THM 4L80E/4L80EHD

NEW DESIGN OVERRUN ROLLER CLUTCH

CHANGE: Beginning in March 2001, a new design Overrun Roller Clutch was introduced into the THM 4L80E, as a running change. This engineering change affected many other related parts.

REASON: Increased durability and reliability with the new design roller clutch, by reducing the ability of the rollers to "skew".

PARTS AFFECTED:

(1) OVERRUN ROLLER CLUTCH - Entirely new design with smaller diameter rollers and the rollers are now trapped inside of a "Shoe" to help prevent skewing, and the springs put pressure on the "Shoe", as shown in Figure 1.

(2) OVERRUN CLUTCH HOUSING - Requires a different ramp angle on the inner cam, to accommodate the new design roller clutch, as shown in Figure 1. The snap ring was also moved away from the back of the roller clutch which required a new snap ring groove that is lower in the housing, as shown in Figure 2.

(3) OVERRUN ROLLER CLUTCH RETURN SPRING - Now requires a recess in the return spring retainer to accomodate the relocated snap ring groove, as shown in Figure 2.

(4) RETAINER SNAP RING - New design has revised dimensions, as shown in Figure 2. The new design snap ring is thinner and narrower.

(5) OVERDRIVE PLANETARY CARRIER - The new design has a smaller diameter roller clutch outer race incorporated in the overdrive carrier, as shown in Figure 3.

INTERCHANGEABILITY:

None of the current design parts listed above will interchange with the previous design level parts. They will however retro-fit back on all models, when used as a service package.

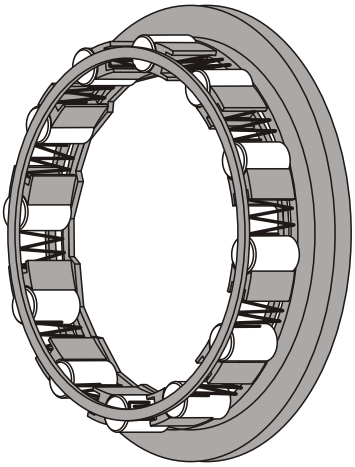
SERVICE INFORMATION:

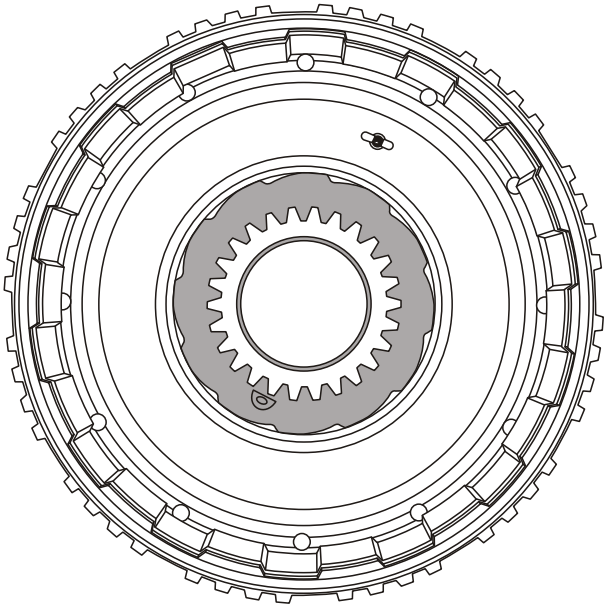
Overrun Roller Clutch Service Package (New Design) 24222160
Turbine Shaft Assembly (2nd Design) 24200128

SPECIAL NOTE:

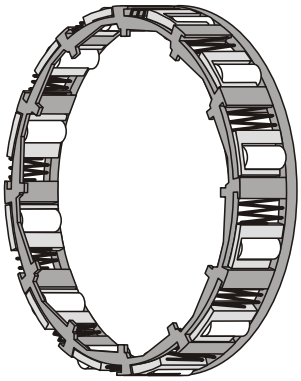
If installing this service package into an early model, with the 1st design turbine shaft, you must also purchase the 2nd design turbine shaft, as shown in Figure 4. The changes included shot peening the area around the forward clutch feed hole, the feed hole diameter reduced and drilled through the turbine shaft (See Figure 4).

