TECH TIP

SUBJECT: Torque Converter Lug Leaks

MODELS AFFECTED: All Original Equipment Manufacturer (OEM) Chassis Equipped with Cummins® B Series 6.7L Engines and Allison Transmission, Inc. 1000 Series™ and 2000 Series™ Transmissions

Description of Complaint

There has been a complaint of a transmission fluid leak originating from the inside of the torque converter housing. After inspecting with UV dye and torque converter pressure testing, the leak is determined to be the result of a cracked weld at a torque converter attachment lug. The technician may find that this crack and subsequent leak is the result of a failed vibration damper at the front of the engine crankshaft.

Potential Causes

A failed engine vibration damper can introduce high torsional activity into the crankshaft and subsequently into the Allison torque converter, which can cause the lugs to crack at the base of the welds. Some signs of a failed engine vibration damper are listed below, but a Cummins branch location should be contacted to confirm the cause.

- Swollen engine vibration damper (refer to Figure 1).
- Cracked mounting surface on the front of the crankshaft (refer to Figure 2).
- Viscous fluid leakage from cracks in the engine vibration damper (refer to Figure 3).

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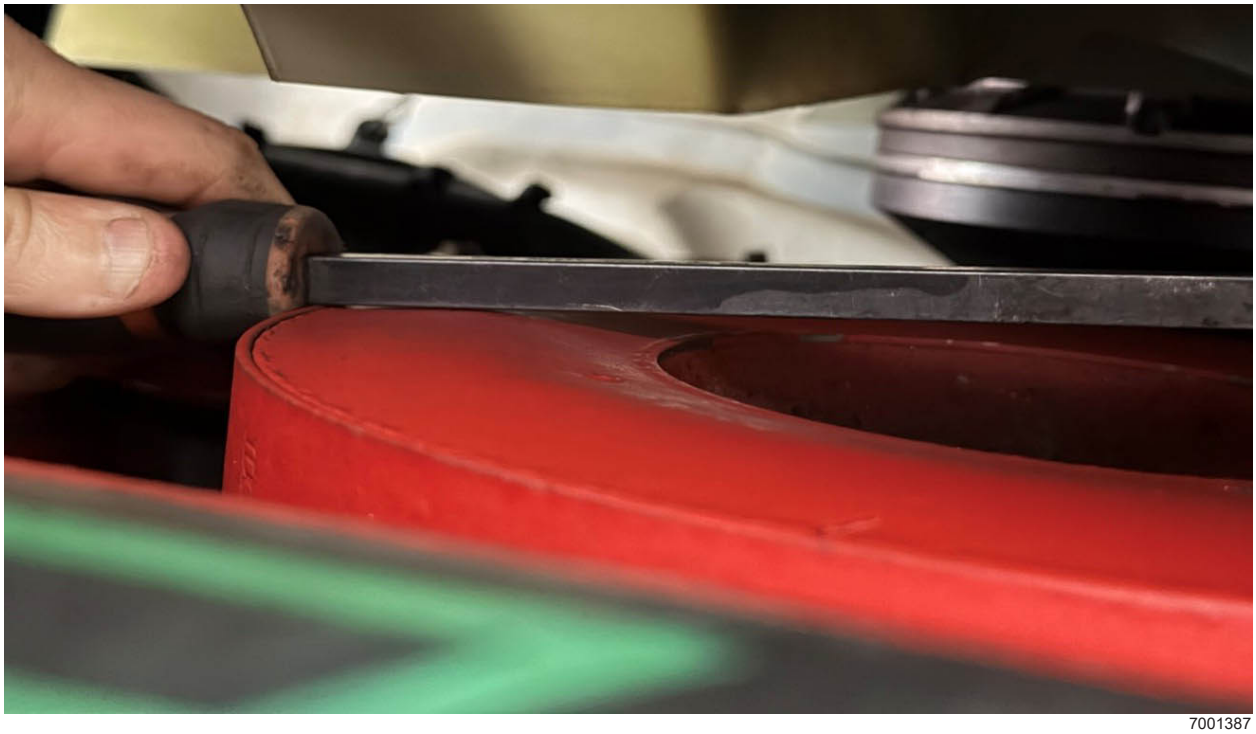

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Figure 1. Example of a Swollen Engine Vibration Damper

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Figure 2. Example of Cracked Mounting on the Front of the Crankshaft

