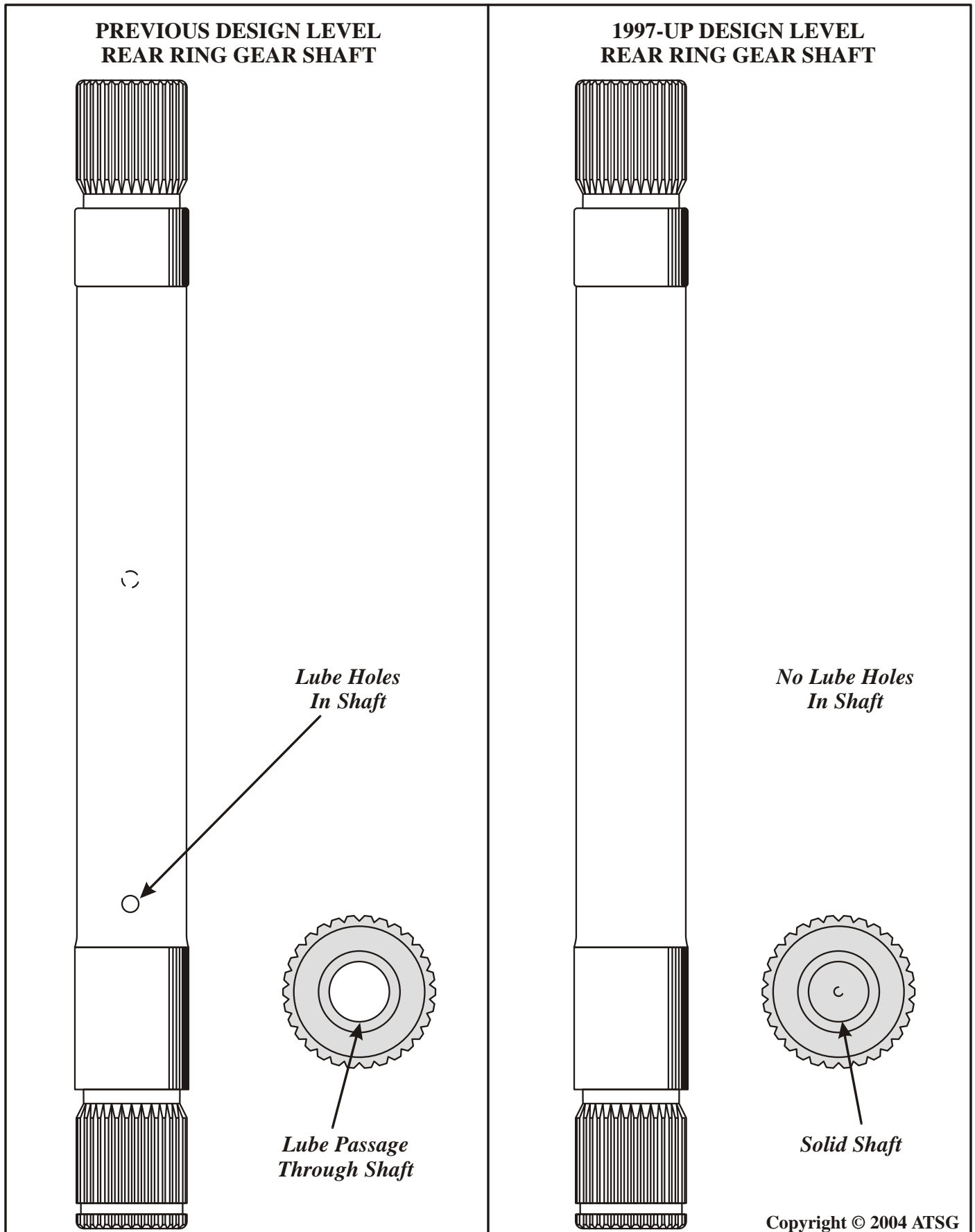


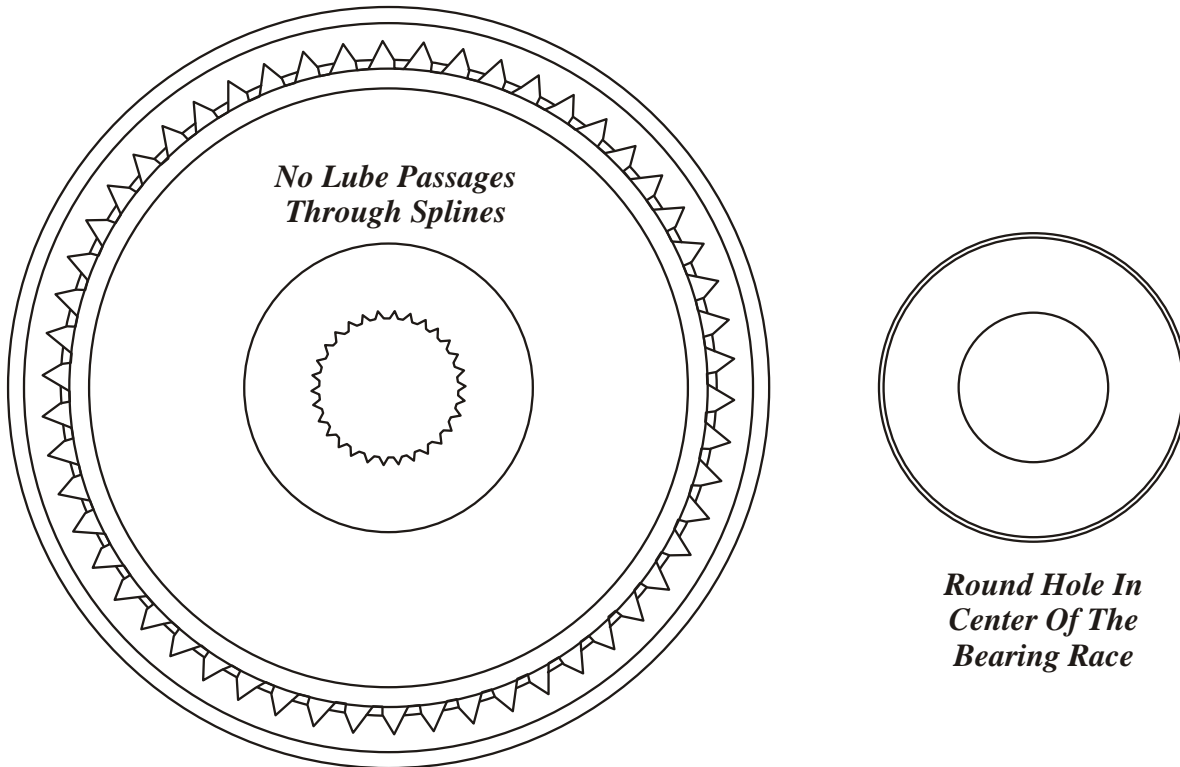
Figure 5



