

ALLISON 1000

GEARTRAIN BIND-UP

COMPLAINT: When the torque converter housing is bolted to the transmission case the geartrain is locked and will not rotate. The converter housing does fit flush to the transmission case and the technician states that no hard parts were replaced. The technician measured the height of the mainshaft from the front of the transmission using an "H" gauge, it measured .130 inches which is too high. It should measure .100 inch when the mainshaft is properly seated. If it was not indexed all the way down into the sun gear spacer it would measure approximately .290 inch as is stated in the ATSG Techtran® manual and is illustrated in figure 1. This clearly was not the problem.

CAUSE: When the transmission is assembled correctly, rear end play should be .018 inch to .032 inch as seen in figure 2. The end play is determined by the selective shim located in the extension housing shown in figure 3. After reassembling the transmission numerous times it was discovered that the thrust bearing located between the output shaft and P3 sun gear was installed upside down. The thrust bearing is shown incorrectly installed in figure 4 and is shown correctly installed with the bearing lip facing the sun gear in figure 5.

CORRECTION: With the thrust bearing installed with the lip facing the sun gear the geartrain now rotated as it should and the correct end play measurement was attained.

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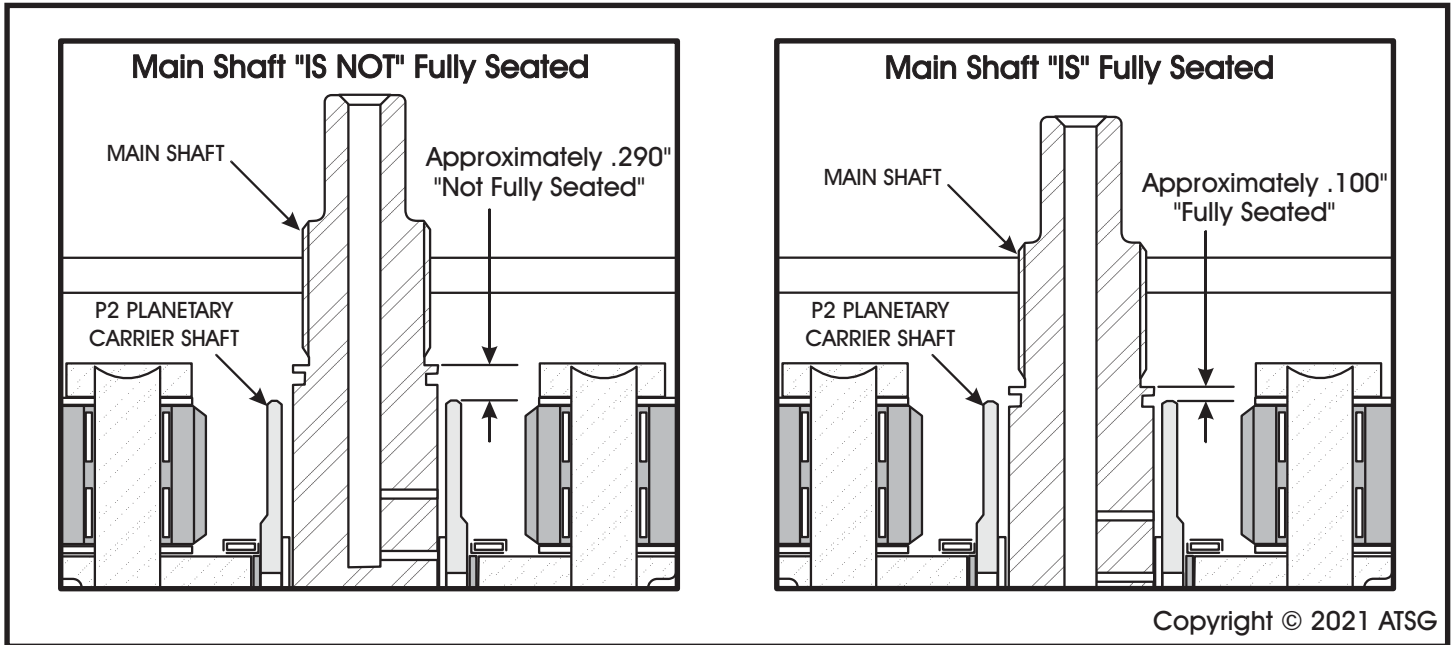