PREVIOUS DESIGN
OVERRUN ROLLER CLUTCH





CURRENT DESIGN
OVERRUN ROLLER CLUTCH



Different Ramp Angle
On Inner Cam

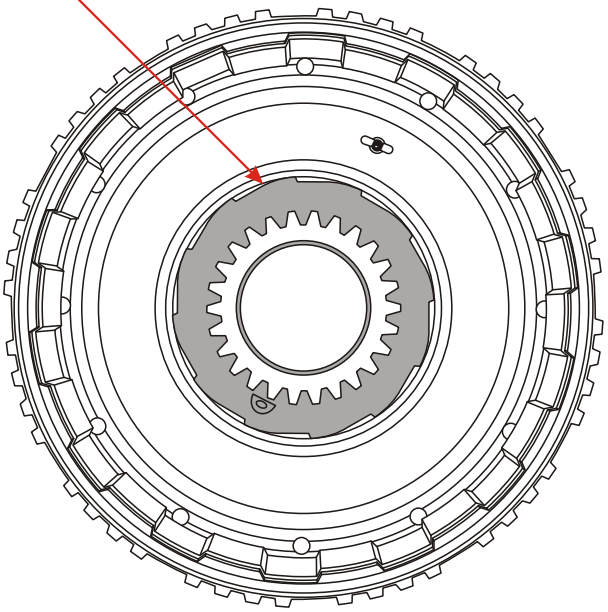
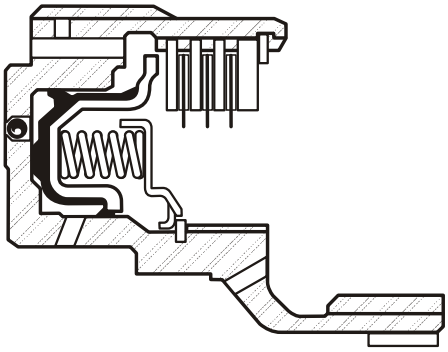
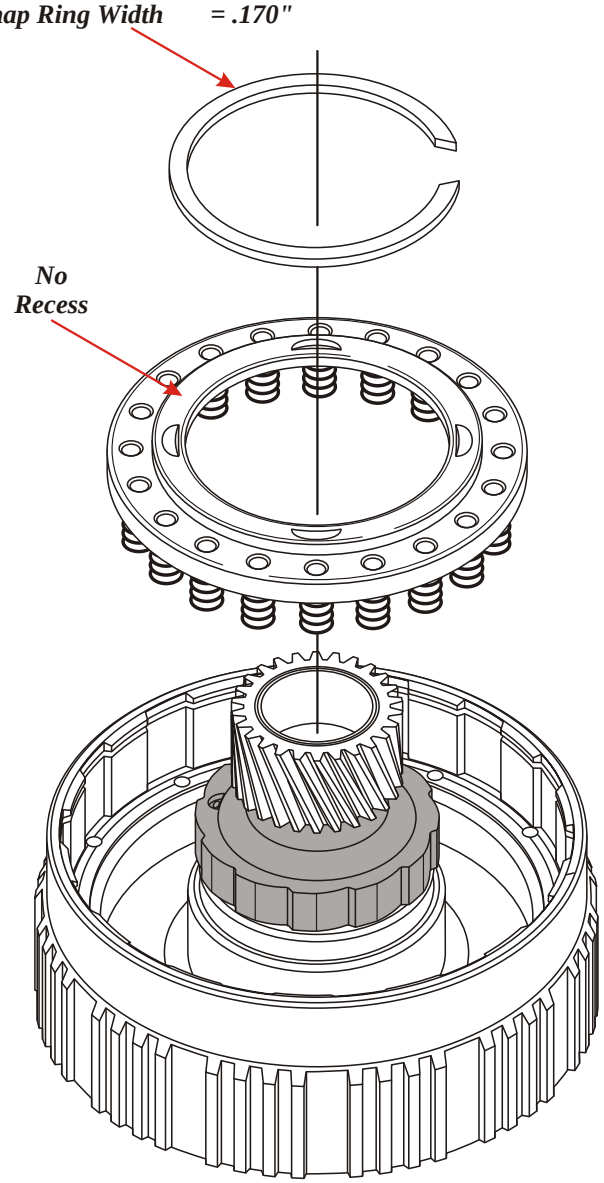


