

# 2020 - 2024 Corvette: Noise From the Transmission Area

July 23, 2024

There may be a noise from the bell housing area of the DCT TR9080 transmission (RPO M1L, M1M) on some 2020-2024 Corvettes along with a number of DTCs set in the Transmission Control Module (TCM). The noise may be due to a dislodged snap ring in the direct clutch assembly. (Fig. 15) As a result, one or more pressure DTCs may set if there is debris caused by the valves sticking in the Main Control Valve (MCV) Body or the direct clutch may contact the fluid tubes, stator shaft or transmission housing.

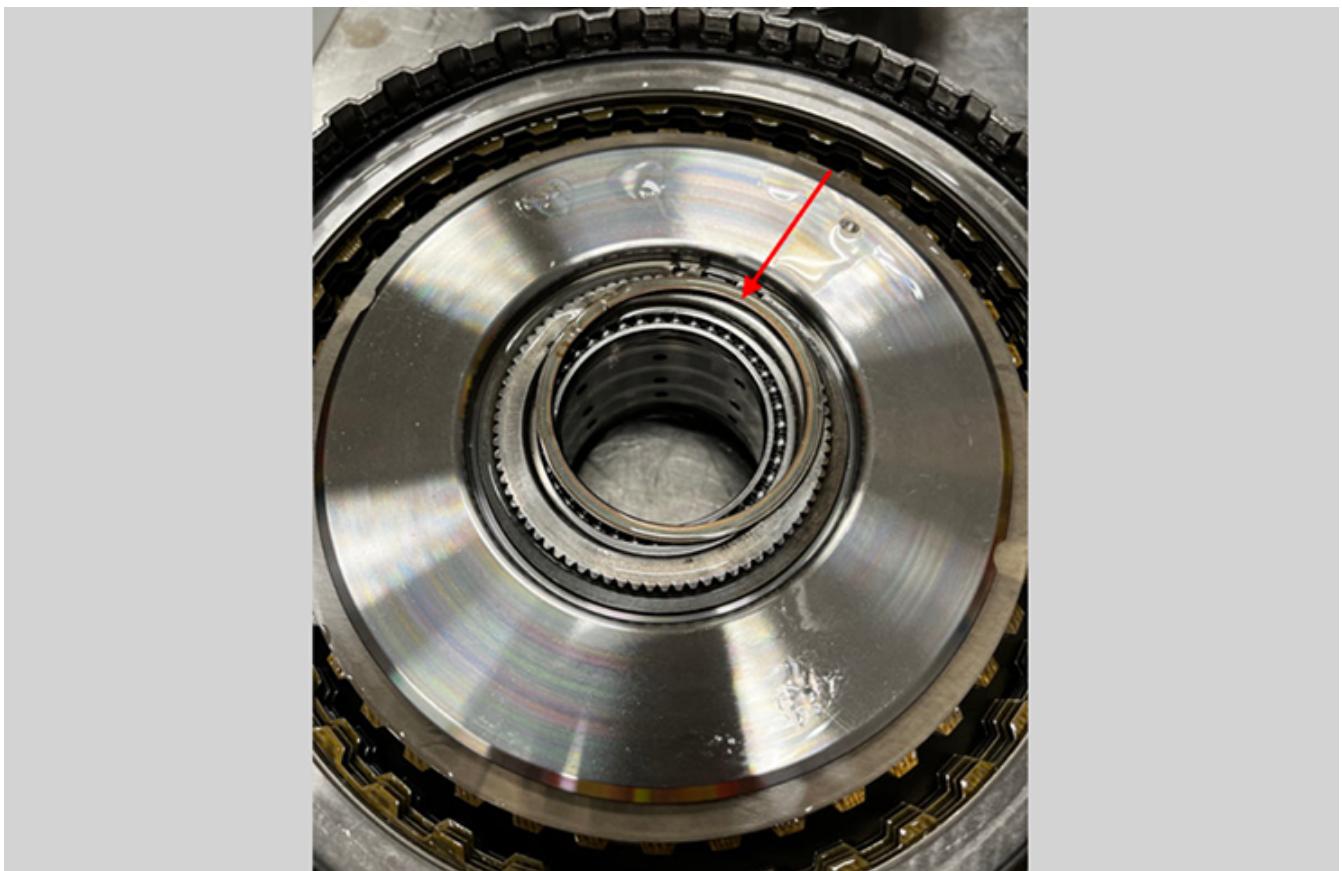


Fig. 15

**TIP:** If DTCs P1955 (Transmission Fluid Pressure Relief Valve Performance)

and P0867 (Transmission Fluid Pressure Performance) are set, refer to Bulletin #23-NA-139. Do not attempt any repairs.