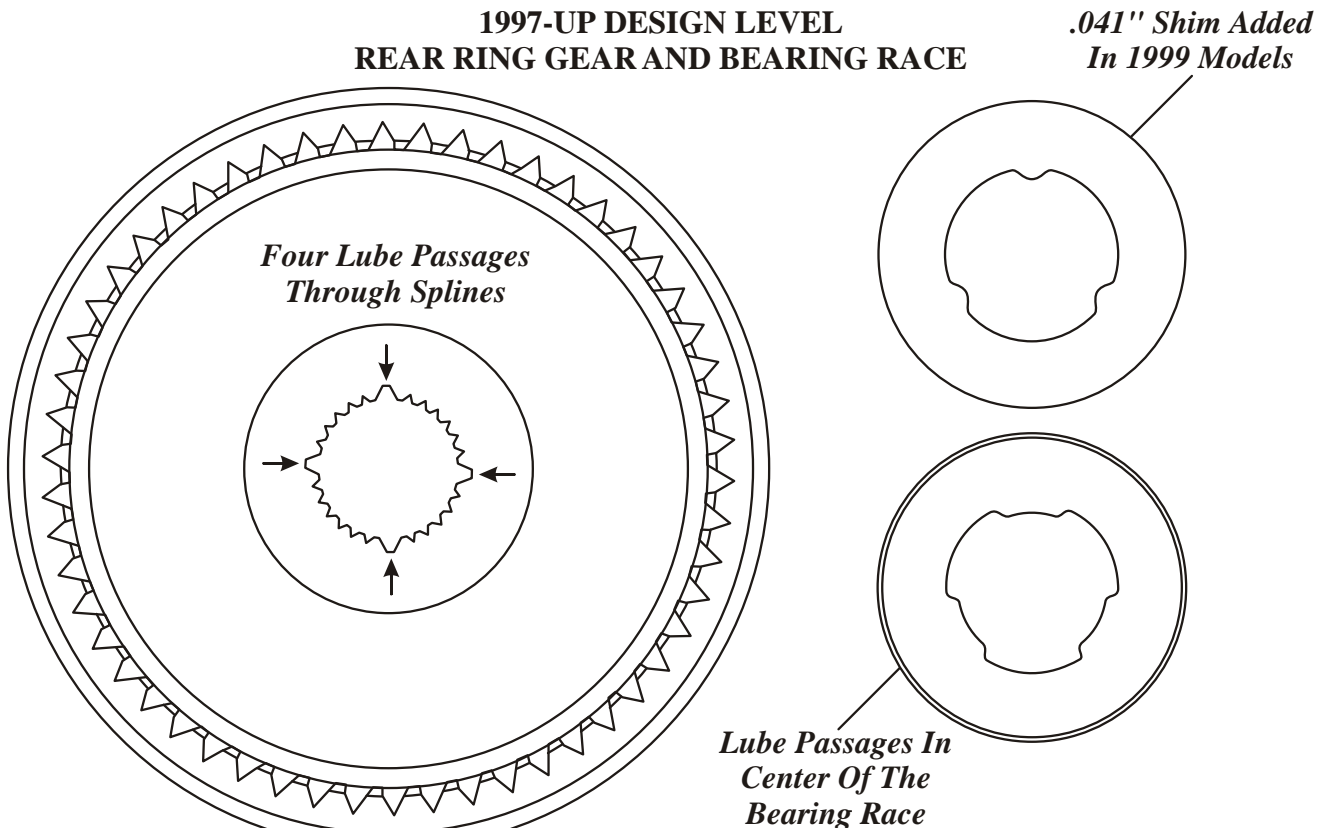
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Figure 6