Figure 1

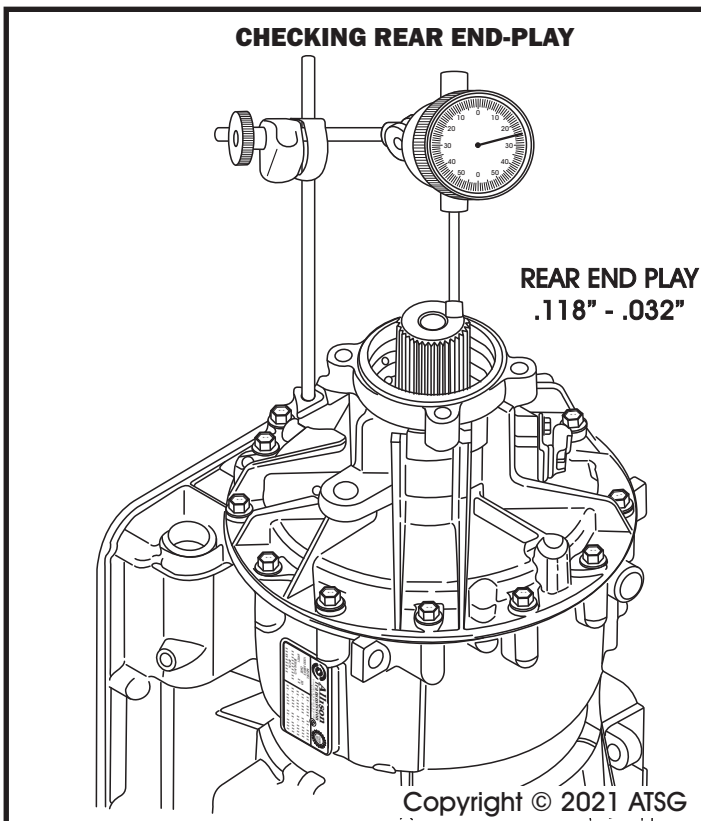


Figure 2

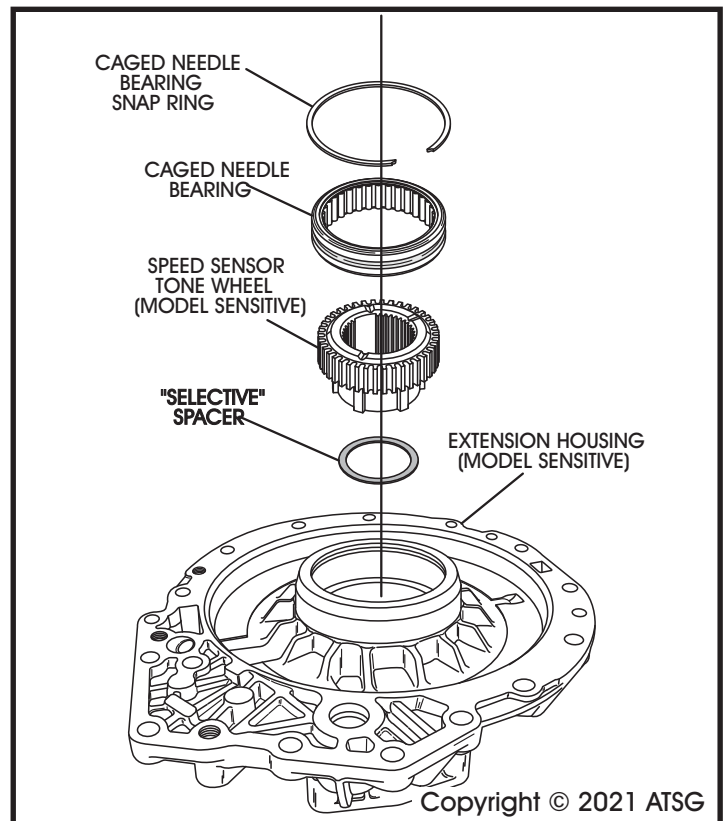


