

# 2015 - 2017 Corvette: Service Bulletin: #PIP5437B: 8L45 8L90 Diagnostic Tips for Harsh Shifts and Delayed or Harsh Garage Shift Engagements

## #PIP5437B: 8L45 8L90 Diagnostic Tips for Harsh Shifts and Delayed or Harsh Garage Shift Engagements - (May 22, 2017)

<b>Subject:</b>				8L45 8L90 Diagnostic Tips for Harsh Shifts and Delayed or Harsh Garage Shift Engagements			
Brand:	Model:	Model Year:		VIN:		Engine:	Transmission:
		from	to	from	to		
Cadillac	ATS	2016	2017	All	All	All	MN5, M5T, M5U
Cadillac	CT6	2016	2017	All	All	All	M5N, M5X
Cadillac	CTS	2016	2017	All	All	All	MN5, M5U
Cadillac	Escalade Models	2015	2017	All	All	All	M5U
Chevrolet	Camaro	2016	2017	All	All	All	M5T, M5U
Chevrolet	Colorado	2017		All	All	All	M5T

Chevrolet	Corvette	2015	2017	All	All	All	M5U
Chevrolet	Express	2017		All	All	All	M5U
Chevrolet	Silverado	2015	2017	All	All	All	M5U
GMC	Canyon	2017		All	All	All	M5T
GMC	Savana	2017		All	All	All	M5U
GMC	Sierra	2015	2017	All	All	All	M5U
GMC	Yukon Denali Models	2015	2017	All	All	All	M5U

<b><i>Involved Region or Country</i></b>	North America and N.A. Export Regions
<b><i>Condition</i></b>	Some customers may comment on the transmission in their vehicle is not shifting correctly
<b><i>Cause</i></b>	This condition may be caused by one or more clutch fill times not completely learned in the TCM

### **Correction**

The following diagnostic aids should be used as a starting point for 8L45/90 transmission with shift concerns.

Check for Diagnostic Trouble Codes (DTC's) in all modules. Address all DTC's prior to following the information below.

Check for any available ECM/TCM calibration updates.

As of the release date of this information the following bulletins are available.

16-NA-411 for 2015 to 2016 vehicles equipped with the L86 engine and the 8L90 transmission.
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16-NA-412 for 2015 to 2016 vehicles equipped with the L83 engine and the 8L90 transmission.
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16-NA-404 for 2017 vehicles.
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Complete a test drive with the vehicle in an attempt to duplicate the customers concern.

**Note:** In some cases it may be necessary to have the customer drive the vehicle for the technician in an effort to duplicate their specific shift complaint.

GDS2 should be used to capture a session log of the event. A bookmark should be set when the customers shift concern is identified.

Review the GDS2 session log to identify which shift(s) are occurring at each bookmark.

The following bulletins are based on the model year of the vehicle and should only be followed based on the following information

2015 model year vehicles with 7,500 miles or less since the vehicle in service date, TCM calibration update or the Service Fast Learn (SFL) procedure being performed.
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2016 model year vehicles with 5,000 miles or less since the vehicle in service date, TCM calibration update or the Service Fast Learn (SFL) procedure being performed.
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2017 model year vehicles with 2,500 miles or less since the vehicle in service date, TCM calibration update or the Service Fast Learn (SFL) procedure being performed.

**Note:** Transmission, valve body or TCM replacement would have required a Service Fast Learn (SFL) procedure to be performed.

**Note:** If the TCM calibration has been updated that would have required a Service Fast Learn (SFL) procedure to be performed on vehicles with any mileage accumulation.

For 2015 model year Chevrolet Corvette follow the latest version of bulletin 14-07-30-001: Information on Transmission Adaptive Functions and Correcting Low Mileage Harsh Shifts, Slips, or Flares.

For 2015 model year vehicles other than Chevrolet Corvette make sure the ECM/TCM calibrations are up to up to date per 16-NA-411 or 16-NA-412 and follow 16-NA-019.

For 2016 and 2017 model year vehicles follow the information in bulletin 16-NA-019: Information on Transmission Adaptive Functions and Correcting Low Mileage Harsh Shifts, Slips, or Flares.

**Note:** Vehicles that have had mileage accumulation of 7,500 miles or more for 2015 MY, 5,000 or more on a 2016 MY or 2,500 or more on a 2017 MY after vehicle in service date without a TCM calibration update, transmission replacement, valve body replacement or a Service Fast Learn (SFL) procedure without a prior shift complaint will have limited success in following the drive learn procedure bulletins.

Complete the clutch drive learn procedure for the suspect clutch(s) based on the bookmarks placed in the GDS2 session.

**Note:** The drive learn procedure should only be performed on smooth level roads and may take 45 minutes or more to complete.

**Note:** Every clutch may not need to be learned.

**Note:** Completion of the Service Fast Learn (SFL) will reset all shift adapts and may require that the entire transmission drive learn procedure for each clutch be completed.

The vehicle should be test driven again after the vehicle has been allowed to cool down for 8 or more hours to ensure the cold shift quality is acceptable.

Please refer to bulletin 16-NA-361 for Information on Transmission Harsh 1-2 Shift Upon First Start Up/Shift of the Day Under Light Throttle.

Review TSB 16-NA-213: Diagnostic Tip for Harsh Shifts after Mileage Accumulation without Previous Transmission Repairs and/or Calibration Updates should be referenced on transmission built between July 1, 2015 and September 14, 2015 as it may apply to the vehicle you are working on.

Transmissions that continue to experience shift quality issues in both Drive and Manual Mode 7th Gear after completing the learn process or developed a poor quality shift after mileage accumulation has developed should have the transmission pan removed and inspected for excessive clutch debris.

For Garage Shift concerns please refer to the following bulletins:

2015-2016 model years. 16-NA-014: Delayed Engagement After Sitting With Engine Off. Torque Converter Fluid Drain Back.
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2015-2017 model years. 16-NA-364: Delayed Engagement After Sitting With Engine Off - Clutch Slow to Fill.
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<i>Version</i>	2
<i>Modified</i>	11/14/2016 To update models, model years and correction.

Online URL:

<https://www.corvetteactioncenter.com/tech/knowledgebase/article/2015-2017-corvette-service-bulletin-pip5437b-8145-8190-diagnostic-tips-for-harsh-shifts-and-delayed-or-harsh-garage-shift-engagements-1365.html>