



KIA A5HF1/F5A51

NO FORWARD OR UNDERDRIVE CLUTCH DRUM FAILURE

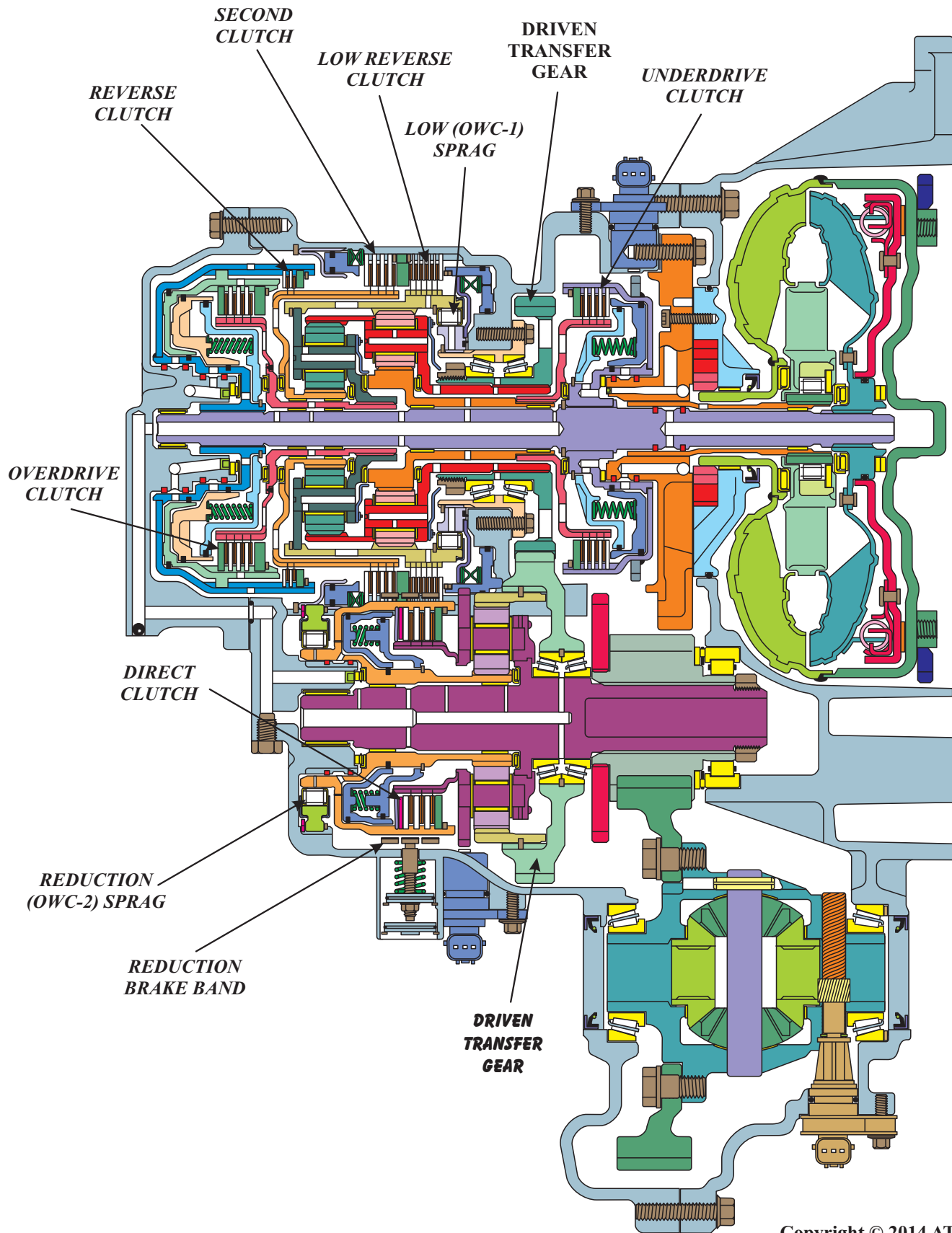
COMPLAINT: Before or after overhaul, 2006 and up Kia vehicles equipped with the A5HF1/F5A51 series transaxle may have a complaint of no forward engagement or during the inspection process it is noticed that the retaining ring for the Underdrive Clutch is dis-lodged from the drum, or it is noticed that the area where the snap ring sits in the Underdrive Clutch drum is destroyed, without any apparent reason for the failure.

