# FORD 5R55N VERSUS 5R55W
## TRANSMISSION DIFFERENCES

The Ford Motor Companys 5R55N (Non Sync.) transmission first appeared in the 2000 Lincoln "LS" and some of the Jaguar Models, which we are already somewhat familiar with. Beginning at the start of production for model year 2002, Ford has introduced the 5R55W (Wide Ratio) transmission into the some models of the Ranger and Explorer. The internal parts look almost identical, but will not interchange with their look alikes in the 5R55N transmission. The information in this bulletin will help you in getting the proper replacement parts back into the proper unit. Externally these transmissions are easy to identify and we have provided illustrations of both transmissions in Figure 1.

***Figures 2 and 3 are illustrations of the fluid level checking procedure with a description of the procedure on the page preceding the illustrations.***

***Figure 4 is an illustration of the two different turbine shafts. They are identical in every respect except for the overall length.***

***Figures 5 and 6 show you the differences in the overdrive sun gear and drive plate. Notice the differences in the tooth count on the sun gear.***

***Figures 7 and 8 are illustrations of the two different coast clutch housings. Notice that the slots to accept the tabs on the adapter plate are narrower and angled to the left at a very slight angle. This means that it will engage into the coast clutch housing in only one direction.***

***Figures 9 and 10 are illustrations of the two different overdrive ring gears and the overdrive center shafts. Notice the difference in the tooth counts of both pieces.***

***Figure 11 illustrates the difference in the snap ring that retains the overdrive center shaft in the ring gear and the dimensions for identification.***

***Figures 12 and 13 are illustrations of the two different overdrive carriers. Notice the difference in the tooth counts on the planetary pinions.***

***Figure 14 illustrates the internal components of the forward clutch housing for the 5R55N. Figure 15 illustrates the internal components of the forward clutch housing for the 5R55W. The empty forward clutch housings and the forward clutch components are the same in both units.***

***Figures 16 and 17 are illustrations of the two different, completed forward clutch housing assemblies. Notice that the only visible difference is the piston and the return spring retainer.***

***Figures 18 and 19 are illustrations of the two different forward planetary carriers and the two different forward planetary internal ring gears. Notice the different tooth count on the planetary carrier pinions and the different tooth counts on the forward internal ring gear.***

**Continued on next Page.**

*Figures 20 and 21 are illustrations of the two different sun gear and shell assemblies. Notice that the 5R55N uses an intermediate sprag and the 5R55W does not. This required a taller spacer as shown in Figure 21. Notice also the difference in tooth count of the forward sun gear, but the rear sun gear remains the same.*

*Figure 22 shows illustrations of the two different solenoid pack assemblies. Notice that the 5R55W does not use a reverse pressure switch and the hole where it plugs in is obviously different.*

*Figure 23 shows 3 dimensional illustrations of the two different valve body assemblies. The most noticeable difference is the 5R55W does not use a cover plate. The bolt pattern however, is exactly the same as the 5R55N transmission.*

*Figure 24 shows illustrations of the two different valve body assemblies in the worm track area, different amount of checkballs and the locations, and the retainer locations for both valve bodies.*

*Figure 25 is illustrations of the two different valve body spacer plates. One hole location for the spacer plate retaining bolts has changed to help prevent you from a mis-match.*

*Figures 26 and 27 are illustrations of the two different reverse servo housings. Notice that the 5R55W transmission has two feed holes in the housing, has a larger diameter for the inner piston seal, and has a different reverse servo check valve.*

*Figure 28 is illustrations of the two different of the two different reverse servo return springs. Notice the difference in the spring dimensions.*

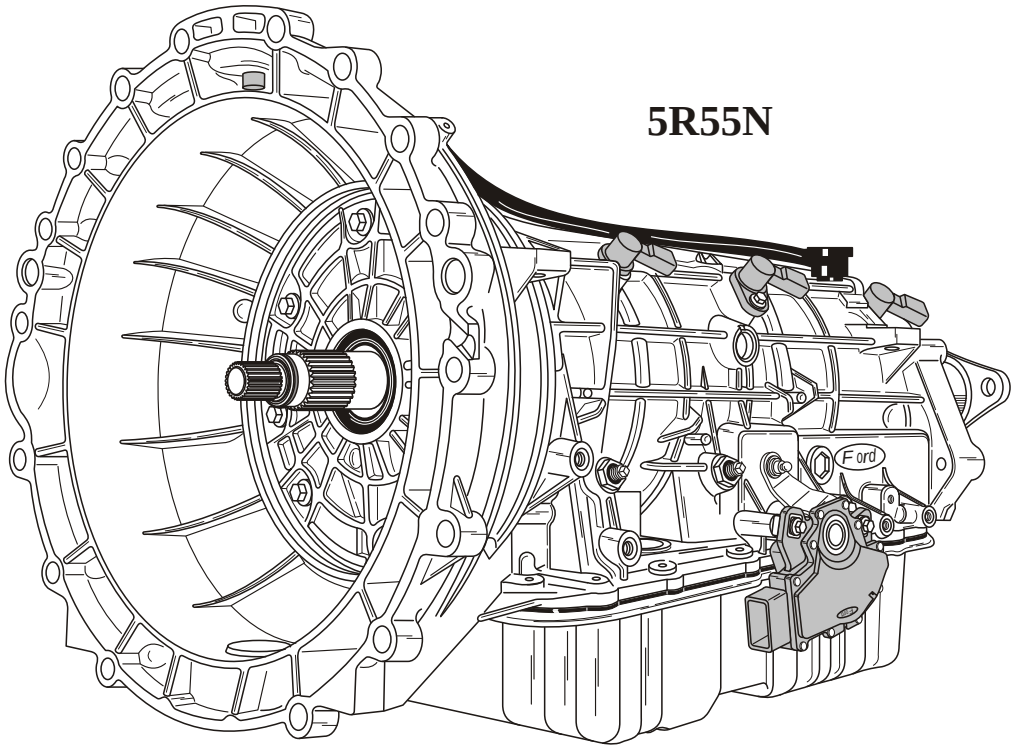
*Figure 29 is illustrations of the two different of the two different reverse servo pistons. Notice the difference in the outside diameter of the body, to accommodate the larger diameter in the housing.*

*Figures 30 and 31 are illustrations of the two different reverse servo components and the assembly process for each of them.*

*Figures 32 and 33 are illustrations of the two different intermediate servo covers and the intermediate servo pistons.*

***CAUTION:***
***NONE OF THE COMPONENTS LISTED ABOVE WILL INTERCHANGE BETWEEN THESE TWO SIMILAR TRANSMISSIONS***

**5R55N**




**5R55W**

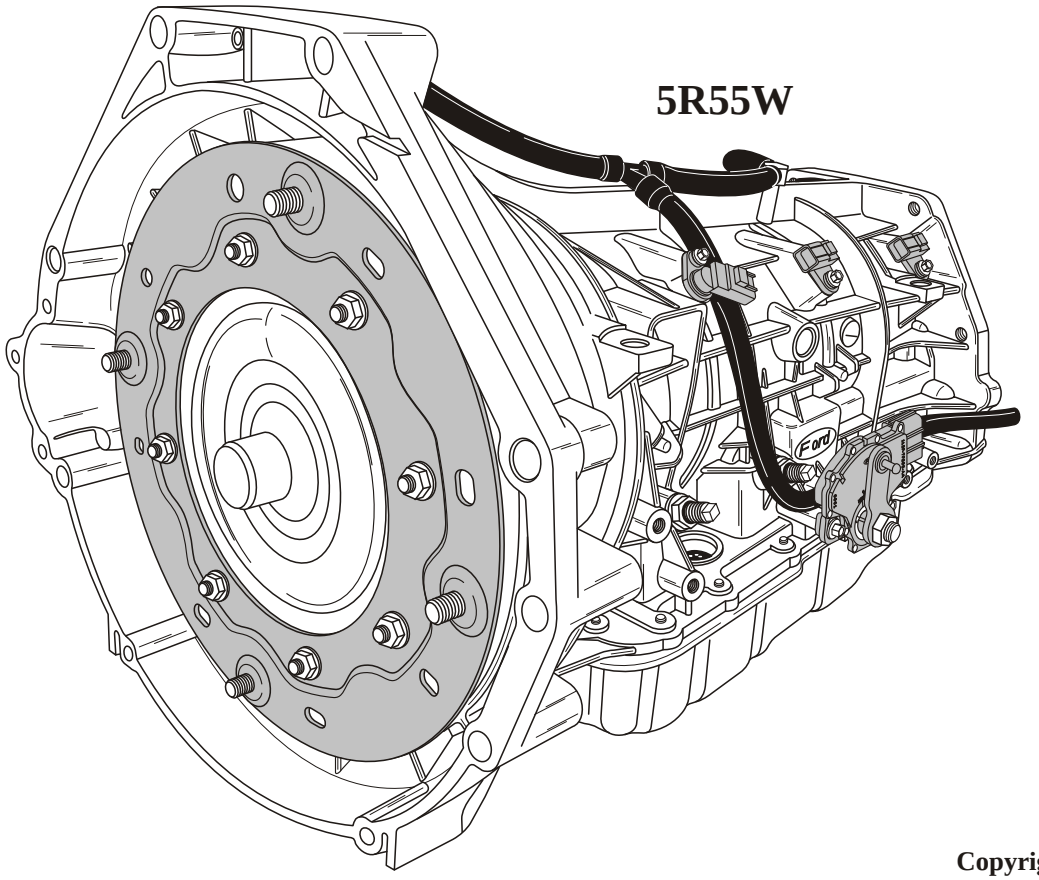





Figure 1

# FORD 5R55N/5R55W

## CHECKING FLUID LEVEL

### 5R55N PROCEDURE

Checking the fluid level on any vehicle equipped with Ford Motor Companys new 5R55N transmission may become confusing to some technicians. There is a plug in the extension housing, as shown in Figure 2, that would lead one to believe that this is where you check the fluid level, since some of the other manufacturers are currently checking fluid level in this manner, and it refers to the correct temperature to check the fluid right on the extension housing.

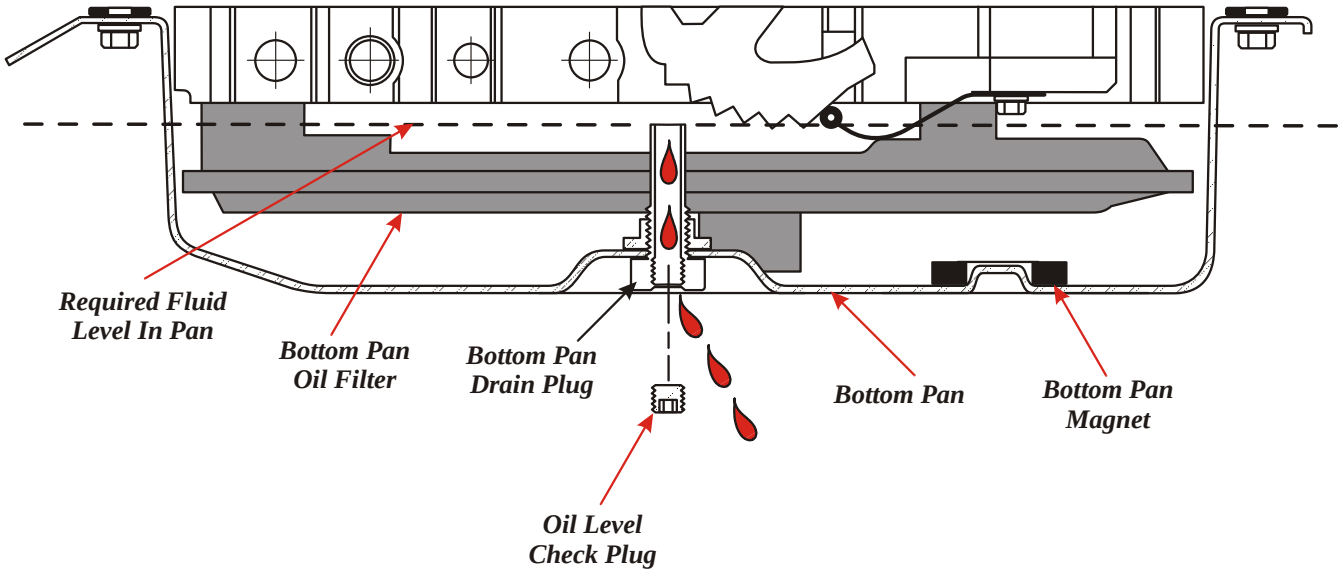
However, this is a ***"Fill" plug only*** on the new 5R55N transmission from Ford Motor Company, which is currently found in the 2000 Lincoln LS and some Jaguars. To ***"Check"*** for the correct fluid level, you must remove the check plug, which is located in the center of the bottom pan drain plug, and is removed with an allen wrench, as shown in Figure 2, while holding the drain plug with the proper size wrench so as not to loosen the drain plug.

We have provided you with a cut-away drawing of the bottom oil pan and the drain plug so that you will understand how this system works. Notice that the drain plug actually has a "stem" made on it that extends some distance up into the bottom pan, which is our way to establish the proper fluid level in the transmission. By removing the "Check" plug from the "Drain" plug, the fluid should just trickle over the stem and out through the center of the drain plug, as shown in Figure 2. The "Fill" plug in the extension housing is your only way to replace fluid in the transmission.

### 5R55W PROCEDURE

Checking the fluid level on any vehicle equipped with Ford Motor Companys new 5R55W transmission, is exactly the same as described above by removing the check plug which is located in center of the bottom pan drain plug, as shown in Figure 2. However, the ***"Fill"*** plug is located on the right rear of the transmission case, as shown in Figure 3. The 5R55W transmission is currently found the 2002 Explorer and 2002 Ranger.