## PREVIOUS DESIGN LEVEL REAR RING GEAR AND BEARING RACE



## 1997-UP DESIGN LEVEL REAR RING GEAR AND BEARING RACE



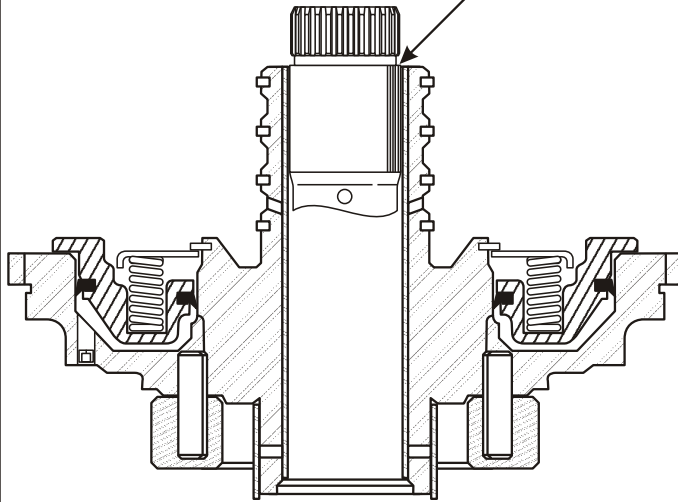
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Figure 7



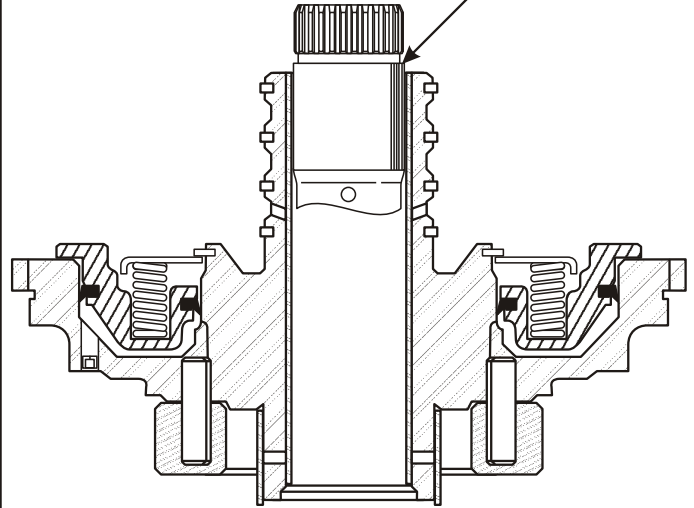
1999 SUN GEAR SHAFT  
WITH 1997-98 CENTER SUPPORT  
AND NO .041" SHIM

*Shaft Journal  
Approximately  
Flush With Support*



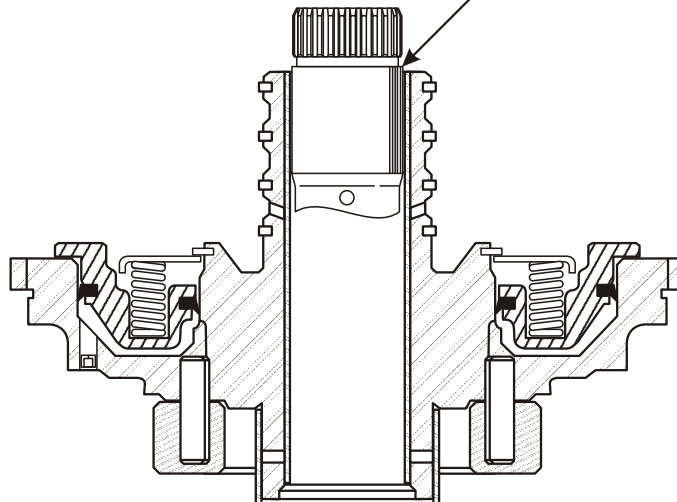
1997-98 SUN GEAR SHAFT  
WITH 1999 CENTER SUPPORT  
AND WITH .041" SHIM

*Shaft Journal  
Approximately  
.090" Above Support*



"CORRECT ASSEMBLY"  
WITH PROPER  
SUN GEAR SHAFT  
AND CENTER SUPPORT

*Shaft Journal  
Approximately  
.050" Above Support*



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Figure 8