CAUSE: The cause may be, that the Driven Transfer gear is moving forward contacting the bottom of the Underdrive Clutch drum causing the failure. Refer to Figure 1 for a component location showing a cross-sectional view of the Underdrive Clutch drum and how close the Driven Transfer gear is to the bottom of the drum. Figure 2 shows these components all together and how the Driven Transfer gear can move forward and contact the Underdrive drum. Figure 3 shows the area in the Underdrive Clutch drum that is affected by the contact. Refer to Figure 4 for a breakdown of the Direct planetary carrier and the location of the Driven Transfer gear which is part of this assembly. Refer to Figure 5 for a breakdown of the outer bearing race assembly that is retained into the Driven Transfer gear with an external snap ring. This one piece design outer race is not held into the Driven transfer gear tight enough to prevent the Driven Transfer gear from moving forward independently from the race, causing contact with the Underdrive Clutch assembly. Note: The Mitsubishi design utilizes two races rather than one which would prevent this problem from happening, although these parts are not interchangeable as the tooth counts are not the same.

CORRECTION: Replace the Underdrive Clutch housing and Driven Transfer gear assembly with compatible parts.

Special Thanks to David Ward Mr. Transmission Louisville KY and Eddy at Rickys Transmission

INTERNAL COMPONENT LOCATIONS

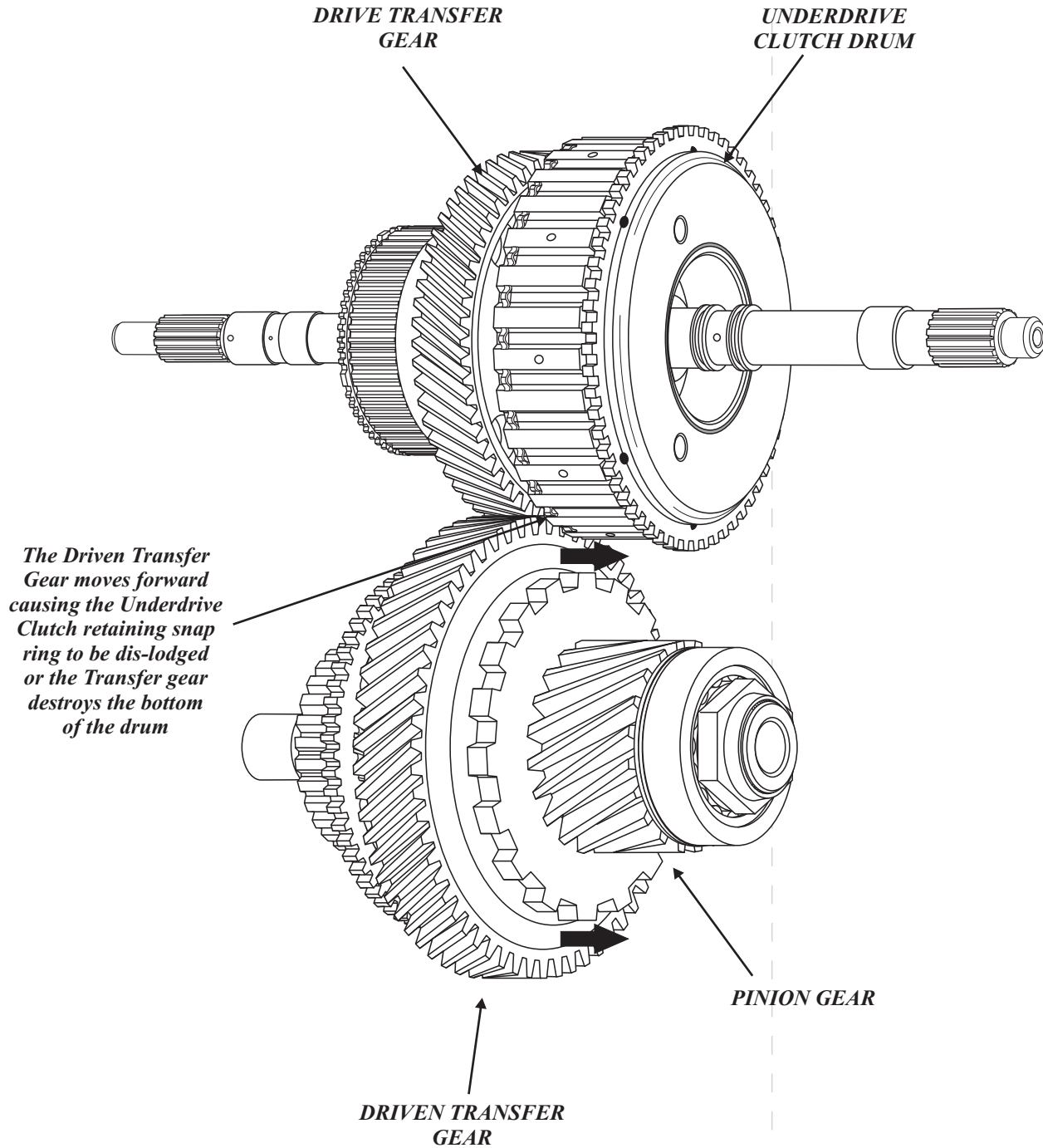


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Figure 1

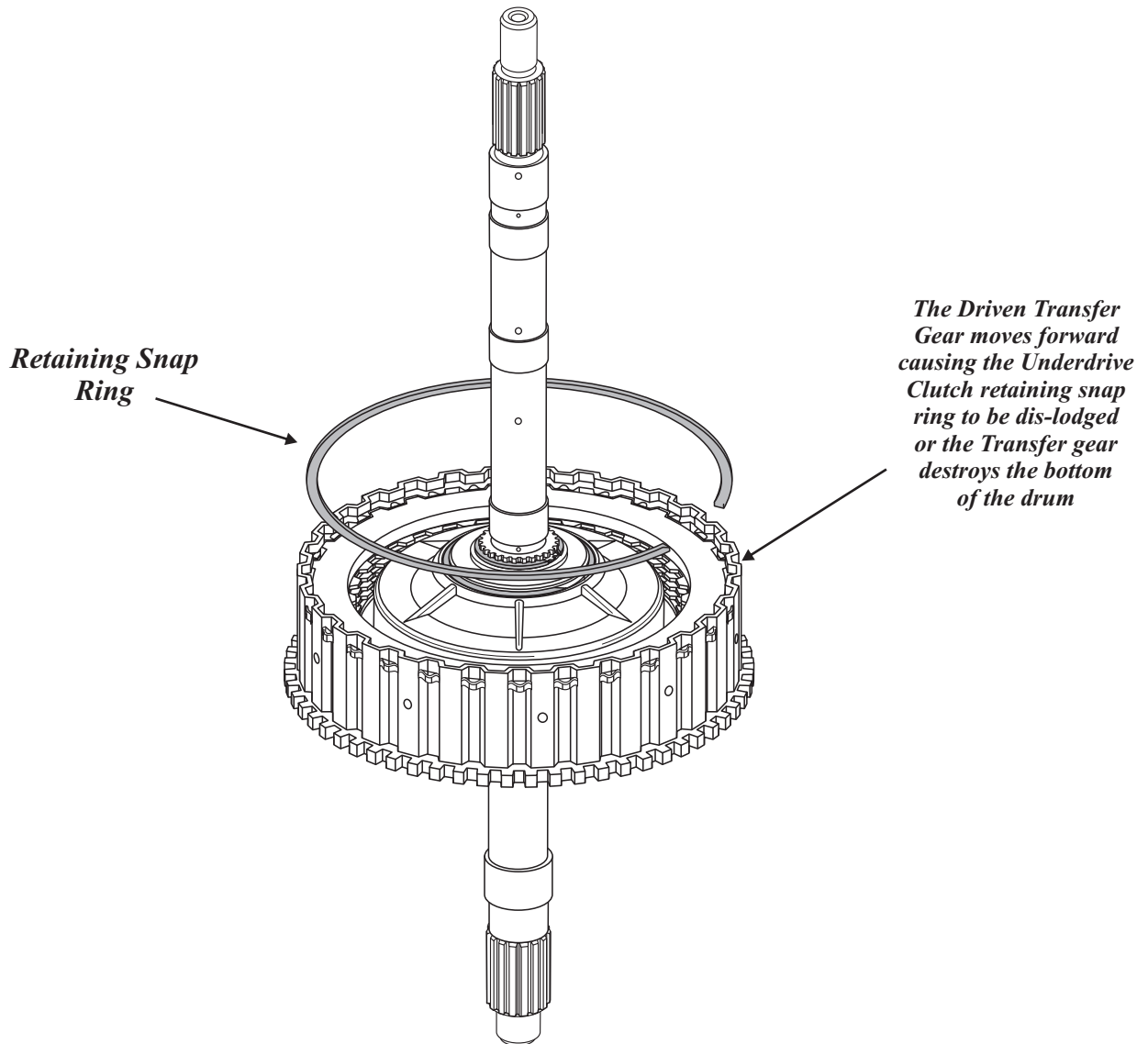
Technical Service Information

INTERNAL COMPONENT LOCATIONS



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UNDERDRIVE CLUTCH DRUM

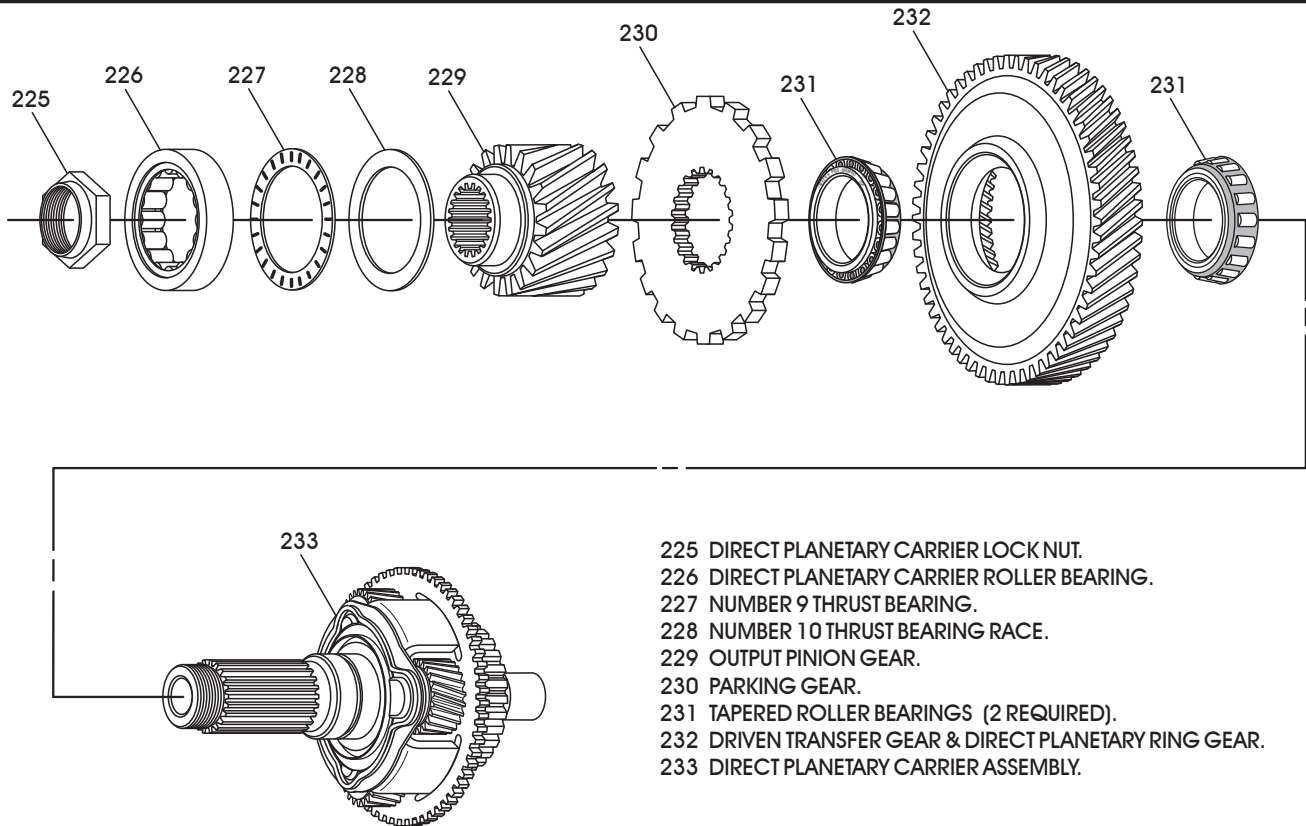