## CHECKING FLUID LEVEL



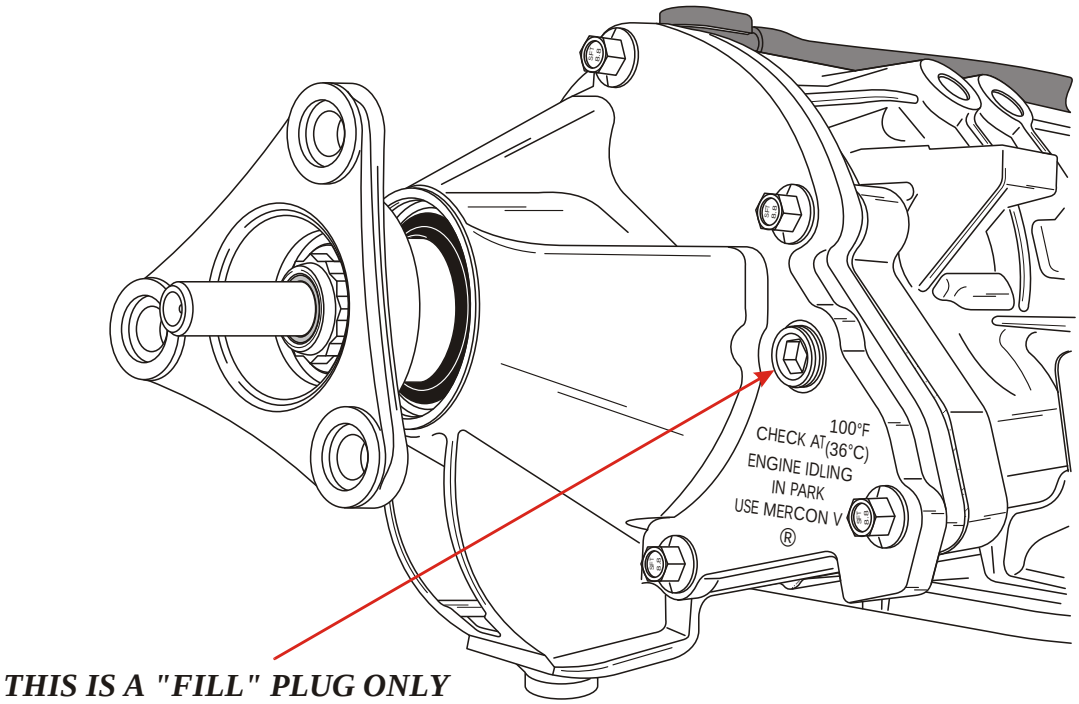
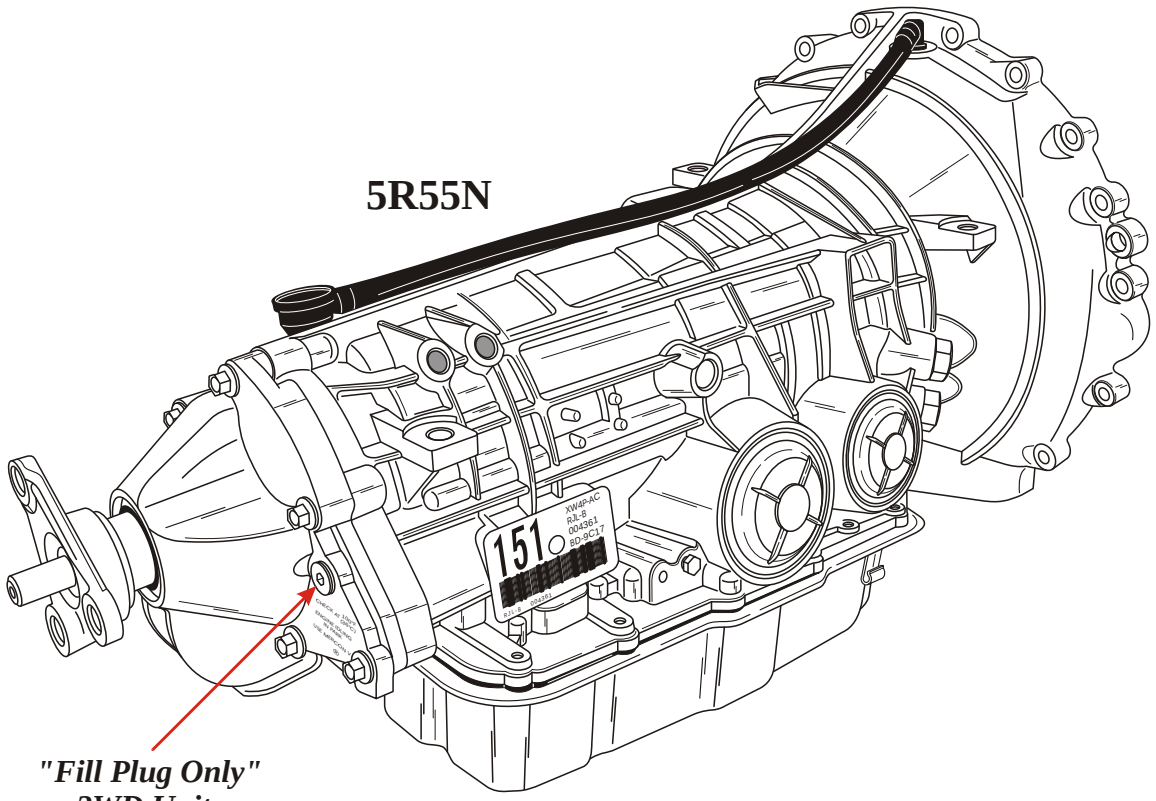






Figure 2



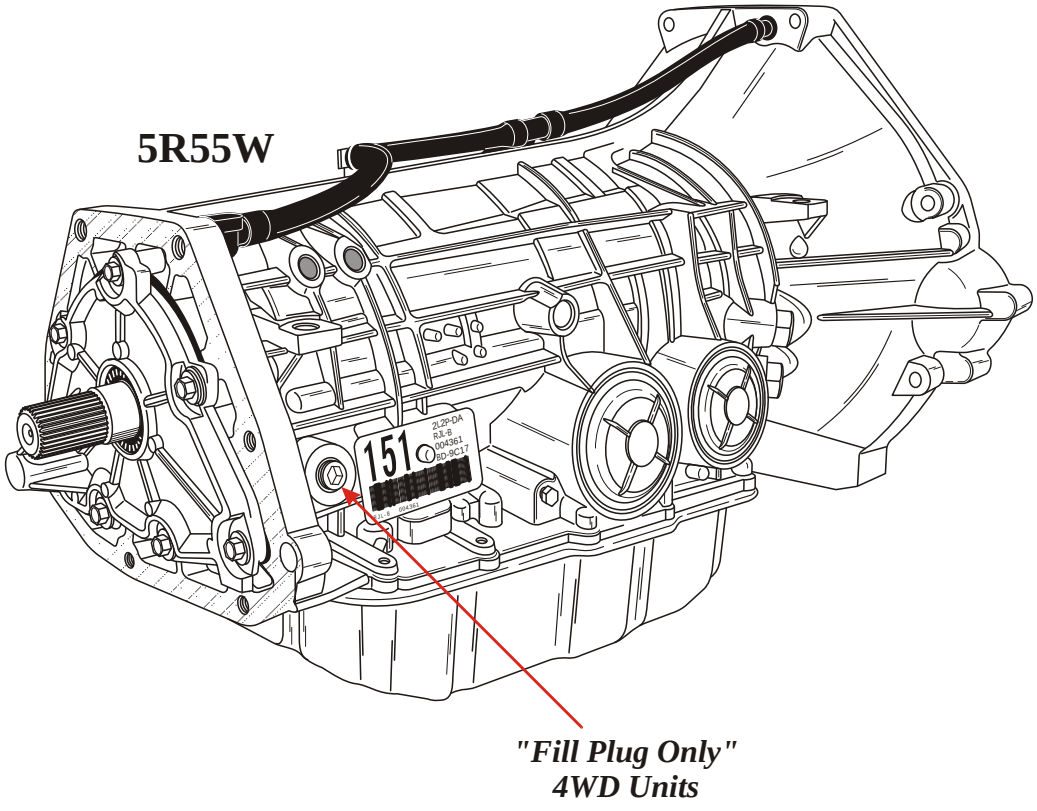
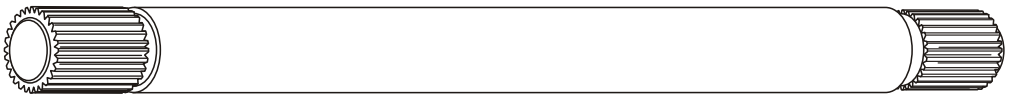






Figure 3

**TURBINE SHAFT DIFFERENCES**

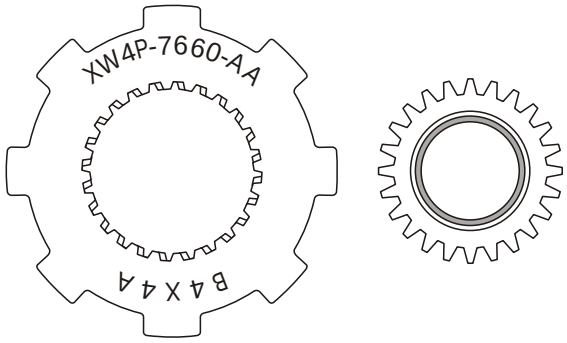
*"5R55N" Turbine Shaft*



*"5R55W" Turbine Shaft .200" Longer*



Figure 4




*"5R55N"*
*Overdrive Sun Gear*
*24 Teeth*

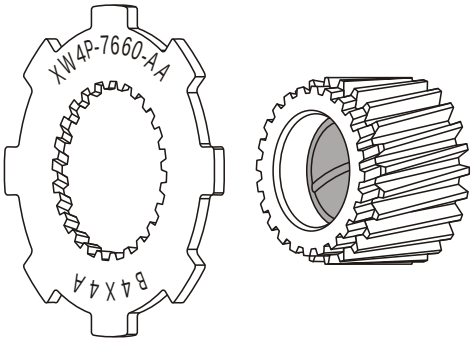
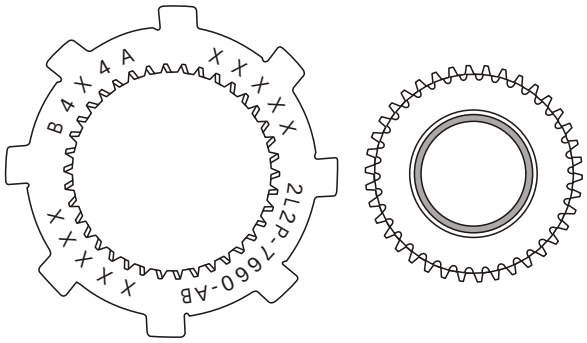