Figure 1

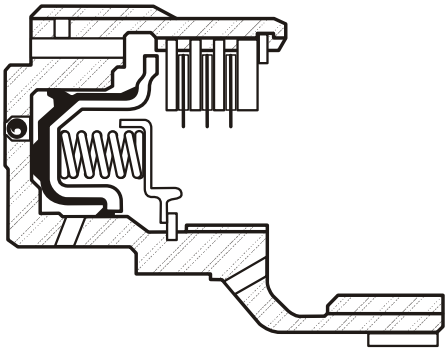
PREVIOUS DESIGN



Snap Ring Thickness = .079"
Snap Ring Width = .170"



CURRENT DESIGN



Snap Ring Thickness = .060"
Snap Ring Width = .140"

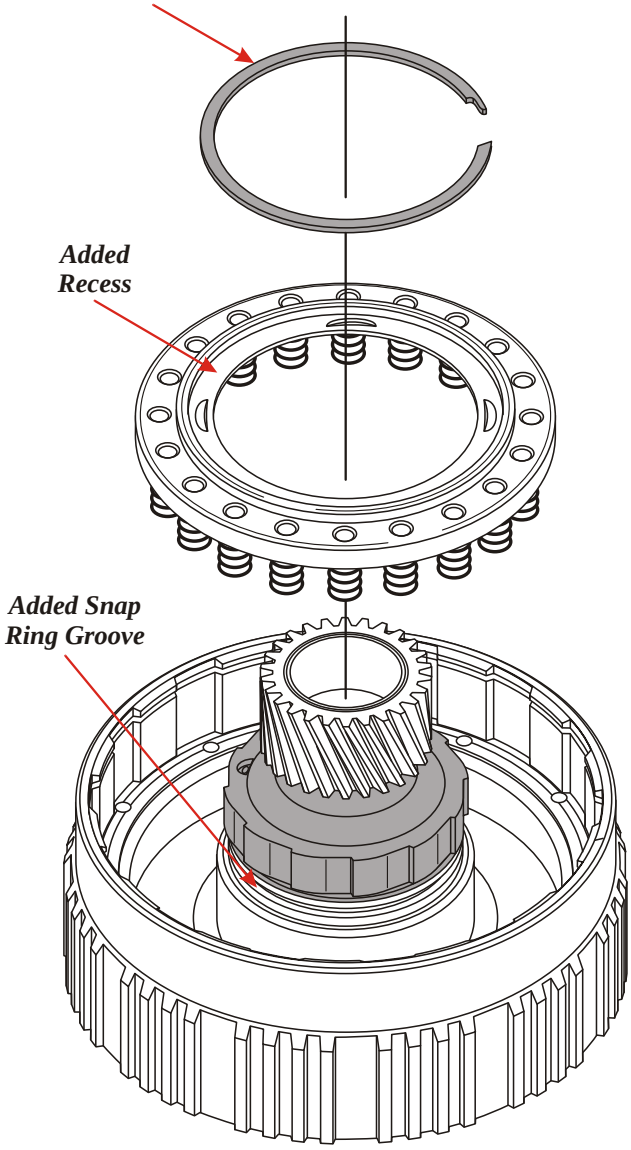


Figure 2

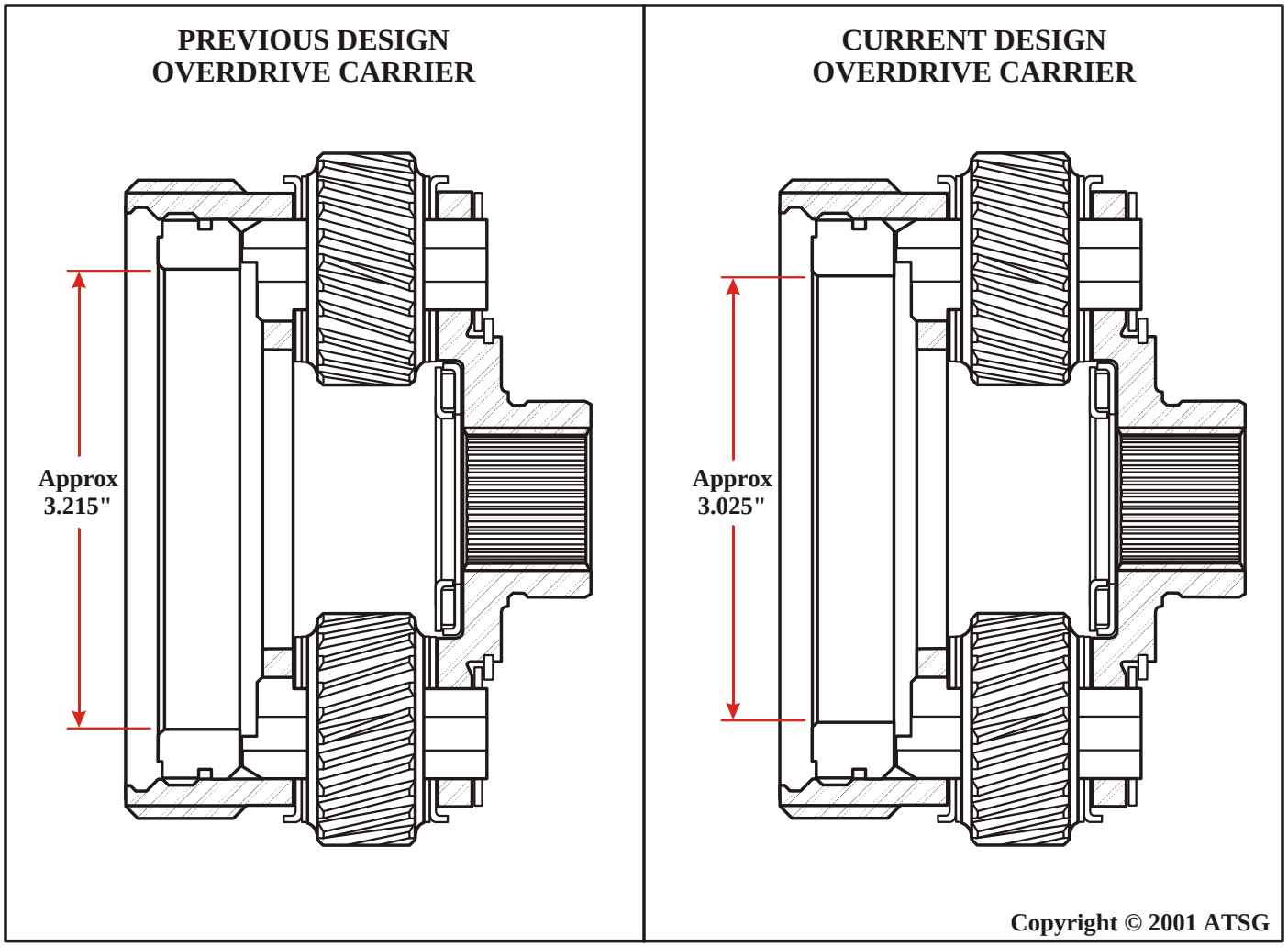

PREVIOUS DESIGN
OVERDRIVE CARRIER
Approx
3.215"
CURRENT DESIGN
OVERDRIVE CARRIER
Approx
3.025"
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