

AERO SHUTTER DIAGNOSTIC TIPS

The aero shutters on some 2019-2021 Silverado 1500, Tahoe, Suburban, Sierra 1500, Yukon, Escalade; 2020-2021 Silverado 2500HD/3500HD and Sierra 2500HD/3500HD models may have several conditions that could potentially cause improper shutter operation. Several DTCs may be set, depending on the specific conditions.

CONTINUED ON PAGE 2



Excellence in Service Award

In recognition of your efforts to go above and beyond the call of duty to the delight of General Motors and our customers, delivering exceptional Skill and Integrity we hereby present:

**Dealer Technician
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**FSE Technician
Recognition Awards –
1st Quarter 2022**

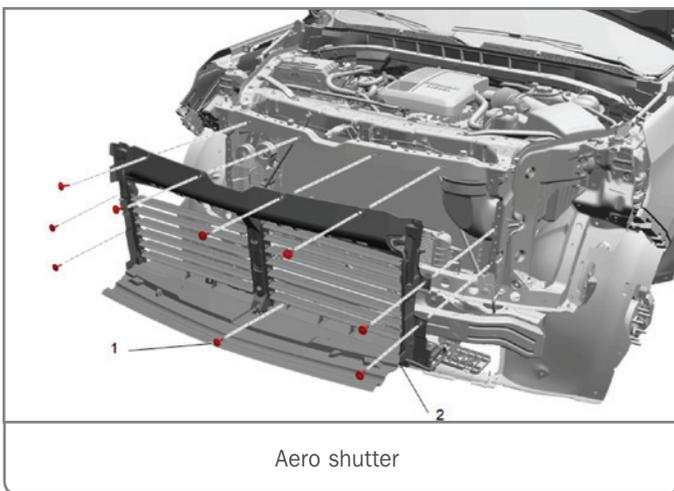
see page 4

<i>Aero Shutter Diagnostic Tips</i>	<i>1</i>
<i>Possible Engine Overheating Condition</i>	<i>3</i>
<i>Inoperable Folding Rear Seat</i>	<i>6</i>
<i>Assessing Park Assist Sensor Damage.</i>	<i>8</i>
<i>Transfer Sound Insulator When Installing 10-Speed Service Transmission.</i>	<i>10</i>

Aero Shutter Diagnostic Tips

When checking aero shutter operation, be sure to look for electrical integrity issues, displaced louvers/vanes, and debris that may block movement.

Here are a few tips to follow when diagnosing any aero shutter conditions on these vehicles. Refer to Bulletin #21-NA-077 for complete details on all diagnostic steps.



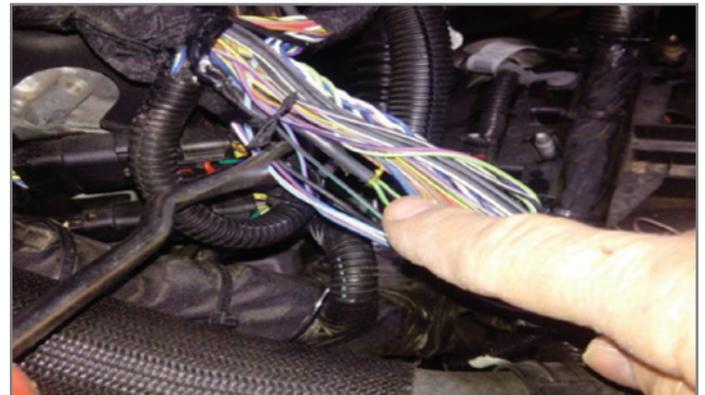
TIP: A shutter performance issue will always set DTC P059F (Active Grille Air Shutter 1 Performance) and U0284 (Lost Communication with Active Grille Air Shutter Actuator 1) for the upper shutters and DTC P05AE (Active Grille Air Shutter 2 Performance) and U0285 (Lost Communication with Active Grille Air Shutter Actuator 2) for the lower shutters. Shutters should never be replaced if these DTCs are not present.

COMMUNICATION CONCERNS

Check for DTCs U0284 and U0285. On light-duty trucks, these codes may be paired with DTCs U0632 (Lost Communication with Cooling Fan Motor), U0633 (Lost Communication with Engine Cooling Fan 2), U01B0 (Lost Communication with Battery Monitor Module) or U1345 (Engine Control Module LIN Bus 1).

