

Service Update

N192217820 Torque Converter Shudder/Shake



Release Date: August 2019

Revision: 00

Attention: This service update involves vehicles in dealer inventory only and will expire August 31, 2020.

Make	Model	Model Year		RPO	Description
		From	To		
Cadillac	ATS	2016	2019	M5N	8-Speed Transmission
Cadillac	CT6	2016	2018	M5U	
Cadillac	CTS	2016	2019	M5T	
Cadillac	Escalade	2015	2017	M5X	
Cadillac	Escalade ESV	2015	2017	or	
Chevrolet	Colorado	2017	2019	MQE	
GMC	Canyon	2018	2019		

This service update should be performed on vehicles in dealer inventory only. Involved vehicles are marked “open” on the Investigate Vehicle History screen in GM Global Warranty Management system. This site should always be checked to confirm vehicle involvement prior to beginning any required inspections and/or repairs.

Condition	The current transmission fluid may cause the customer to experience a shake or shudder feeling, which may be described as driving over rumble strips or rough pavement.
Correction	Dealers are to drain the old transmission fluid and refill with the new fluid.

Parts

Note: Only select the parts that coincide with the repair performed. Caution: Choose one of the applicable part numbers below that are required when performing the oil/fluid change. Do NOT use any other oil/fluid for this repair.

Quantity	Part Name	Part No.
20 - (All Models Except CT6) 24 - (CT6 Only)	Mobil 1 Synthetic LV ATF HP (Available only through Local GM Oil Distributors)	19417577 (US - 1 quart)
1		19418066 (CAN - 0.946L/1 quart)
		19417904 Drum 55 Gallon (US Only)
2	Retainer, Trans Fluid Fluid Clr Pipe Ftg	24205103
1	Seal, Trans Fluid Clr Pipe	23135703

For Export: Middle East market will use oil part number 19418411 and the oil can be ordered through MEDC.

Reminder: Parts may be removed from Retail Inventory Management (RIM). Dealers should review the affected parts to confirm RIM managed status. Parts may have quantity limiters in effect.

Warranty Information

For vehicles repaired under the Powertrain coverage, use the following labor operation. Reference the Applicable Warranties section of Investigate Vehicle History (IVH) for coverage information.

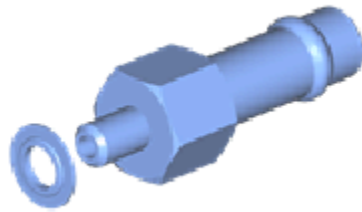
Labor Operation	Description	Labor Time	Trans. Type	Net Item
9104582	Transmission Fluid Exchange	1.1	ZFAT	N/A
	ADD: CT6 AWD Triple Drain and Fill	1.0		
	ADD: CT6 RWD Triple Drain and Fill	1.6		
	ADD: DT-45096 Prep (Not required unless the fluid is not Mobil 1 Synthetic LV ATF HP)	0.1		

Special Kit

DT-52263 Transmission Fluid Exchange Kit:

- DT-52263-1 Block Assembly (includes fluid drain hose, spring clamp)
- DT-52263-2 Cooler Line Plug (qty 3) (use with rear differential cooler)
- DT-52263-4 3/8" Hose Adapter (6" long with 2 hose clamps)
- DT-52263-5 Radiator Cooler Drain Adapter

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- DT-51190 Transmission Oil Fill Adapter



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- GE-47716-2 Graduated Bucket



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- DT-45096 TransFlow Cooler Flush Machine

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- DT-45096-31 TransFlow Adapter (one of two pieces from DT-45096-30)

Service Procedure

Initial TransFlow Flush Machine Setup

Important: The prepping procedure only needs to be completed if the DT-45096 supply reservoir has DEXRON VI fluid in it and has not been converted to use the new blue label Mobil 1 Synthetic LV ATF HP fluid.

Note: The prepping procedure only needs to be completed if HP fluid is not in the supply reservoir.

1. Connect the TransFlow adapter DT-45096-31 to the supply line of the DT-45096 TransFlow machine.



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2. Switch the DT-45096 TransFlow to Idle.
3. Connect power leads to the vehicle 12-volt DC supply.
4. Turn the TransFlow main switch ON.
5. Connect air supply to the DT-45096.
6. Place the TransFlow supply hose with adapter DT-45096-31 into a waste reservoir using care not to spill the expelled fluid.
7. Switch the DT-45096 TransFlow to Flow and allow all the fluid in the supply reservoir to be removed and placed in the waste reservoir.

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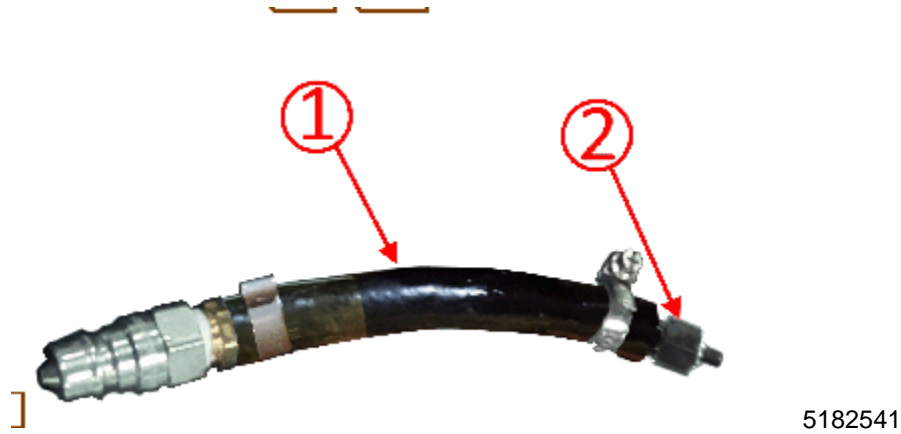


8. Switch the control switch back to idle.

Fluid Exchange Procedure - Colorado, Canyon, Escalade Models with an Accessible Transmission Oil Cooler Line Block Assembly

Important: This procedure must be followed as published. The exchange process is required to obtain proper level of new blue label Mobil 1 Synthetic LV ATF HP fluid. Intermixing of other types of transmission fluid or aftermarket additive packages will result in a low concentration level of new fluid and will not provide satisfactory results.

