

2018 TRANSMISSION

Transmission Cooling - Traverse

SPECIFICATIONS

FASTENER SPECIFICATIONS

Single Use Non-Threaded Fasteners/Components

NOTE:

All fasteners/components listed in this table MUST BE DISCARDED and replaced with NEW after removal.

Application
Transmission Fluid Cooler Pipe Fitting Retainer
Transmission Fluid Cooler Pipe Fitting Seal

Reusable Threaded Fastener Tightening Specifications

NOTE:

All fasteners listed in this table can be reused after removal.

Application	Specification
	Metric (English)
Transmission Fluid Auxiliary Cooler Bolt	9 N.m (80 lb in)
Transmission Fluid Cooler Inlet Pipe Bolt	9 N.m (80 lb in)
Transmission Fluid Cooler Outlet Pipe Nut	22 N.m (16 lb ft)
Transmission Fluid Cooler Thermal Bypass Valve Bolt	9 N.m (80 lb in)

DIAGNOSTIC INFORMATION AND PROCEDURES

TRANSMISSION FLUID COOLER FLOW TEST AND FLUSHING

GM studies indicate that plugged or restricted transmission oil coolers and pipes cause insufficient transmission lubrication and elevated operating temperatures which can lead to premature transmission failure. Many repeat repair cases could have been prevented by following published procedures for transmission oil cooler flushing and flow checking. This procedure includes flow checking and flushing the auxiliary transmission oil cooler, if equipped.

NOTE:

Use the DT-45096 transmission oil cooling system flush and flow test tool to flush and flow test the transmission oil cooler and the oil cooler pipes after the transmission is removed for repairs.

Only use the appropriate GM automatic transmission fluid when doing a repair on a GM transmission.

If the fluid in the **DT-45096** transmission oil cooling system flush and flow test tool is different than what is used in the transmission, after performing the flush and flow test, use compressed air to blow the residual transmission fluid out of the oil cooler and lines.

The service procedure steps for oil cooler flushing and flow testing are as follows:

Cooler Flow Check and Flushing Steps

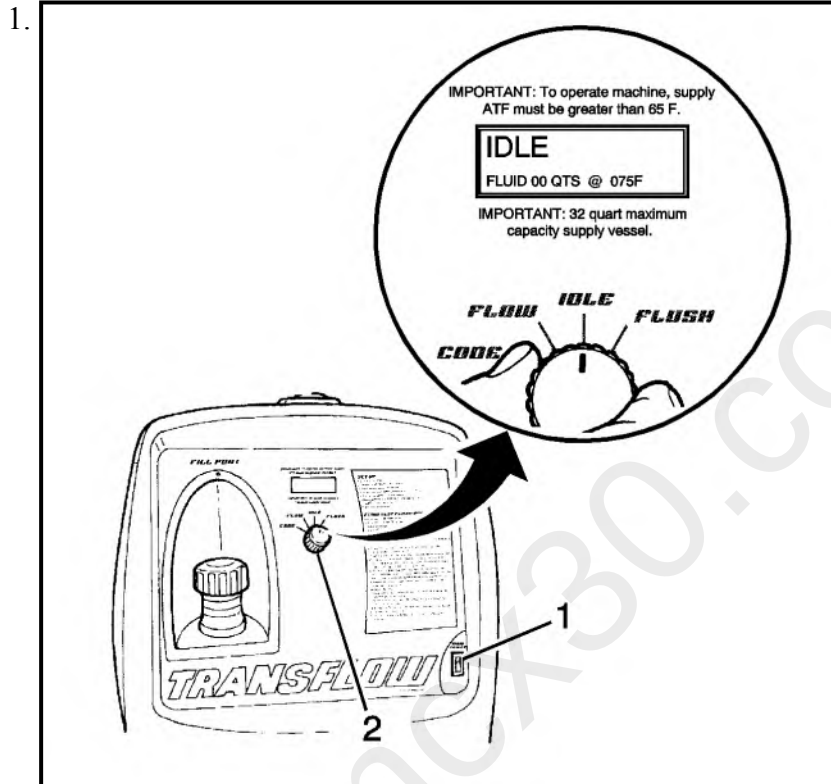
1. Machine Set-up
2. Determine Minimum Flow Rate
3. Back Flush