Figure 5




*"5R55W"*
*Overdrive Sun Gear*
*38 Teeth*

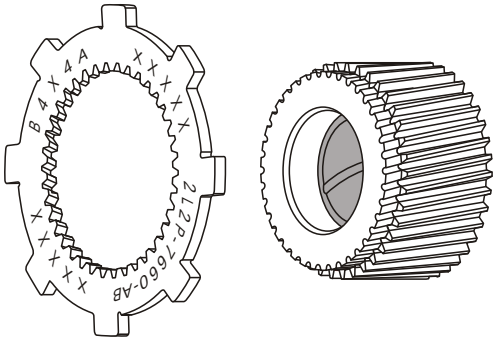





Figure 6

**5R55N OVERRUN DRUM**

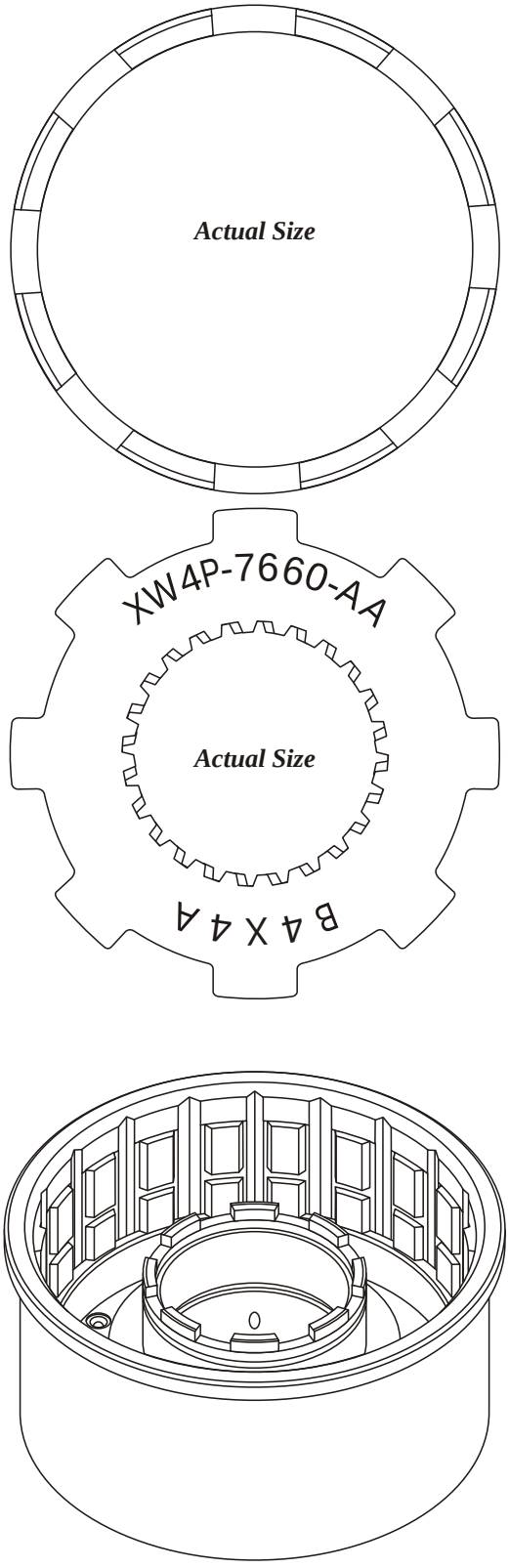





Figure 7

**5R55W OVERRUN DRUM**

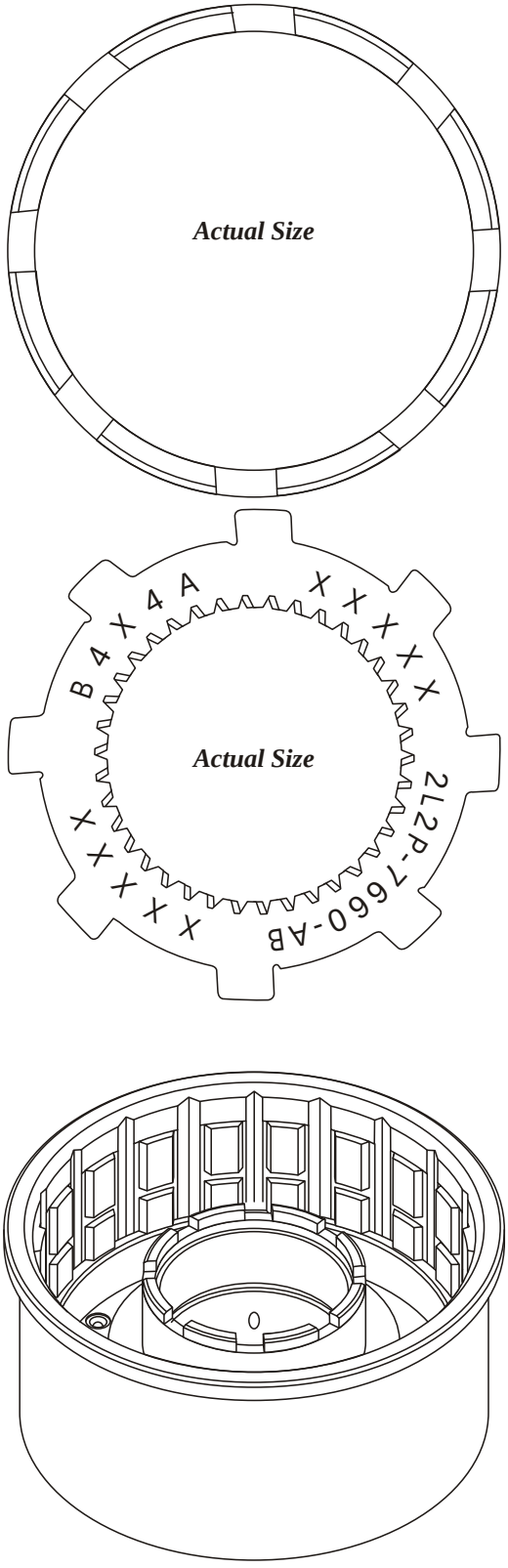





Figure 8

**5R55N OVERDRIVE RING GEAR AND CENTER SHAFT**

***"5R55N"***
***Overdrive Ring Gear***
***72 Teeth***

***"5R55N"***
***Overdrive Center Shaft***
***72 Teeth***

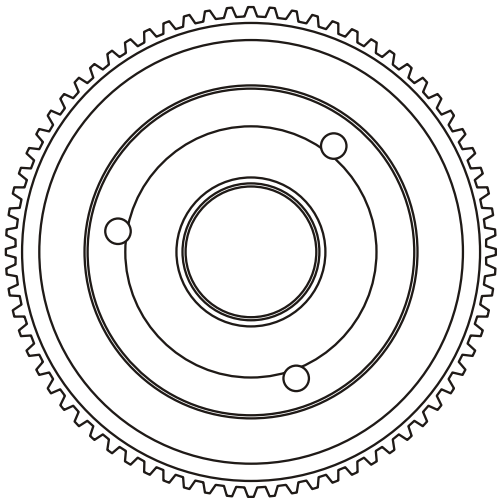




Figure 9

**5R55W OVERDRIVE RING GEAR AND CENTER SHAFT**

***"5R55W"***
***Overdrive Ring Gear***
***94 Teeth***

***"5R55W"***
***Overdrive Center Shaft***
***94 Teeth***

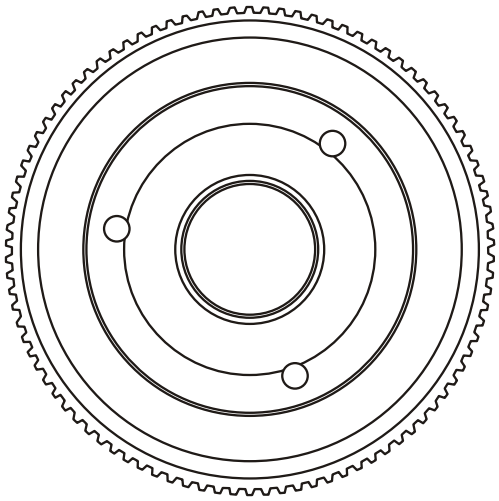
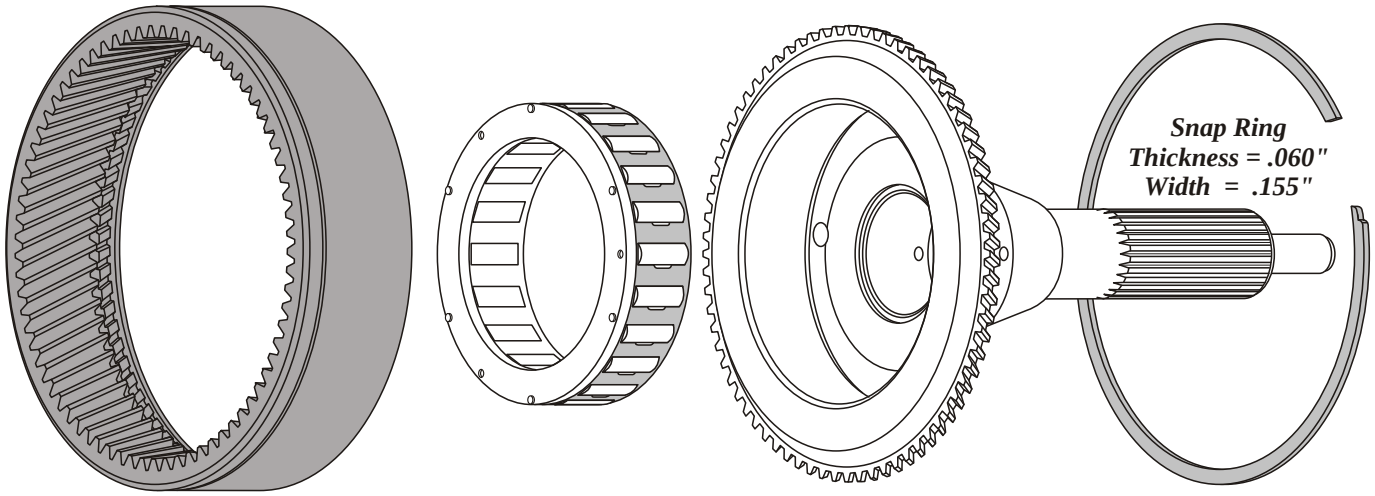




Figure 10

*"5R55N" Overdrive Ring Gear Snap Ring*




*"5R55W" Overdrive Ring Gear Snap Ring*

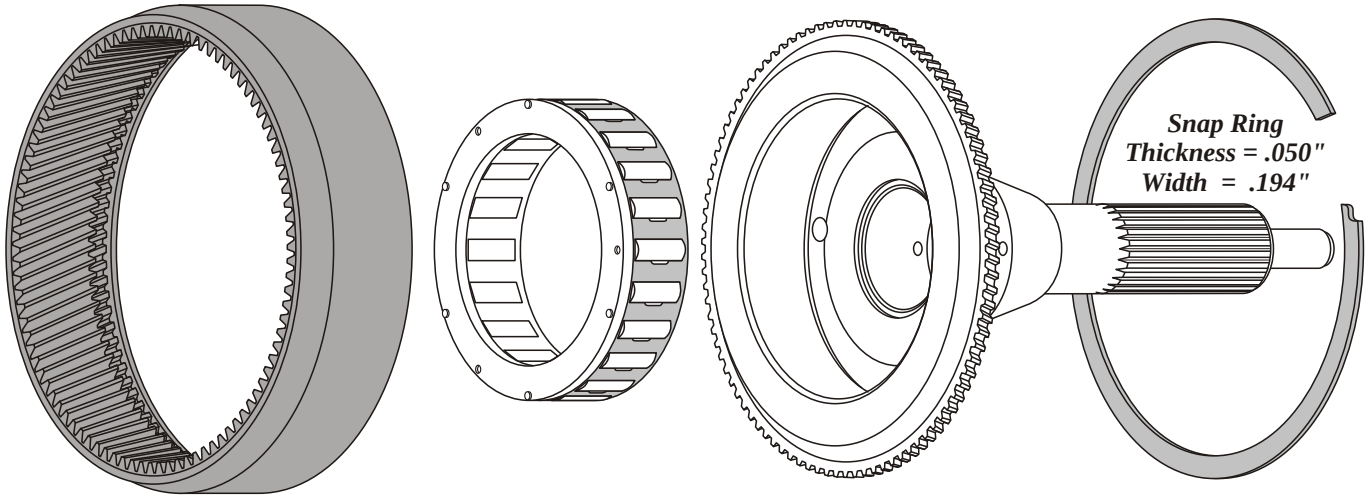
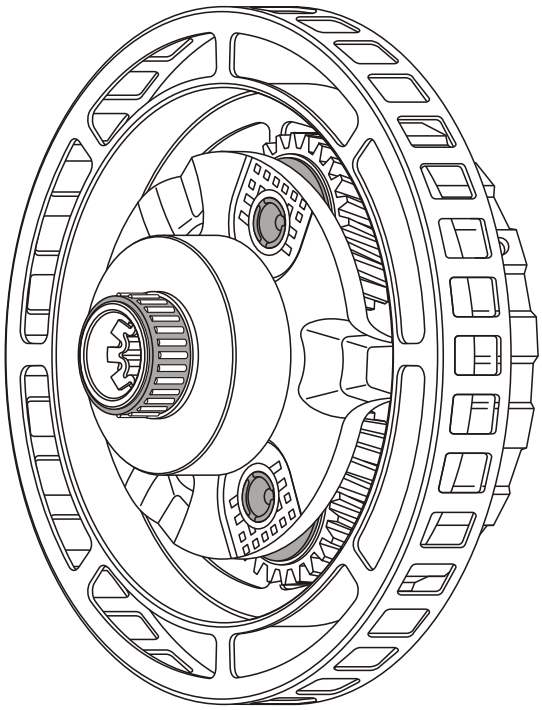





Figure 11

**5R55N OVERDRIVE CARRIER**



*"5R55N" Overdrive Carrier*
*25 Tooth Pinions*

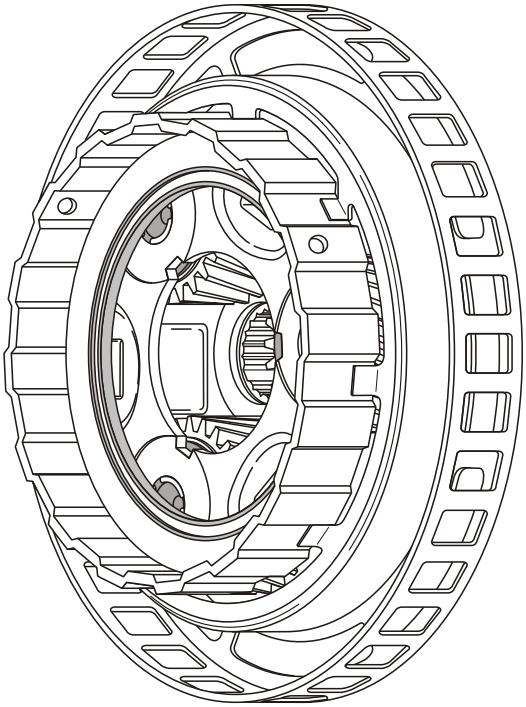
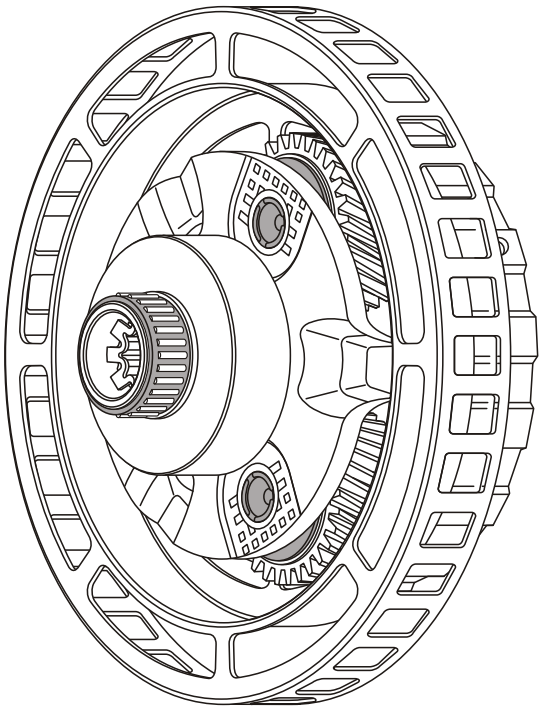