Figure 3

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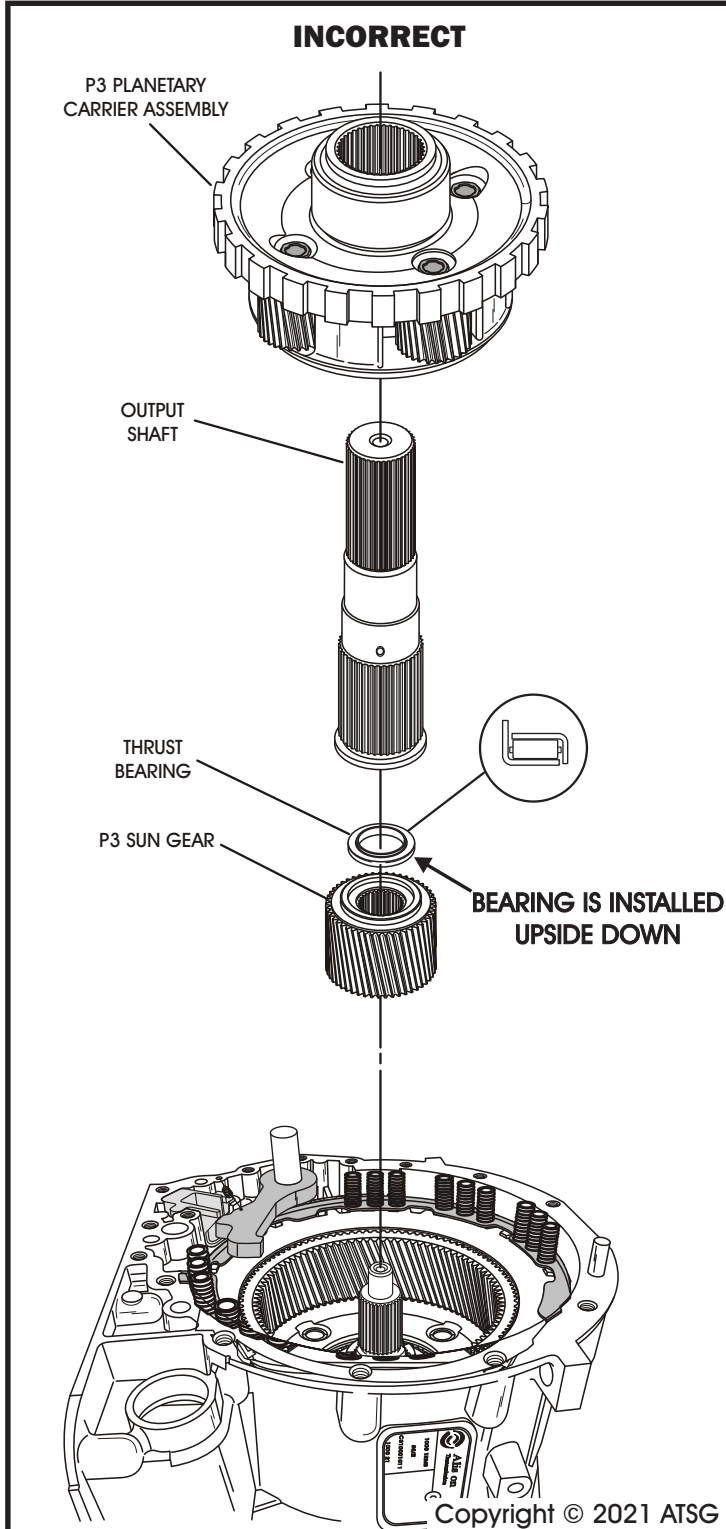