If the noise from the bell housing area follows engine RPM and can be duplicated without moving the vehicle, verify that the vehicle has the latest TCM calibrations, set up a TAC case and attach the PicoScope sound files (refer to Bulletin #21-NA-049), and verify the park sensor measurement in the GDS transmission data for Park Lock Valve (PLV) drift (refer to Bulletin #23-NA-176). (Fig. 16)

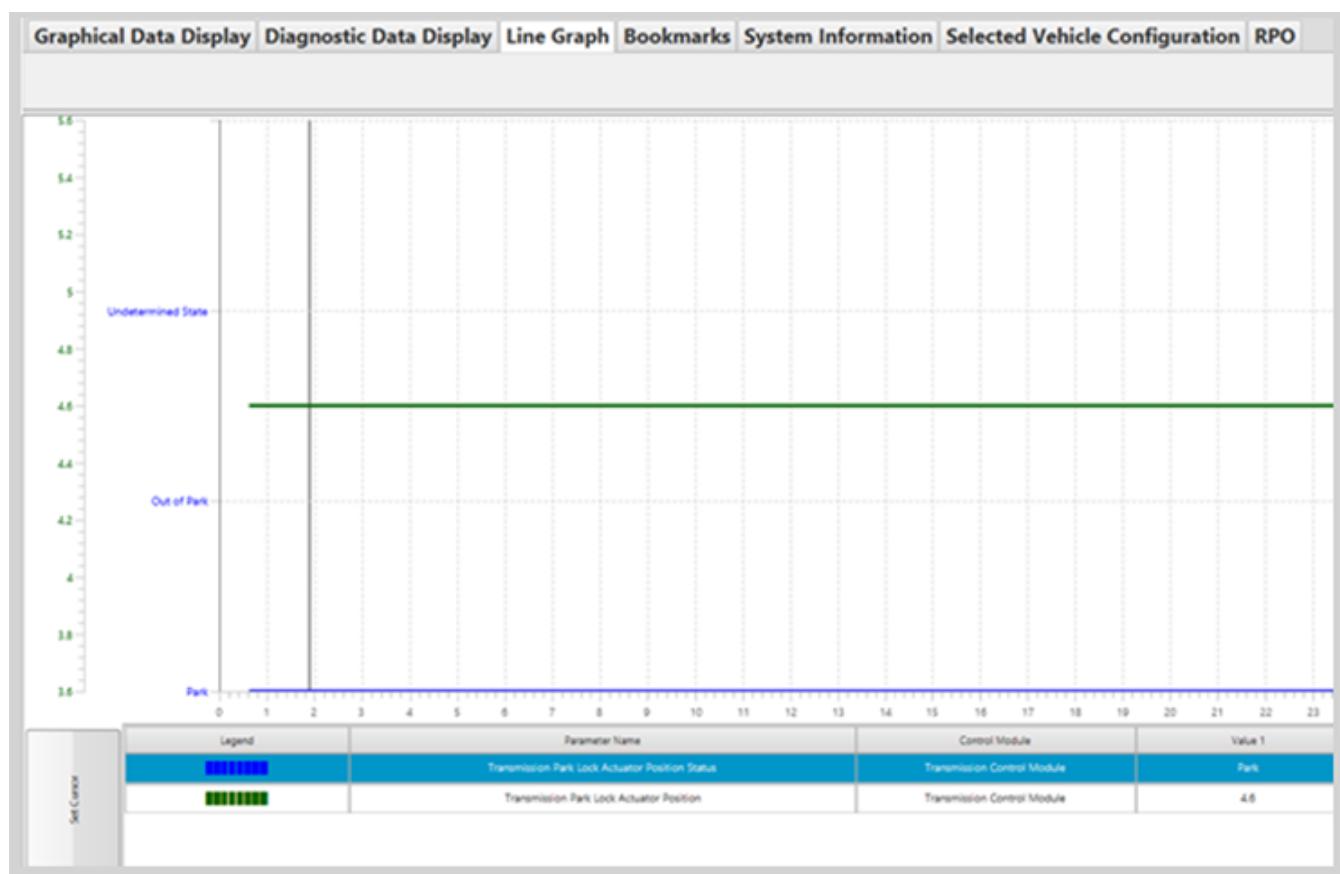


Fig. 16

In addition, if the MIL is illuminated — along with the noise from the bell housing area following engine RPM and can be duplicated without moving the vehicle — verify that the vehicle has the latest TCM calibrations as well as perform the transmission service diagnostic test.

