Bulletin No.: PIP5337G

Date: Nov-2016

Service Bulletin

PRELIMINARY INFORMATION

Subject: Shake Or Shudder On Acceleration

Models: 2015 - 2016 Cadillac Escalade, Escalade ESV built prior to 11/01/15

2015 - 2016 Chevrolet Corvette, Silverado built prior to 11/01/15

2015 - 2016 GMC Sierra, Yukon, Yukon XL built prior to 11/01/15

Equipped with 8L90 Automatic Transmission (RPOs M5U) and the 6.2L (RPOs L86 and LT1)

Note: This information does not apply to Silverado and Sierra models with the 5.3L (RPO L83).

Please refer to bulletin 16-NA-175 for all other vehicles equipped with the 8L90 automatic transmission RPO (M5U) with shudder concerns.

This PI was superseded to add diagnostic recommendations. Please discard PIP5337F.

The following diagnosis might be helpful if the vehicle exhibits the symptom(s) described in this PI.

Condition/Concern

Some customers may comment on any of the following conditions.

A shake and/or shudder during light throttle acceleration between 48 and 104 km/h (30 and 65 mph) steady state driving when transmission is not actively shifting gears.

A shudder feeling that may be described as driving over rumble strips or rough pavement.

A shudder feeling that is evident in both Drive and M7 mode.

Recommendation/Instructions

To ensure TCC shudder is diagnosed correctly, please drive the following schedule on a smooth road with transmission sump temperature between 50°C (122°F) - 70°C (158°F).

Important: For some road conditions, it may be required to apply the brake pedal and throttle simultaneously to stay within desired engine torque range.

Press and hold the tow-haul mode button for 5 seconds to disable grade braking to prevent downshifts during test.

Run the following tests for 3 operational modes:

A. Normal Operation (GDS2 for viewing only).

B. GDS2 Commanding TCC in Disabled Operation. (TCC Open).

C. GDS2 Commanding TCC in Enabled Operation. (TCC Locked).

TEST:

Drive the vehicle in 8th gear, V8 mode, with a transmission input speed of 1,050–1,300 rpm with (approximately 64-89 km/h (40–55 mph)) constant throttle input, and engine torque 200-375 Nm.

To confirm TCC shudder, the vibration concern must be created in normal operation (Mode A) of the test.

If the concern is gone with the torque converter clutch disabled (Mode B, TCC Open) and is gone when the torque converter clutch enabled (Mode C, TCC Locked), the vibration root cause is TCC shudder and the torque should be replaced.

If the concern is not present in Mode A, then the vibration concern is not TCC shudder.

If the concern is still present with the torque converter clutch disabled (Mode B) or with the torque converter clutch enabled (Mode C, TCC slip speed at zero),

the root cause of vibration is NOT shudder.

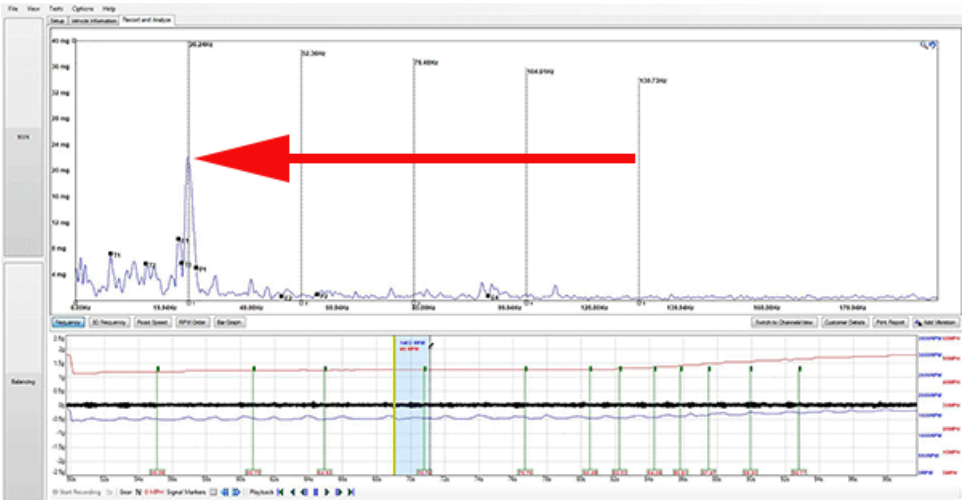
Vibrations not identified as shudder should be further investigated using the “Vehicle Vibration Diagnosis in SI as a starting point.

