TECH LINK

December 2023, Volume 25, No. 23

DCBS Warranty Requirement Deadline Extended

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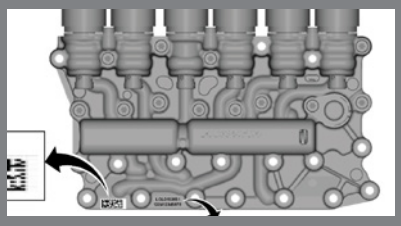


Dual Clutch Transmission MCVM PUN Characterization

see page 3

DCBS Warranty Requirement Deadline Extended

The deadline for using the EL-52800 Diagnostic Charge Battery Station (DCBS) as the only approved tool for diagnosing battery replacements and submitting battery warranty claims has been extended through the end of March 2024. The deadline is being extended to provide dealerships with additional time to order and receive additional DCBS units for their shops.

Beginning April 1, 2024, the DCBS Warranty Claim Code test result printout attachment will be the only acceptable supporting documentation for warranty battery replacement transactions. The EL-50313 Midtronics GR8 will no longer be acceptable equipment for warranty transactions.

USING THE DCBS

The DCBS provides comprehensive battery diagnostic services using a smart logic test sequence, which produces in-depth test results for lead acid, Absorbent Glass Mat (AGM) and Enhanced Flooded Batteries (EFB). The DCBS can determine the battery's state of health by checking the IR (internal resistance) and performing a true 1/2 cold cranking amps (CCA) Load Test. It also features an integrated reserve capacity (RC) tester to determine a true RC measurement, if needed.

Once a battery test is complete, the on-screen results will show "Battery is good" if the battery has a good state of health. The test results will show "Battery is bad" if the battery needs to be replaced. The tool will ask for the RO along with the VIN and BAC if not already entered. It will then print a warranty code if the test was run using the trolley. No warranty code will be generated when a battery test is done with the remote only.

With the enhanced speed, accuracy and ability to recover batteries, the DCBS is recommended to be used whenever possible for all battery diagnosis and charging.

SOFTWARE UPDATES

In order to maintain the capabilities of the DCBS, be sure to update the Optimus software regularly. The latest software includes updates to the integrated GM vehicle database with 2024 model year battery specifications, which offers quick identification of the latest GM vehicles to help speed up the diagnostic process.

Diagnostic Charge Battery Station

The DCBS Warranty Claim Code test result printout will be the only acceptable supporting documentation for warranty battery replacement transactions.

Additional resources on DCBS operation, including several quick guides and user manuals, are available at e-xteq.com. In the U.S., dealerships with any additional questions can contact E-XTEQ Tech Support at 1-877-453-3265.

For more information, refer to Bulletin #23-NA-055 and Bulletin #20-NA-132.

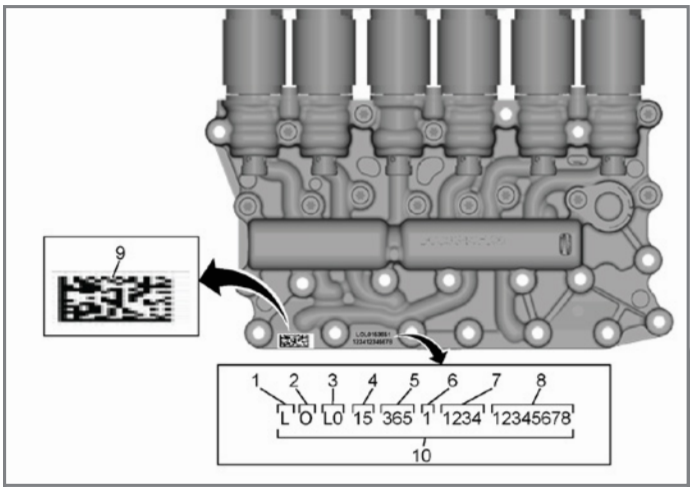
▶ Thanks to Josh Shuck

Dual Clutch Transmission MCVM PUN Characterization

Service Information repair procedures have been updated for repairs to the Dual Clutch Transmission (DCT) (RPO M1L) on 2020-2024 Corvette models.

