



## Preliminary Information

### PIP5943 Diagnostic Aids for 8 Speed Transmissions With Shift Concerns

#### Models

Brand:	Model:	Model Years:	VIN:		Engine:	Transmissions:
			from	to		
Cadillac	ATS	2016 - 2019	All	All	All	M5N, MNU
Cadillac	CTS	2016 - 2019	All	All	All	M5N, M5U
Cadillac	CT6	2016 - 2018	All	All	All	M5N, M5X
Cadillac	CT4	2020 - 2024	All	All	All	M5N, MHA
Cadillac	Escalade	2015 - 2020	All	All	All	M5U
Chevrolet	Camaro	2016 - 2023	All	All	All	M5T, M5U
Chevrolet	Corvette	2015 - 2018	All	All	All	M5U
Chevrolet	Colorado (VIN S/T)	2017 - 2023	All	All	All	M5T
Chevrolet	Express	2017 - 2024	All	All	All	M5U
Chevrolet	Silverado	2015 - 2018	All	All	All	M5U, M5X
Chevrolet	Silverado 1500 (New Model)	2019	All	All	All	MQE
Chevrolet	Silverado 1500	2020 - 2021	All	All	All	MQE
Chevrolet	Silverado 1500- LTD (RPO J21, VIN Digit 5 = A/D)	2022	All	All	All	M5X
Chevrolet	Silverado 1500- LTD (RPO J22, VIN Digit 5 = W/Y)	2022	All	All	All	M5X, MQE
Chevrolet	Silverado 1500	2022 - 2023	All	All	All	MQE
GMC	Canyon	2017 - 2023	All	All	All	M5T
GMC	Sierra	2015 - 2018	All	All	All	MQE
GMC	Sierra 1500 (New Model)	2019	All	All	All	MQE
GMC	Sierra 1500	2020 - 2021	All	All	All	MQE
GMC	Sierra 1500 - Limited (RPO J21, VIN Digit 5 = 8/9)	2022	All	All	All	M5X, MQE
GMC	Sierra 1500 - New (RPO J22, VIN Digit 5 = H/U)	2022	All	All	All	M5X, MQE
GMC	Sierra 1500	2023	All	All	All	MQE
GMC	Savanna	2017 - 2023	All	All	All	M5U, MQD
GMC	Yukon	2015 - 2020	All	All	All	M5U

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

Involved Region or Country:	North America
Condition:	There may be complaints of hard or harsh shifts on 8 speed transmissions.
Cause	Diagnostic aids for improving shift quality .

Correction:

First if there is a hard 1-2 shift felt on the first 1-2 shift of the day, it is to be considered normal as there is a clutch purge being performed at this time and no repair attempts should be performed. Please refer to bulletin [16-NA-361](#).

On low mileage vehicles, meaning vehicles less than 1 year old and having less than 3000 miles on the odometer, if a hard shift or a shift the customer may find to be objectionable, the first step is to follow bulletin [16-NA-019](#).

While following [16-NA-019](#), please do not use the clutch volume or the spring learns that can be found in GDS2. These are very misleading, as they can cause the Technician to believe the learn has completed when it may not have. These parameters are algorithmically based to change once the conditions have been met twice for the clutch or spring learn, it does not mean that the clutch or spring has completely finished the learn. Drive the vehicle until you can feel the difference in the shift to determine if the clutch learn is progressing.

On vehicles with greater than 3000 miles, or on vehicles that have objectionable shifts once bulletin [16-NA-019](#) has been completed the next direction should be to remove the transmission pan and inspect for debris. If there is not an unreasonable amount of debris based on mileage then the valve body should be replaced and bulletin [16-NA-019](#) followed again.

If the Debris is excessive, OR the condition remains following the valve body replacement, and after performing [16-NA-019](#); the next step is removal of the transmission and inspecting the clutch pack travel and resetting as necessary.

Generally speaking, setting the clutch pack travel to the tighter end of the range tends to produce a more appealing shift to the customer. During tear down the steels should be inspected for uneven and excessive wear and replaced as needed, if there is damage or distress seen to the friction discs .

Also, when dealing with Hard or uncomfortable garage shifts that [16-NA-019](#), or the valve body does not correct, it has determined that setting the transmission end play toward the tight end of the specification (.008"-.012") has proven to be an effective repair

If there are signs of overheating, the technician should verify the TBV valve operation using a laser thermometer to measure inlet and outlet temperatures of the cooler by measuring the lines at different locations.

Also, If the speed sensors were just replaced and the Service Fast Learn fails for excessive vehicle speed, or If P0717, P0722, P0746 and/or P0796 also sets the Speed sensors should be inspected for the proper orientation as seen in SI, Meaning the smaller portion of the conduit should be facing the rear of the unit

**Please note the pictures below**

Incorrect Installation



Correct Installation



### Warranty Information

For vehicles repaired under the Bumper-to-Bumper coverage (Canada Base Warranty coverage), use the following labor operation. Reference the Applicable Warranties section of Investigate Vehicle History (IVH) for coverage information.

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.

### Version History

Version	1
Modified	10/19/2023 - Created on.



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