Figure 12

**5R55W OVERDRIVE CARRIER**



*"5R55W" Overdrive Carrier*
*28 Tooth Pinions*

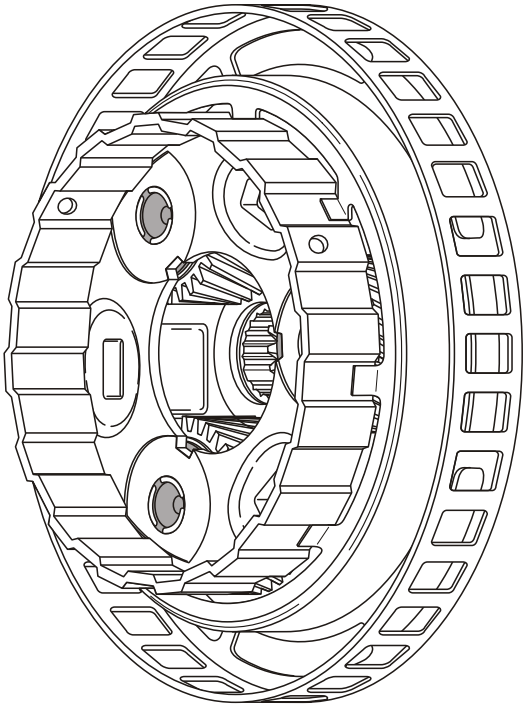




Figure 13

## 5R55N FORWARD CLUTCH COMPONENTS

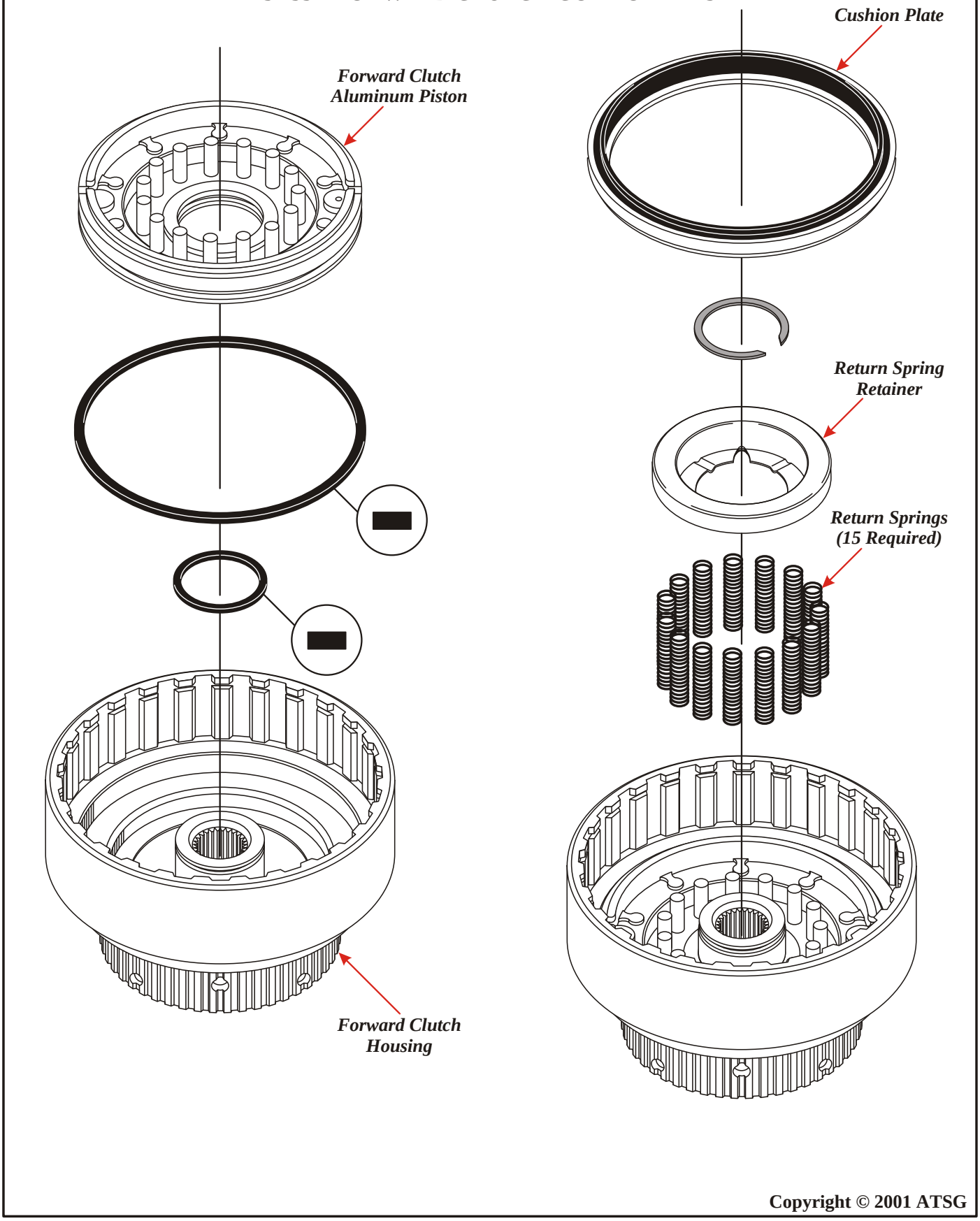





Figure 14

**5R55W FORWARD CLUTCH COMPONENTS**

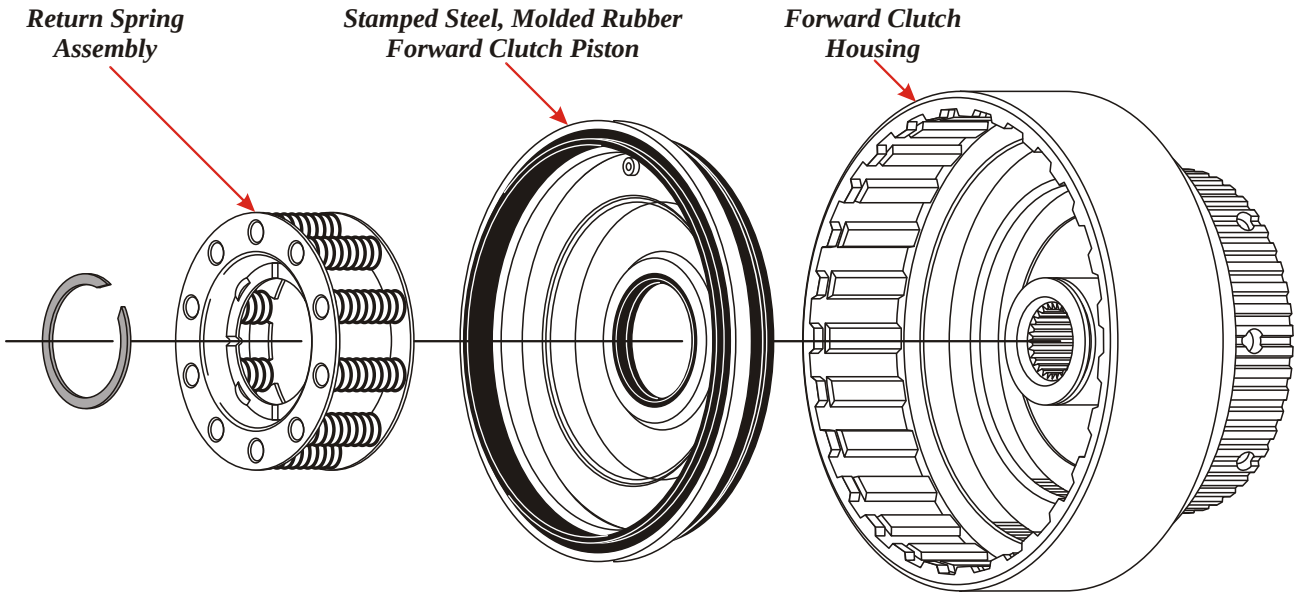





Figure 15

**COMPLETED "5R55N" FORWARD CLUTCH HOUSING**

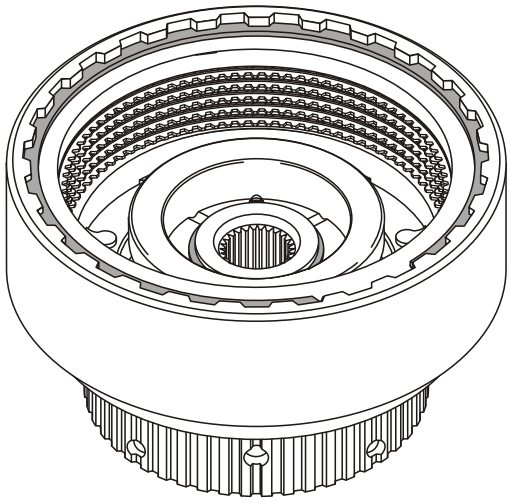