4. Forward Flush
5. Flow Test
6. Code Recording Procedure
7. Clean-up

Special Tools

- **DT-45096** Transmission Oil Cooling System Flush and Flow Test Tool
- **DT-45096-50** Transmission Cooler Flush Adapter
- Shop air supply with water/oil filters, regulator and pressure gauge - minimum 90 psi
- Eye protection
- Rubber gloves

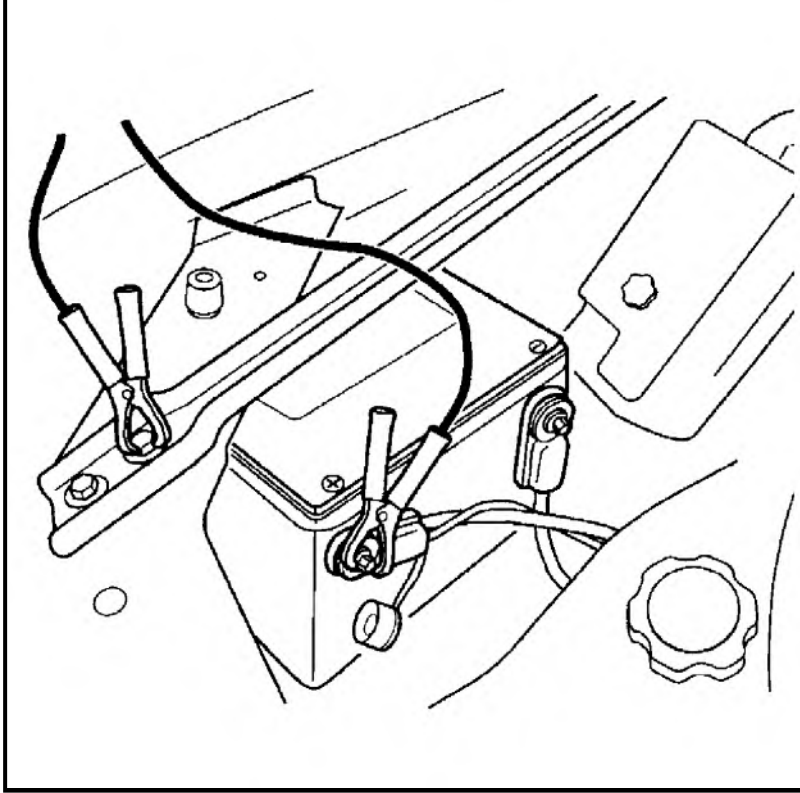
Machine Set-up



Verify that the main power switch (1) is in the OFF position.

