2016 Cadillac CTS-V: GM TechLink: V8 Engine Surge Sensation during Highway Driving

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A surge or misfire sensation during steady-state highway driving may be felt on some 2014 - 2016 Corvette and 2016 Camaro and Cadillac CTS-V models (Fig. 11) equipped with the 6.2L V8 engine (RPOs LT1, LT4) and the 8-speed automatic transmission (RPO MU5). The sensation may be noticed most often in 6th, 7th, or 8th gear, in manual or automatic mode, with an engine speed between 1,000 and 2,500 rpm under load. The Torque Converter Clutch (TCC) will be engaged and there will not be any misfire data or P0300 (Engine Misfire) DTCs set.

Fig. 11

TCC slip with this condition present may show on a scan tool of \pm 6–0 rpm. This occurs at about 30–60% throttle. This sensation, or chuggle, with the TCC locked is a normal condition.

Full-size trucks equipped with the Gen 5 V8 engine (RPOs L83, L86) may not exhibit this condition because they usually have 15-50 rpm of TCC slip speeds, which absorbs any engine chuggle sensation.

The normal operation of engines and transmissions generate various vibrations and the engine and transmission mounts are designed to isolate these vibrations from the rest of the vehicle. While the mounts do a great job of isolating most vibrations, there still may be certain engine loads and rpms that generate vibrations that drivers may feel in the vehicle. Changes in engine load or rpm will change the vibrations produced, making it more or less apparent to occupants in the vehicle.

When issues of this nature are encountered, like equipped vehicles should be compared and, if consistent results are identified, should be considered a normal characteristic of vehicle operation.

- Thanks to Tracy Lucas

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