If any of these codes are set, check the integrity of the following components:

- Aero shutter fuse
- Engine wiring harness
- Jumper harness to the shutter actuators
- X133 connector and other connectors to the aero shutter
- J170 splice (light-duty trucks only); even a small amount of movement of the splice may cause an intermittent communication issue



Movement of the J170 splice on light-duty trucks may cause an intermittent communication issue.

SHUTTER OBSTRUCTIONS

If DTCs P059F and P05AE are set, check for any debris in the upper and lower shutters, a louver/vane that is disengaged from the linkage, or a shutter that is binding. Try to remove any debris by hand or using compressed air before removing the front fascia of the vehicle or the shutter.

On light-duty trucks, the upper shutter may be binding on the air induction plenum (upper driver's side).

On SUVs as well as light-duty trucks, the upper shutter also may be binding on the horn or bracket (upper passenger's side). There should be at least 0.40 inches (10 mm) of clearance between the shutter louver/vane and horn.

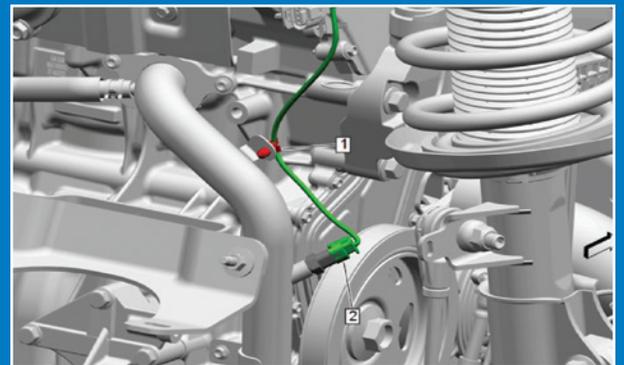
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Possible Engine Overheating Condition

The turbocharged 2.0L 4-cylinder engine (RPO LSY) on some 2019 CT6; 2020-2022 CT4, CT5, XT5, XT6, Blazer, Acadia and 2021-2022 Envision models may experience an engine overheating or running hot condition. An over temperature indicator may be displayed on the instrument cluster.

Follow the engine overheating diagnostics in the appropriate Service Information if an overheating condition is present.

If the root cause of the overheating or running hot condition cannot be isolated after completing the published engine overheating diagnostics, replace the Engine Coolant Temperature (ECT) sensor #1, identified in the engine overheating diagnostic chart. The ECT sensor #1 may be reading noticeably cooler than the other ECT readings, which could affect the position of the Coolant Control Valve (CCV) and limit the amount of coolant entering the radiator. As a result, the engine may be running hot.



ECT sensor #1

Be sure to use the latest part listed in the Electronic Parts Catalog. Refer to the Engine Coolant Temperature (ECT) #1 – Coolant Pump Outlet Pipe procedure in the appropriate Service Information. After repairs, validate that the engine is operating in the proper temperature range.

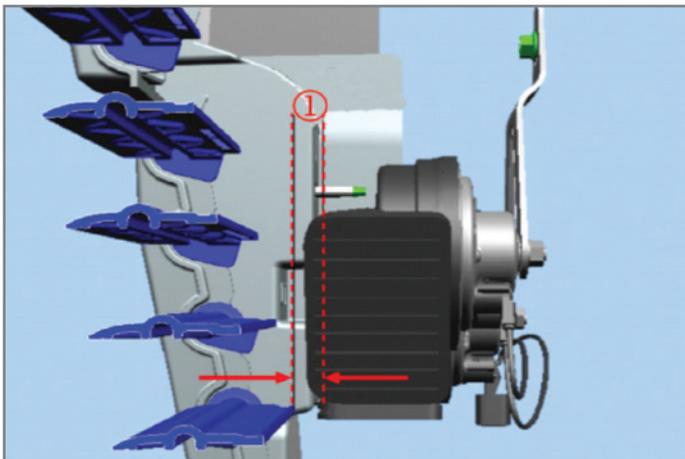
Refer to #PIP5839 for additional information.

► Thanks to Robert Halas



Look for debris that may be binding the shutters.

TIP: For 2020-2021 Silverado 2500HD/3500HD models with a fourth lower row of louvers/vanes, refer to Bulletin #21-NA-071 for the Lower Shutter Louver Modification procedure.