2. Place the main function switch (2) in the IDLE position.

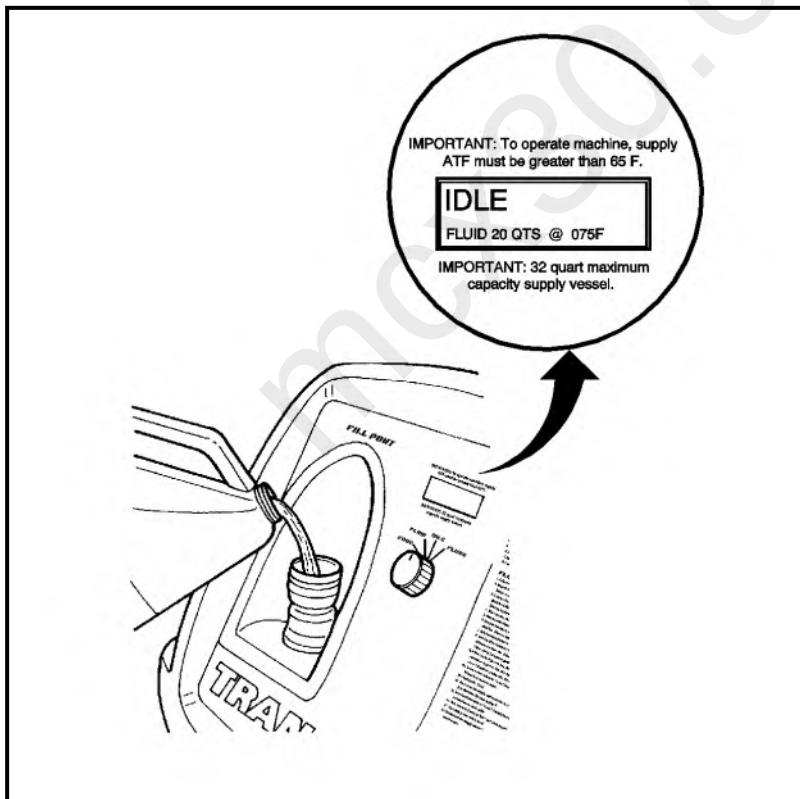




Connect **DT-45096** flush and flow test tool to the vehicle 12V DC power source by connecting the red battery clip to the positive, +, battery post on the vehicle and connect the negative lead to a known good chassis ground.

4. Turn the main power switch to the ON position.

5.

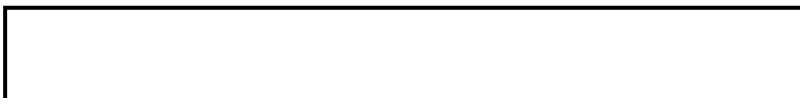


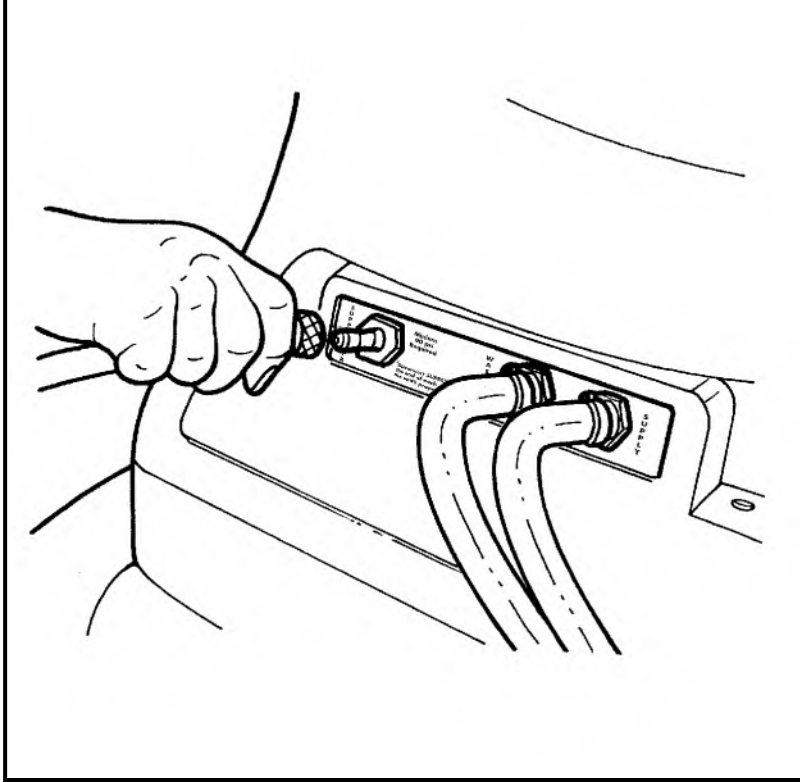
CAUTION: Do not overfill the supply vessel. Damage to the unit may result. To verify the fluid level, view the LCD screen display while filling the unit, to ensure the fluid level does not exceed 30 L (32 qt).

Fill the supply tank with the appropriate GM automatic transmission fluid through the fill port.

6. Reinstall and tighten the fill cap.

7.