After making repairs to the DCT, including Main Control Valve (MCV) and direct clutch replacement, it is no longer required to characterize the MCV and direct clutch Part Unique Number (PUN) in the Transmission Control Module (TCM).

Direct clutch replacement

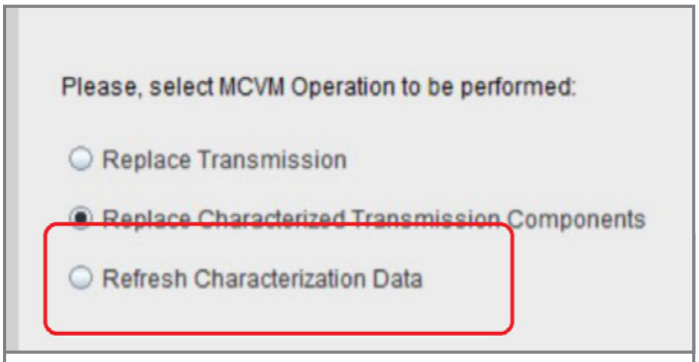


22-digit PUN (#10)

Technicians must still characterize Shift Activation (SAV) and transmission assembly replacements. During this procedure, there may be some confusion when comparing the service tool with the Service Information instructions. Service Information is very detailed in specifying that the 22-digit PUN is needed. There is a 21-digit and 22-digit PUN on these parts.

The supplier uses the 21-digit PUN for production parts and the 22-digit PUN is used in service. Only the 22-digit PUN should be entered when TCM programming.

When a production part is shipped it does not contain the 22-digit PUN required for characterization. Performing the Service Fast Learn procedure after SAV and transmission assembly replacements allows the TCM to adequately learn the flow and fill characteristics of the new parts.



Select Refresh Characterization Data and use the TUN from the transmission assembly.

TIP: If direct clutch or MCV PUN characterization has been attempted and fails, select Refresh Characterization Data and use the Transmission Unique Number (TUN) from the transmission assembly.

For additional information, refer to #PIP5781A.

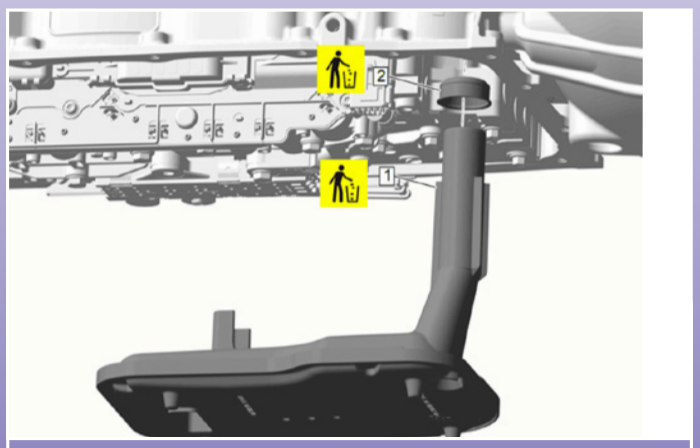
▶ Thanks to Steve Schipansky

6-Speed Automatic Transmission Oil Filter and Seal Now Available Individually

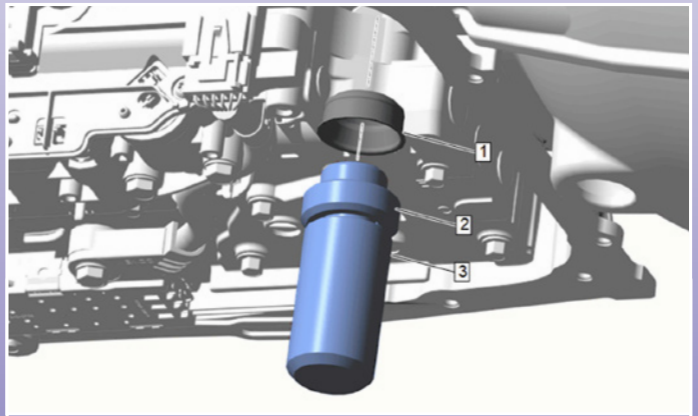
A change has been made to the Transmission Oil Filter and Seal Kit (part number 24236933) for the 6L50 (RPO MYB), 6L80 (RPO MYC) and 6L90 (RPO MYD) 6-speed automatic transmissions used in a number of GM vehicles, including Silverado, Tahoe, Suburban, Sierra, Yukon, Camaro and Corvette models.