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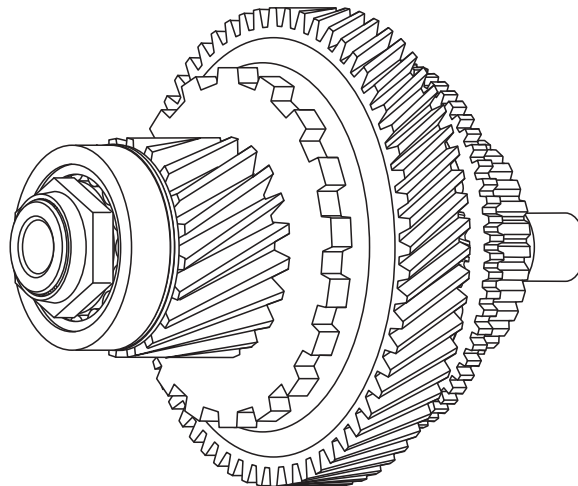
Figure 3

Technical Service Information

DIRECT PLANETARY CARRIER EXPLODED VIEW



COMPLETED ASSEMBLY



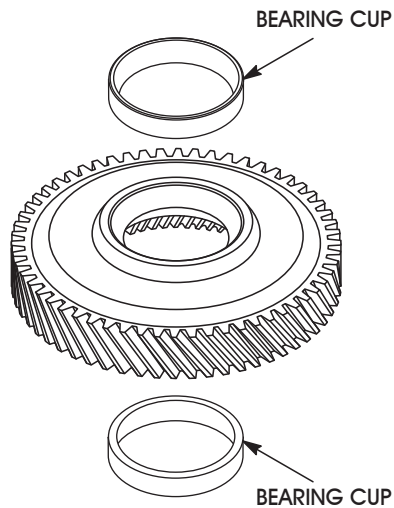
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Figure 4

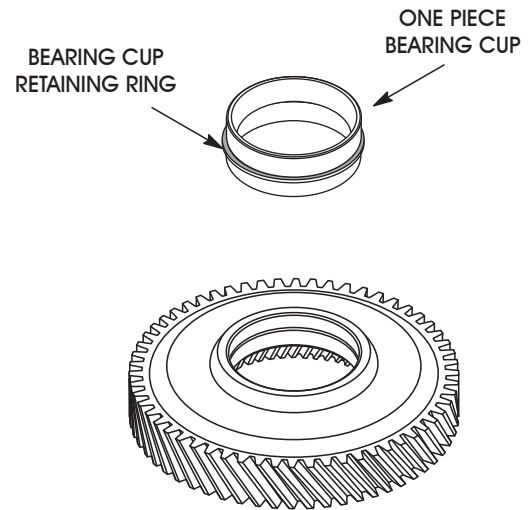
Technical Service Information

DRIVEN TRANSFER GEAR BEARING RACE ASSEMBLIES

MITSUBISHI



KIA



KIA DESIGN BEARING CUP IS A ONE PIECE DESIGN THAT INCORPORATES A RETAINING RING ON THE OUTER PORTION OF THE RACE THAT RETAINS IT INTO THE DRIVEN TRANSFER GEAR

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Figure 5