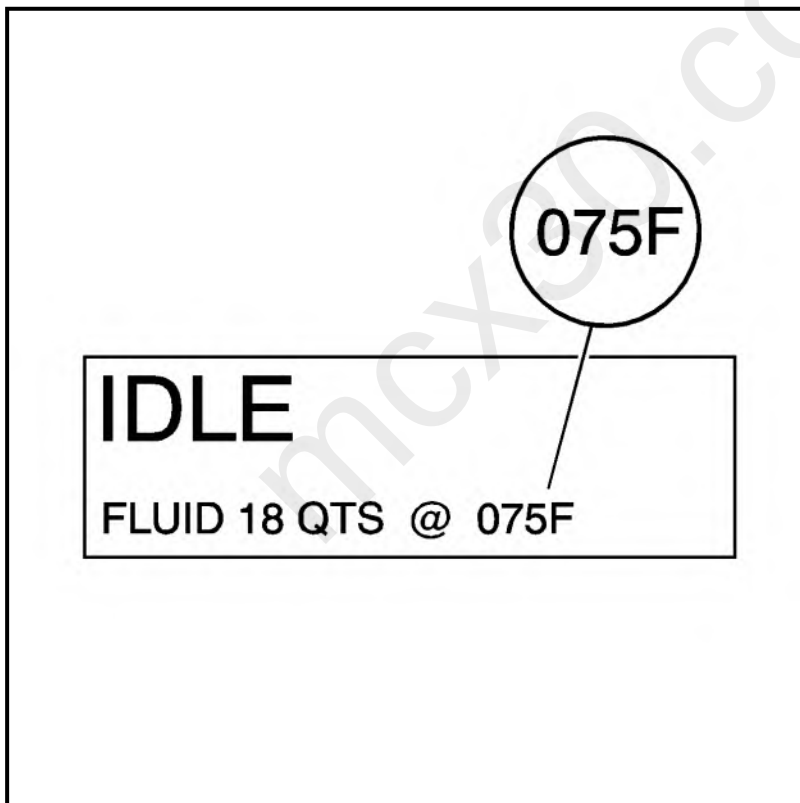




Connect a shop air supply hose to the quick-disconnect on the rear panel marked SUPPLY AIR.

Determine Minimum Flow Rate

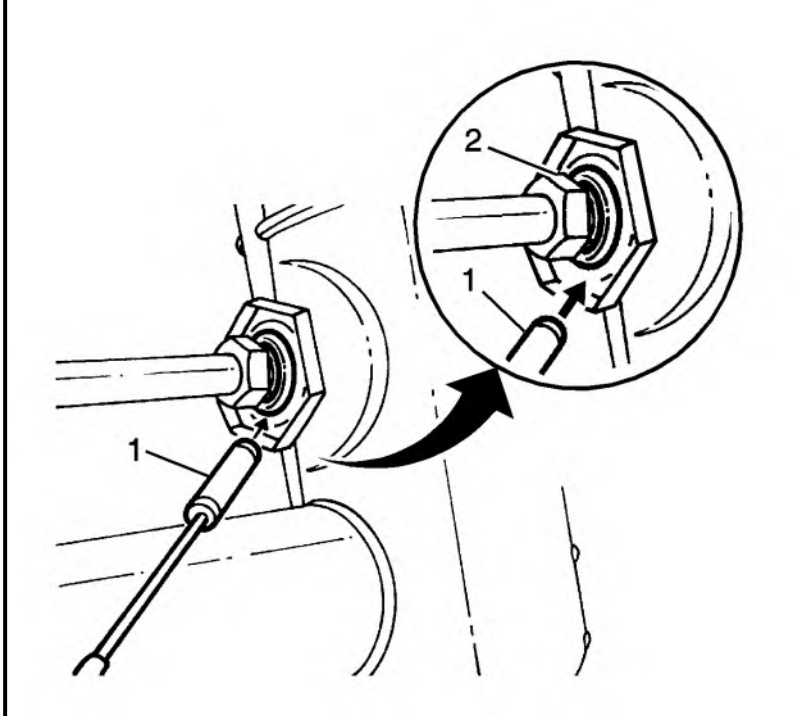
1.



From the machine display, identify the temperature of the automatic transmission fluid that is stored in the supply vessel of **DT-45096** flush and flow test tool.

2.





Determine whether the transmission oil cooler is steel or aluminum by using a magnet (1) at the cooler flange (2) at the radiator.

3. Refer to the table below. Using the temperature from step 1, locate on either the Steel MINIMUM Flow Rate table or the Aluminum MINIMUM Flow Rate table the minimum flow rate in gallons per minutes (GPM). Record the minimum flow rate in GPMs and the supply fluid temperature for further reference.