Figure 16

**COMPLETED "5R55W" FORWARD CLUTCH HOUSING**

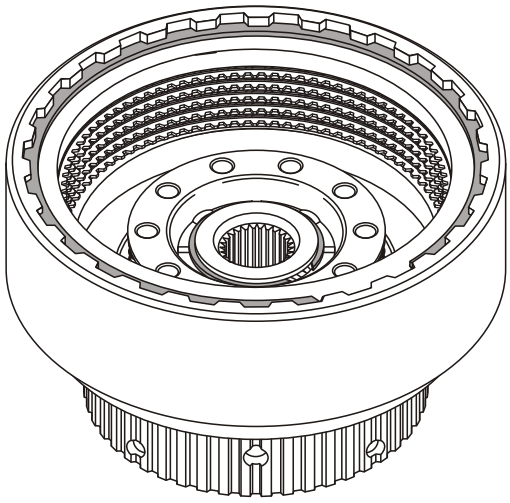




Figure 17

**5R55N FORWARD PLANETARY**

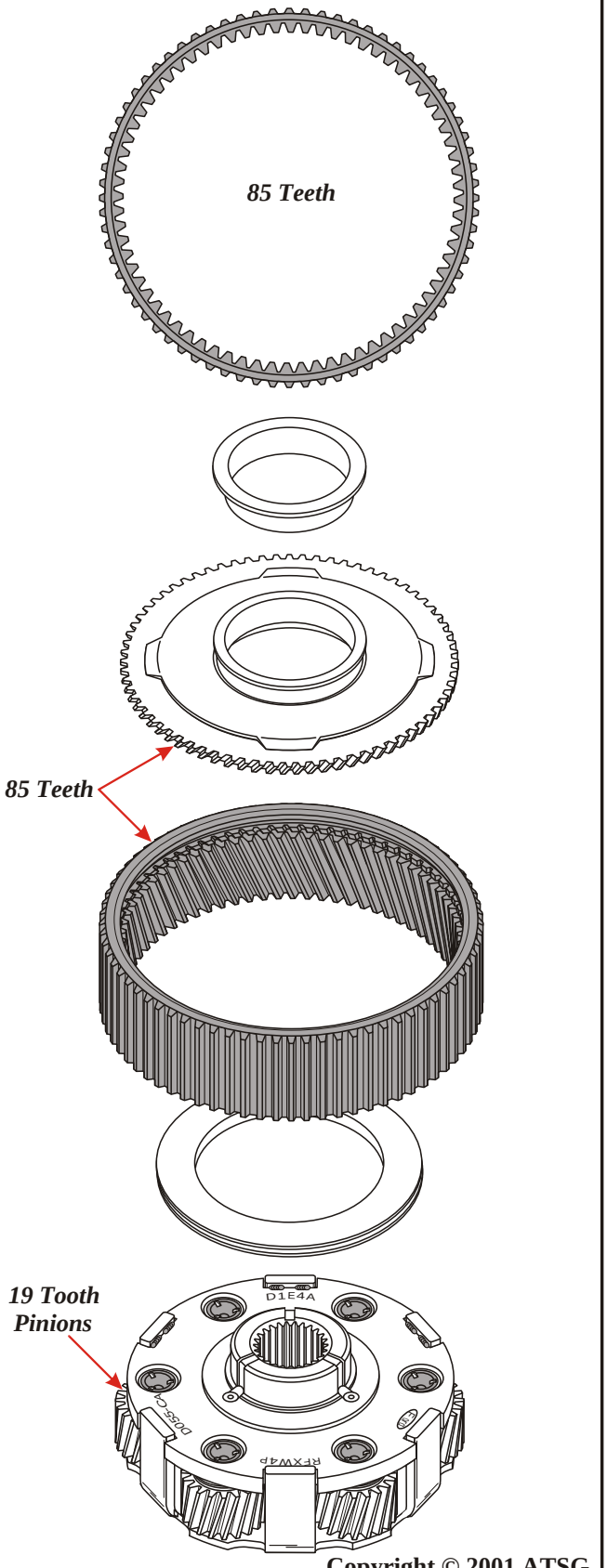





Figure 18

**5R55W FORWARD PLANETARY**

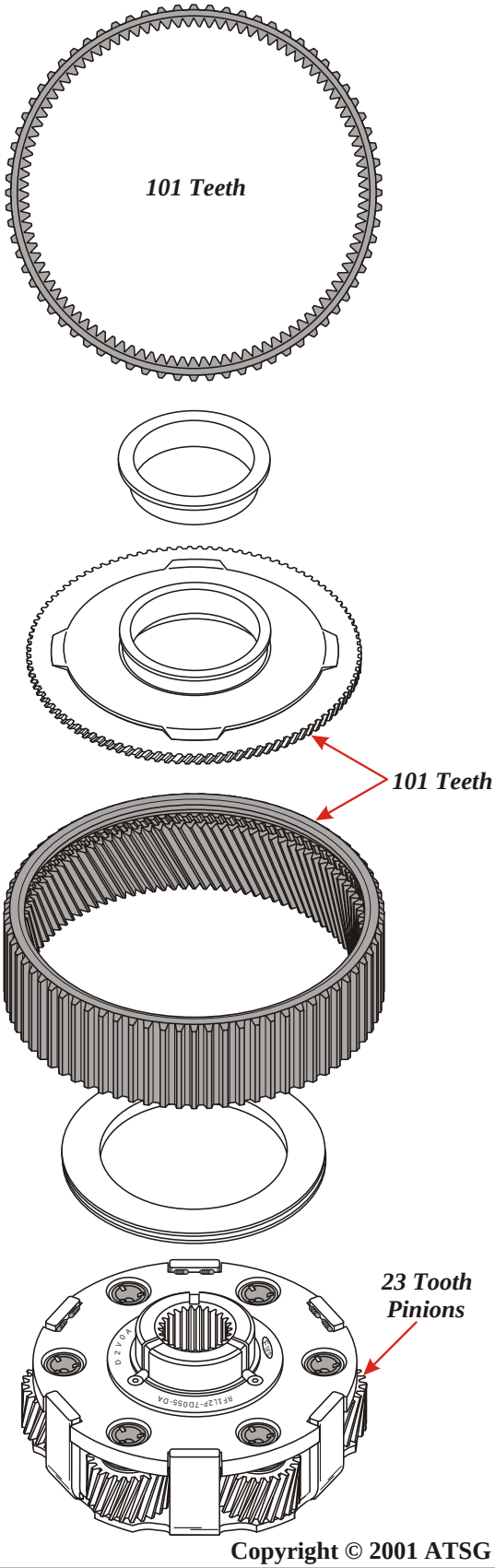





Figure 19

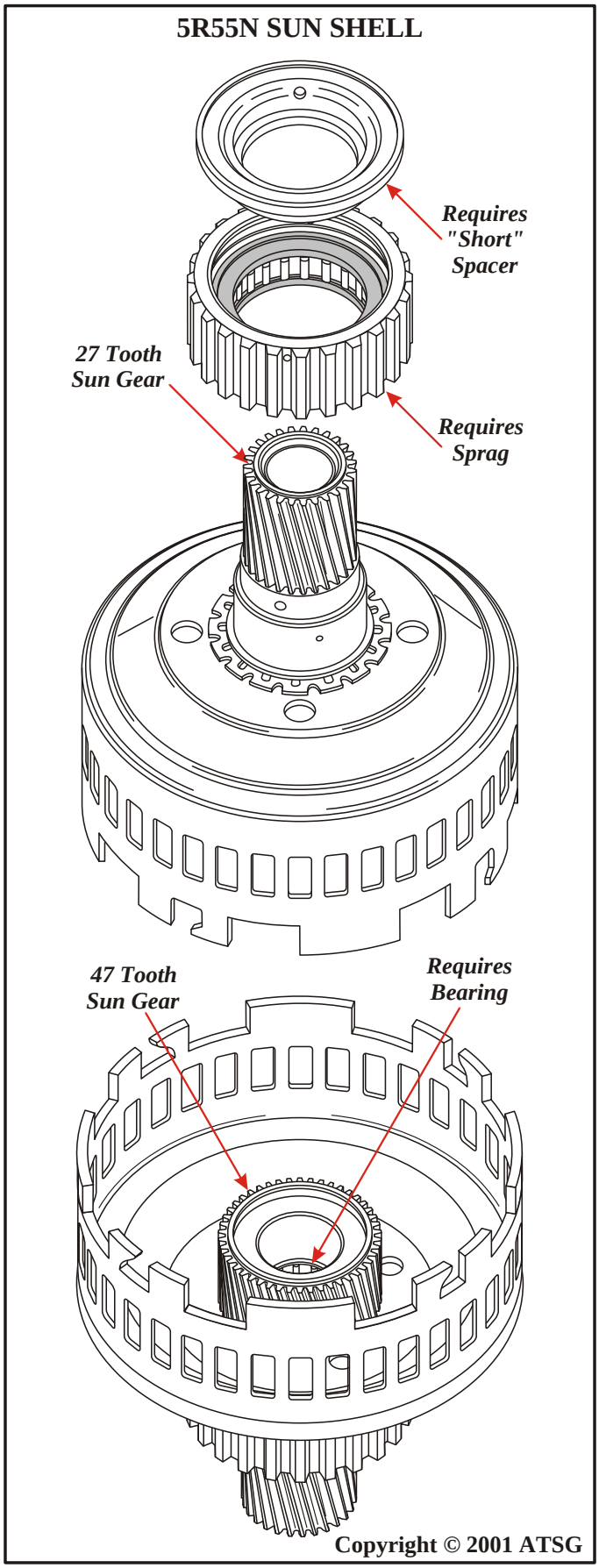



Figure 20

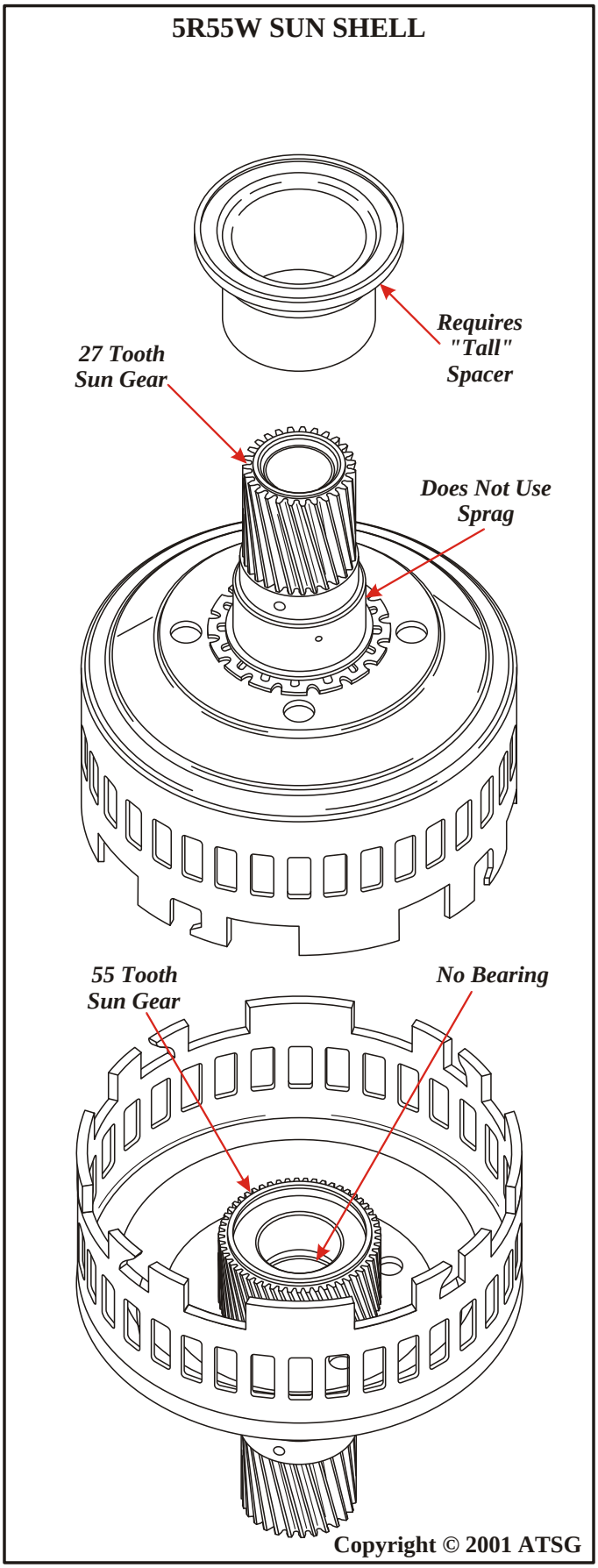
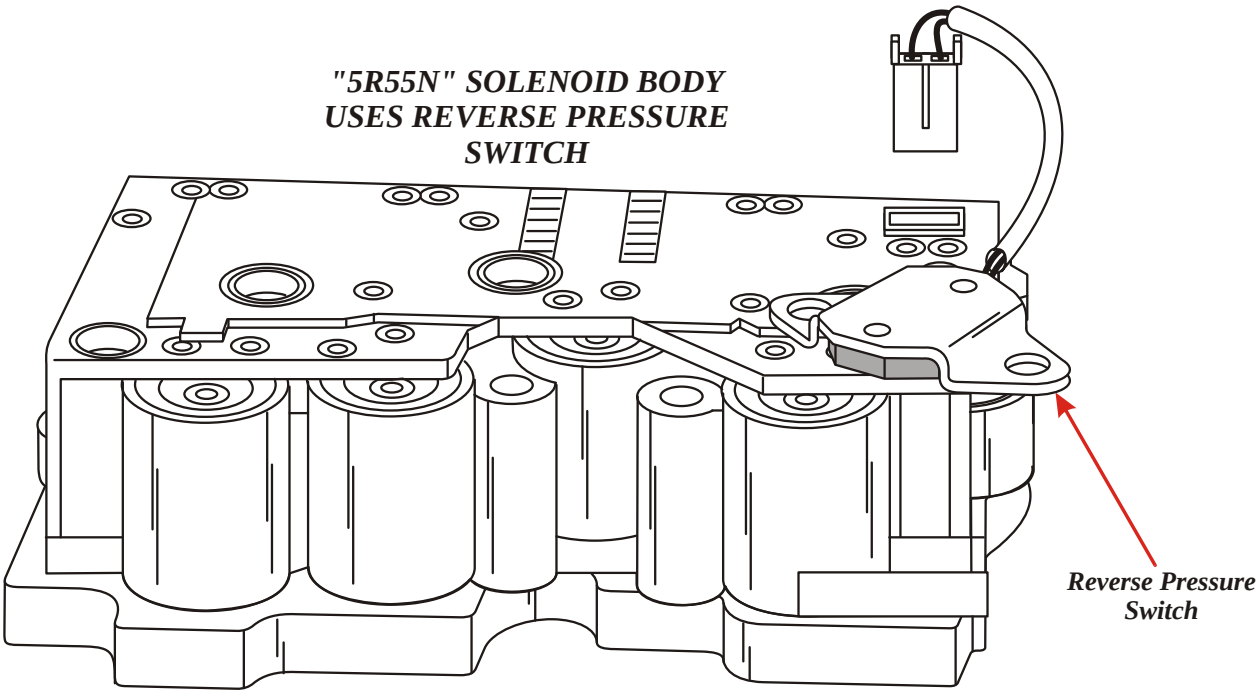