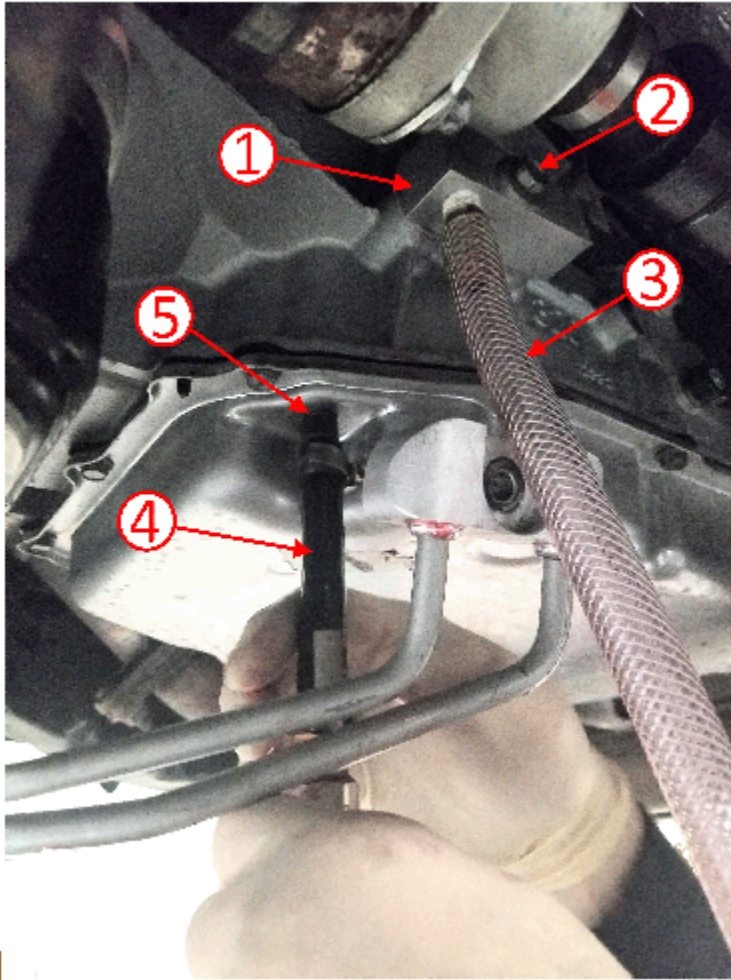
1. Fill the DT-45096 with 20 quarts of HP fluid.
2. Raise the vehicle.



3. Install the DT-45096-31 TransFlow adapter (1) to the DT-51190 fluid fill adapter (2).
4. Remove the transmission oil cooler pipe assembly from the transmission.

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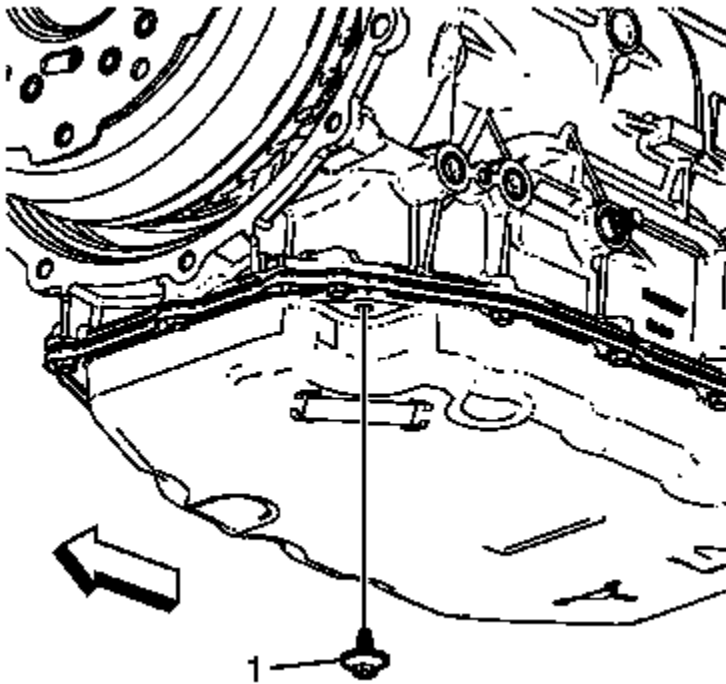


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5. Install the DT-52263-1 Adapter Block Assembly (1), reusing the seal from the transmission oil cooler pipe assembly.
6. Tighten the bolt (2) to 22 Nm (16 lb ft).
7. Place the hose (3) in the GE-47716-2 Graduated Measuring Bucket, utilizing a Spring Clamp to retain the hose.
8. Remove the level set plug (1) from the transmission.

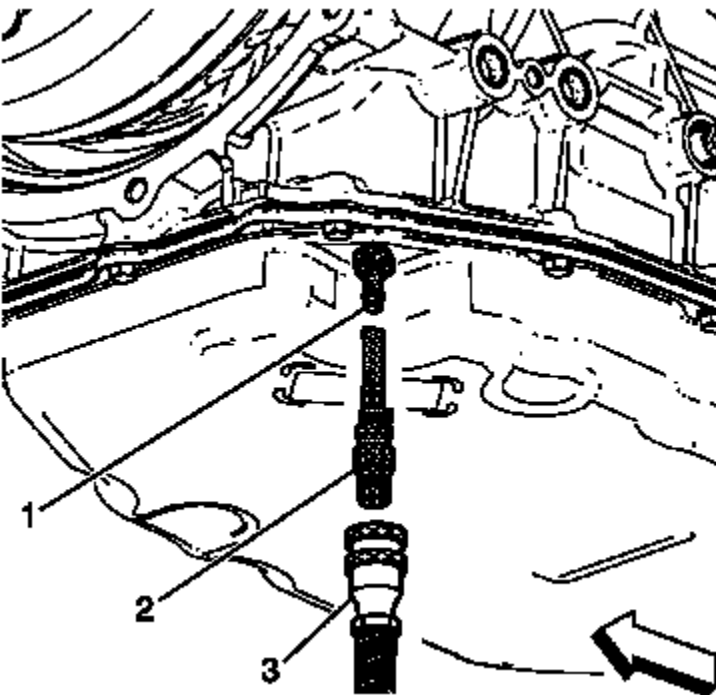
Important: DO NOT over tighten the DT-51190 as it can be damaged by excessive torque. DO NOT exceed 9 Nm (80 lb in).

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9. Install the DT-51190/DT-45096-31 assembly and hand tighten as shown in the graphic above.



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10. Connect the TransFlow fluid feed (supply) line (3) to the DT-45096-31 adapter (2).
11. Lower the vehicle.

Caution: DO NOT REMOVE MORE THAN 3 QTS OF FLUID AS IT COULD CAUSE FLUID PUMP CAVITATION AND POSSIBLY DAMAGE THE TRANSMISSION.