Example

- Fluid temperature: 75°F
- Cooler type: Steel

The MINIMUM flow rate for this example would be 0.8 GPM.

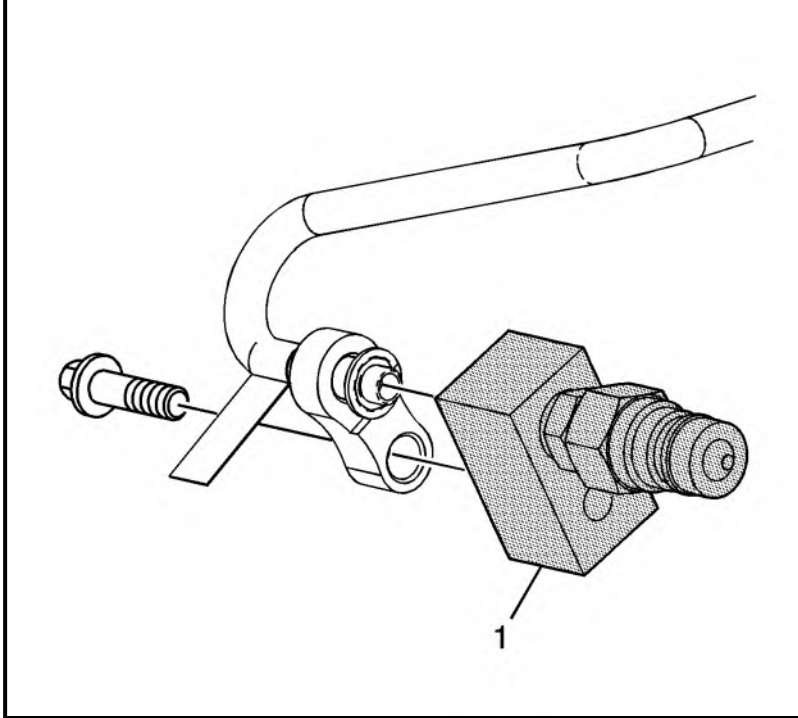
4. Inspect transmission oil cooler lines for damage or kinks that could cause restricted oil flow. Repair as needed and refer to the appropriate GM service information procedures.

Minimum Flow Rate in Gallons Per Minute (gpm)

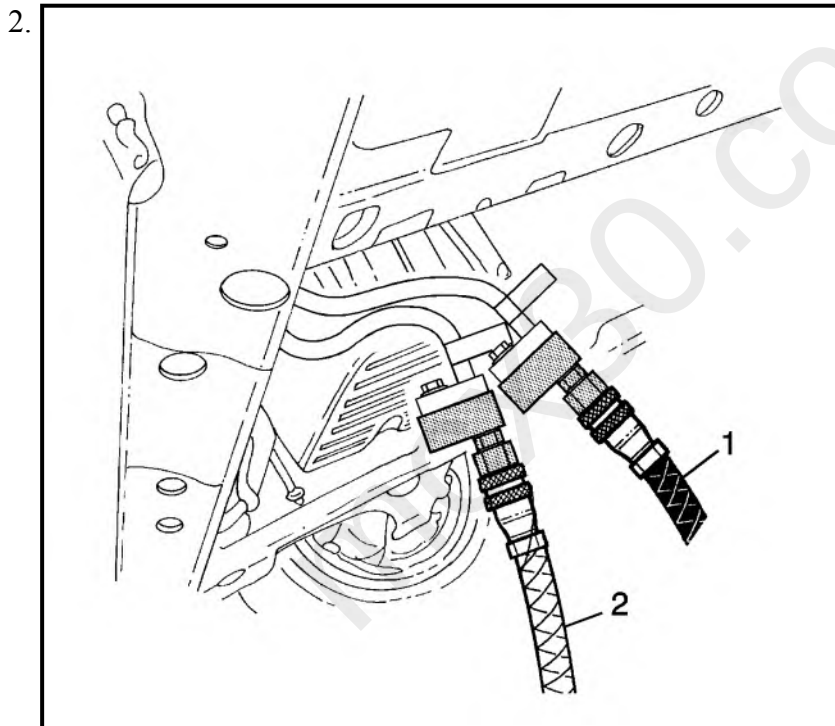
Temperature Range	Steel	Aluminum
65 - 66°F	0.6 gpm	0.5 gpm
67 - 70°F	0.7 gpm	0.6 gpm
71 - 75°F	0.8 gpm	0.7 gpm
76 - 80°F	0.9 gpm	0.8 gpm
81 - 84°F	1.0 gpm	0.9 gpm
85 - 89°F	1.1 gpm	1.0 gpm
90 - 94°F	1.2 gpm	1.1 gpm
95 - 98°F	1.3 gpm	1.2 gpm
99 - 103°F	1.4 gpm	1.3 gpm
104 - 108°F	1.5 gpm	1.4 gpm
109 - 112°F	1.6 gpm	1.5 gpm
113 - 117°F	1.7 gpm	1.6 gpm
118 - 120°F	1.8 gpm	1.7 gpm