Figure 21

SOLENOID BODY ASSEMBLY DIFFERENCES

***"5R55N" SOLENOID BODY USES REVERSE PRESSURE SWITCH***




***"5R55W" SOLENOID BODY DOES NOT USE REVERSE PRESSURE SWITCH***

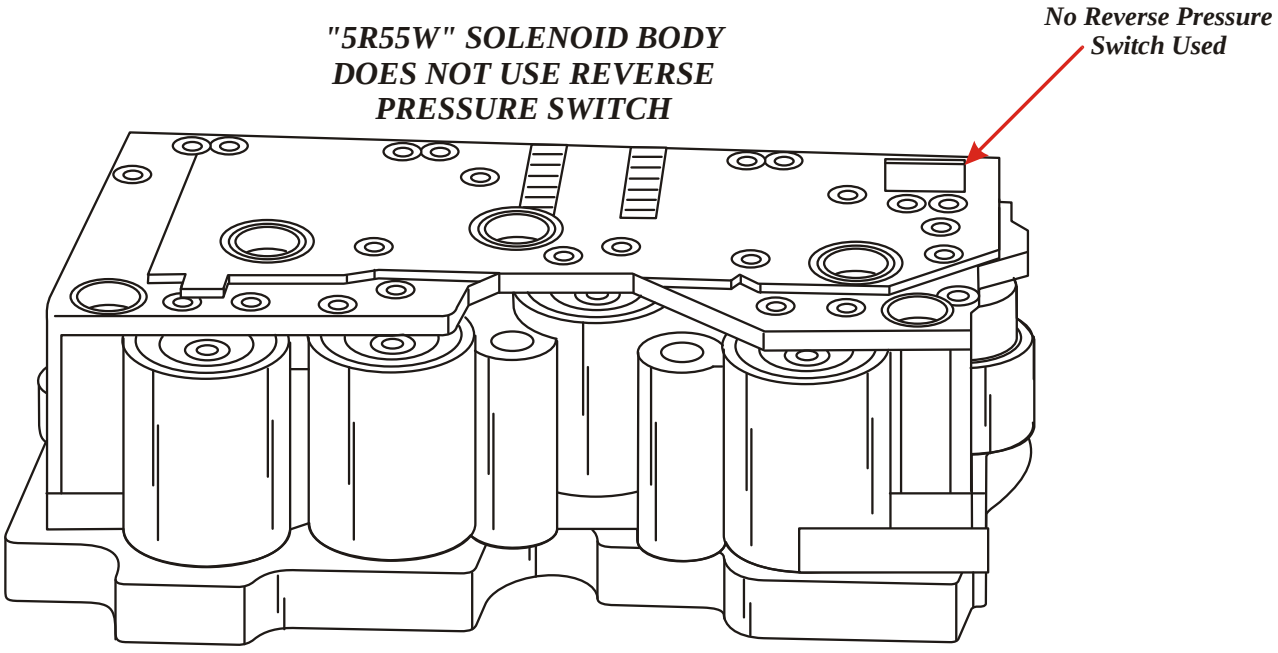
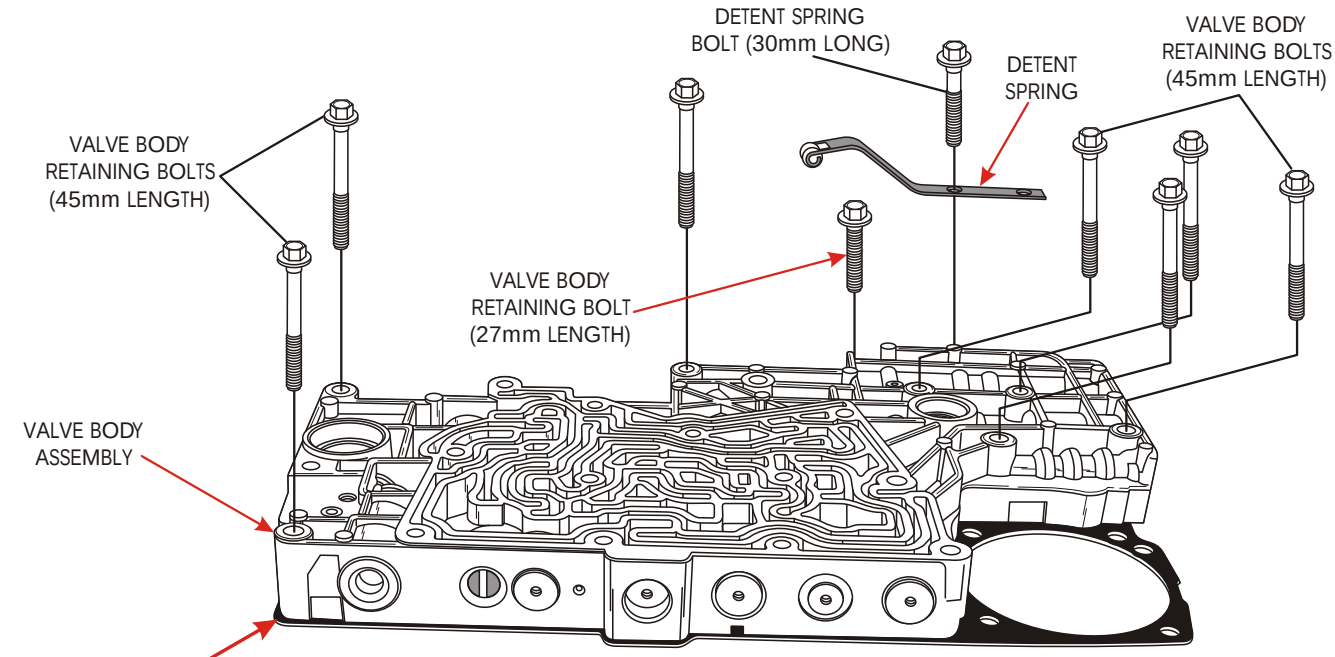


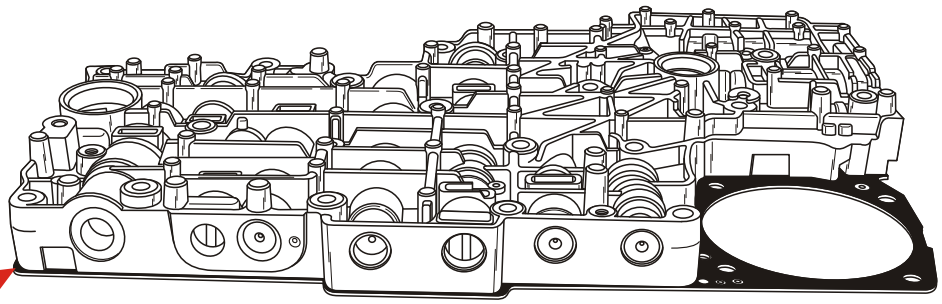



Figure 22

## VALVE BODY COMPARISON




**"5R55N" VALVE BODY ASSEMBLY**



**"5R55W" VALVE BODY ASSEMBLY**



Figure 23

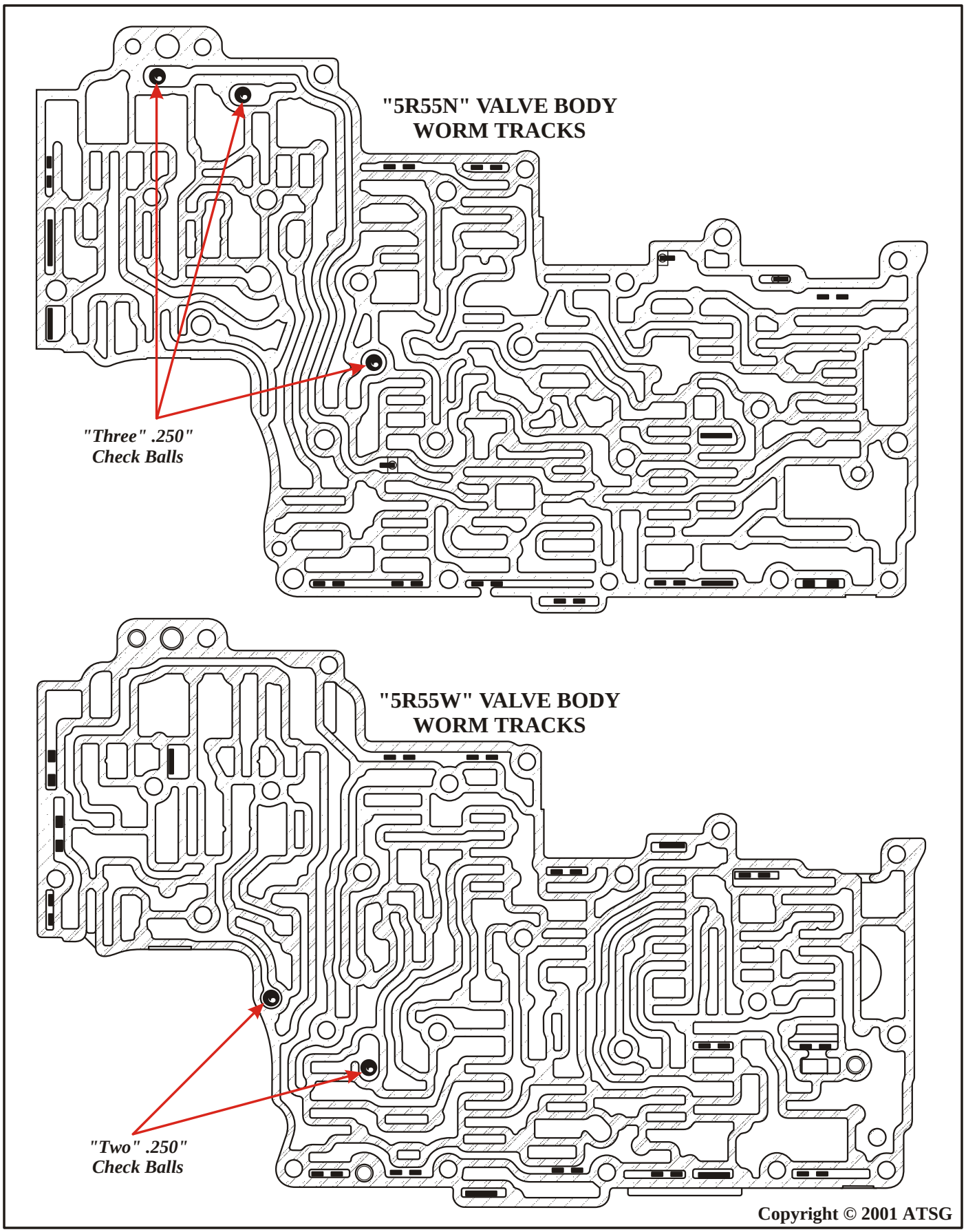
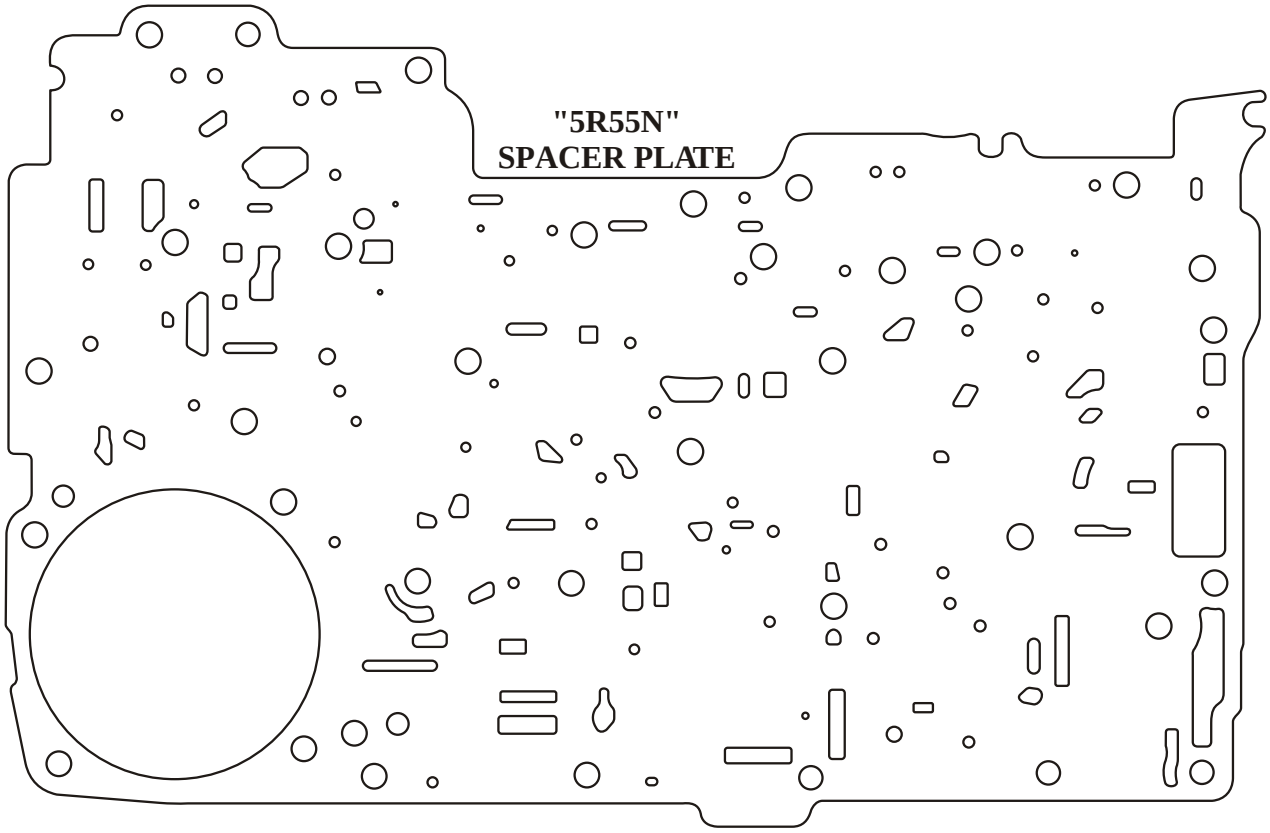

"5R55N" VALVE BODY
WORM TRACKS
"Three" .250"
Check Balls
"5R55W" VALVE BODY
WORM TRACKS
"Two" .250"
Check Balls
Copyright © 2001 ATSG