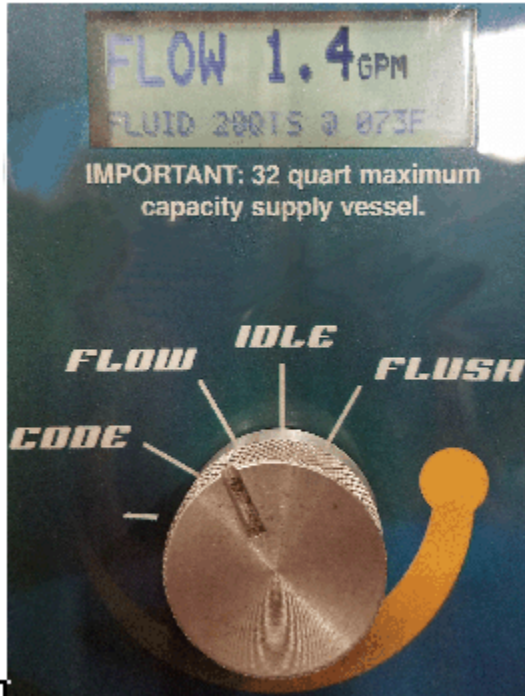
12. Utilizing the graduated bucket, start the engine and run 30 - 45 seconds until 3 quarts of fluid is expelled.

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13. Shut the engine off immediately.
14. Connect the DT-45096 to the vehicle battery 12 volts and connect shop air to the air connection.
15. Switch the DT-45096 TransFlow to Flow and add 4 quarts of HP to the transmission.



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16. Switch the DT-45096 TransFlow to Idle (Reducing fluid level in the TransFlow from 20–16).



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17. Switch the TransFlow DT-45096 to Flow and start the engine:

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- 17.1. Add a maximum of 4 quarts of HP Fluid to the transmission, turn the TransFlow switch to idle once 4 quarts have been added, while allowing 4 additional quarts of oil to fill the DT-graduated bucket (Reducing fluid level in the TransFlow from 16 – 12).

Note: DO NOT add additional transmission fluid until the 4 quarts of oil have been removed from the transmission (Reducing fluid level in the TransFlow from 12–8).

- 17.2. Repeat step 17.1.
- 17.3. Add a maximum of 5 quarts of HP fluid to the transmission while allowing 5 additional quarts of oil to fill the DT-graduated bucket (Reducing fluid level in the TransFlow from 8 – 3).

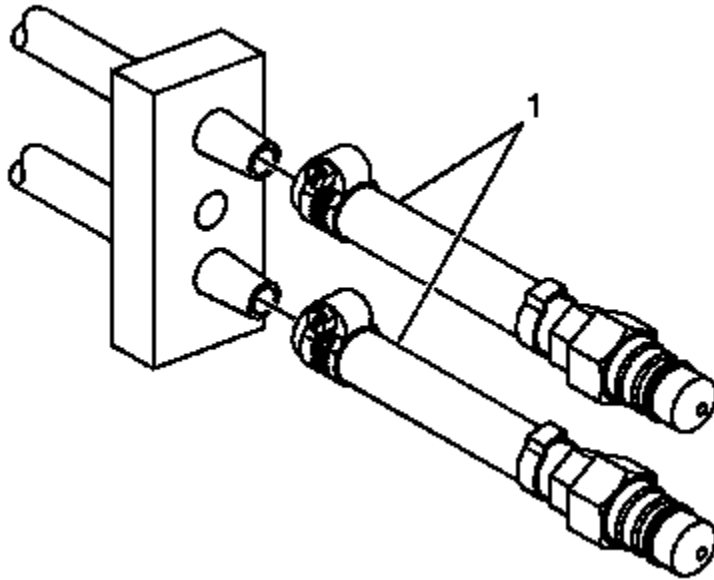


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- 17.4. Shut the engine off once 16 quarts of fluid have been collected.
- 17.5. Properly dispose of the expelled transmission fluid.
18. Raise the vehicle.
19. Disconnect the DT-45096 TransFlow feed (supply) line from DT-45096-31 TransFlow adapter.
20. Using care, remove DT-45096-31/DT-51190 as an assembly.
21. Remove the DT-51190 fluid fill adapter from DT-45096-31 hose.
22. Install the level set plug and tighten to 9 Nm (80 lb in).
23. Remove DT-52263-1 Adapter Block Assembly from the transmission.

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24. Install DT-45096-31 adapters (1) to the transmission oil cooler lines.
25. Connect the DT-45096 TransFlow to the DT-45096-31 adapters.



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26. Switch the DT-45096 TransFlow to Flush.
27. Flush the vehicle cooler and lines using 2 quarts of HP fluid.
 - 27.1. Flush 1 quart of fluid through the lines, then switch the hose connections and flush 1 quart of fluid in the opposite direction.
28. Remove the DT-51190/DT-45096-31 assembly.
29. Install the transmission oil cooler pipe using a new cooler block seal.

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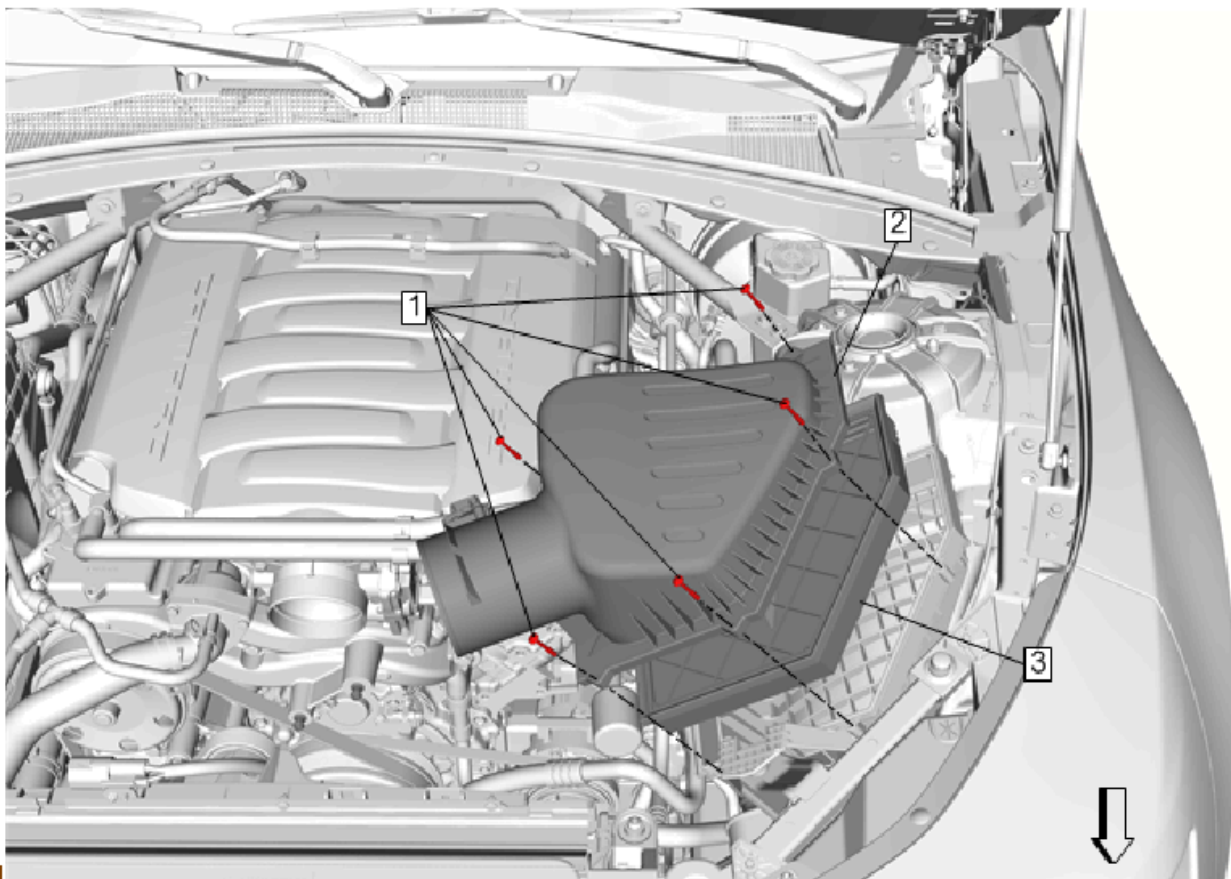
30. Partially lower the vehicle.
31. Start the engine.
32. Using care, shift the transmission through all forward ranges and Reverse.
33. Shift the transmission into Park.
34. Perform the Transmission Fluid Level and Condition Check outlined below in this procedure:
 - 34.1. Get the transmission fluid temperature to the proper temperature.
 - 34.2. Install the level set plug and tighten to 9 Nm (80 lb in).