The use of the PICO scope and NVH software can be used to confirm TCC shudder, Engine, Tire or Driveline component related conditions.

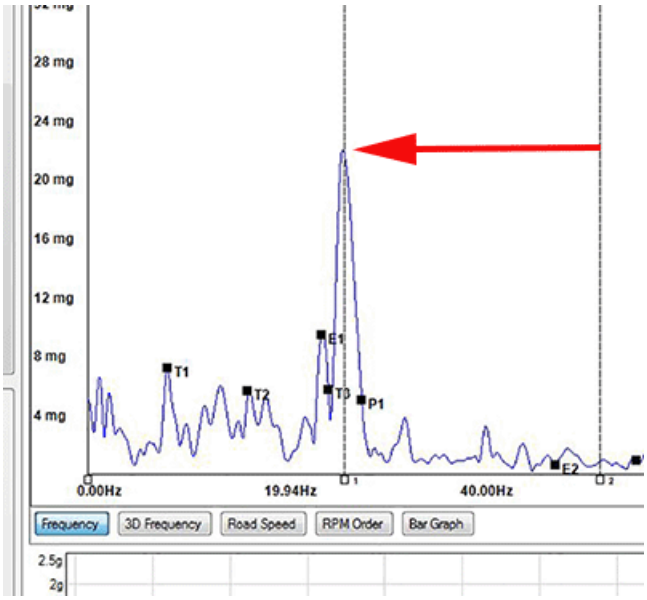
To confirm TCC shudder record the PICO scope data while driving the vehicle in 8th gear, in V8 mode, with a transmission input speed of 1,050–1,300 rpm At 40 to 55 MPH (64-89 km/h) at constant throttle input, and engine torque 200-375 Nm.

The disturbance will display as unknown and will be around 26 Hz at 16 to 24 mg as shown in the illustrations below if the concern is TCC shudder.

Note: If an engine 2 (E2) disturbance is noticed in the graph the engine most likely went into V4 mode.



In the above illustration frequency and default view have been selected.



Additionally the following should be performed as well during the torque converter replacement process.

Flush the cooler lines and cooler using DT-45096 transmission oil cooling system flush and flow test tool.

Use compressed air to remove any residual fluid from the cooler and lines.

Remove the transmission fluid pan and drain transmission fluid.

Note: If you find that the fluid is cloudy, milky, or appears to be contaminated with water or engine coolant, DO NOT proceed with below steps.

Follow Both SI Procedures for "Cooling System Leak Testing and "Engine Coolant/Water in Transmission."

Install a new transmission filter, clean pan and magnet.

Install the transmission fluid pan and refill with new transmission fluid following the fluid fill procedure in SI to obtain correct fluid level.

Note: Only DEXRON®HP Fluid should be used. The US part number for the DEXRON®HP Fluid is 19353429, P/N (19353430) in Canada.

Note: US dealers must order The DEXRON®HP fluid through your local General Motors oil distributor. Canadian dealer must order through CCA.

Important: Under certain load conditions a minor chuggle/shudder feel may be felt in the passenger compartment due to natural engine frequencies or Active Fuel Management (AFM) transitioning from 8 cylinder to 4 cylinder and back to 8 cylinder.

It may be necessary to compare the operation of the vehicle to a known good unit under the identical driving conditions as the operation may be characteristic.

In the event that the customer returns for a confirmed torque converter shudder after replacing the torque converter please follow bulletin 16-NA-175.

Parts Information

Part Number	Description	QTY
24279497	Torque Converter: 6.2 (L86) – Truck and Utility	1
24279495	Torque Converter: 6.2 (LT1) Corvette	1

Warranty Information

For vehicles repaired under warranty use:

Labor Operation	Description	Labor Time	
8480518	Replace Torque Converter, Filter and	Corvette	13.6
	Flush Cooler Lines	4wd Truck and Utility	6.5
		2wd Truck and Utility	5.6

Please follow this diagnostic or repair process thoroughly and complete each step. If the condition exhibited is resolved without completing every step, the remaining steps do not need to be performed.