Figure 24



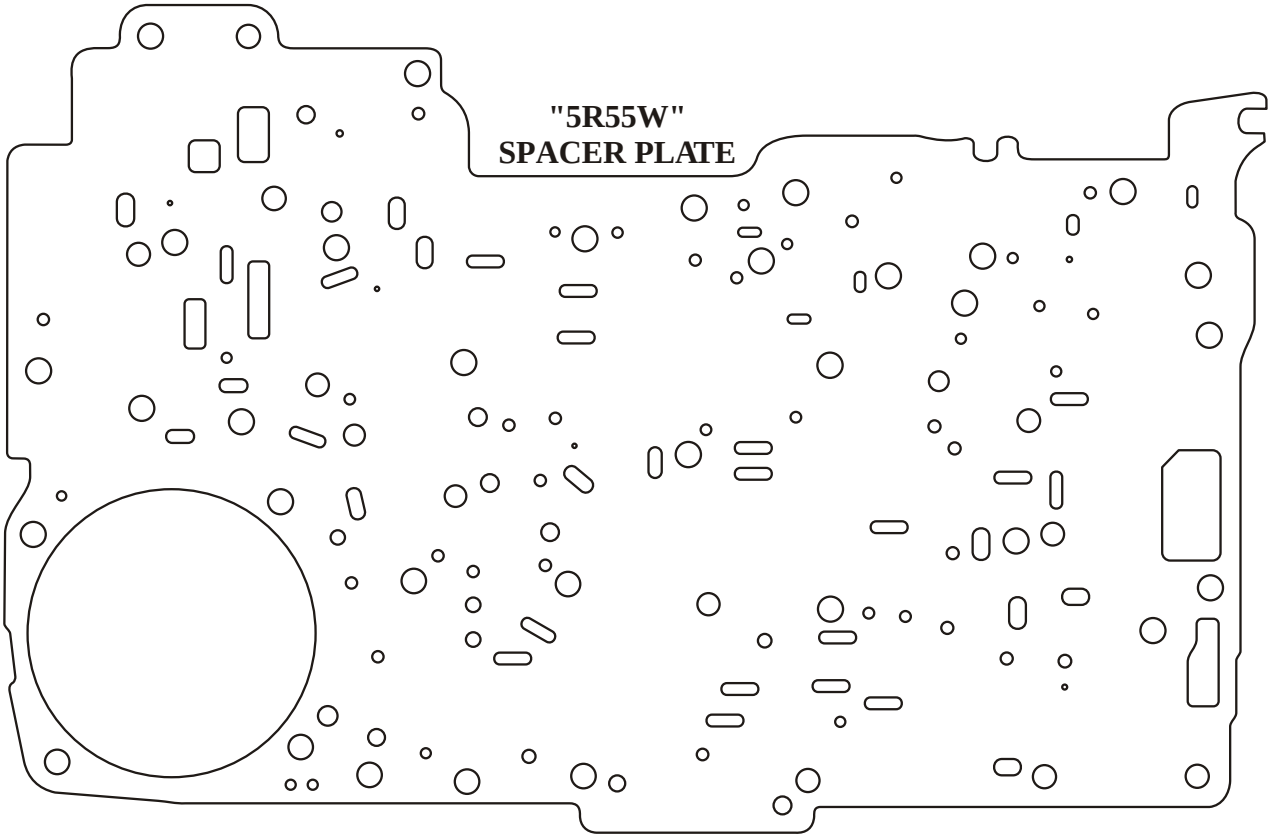






Figure 25

## "5R55N" REVERSE SERVO HOUSING

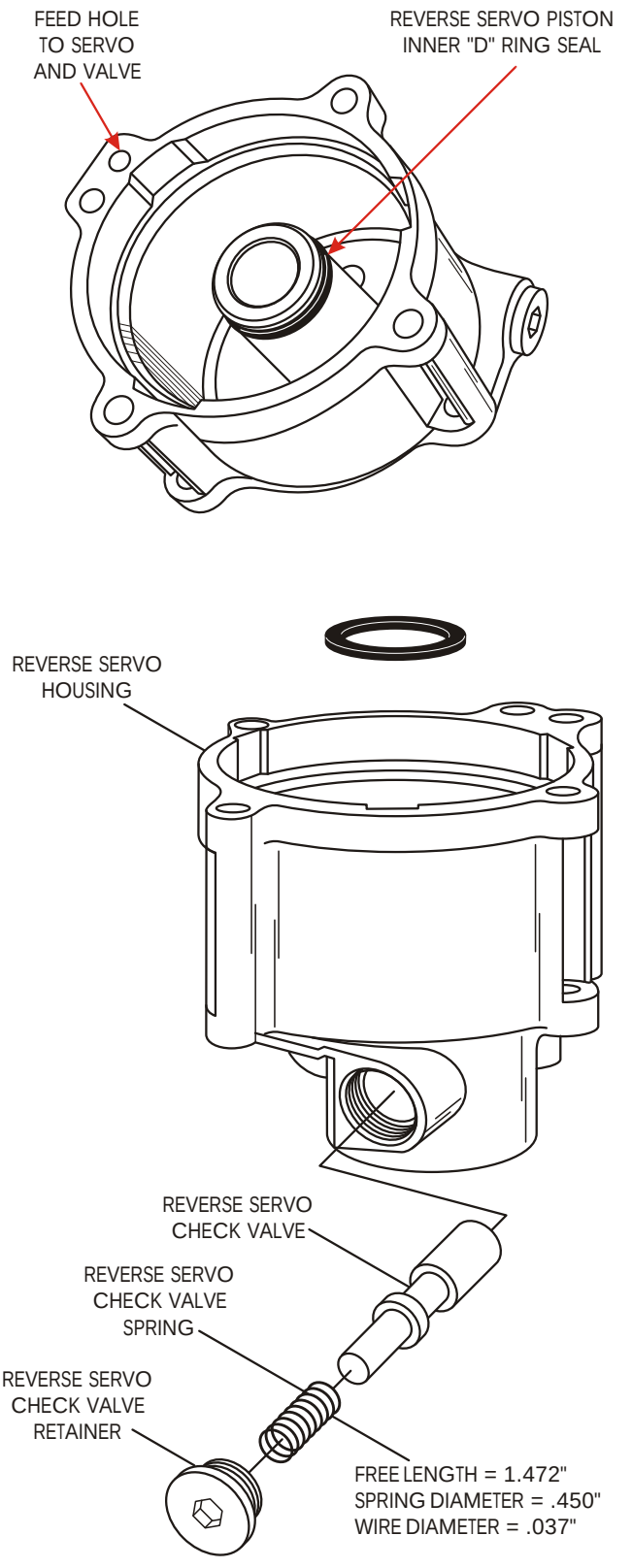





Figure 26

## "5R55W" REVERSE SERVO HOUSING

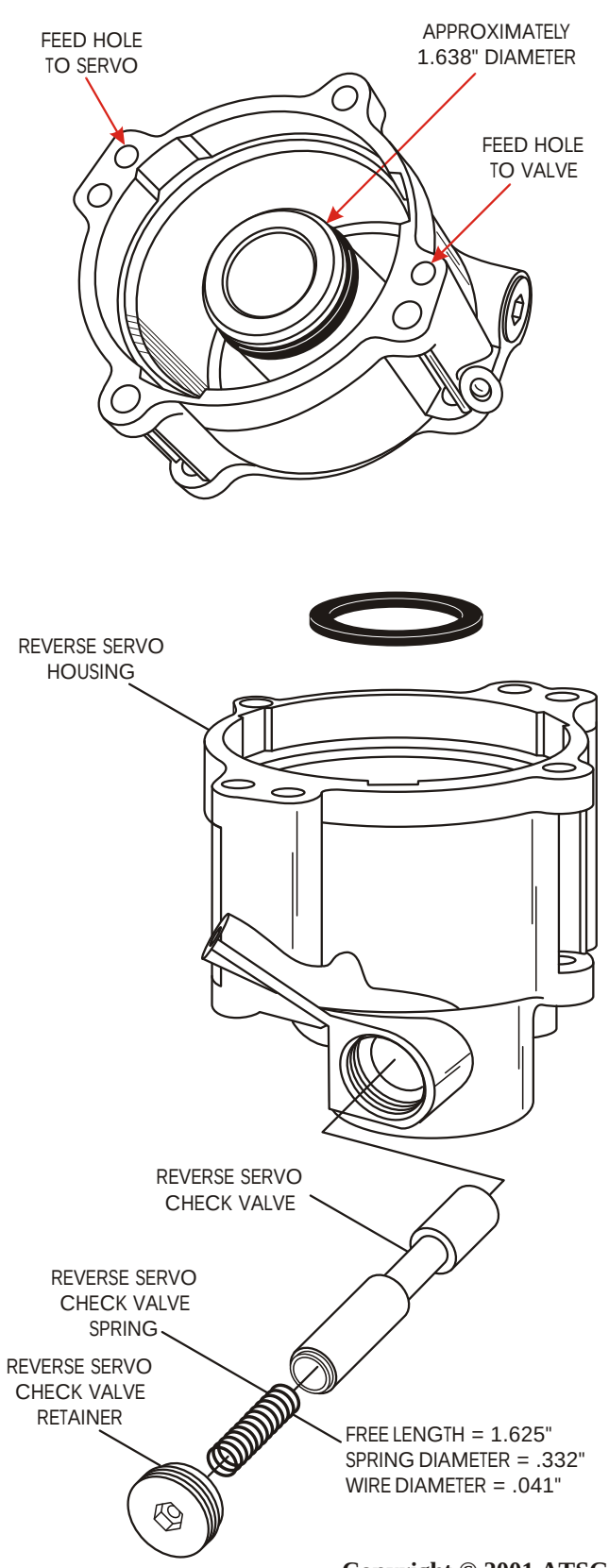





Figure 27

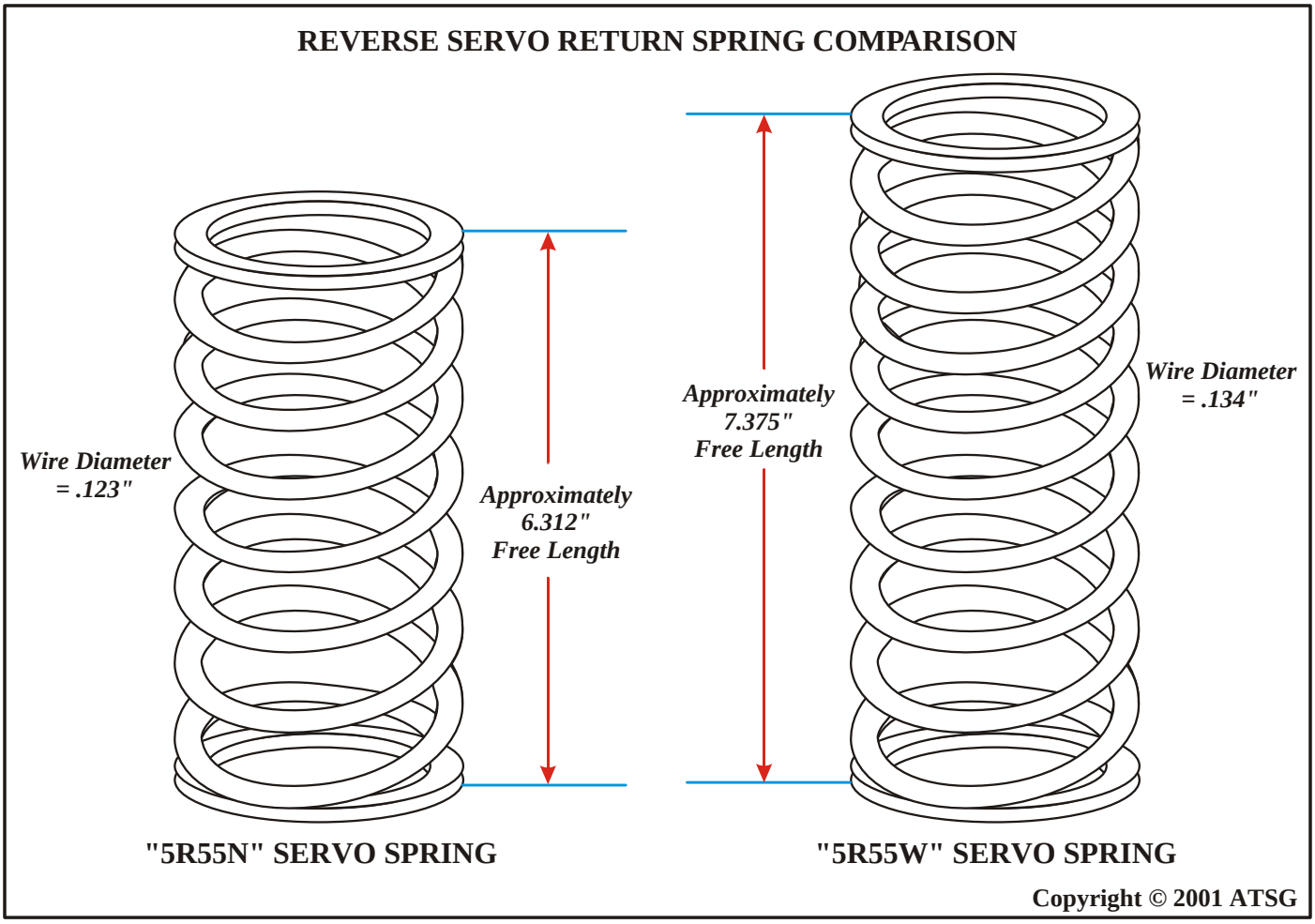