Back Flush Procedure

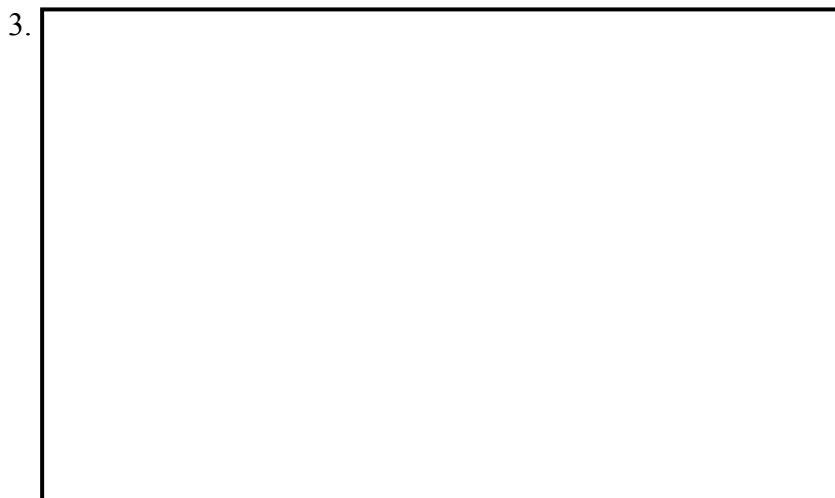
1.

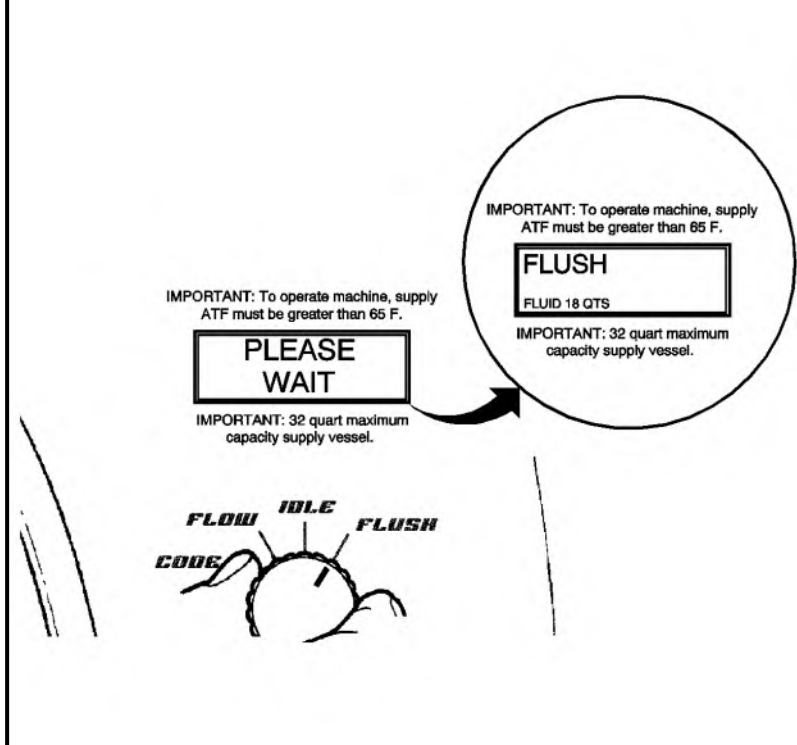


Connect the **DT-45096-50** cooler flush adapter (1) to the vehicle transmission oil cooler supply and return lines at the transmission.