The TCC shudder condition should be directionally improved immediately after the fluid exchange procedure. It may take up to 320 km (200 mi) for the TCC shudder condition to be eliminated. It is not a requirement for the dealer to drive the vehicle 320 km (200 mi). The customer should be advised that the full effect will take up to 320 km (200 mi) and a minimum of two cold to operating temperature drive cycles.

Fluid Exchange Procedure - CTS and ATS Not Equipped with a Rear Differential Cooler

Important: This procedure must be followed as published. The exchange process is required to obtain proper level of new blue label Mobil 1 Synthetic LV ATF HP fluid. Intermixing of other types of transmission fluid or aftermarket additive packages will result in a low concentration level of new fluid and will not provide satisfactory results.

1. Fill the DT-45096 with 20 quarts of HP fluid.



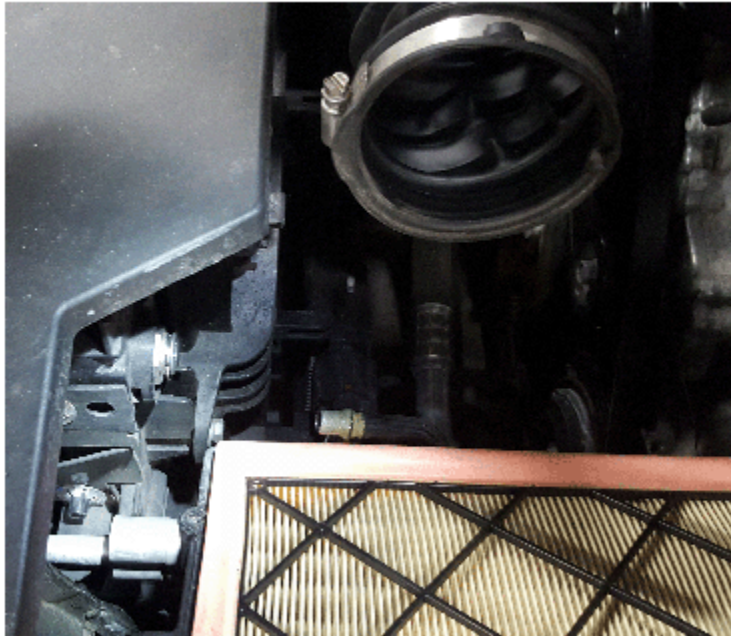
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Note: The MAF sensor must stay connected so that no DTCs will set.

2. Separate the engine upper air filter box (1) from the lower air filter housing to gain access to the upper transmission oil cooler line.

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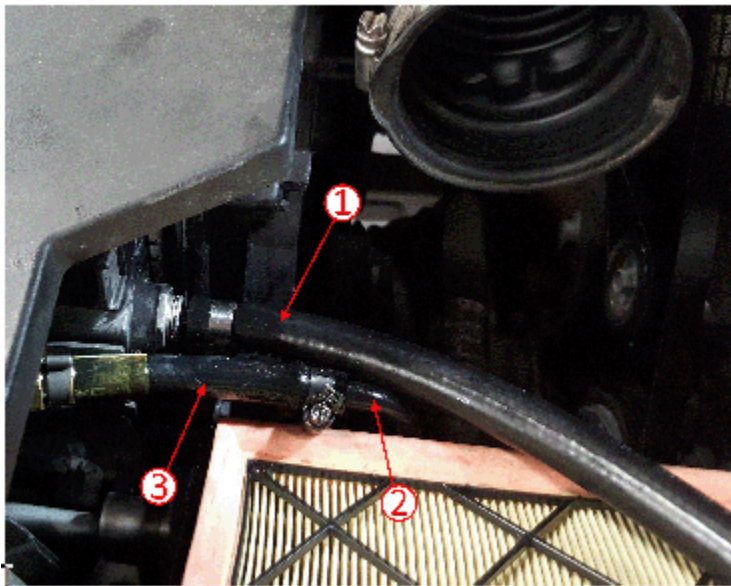
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Note: Upper air filter box removed for clarity.

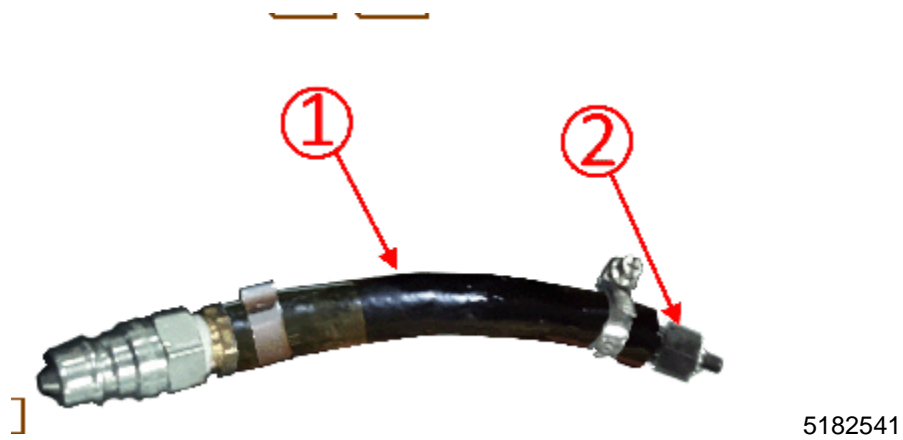
3. Remove the cooler line from the transmission oil cooler.



