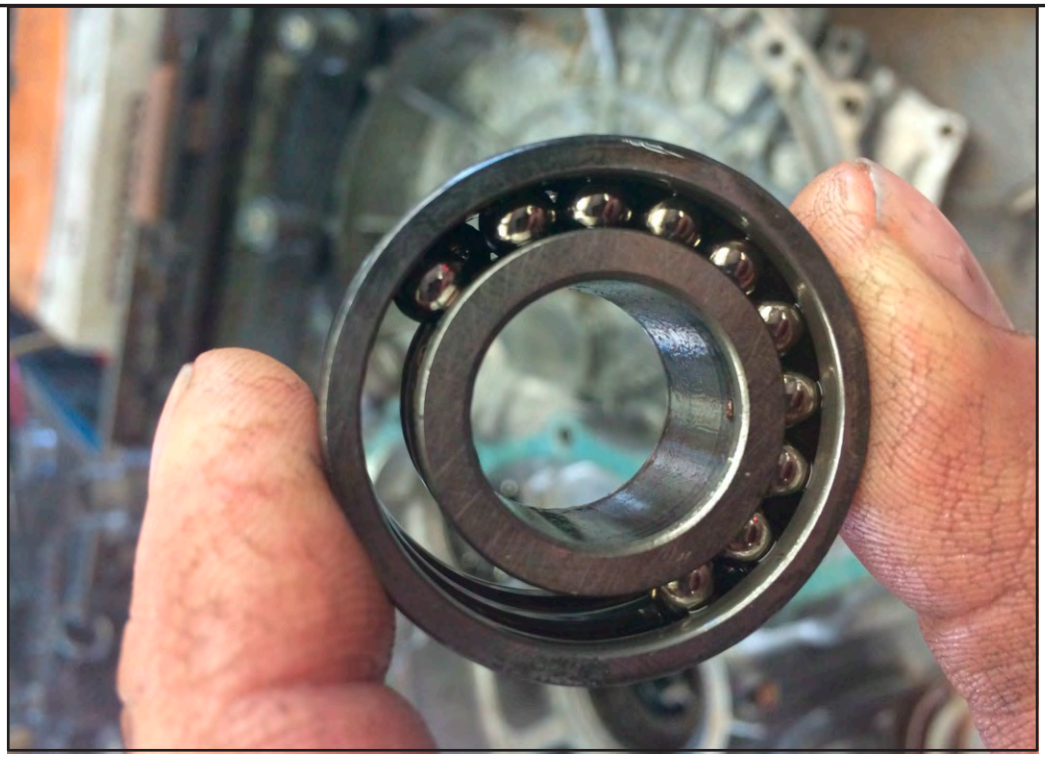
ACURA MDX BDKA TRANSMISSION
INTERMITTENT SPEED SENSOR CODES

COMPLAINT: A 2005 Acura MDX using the BDKA 5 speed transmission comes in to the shop with a P0723 code for an intermittent failure of the Output Shaft Speed Sensor (Countershaft). When the signal is checked no problems are discovered. A new sensor is installed and the vehicle leaves. Sometime later it returns with the same code and again the signal is checked and no problems are discovered. The wiring and connectors are checked thoroughly and all checks fine. P0717 for an intermittent failure of the Input Shaft Speed Sensor (Mainshaft) may also occur but when checked the signal looks fine.

CAUSE: One cause may be the double cage ball bearing in the case supporting the intermediate shaft has developed a problem causing the shaft to wobble. Depending on how bad the bearing has become, this will compromise both the air gap for both the Output Shaft Speed Sensor (Countershaft) and the Input Shaft Speed Sensor (Mainshaft). There have been reports where the bearing has become to loose, several of the balls have fallen out of the bearing (Figure 1). The intermediate shaft becomes so unstable the gears on the shaft make contact with the tip of both sensors removing their protective plastic covering (Figure 2). Third gear on this shaft provides the ISS signal while fourth gear provides the OSS signal.

CORRECTION: In most cases, the damage will require a new valve body as the wobbling intermediate shaft affected the sealing ring area supported by the valve body housing (Figure 3). The bearing and the speed sensors will need to be replaced along with any other parts damaged by the balls bearings that fell out of the race.