The filter and seal currently included in the Transmission Oil Filter and Seal Kit will now be available individually. The parts being sold individually will help improve packaging efficiencies. To obtain the filter and seal, order filter part number 24236517 and seal part number 24225347. The Electronic Parts Catalog (EPC) is being updated to reflect these changes.

Current service procedures require that the seal be replaced anytime the filter is removed. The fluid pan gasket is reusable. The gasket should be replaced if it is stuck to the case or pan. Be sure follow the appropriate Service Information procedures and use the correct special tools when installing the filter seal.



Filter (#1) and seal (#2)



Seal, seal installer and driver handle

▶ **Thanks to Mark Gordon**

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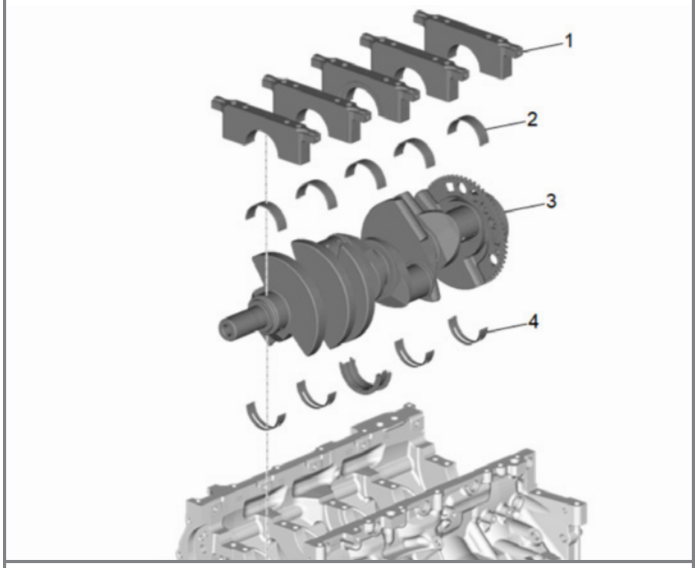
Crankshaft Bearing Diagnosis

A growling, knocking or rhythmic thumping sound may be heard on some 4.3L engines (RPO LV3), 5.3L engines (RPO L82, L84) and 6.2L engines (RPO L87, LT1, LT2, LT4, L8T) on some 2019-2024 Camaro, Corvette, Silverado 1500, Sierra 1500; 2020-2024 Silverado 2500/3500, Sierra 2500/3500; 2021-2024 Tahoe, Suburban, Yukon, Escalade; 2021-2024 Express, Savana; and 2022-2024 CT5 models. The engine may be hard to rotate once at operating temperature, which may lead to it locking up and unable to restart. Once the engine cools down to ambient temperature, it may refire and run normally. In addition, the starter fuse may be open. All of these conditions may be a sign of an early bearing failure.



Check for crankshaft bearing or thrust bearing failure.

If these engine conditions are present, check for crankshaft bearing failure or a damaged thrust bearing. There are several items to inspect to determine if bearing failure has occurred.

Inspect the engine oil and filter for bearing material.

ENGINE OIL AND FILTER

Begin diagnosis by inspecting the engine oil and filter for bearing material or excessive metal debris. Pouring the oil through a white shop towel may be helpful.

TIP: There may be light glitter in the oil from the manufacturing process if the engine has not had its first oil change. In this case, further engine inspection is necessary

Remove the engine oil pan for further inspection of the crankshaft rod and main bearings if bearing debris has been identified.