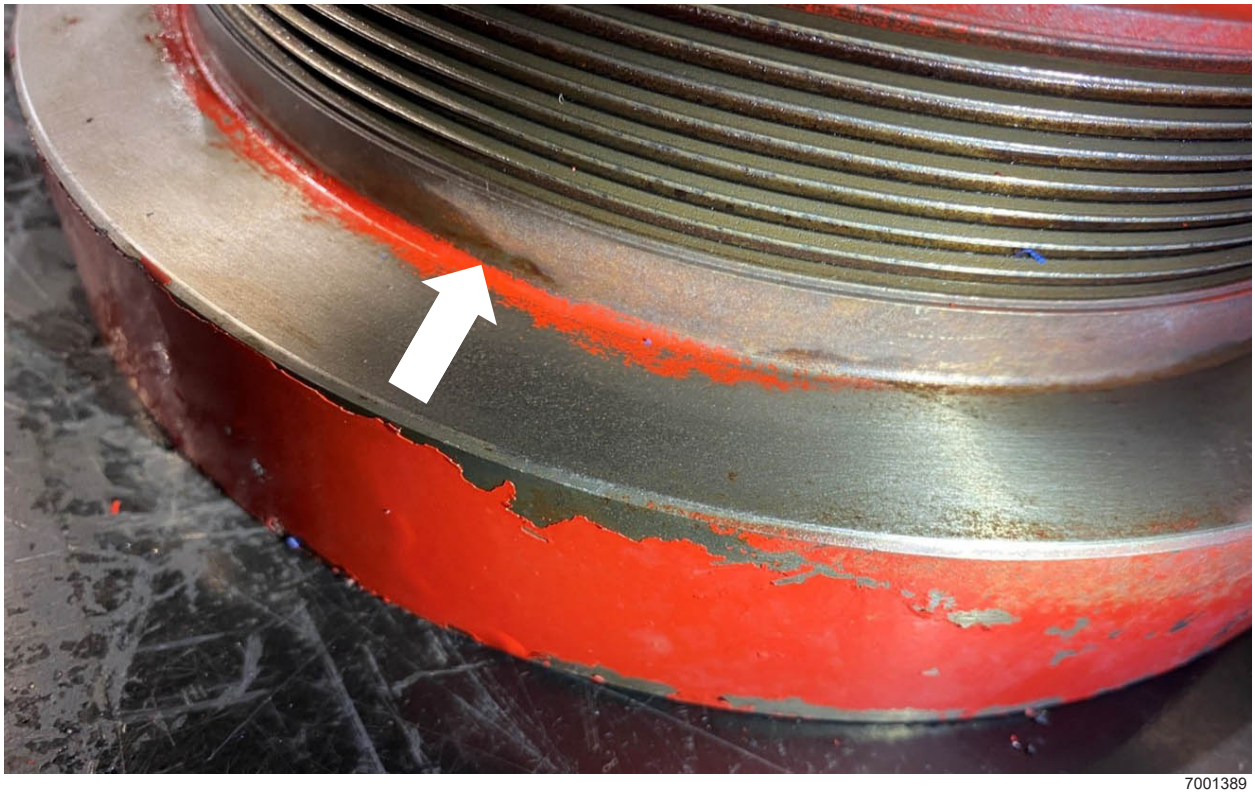

Figure 3. Example of Viscous Fluid Leakage from Crack

Confirmation of a Failed Damper

If the torque converter lug leak is confirmed and engine vibration damper is suspected as the cause, the Allison Channel Partner should contact their local Cummins branch location to confirm if the engine vibration damper has failed (refer to the latest version of Cummins *TSB210097*).

To minimize customer impact, work with the Cummins branch location to diagnose the damper in a way that tries to avoid sending the truck to the Cummins branch location. For example, ask if the Cummins branch location can send a technician to the downed vehicle, or ask if the engine vibration damper can be diagnosed as failed through photographs.

If Cummins confirms the damper is failed, follow the service procedure below.

Service Procedure

If the engine vibration damper has failed, the engine vibration damper must be replaced, along with the transmission torque converter. Follow the published Allison service procedures for replacing the torque converter. Ask the Cummins branch location to file a progressive damage claim (refer to the latest version of the *Cummins Warranty Administration Manual*, Section 502-003) to cover the damaged torque converter as progressive damage related to a warrantable engine vibration damper failure.

If the engine vibration damper is not failed at the time that the torque converter developed a lug leak, inquire with Cummins or the customer to see if the engine vibration damper had previously failed and been replaced within the past 12 months. If the engine vibration damper was covered on a previous Cummins claim, Cummins

should cover the damaged torque converter for engine vibration damper failures that occured up to 12 months after engine vibration damper failure.

NOTE: The torque converter lug leaks resulting from failed engine dampers described in this letter are not an Allison defect in material or workmanship. Time and material used to diagnose and/or address this issue by an Allison Distributor or Dealer will not be compensated by Allison through any Allison warranty or coverage. In these instances, the customer should work with the Cummins dealer to file a Cummins warranty claim or goodwill consideration.