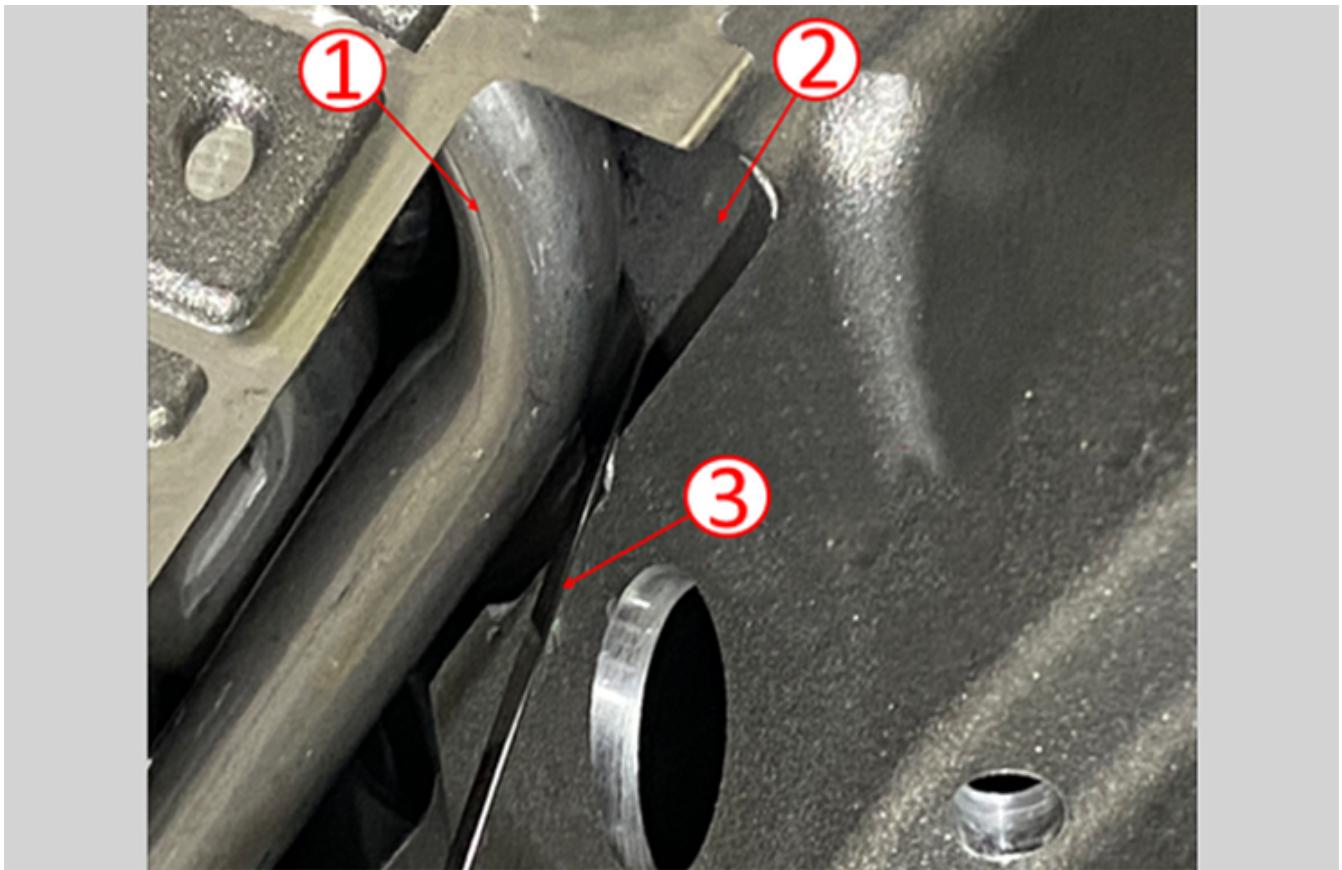
## Repair Options

Based on TAC analysis of the PicoScope data and the PLV drift confirmation, there are three repair options.

- If there is direct clutch snap ring failure without any DTCs set as current, replace the direct clutch and stator. In addition, remove the transmission pan to clean any debris from the magnets and replace the sump and canister filter elements.
- If there is direct clutch gear noise, replace the direct clutch, stator and pump gear. Also remove the transmission pan to clean debris from the magnets and replace the sump and canister filter elements.
- If there is direct clutch snap ring failure with an illuminated MIL and pressure DTCs set, replace the direct clutch and stator. Also remove the transmission pan to clean debris from the magnets, replace the sump and canister filter elements, and replace the Main Control Valve (MCV).