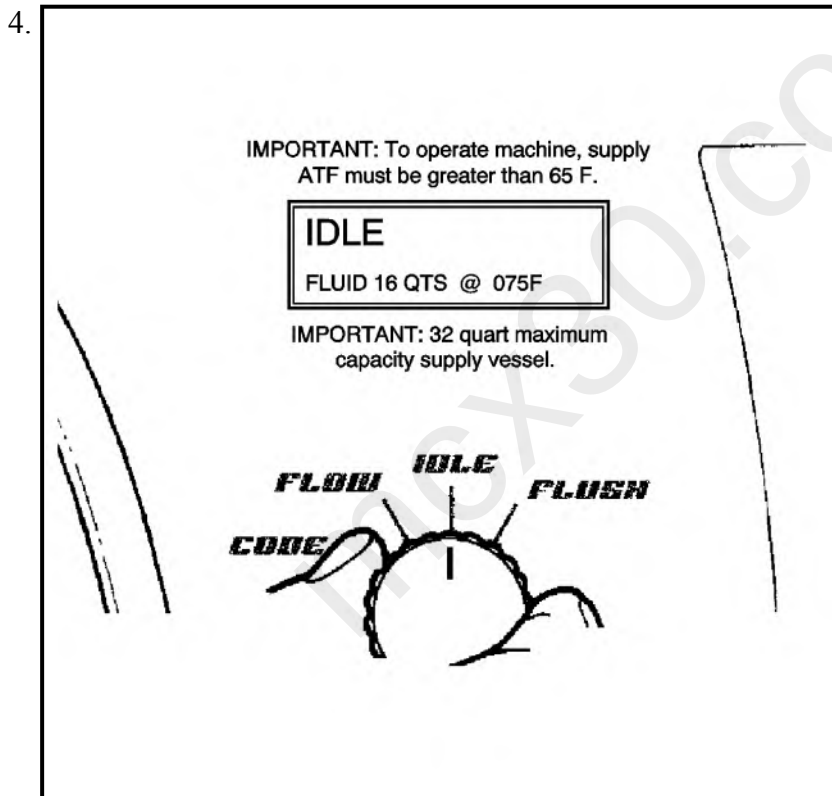


Connect the black supply hose (1) to the return line, top connector of the transmission, and the clear waste hose (2) to the feed line, bottom connector of the transmission, to the vehicle cooler lines. This is the reverse flow - backflush direction.