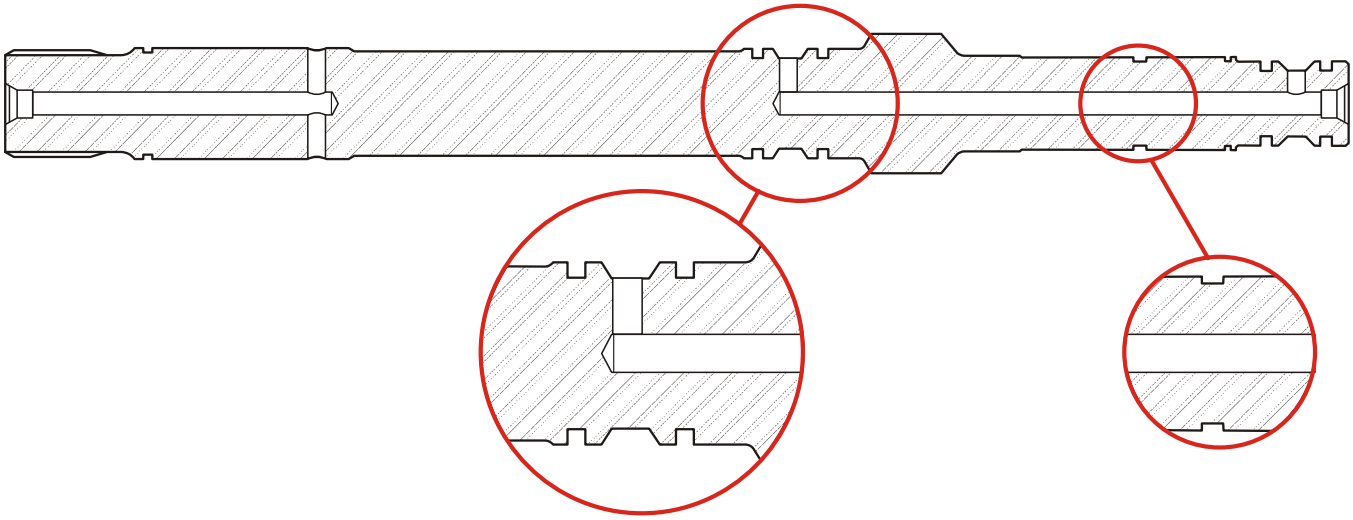
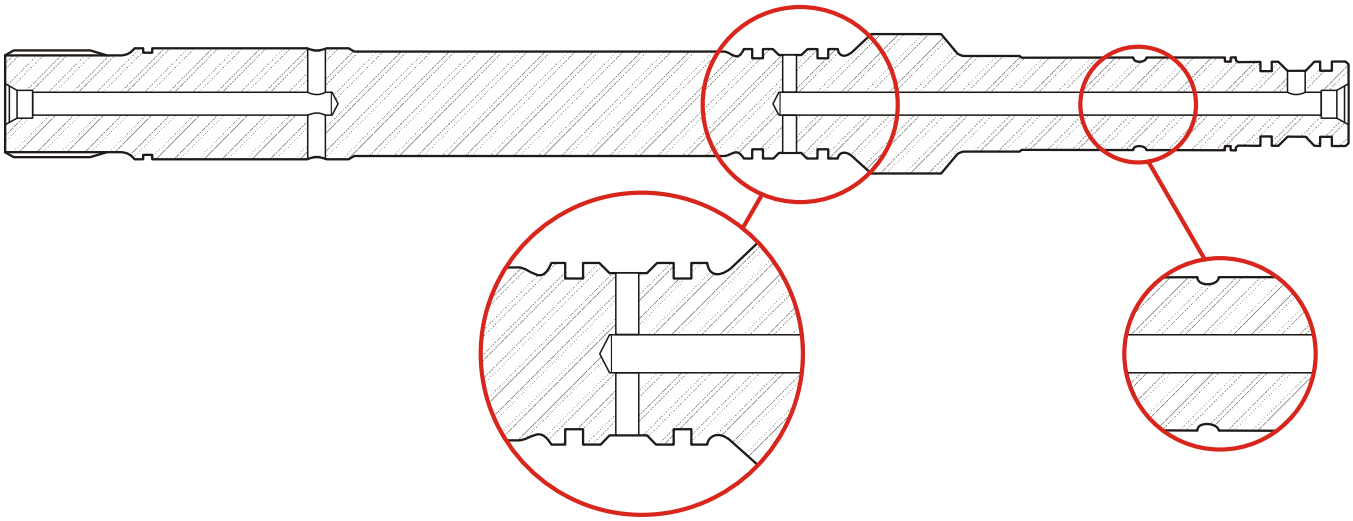
Figure 3

"1ST" DESIGN TURBINE SHAFT



"2ND" DESIGN TURBINE SHAFT



Forward Clutch Feed Hole Drilled Through

Figure 4