Check for the proper clearance (#1) between the shutter vane and horn.

SHUTTER TEST

Functionally test each shutter assembly to fully open and fully closed twice. If the shutters fully open and fully close twice without any stoppages, do not replace the shutter assembly.

TIP: On 2019-2021 Silverado 1500 and Sierra 1500 models and 2020-2021 Silverado 2500HD/3500HD and Sierra 2500HD/3500HD models equipped with upper and lower shutters, the top passenger-side louver/vane of the upper shutter is intentionally missing from the shutter assembly for airflow reasons. Do not replace the shutter for the missing louver/vane.

Refer to Bulletin #21-NA-077 for additional information.

► Thanks to David MacGillis, Kevin Minor and Hassan Abdallah

FSE Technician

RECOGNITION AWARDS

1ST QUARTER 2022

The GM Field Service Engineer (FSE) Technician Recognition Awards (U.S.) celebrate the skill and dedication of dealership technicians who have recently worked with FSE's on challenging repairs.

Technicians at GM dealerships are selected for recognition based on their focus on safety, customer satisfaction, personal accountability, training achievements, diagnostic abilities, and the level of repair documentation.

Each recognized technician receives a Service Excellence magnetic plaque and an Excellence in Service Award certificate.



1ST QUARTER 2022 AWARD WINNERS



Technician: Steven Magee

Dealership: RK Chevrolet,
Vineland, New Jersey

FSE: Thomas Richards

Service Excellence: Steven

was working on a 2021 Silverado with the 2.7L L3B four-cylinder engine that had an illuminated Check Engine light and several communication DTCs. Upon meeting Steven at the dealership, he had the area of concern disassembled and ready to diagnose. He also had all the necessary wiring diagrams printed and the circuits marked that he had checked. Our diagnosis narrowed down the concern to circuit 2732, which was chafed on the alternator bracket. Thanks to Steven's diligence, the repair was made without needing to replace the engine wiring harness. Steven was easy to work with and willing to do what it took to accurately resolve the problem.



Shop Foreman: Phil Simmons

Dealership: Sherwood
Chevrolet Buick GMC,
Tunkhannock, Pennsylvania

FSE: Paul French

Service Excellence: Phil embodies all the characteristics of a Service Excellence Technician. He is up to date on all training and is knowledgeable and intelligent. Phil always strives to do right by customers and the dealership with high quality, efficient repairs. He is always aware of the most current problems and their solutions and is a valuable resource for all the technicians he works with in the dealership.

CONTINUED ON PAGE 5



Technician: Jason Hawkins

Dealership: Sewell Cadillac, Dallas, Texas

FSE: Lee Williams

Service Excellence: Jason

recently assisted Engineering with fixing a coax cable routing issue on a Cadillac XT4 that was losing the video feed from the side-view camera. Jason was tasked with making multiple repair attempts, including with videos and borescope photos. The repairs all required multiple installations and removals of the side-view cameras, harnesses, and coax cable along with road test procedures.

Jason’s patience and professionalism never wavered. Never once did he question why or resist suggested repairs from Engineering. Thanks to his help, it was determined that the coax cable routing was causing an intermittent loss of contact at the door connectors. The fix required that the coax cable be mounted and insulated in a manner that relieved strain on the coax connector. Arriving at a successful solution was a collaboration that heavily relied on Jason’s understanding and persistence.



Technician: Robert Rinesmith

Dealership: Autonation Chevrolet, Gilbert, Arizona

FSE: Clint Mielke

Service Excellence: Parasitic draws can be the most challenging task that a technician tackles. Robert had a recent case with a 2022 Tahoe that was no exception. When first contacted, Robert was able to explain in detail what his observations and measurements were, and that the condition occurred approximately 7 minutes after the vehicle was shut off.

Working late in the afternoon on a Friday, Robert explained that he really wanted to solve this repair before the weekend instead of waiting until Monday, saying, “I would really like to find an answer to this problem today.” He added, “I feel bad for the customer. This truck is brand new and they’ve only put 42 miles on it.”

Continuing with the diagnosis that day, a loose LIN bus 7 wire was found that was due to a poor crimp from the rear programmable temperature actuator, which was keeping the BCM awake waiting for the actuator to respond. While working on this case, Robert exhibited a strong commitment to “It’s on me” as well as placing the customer at the center of everything we do.