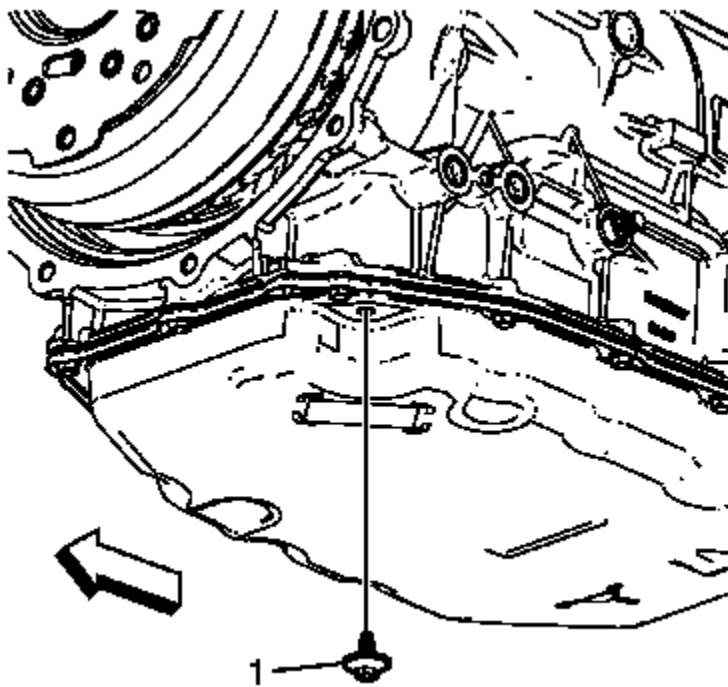
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4. Install end of the DT-52263-5 Radiator Cooler Drain Adapter (1) to the DT-52263-1 Block Assembly.
5. Install the DT-52263-5 Radiator Cooler Drain Adapter into the upper transmission oil cooler line port of the transmission oil cooler.
6. Install the DT-45096-31 adapter (3) over the removed transmission oil cooler line (2) to prevent any fluid spillage.
7. Place the hose in the GE-47716-2 Graduated Measuring Bucket, utilizing a Spring Clamp to retain the hose.
8. Raise the vehicle.

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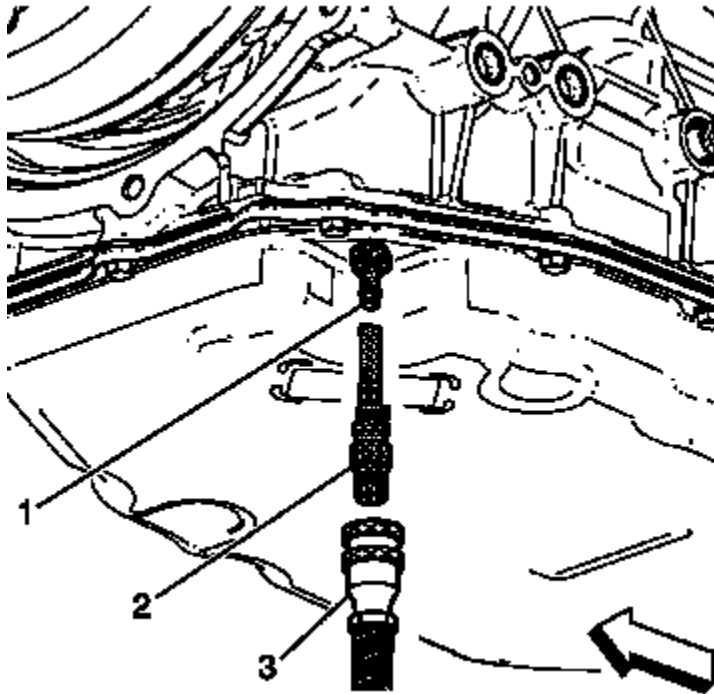
9. Install the DT-45096-31 adapter (1) to the DT-51190 fluid fill adapter (2).



10. Remove the level set plug (1) from the transmission oil pan.

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Important: DO NOT overtighten the DT-51190 as it can be damaged by excessive torque. Do not exceed 9 Nm (80 lb in).

11. Install the DT-51190/DT-45096-31 assembly and hand tighten.
12. Connect the TransFlow fluid feed (supply) line (3) to the DT-45096-31 adapter (2).
13. Lower the vehicle.

Caution: DO NOT REMOVE MORE THAN 3 QTS OF FLUID AS IT COULD CAUSE FLUID PUMP CAVITATION AND POSSIBLY DAMAGE THE TRANSMISSION.

14. Utilizing the graduated bucket, start the engine and run 30-45 seconds until 3 quarts of fluid is expelled.
15. Shut the engine off immediately.
16. Connect the DT-45096 to the vehicle battery 12 volts and connect shop air to the air connection.

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Important: ADDING TOO MUCH FLUID TO THE TRANSMISSION MAY CAUSE FLUID TO BE EXPELLED FROM THE VENT SYSTEM. DO NOT OVERFILL THE TRANSMISSION.

17. Switch the DT-45096 TransFlow to Flow and add 4 quarts of HP to the transmission.



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18. Set the TransFlow switch to idle (Reducing fluid level in the TransFlow from 20–16).

19. Switch the TransFlow DT-45096 to Flow and start the engine:

19.1. Add a maximum of 4 quarts of HP Fluid to the transmission, turn the TransFlow switch to idle once 4 quarts have been added, while allowing 4 additional quarts of oil to fill the DT-graduated cylinder (Reducing fluid level in the TransFlow from 16–12).

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Note: DO NOT add additional transmission fluid until the 4 quarts of oil have been removed from the transmission (Reducing fluid level in the TransFlow from 12–8).

