



Technical Service Information

ALLISON 1000 SERIES

TCC CYCLING OR SURGE

COMPLAINT: After torque converter replacement, the vehicle has TCC cycling or surge. This might be mistaken for an engine miss. When scanning the TCM, the TCC solenoid operation appeared normal, even the tachometer was steady. No codes were stored, but when a movie was taken during a road test, what was found was a glitch in the engine rpm signal.

CAUSE: The replacement torque converter had damaged dimples on the outside housing, Refer to Figure 1). Since the engine speed sensor is located in the bellhousing and is excited by the dimples on the outside of the converter, (Refer to Figure 2), the damaged dimples created a glitch in the engine speed signal. This glitch or “hiccup” in the engine speed signal was enough to cause the TCC related problems.

CORRECTION: When a replacement converter is used, be sure the dimples on the outside are not damaged. Care must be exercised in handling both the original and the replacement converters.

NOTE: A drain plug cannot be installed as this will cause a similar problem since the engine speed sensor would spike the signal when it sees the drain plug.

TCC CYCLING OR SURGE

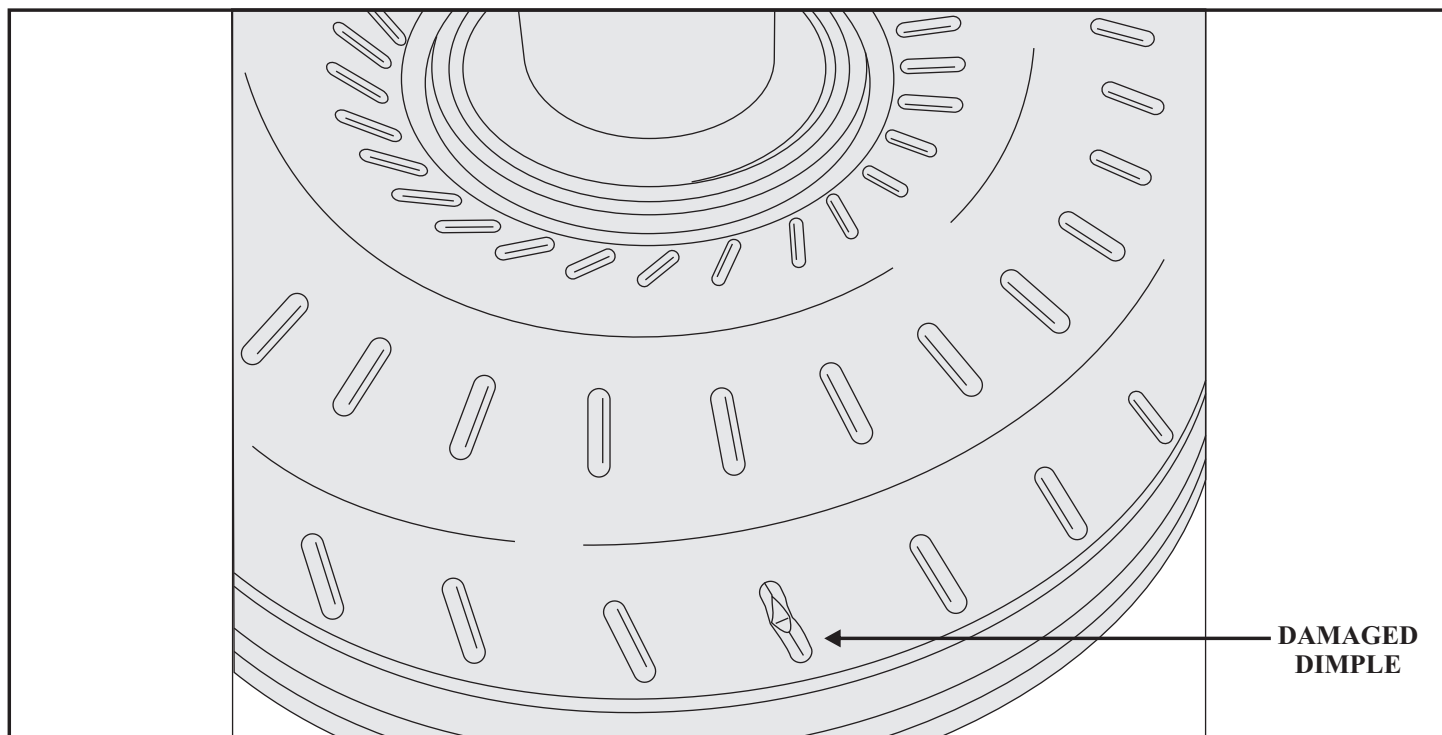


Figure 1

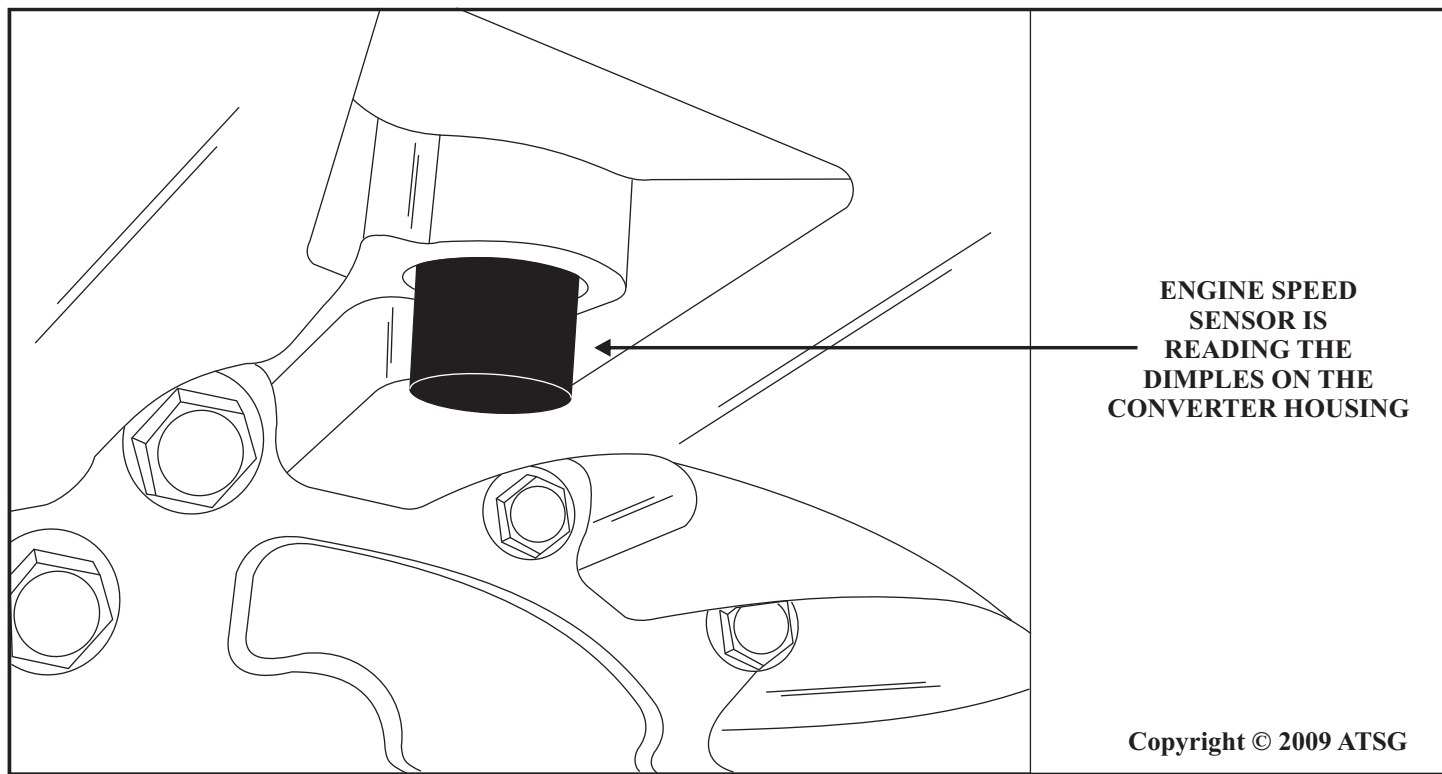


Figure 2