Technician: Bill Chetwood

Dealership: Three-Way Chevrolet Cadillac, Bakersfield, California

FSE: Jamie Borton and Jim Boyke

Service Excellence: Bill pursues customer vehicle satisfaction by making sure all the vehicles he works on are fixed right the first time. He has worked at Three-Way Chevrolet Cadillac for more than 28 years and, along the way, has trained many apprentice technicians who have gone on to have great automotive careers.

Rather than retire, Bill was offered by the dealer to conduct an in-dealership training program to help students transition from student life to a successful dealership career. Bill currently has six trainees from a local college and some are almost ready to move on to start their careers.

Bill is very helpful at the dealership, always pointing out current vehicle issues that he has noticed. He regularly submits SI feedbacks to report Service Information issues and always is willing to help others no matter the department they are in. Overall, Bill is the epitome of what a great dealership technician is and we are grateful to have him on the GM team.

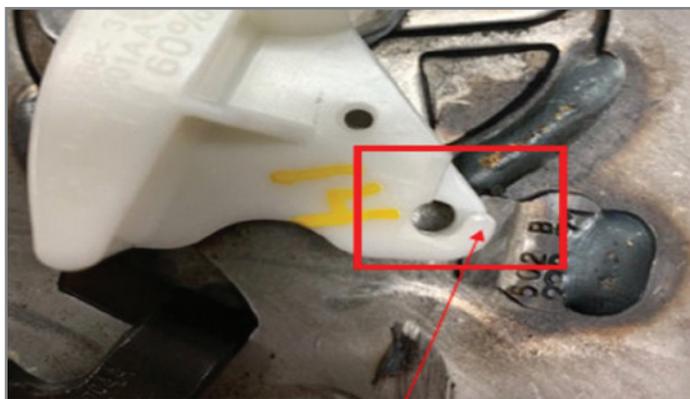
► Thanks to Hank Poelman



Inoperable Folding Rear Seat

The 2nd-row bench seat on 2021-2022 Tahoe, Suburban, Yukon and Escalade models features a 60/40 split-folding function. On some models, the 60% side of the rear seat may not fold down due to a detached seat cable to the outboard seat release lever.

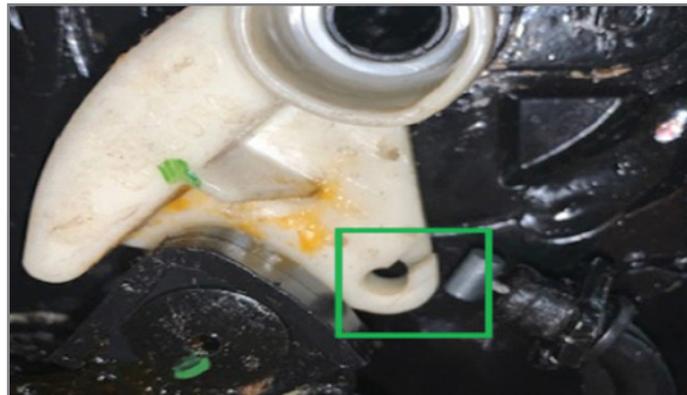
When reattaching the seat cable, a reinforcement retainer should be installed to ensure proper folding operation. Refer to the service procedure in Bulletin #21-NA-284 for complete instructions.



Outboard white release lever

After removing the rear seat adjustment and recline handles and outer finish cover, inspect the outboard white release lever for damage or missing material.

Also verify that the seat cable is disconnected from the release lever.