Figure 4

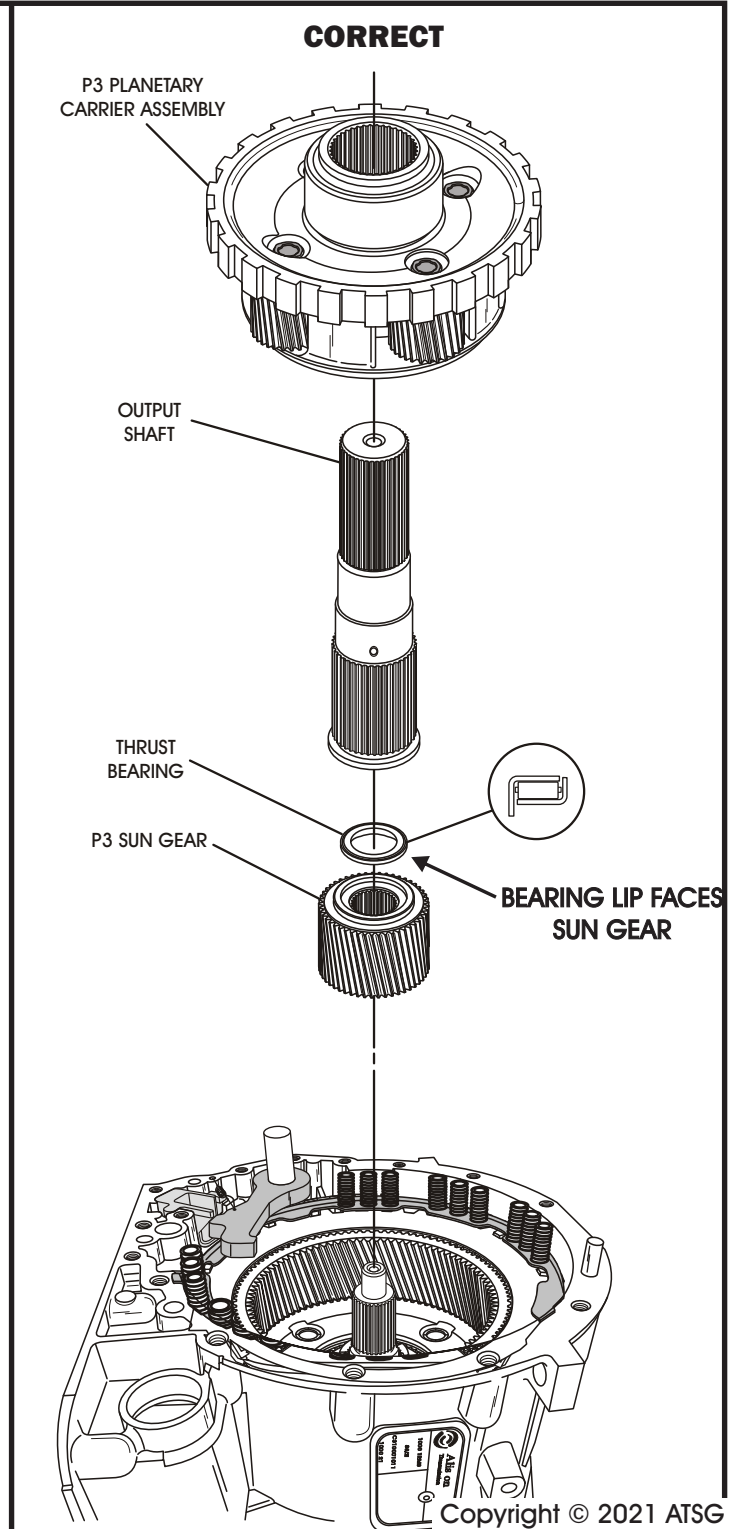


Figure 5