19.2. Repeat step 19.1.



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- 19.3. Add a maximum of 5 quarts of HP Fluid to the transmission while allowing 5 additional quarts of oil to fill the DT-graduated bucket (Reducing fluid level in the TransFlow from 8–3).
- 19.4. Shut the engine off once 16 quarts of oil have been collected.
- 19.5. Properly dispose of the collected transmission fluid.
20. Remove the DT-52263-5 Radiator Cooler Drain Adapter and DT-52263-1 Block Adapter from the transmission oil cooler.
21. Remove the DT-45096-31 from the transmission oil cooler line and install the transmission oil cooler line using a new retaining clip.
22. Install the engine upper air filter box back into position.
23. Partially raise the vehicle.
24. Start the engine.
25. Using care, shift the transmission through all forward ranges and Reverse.
26. Shift the transmission into Park.
27. Perform the Transmission Fluid Level and Condition Check outlined below in this procedure:

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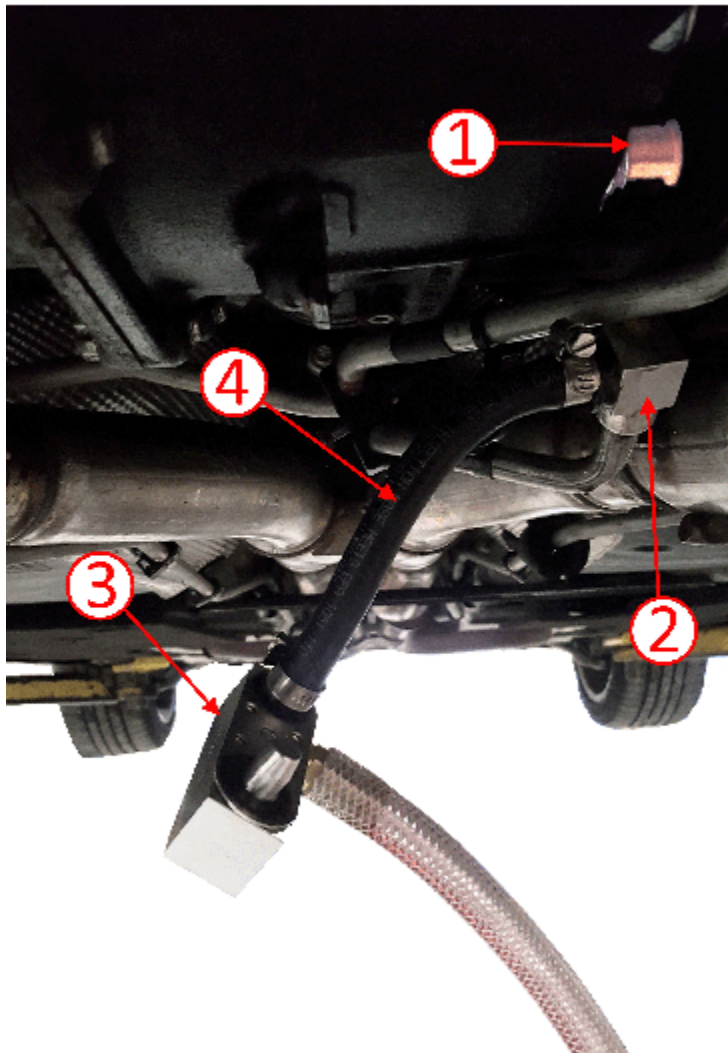
- 27.1. Get the transmission fluid temperature to the proper temperature.
- 27.2. Raise the vehicle and remove the DT-51190/DT-45096-31 assembly.
- 27.3. Install the level set plug and tighten to 9 Nm (80 lb in).

The TCC shudder condition should be directional improved immediately after the fluid exchange procedure. It may take up to 320 km (200 mi) for the TCC shudder condition to be eliminated. It is not a requirement for the dealer to drive the vehicle 320 km (200 mi). The customer should be advised that the full effect will take up to 320 km (200 mi) and a minimum of two cold to operating temperature drive cycles.

Fluid Exchange Procedure - CTS and ATS Equipped with a Rear Differential Cooler

Important: This procedure must be followed as published. The exchange process is required to obtain proper level of new blue label Mobil 1 Synthetic LV ATF HP fluid. Intermixing of other types of transmission fluid or aftermarket additive packages will result in a low concentration level of new fluid and will not provide satisfactory results.

1. Fill the DT-45096 with 20 quarts of HP fluid.
2. Raise the vehicle.



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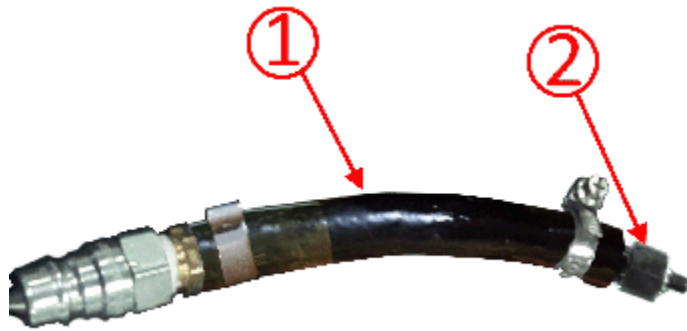
3. Remove the lower/front transmission oil cooler line (2) at the rear differential.
4. Install the DT-52263-2 Cooler Line Plug (1) into the rear differential to prevent fluid loss.
5. Install one end of the DT-52263-4 hose (4) to the open port of the DT-52263-1 Block Assembly (3).
6. Install the other end of the DT-52263-4 hose to the transmission oil cooler line.

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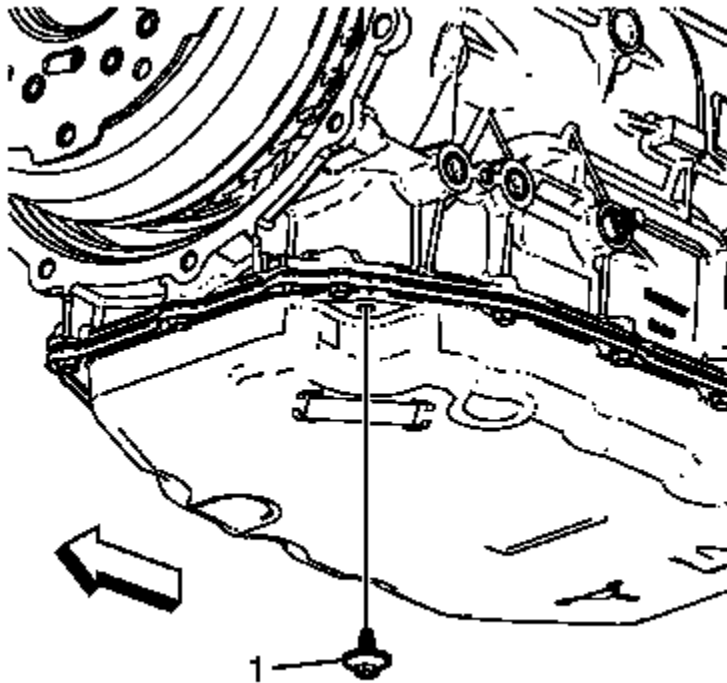


7. Place the hose in the GE-47716-2 Graduated Measuring Bucket, utilizing a Spring Clamp to retain the hose.



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8. Install the DT-45096-31 adapter (1) to the DT-51190 fluid fill adapter (2).