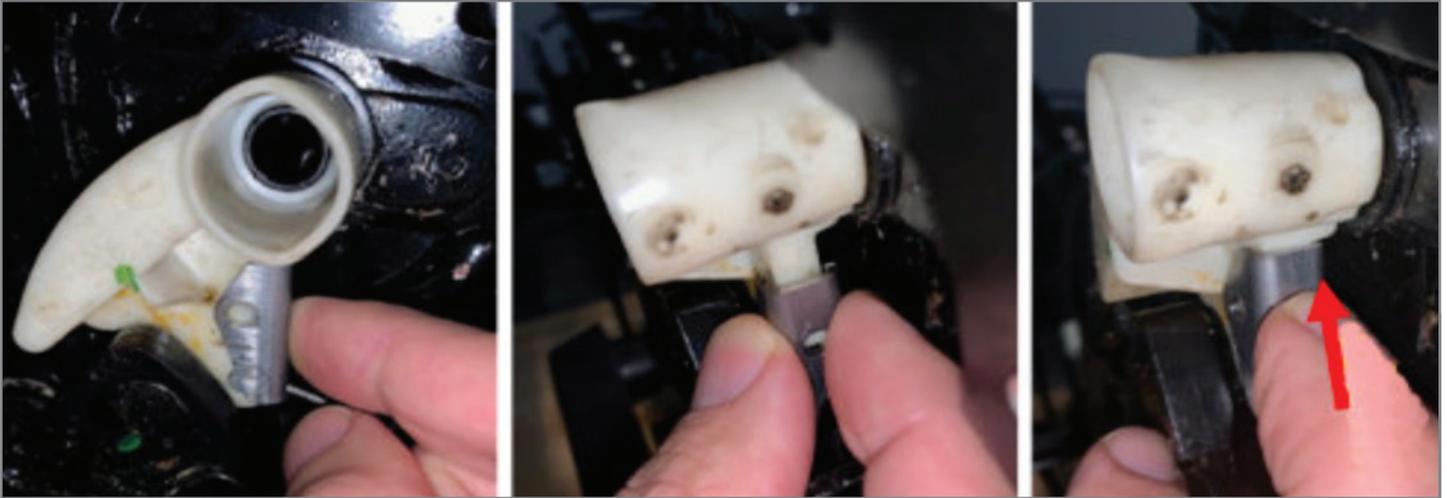
Cable disconnected from the release lever.

If these conditions are found, install a reinforcement retainer following the steps in the Service Bulletin

TIP: When disconnecting the inboard lower cable attachment, remove only the cable end fitting. Use care to not disconnect the internal latch springs. Once the cable has been removed, inspect it for damage. If the metal cable strand is frayed or kinked, the cable should be replaced.

The reinforcement retainer should be located against the white release lever. In the correct position, it will bottom out against the edge of the lever.

CONTINUED ON PAGE 7



Install the reinforcement retainer.

To secure the retainer, drill a hole in the release lever. Use the retainer as a template for the proper location of the hole. Insert the rivet from the service kit to attach the retainer. Ensure the rivet shank does not fall into the seat mechanism.



Drill a hole in the release lever to secure the reinforcement retainer with the rivet in the service kit.



The retainer should not contact the cable strand.

Once the retainer is installed, verify the edge of the retainer is not contacting the metal cable strand and that the seat folds freely.

For complete details on the service procedure as well as part numbers, refer to Bulletin #21-NA-284.

► Thanks to Hassan Abdallah

Assessing Park Assist Sensor Damage

The park assist sensors for Front and Rear Park Assist Systems (RPO UD7, UD5, UFQ, UKG, UKZ) on some 2018-2022 GM passenger cars, crossovers, trucks and SUVs may be damaged due to a number of conditions. Park assist sensors with non-warrantable damage or conditions, such as visible impact damage, should not be replaced under warranty.



Good sensor without any damage.

Here are some examples of non-warrantable damage or conditions to park assist sensors.

STONE CHIP AND MEMBRANE DAMAGE

Check for a sensor with visible stone chip and membrane damage.



Stone chip and membrane damage

DAMAGED CONNECTOR

Inspect the sensor for damage to the connector.



Connector damage

DAMAGED RETAINED TABS

The retaining tabs should not show any damage from impacts or improper removal.



Broken retaining tabs

CONTINUED ON PAGE 9

TWISTED SENSORS

The double marks on the sensor should be aligned. Do not twist the sensor to try and remove the painted cap.

A twisted sensor without the marks aligned is typically caused during sensor removal or installation.



Correctly aligned sensor



Twisted sensor

PAINTED INCORRECTLY

Verify the sensor is painted correctly without any overspray, grinding or re-painting. Follow the appropriate Service Information for the correct painting procedure. Do not refinish previously painted sensors. Excess paint build-up will cause the sensor to be inoperative.