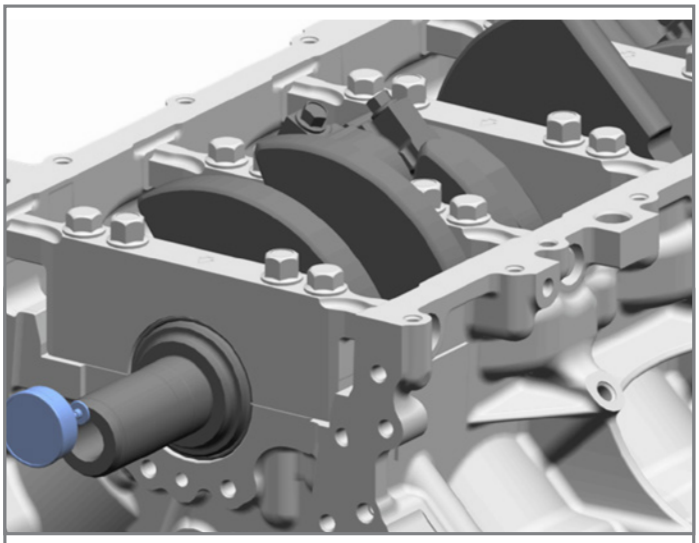
In addition, if material is found in the engine oil, measure crankshaft end play following the appropriate Service Information. If there is not excessive crankshaft end play, remove the engine accessory drive belt and run the engine again. If the noise is eliminated, check the accessory drive belt-driven components for possible issues.

CONTINUED ON PAGE 6

ENGINE NOISE

With the engine at a warm idle, increase engine speed to 1,500 – 1,800 RPM and then back to idle. Listen for the intensity of the noise to increase under higher engine speeds.

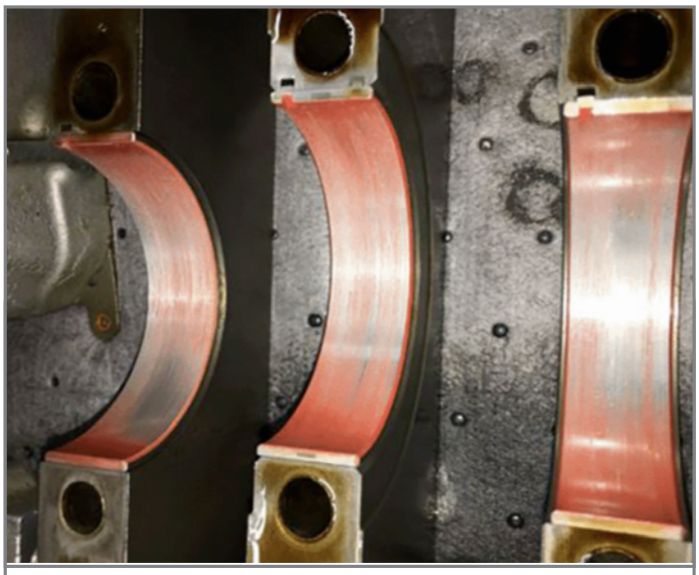
The use of a stethoscope or PicoScope also may help verify if the noise is in the bellhousing or rear of the transmission instead of the engine.



Measure crankshaft end play.

Many evaluations have indicated that the noise is eliminated when the transmission is disconnected. However, do not try to isolate the noise by backing off the torque converter from the engine and running the engine, which may cause engine or transmission damage. Replacing the transmission will not resolve the noise condition.

TIP: If crankshaft bearing damage is found once all diagnostic procedures are completed, refer to Bulletins #22-NA-074 and #18-NA-073 for additional repair directions.



Refer to Bulletin #18-NA-073 for additional repair directions if crankshaft bearing damage is found.

STARTER CONCERNS

If the starter fuse is blown, replace the starter fuse once the new engine is installed. Do not replace the starter assembly. If there are any other starter concerns after fuse replacement, check the appropriate Service Information for additional diagnostic procedures to perform.

For more information on possible bearing failure, refer to the latest version of Bulletin #23-NA-170.

▶ **Thanks to Bryan Salisbury**

TECH LINK

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