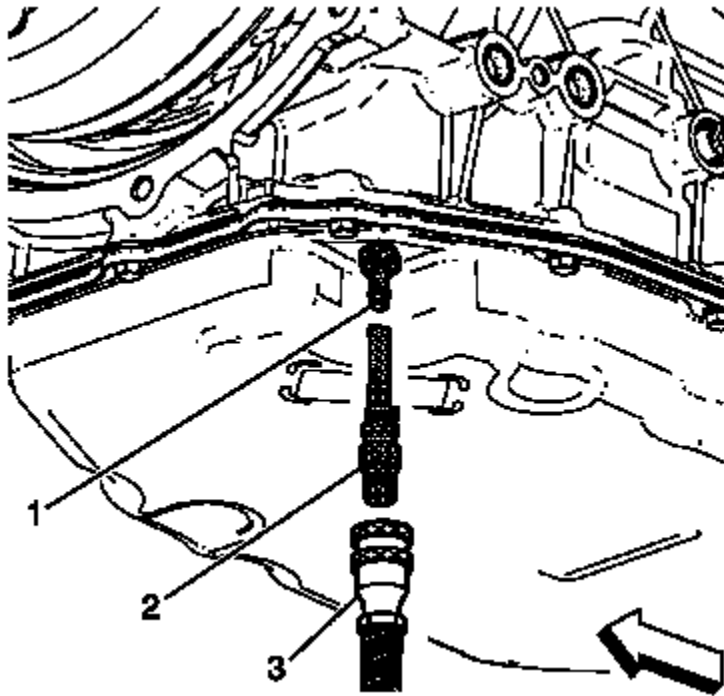


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9. Remove the level set plug (1) from the transmission oil pan.

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Important: DO NOT overtighten the DT-51190 as it can be damaged by excessive torque. Do not exceed 9 Nm (80 lb in).

10. Install the DT-51190/DT-45096-31 assembly and hand tighten.
11. Connect the TransFlow fluid feed (supply) line (3) to the DT-45096-31 adapter (2).
12. Lower the vehicle.

Caution: DO NOT REMOVE MORE THAN 3 QTS OF FLUID AS IT COULD CAUSE FLUID PUMP CAVITATION AND POSSIBLY DAMAGE THE TRANSMISSION.

13. Utilizing the graduated bucket, start the engine and run 30-45 seconds until 3 quarts of fluid is expelled.
14. Shut the engine off immediately.
15. Connect the DT-45096 to the vehicle battery 12 volts and connect shop air to the air connection.

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16. Switch the TransFlow DT-45096 to Flow and add 4 quarts of HP to the transmission.
 17. Set the TransFlow switch to idle (Reducing fluid level in the TransFlow from 20–16).
 18. Switch the TransFlow DT-45096 to Flow and start the engine:
 - 18.1. Add a maximum of 4 quarts of HP Fluid to the transmission, turn the TransFlow switch to idle once 4 quarts have been added, while allowing 4 additional quarts of oil to fill the DT-graduated cylinder (Reducing fluid level in the TransFlow from 16–12).
- Note:** DO NOT add additional transmission fluid until the 4 quarts of oil have been removed from the transmission (Reducing fluid level in the TransFlow from 12–8).
- 18.2. Repeat step 19.1.

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- 18.3. Add a maximum of 5 quarts of HP Fluid to the transmission while allowing 5 additional quarts of oil to fill the DT-graduated bucket (Reducing fluid level in the TransFlow from 8–3).
- 18.4. Shut the engine off once 16 quarts of oil have been collected.
- 18.5. Properly dispose of the collected transmission fluid.
19. Raise the vehicle.
20. Remove the DT-52263-2 Cooler Line Plug from rear differential and install the transmission oil cooler line using a new retainer clip.
21. Remove the DT-52263-4 from the transmission oil cooler line.
22. Install the transmission oil cooler line using a new retainer clip.
23. Partially lower the vehicle.
24. Using care, shift the transmission through all forward ranges and Reverse.
 - 24.1. Get the transmission fluid temperature to the proper temperature.
 - 24.2. Raise the vehicle and remove the DT-51190/DT-45096-31 assembly.
 - 24.3. Install the level set plug and tighten to 9 Nm (80 lb in).

The TCC shudder condition should be directionally improved immediately after the fluid exchange procedure. It may take up to 320 km (200 mi) for the TCC shudder condition to be eliminated. It is not a requirement for the dealer to drive the

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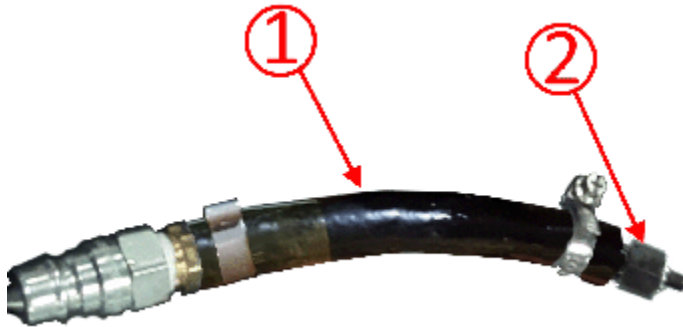
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vehicle 320 km (200 mi). The customer should be advised that the full effect will take up to 320 km (200 mi) and a minimum of two cold to operating temperature drive cycles.

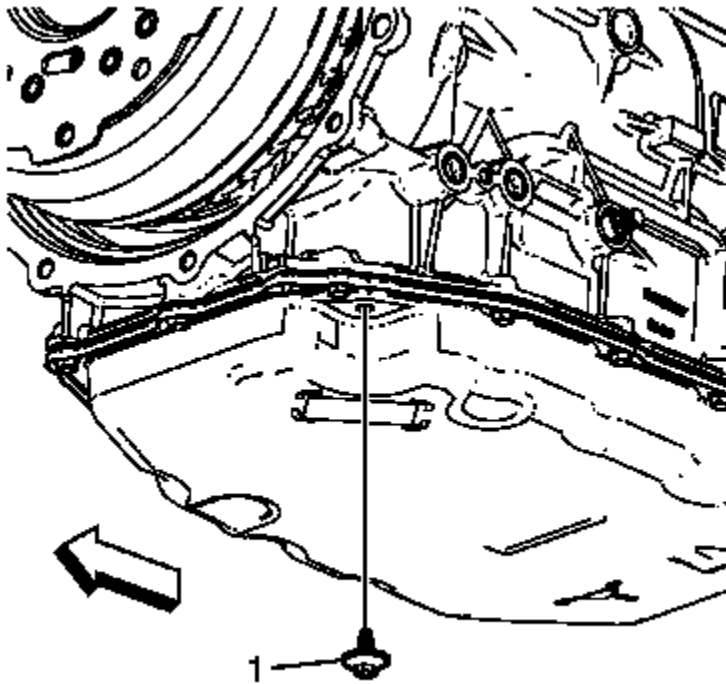
Fluid Exchange Procedure - CT6

1. Fill the DT-45096 with 24 quarts of HP fluid.
2. Raise the vehicle.
3. Using care, remove the transmission oil pan and drain the transmission fluid.
4. Install the transmission oil pan.