Many thanks to Rino Partipilo from Continental Automatic Transmission

Figure 1

ACURA MDX BDKA TRANSMISSION
INTERMITTENT SPEED SENSOR CODES

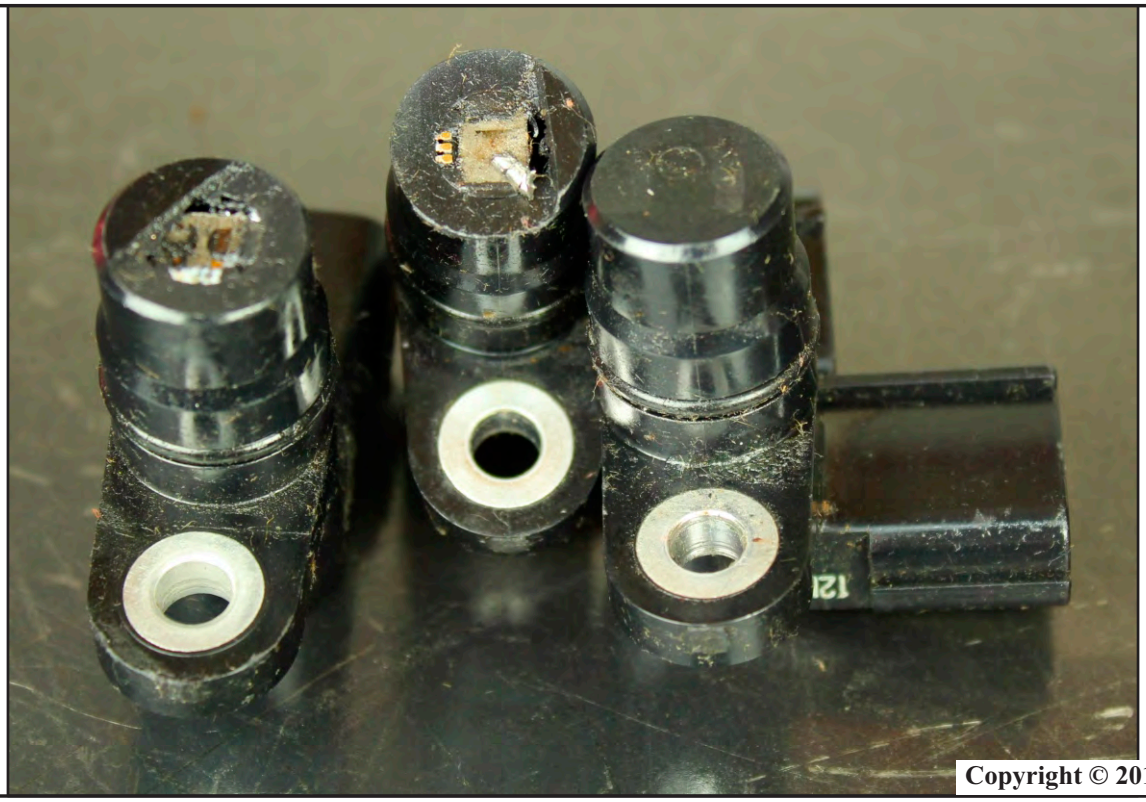


Figure 2

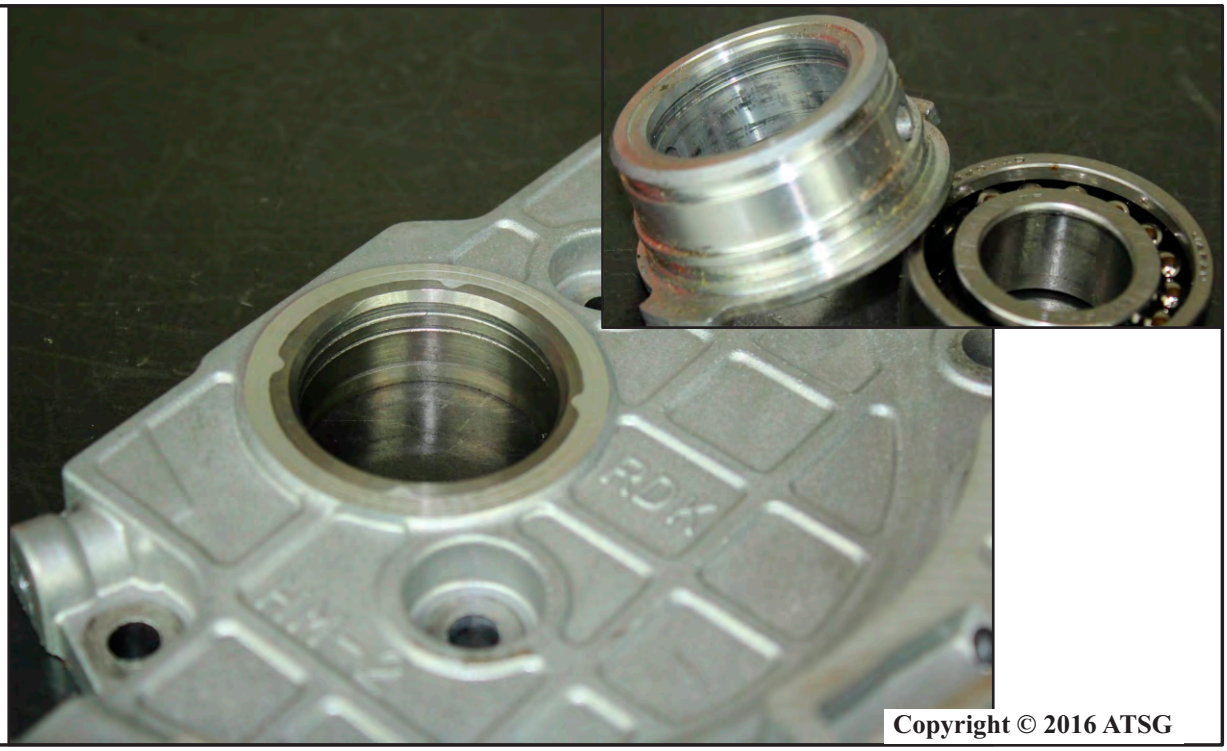


Figure 3