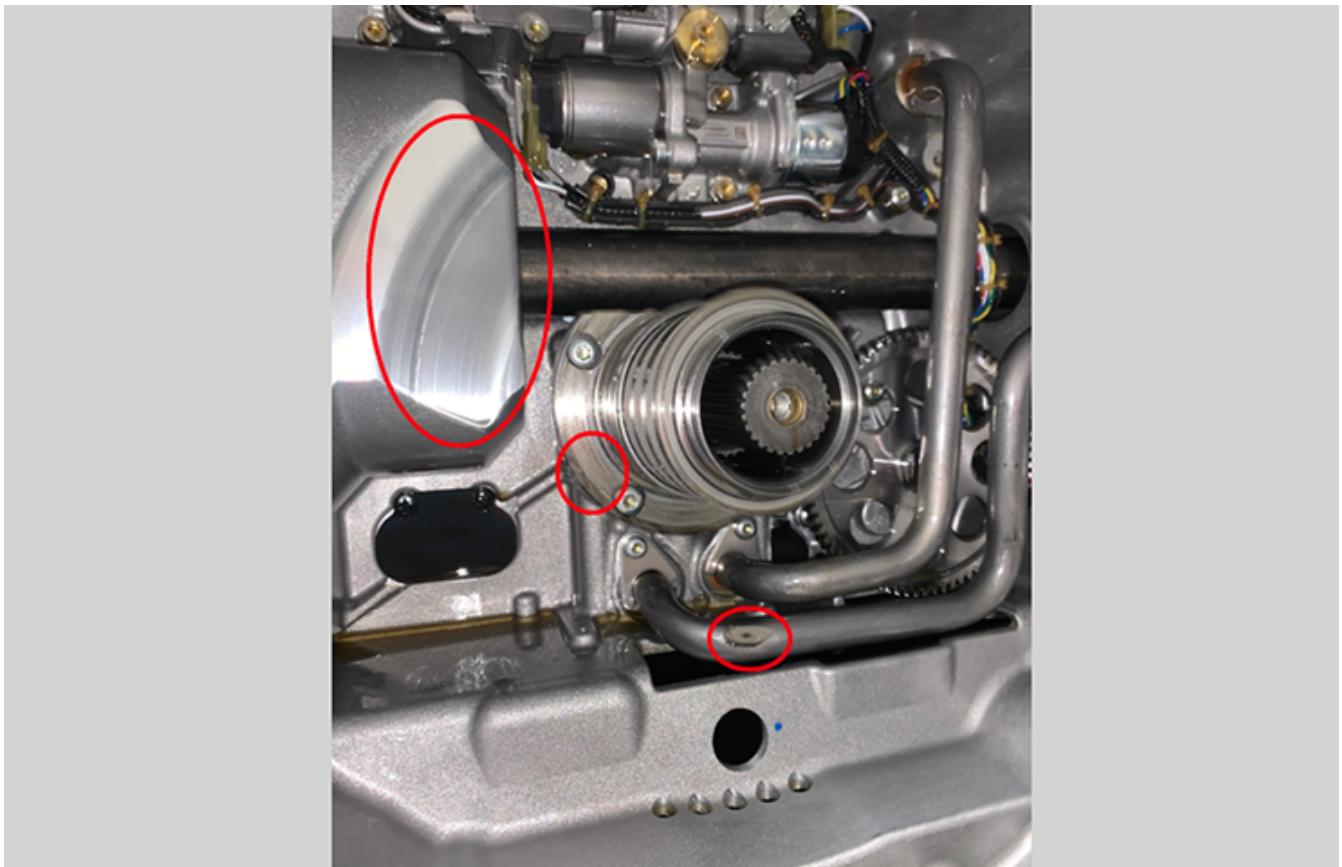
## Snap Ring Diagnosis

Inspect the direct clutch for failure by removing the MCV and check the clearance between the fluid tube (Fig. 17, #1) and direct clutch (Fig. 17, #2) using a feeler gauge. (Fig. 17, #3) If the clearance is 0 mm with obvious contact, follow the repairs for Direct Clutch Replacement in the appropriate Service Information. If the clearance is 0.5 mm, follow the repairs for direct clutch pump gear noise.



**Fig. 17**

While inspecting the pump gear for damage, if the direct clutch can be removed easily but there is contact with the pipe and stator, replace parts as needed. Light damage to the housing caused by direct clutch contact will not require replacement. (Fig. 18)



**Fig. 18**

For more information, including part numbers, refer to Bulletin #23-NA-197.

Verify all parts are for the specific transmission being repaired by verifying transmission identification.

*Thanks to Marty Leach*

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