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5. Install the DT-45096-31 adapter (1) to the DT-51190 fluid fill adapter (2).

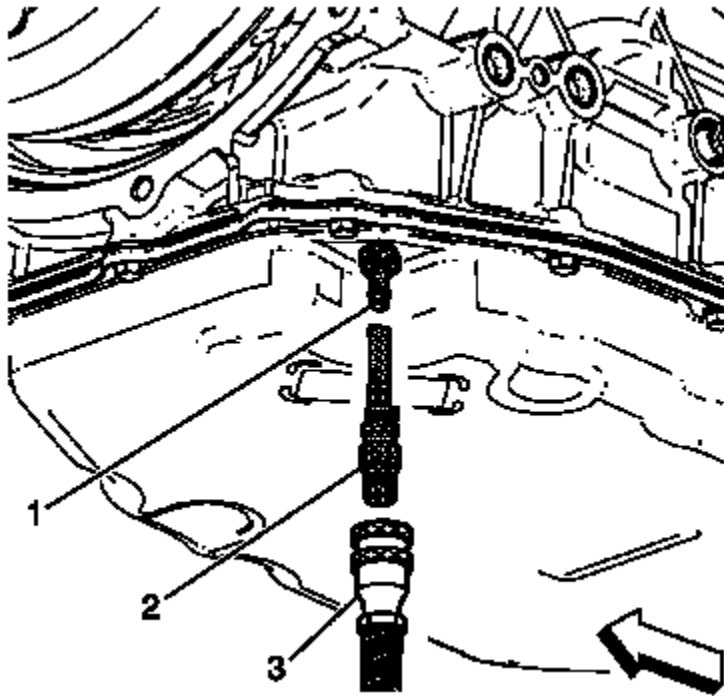


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6. Remove the level set plug (1) from the transmission oil pan.

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Important: DO NOT overtighten the DT-51190 as it can be damaged by excessive torque. Do not exceed 9 Nm (80 lb in).

7. Install the DT-51190/DT-45096-31 assembly and hand tighten.
8. Connect the TransFlow fluid feed (supply) line (3) to the DT-45096-31 adapter (2).
9. Connect the DT-45096 TransFlow to the vehicle battery 12 volts and connect shop air to the air connection.
10. Switch the DT-45096 TransFlow to Flow and fill the transmission with 8 quarts of transmission fluid.
 - 10.1. Switch the DT-45096 TransFlow to idle.
11. Partially lower the vehicle and run the transmission through all 8 forward gears, Reverse and Neutral.
12. Repeat steps 2-4 and 9-10 for 2nd drain and fill.
13. Repeat step 2-3, clean the transmission oil pan and magnet, repeat step 4 and step 10-11.
14. Perform the Transmission Fluid Level and Condition Check outlined below in this procedure:
 - 14.1. Get the transmission fluid temperature to the proper temperature.
 - 14.2. Raise the vehicle and remove the DT-51190/DT-45096-31 assembly.
 - 14.3. Install the level set plug and tighten to 9 Nm (80 lb in).

The TCC shudder condition should be directionally improved immediately after the fluid exchange procedure. It may take up to 320 km (200 mi) for the TCC shudder condition to be eliminated. It is not a requirement for the dealer to drive the vehicle 320 km (200 mi). The customer should be advised that the full effect will take up to 320 km (200 mi) and a minimum of two cold to operating temperature drive cycles.

Dealer Responsibility

Dealers must take the steps necessary to ensure that the service update correction has been made to all involved vehicles in dealer inventory before selling or dealer-trading the vehicle, but no later than August 31, 2020.

All new, used, GM Certified Used, courtesy transportation vehicles, dealer shuttle vehicles, etc. in dealers' possession and subject to this bulletin must be held and inspected/repared per the service procedure of this bulletin before customers take possession of these vehicles. Involved vehicles must be held and not delivered to customers, dealer-traded, released to auction, used for demonstration, or any other purpose.

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All GM Certified Used vehicles currently in the dealers' inventory within the Certified Pre-Owned Inventory System (CPOIS) will be de-certified and must be held and remedied per the service procedure in this bulletin. Upon submitting an accepted/paid warranty transaction in the Global Warranty Management (GWM) system, the vehicle can be re-certified for sale within the CPOIS system, or once again be used in the CTP program.

GM bulletins are intended for use by professional technicians, NOT a "do-it-yourselfer". They are written to inform these technicians of conditions that may occur on some vehicles, or to provide information that could assist in the proper service of a vehicle. Properly trained technicians have the tools, equipment, safety instructions, and know-how to do a job properly and safely. If a condition is described, **DO NOT** assume that the bulletin applies to your vehicle, or that your vehicle will have that condition. See your dealer for information on whether your vehicle may benefit from the information.



**We Support
Voluntary Technician
Certification**

GLOBAL SAFETY FIELD INVESTIGATIONS
DCS5105
URGENT - DISTRIBUTE IMMEDIATELY

Date: August 1, 2019

Subject: N192217820 - Service Update
Torque Converter Shudder/Shake
Inventory Only Vehicles

Models: 2016-2019 Cadillac ATS
2016-2018 Cadillac CT6
2018 Cadillac CT6 CSAV
2016-2019 Cadillac CTS
2015-2017 Cadillac Escalade
2017-2019 Chevrolet Colorado
2018-2019 GMC Canyon
Equipped with 8-Speed Transmission (RPO M5N, M5U, M5T, M5X, or
MQE)

To: All General Motors Dealers

General Motors is releasing Service Update N192217820 today. The total number of U.S. vehicles involved is approximately 3,800. Please see the attached bulletin for details.

Global Warranty Management (GWM)

The Required Field Action section on the Investigate Vehicle History (IVH) screen will be updated August 2, 2019. A list of involved vehicles in dealer new inventory is attached to this message. Please hold all warranty transactions until IVH has been updated.

END OF MESSAGE

GLOBAL SAFETY FIELD INVESTIGATIONS