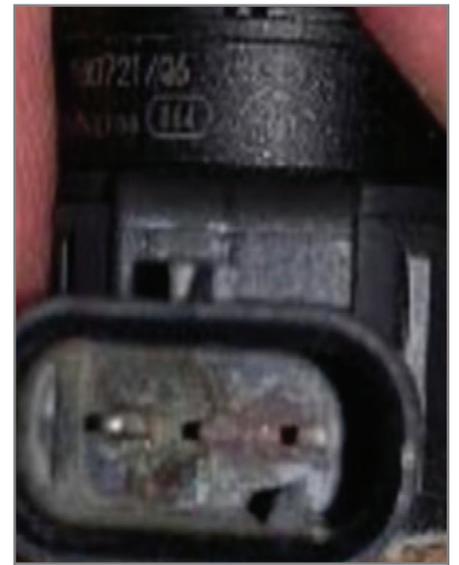
Incorrectly painted sensors

CONNECTOR INTERFACE

Check for any damage by the outside environment, including a corroded connector.

Be sure to precisely follow the removal and installation procedures in the appropriate Service Information in order to avoid sensor damage.

Refer to Bulletin #22-NA-012 for additional information.



Corroded connector

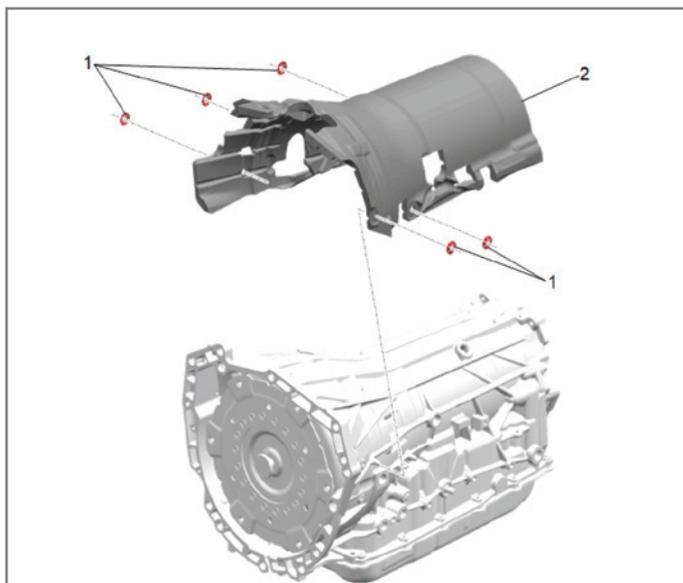
► Thanks to
Kristin Clancy

Transfer Sound Insulator When Installing 10-Speed Service Transmission

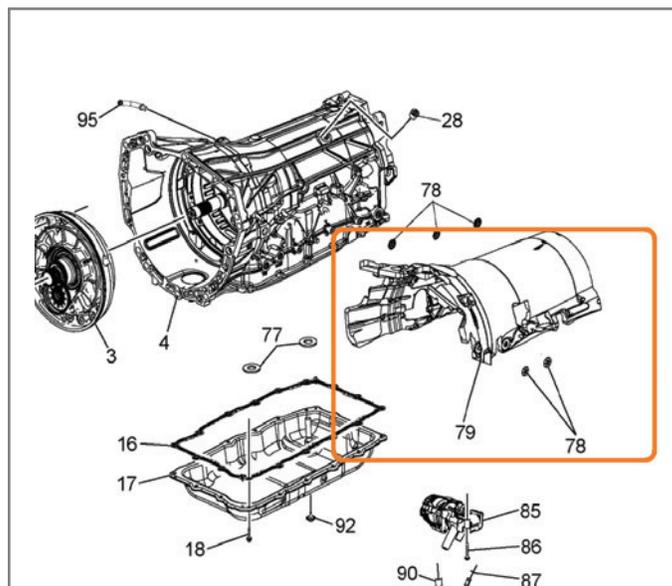
GM now offers remanufactured 10L80 and 10L90 10-speed automatic transmissions for some 2017-2020 rear-wheel-drive applications.

The remanufactured transmissions do not include the transmission housing acoustic sound insulator cover as part of the service transmission assembly. The sound insulator must be transferred from the original transmission to the remanufactured service transmission. Remanufactured transmissions shipped to the dealership without the sound insulator are not built incorrectly.

If needed, the sound insulator and new retaining nuts are available from Service Parts and listed in the Electronic Parts Catalog (EPC).



Remanufactured transmissions do not include the transmission housing acoustic sound insulator cover.



Retaining nuts (#78) and the sound insulator (#79) are available in the EPC.

► Thanks to Mark Gordon

TECH LINK

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