Figure 28

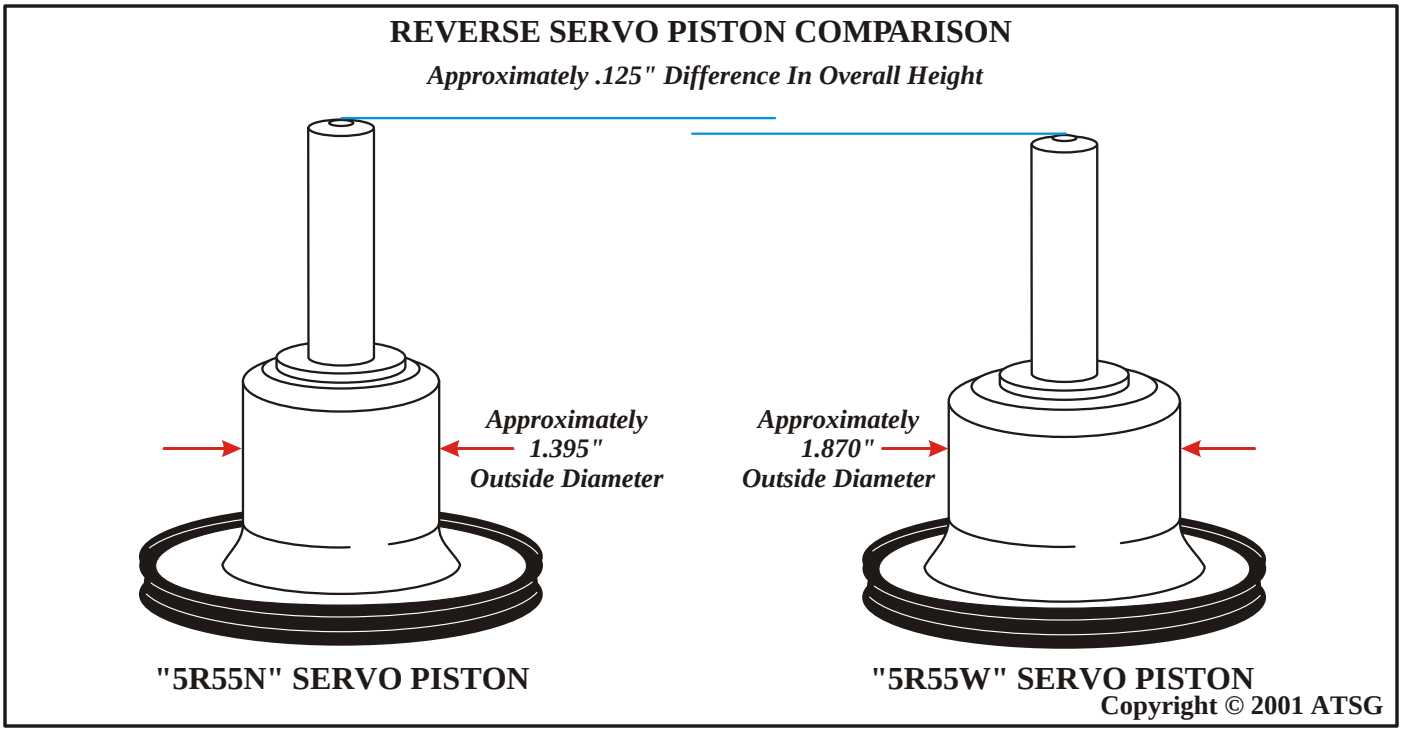



Figure 29

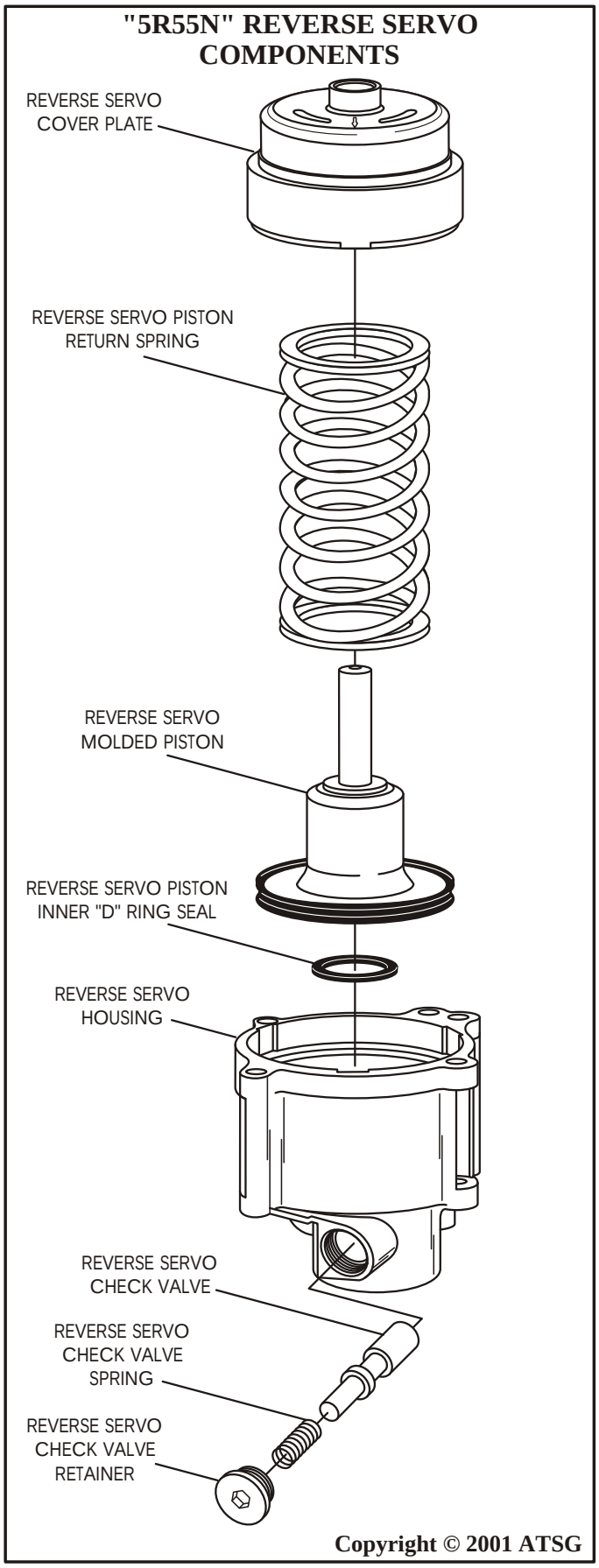



Figure 30

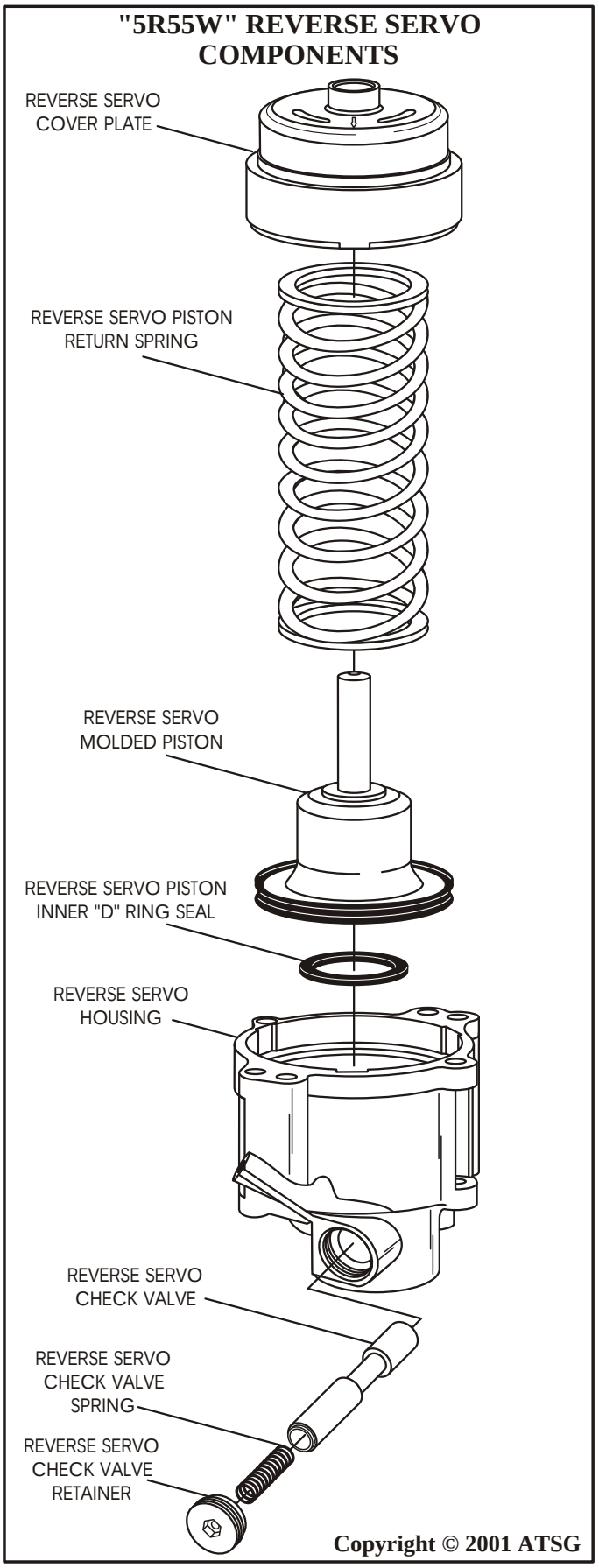



Figure 31

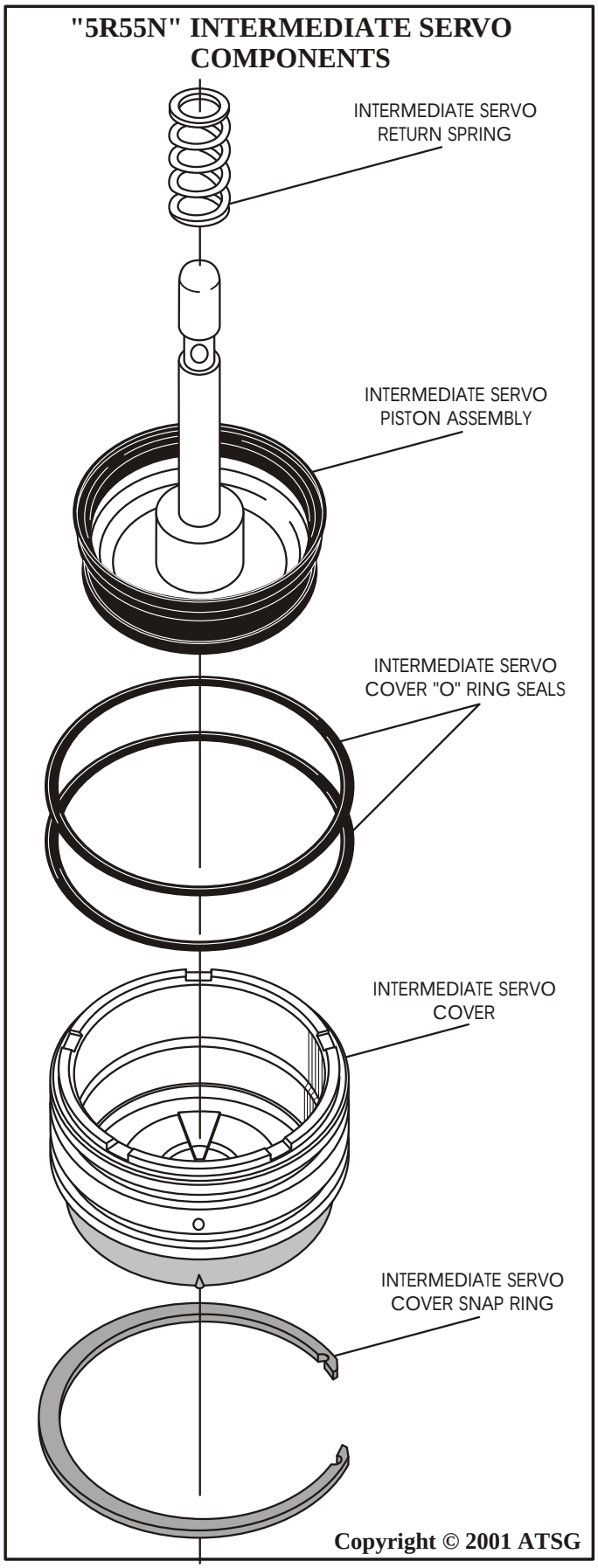



Figure 32

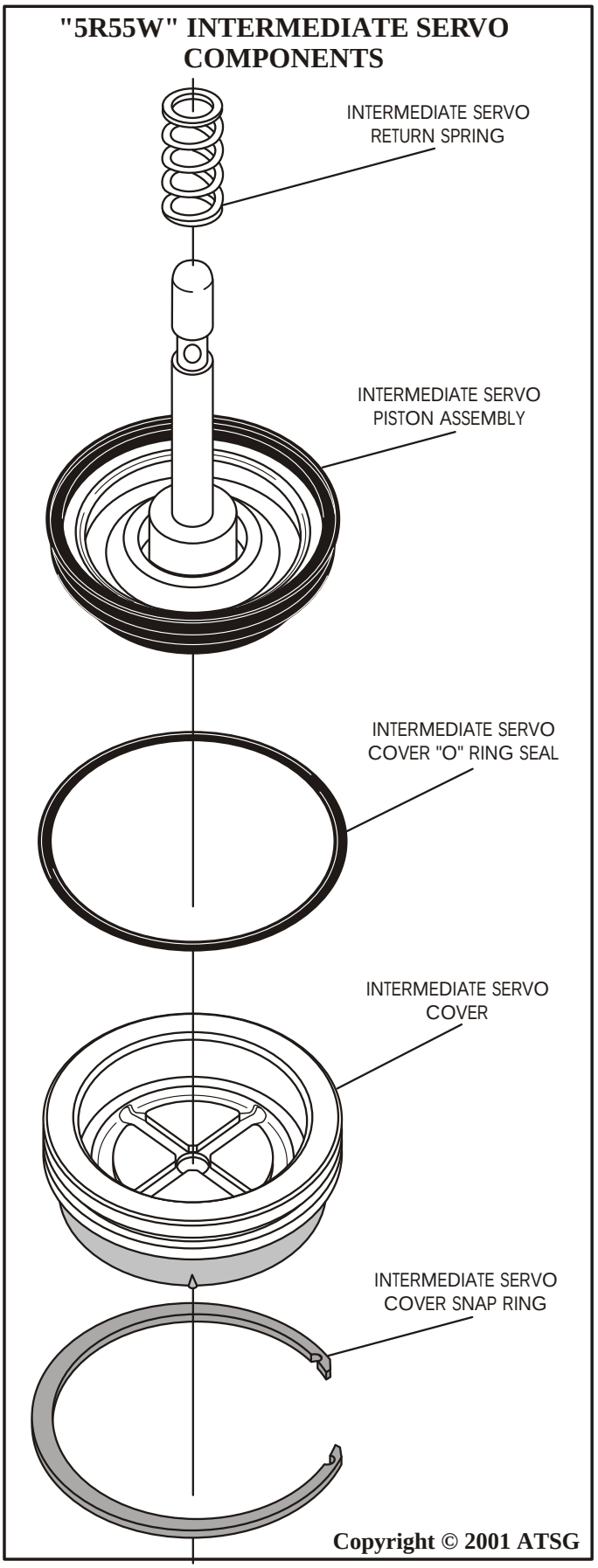



Figure 33