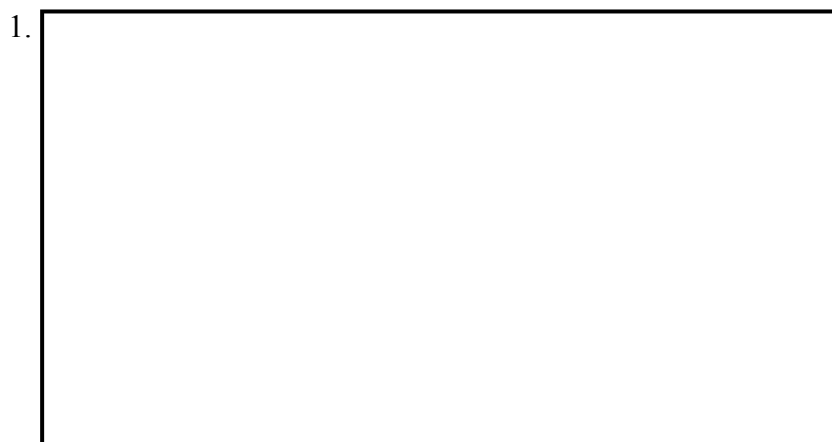


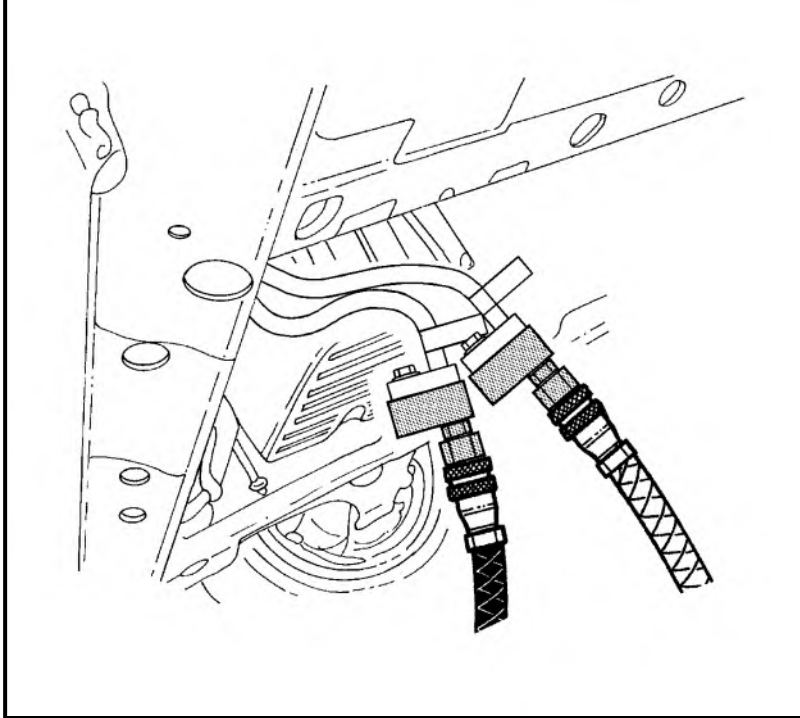
Turn the main function switch to the FLUSH position. Allow the machine to operate for 30 seconds.



Turn the main function switch to the IDLE position and allow the supply vessel pressure to dissipate.

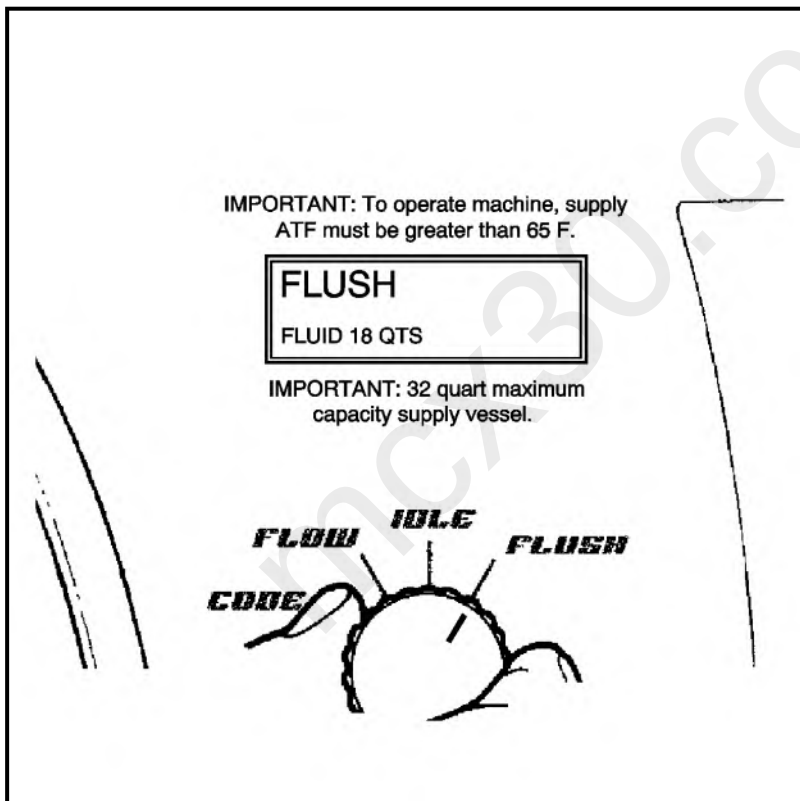
Forward Flush





Disconnect the supply and waste hoses from the vehicle cooler lines. Reverse the supply and waste hoses to provide a normal flow direction.

2.

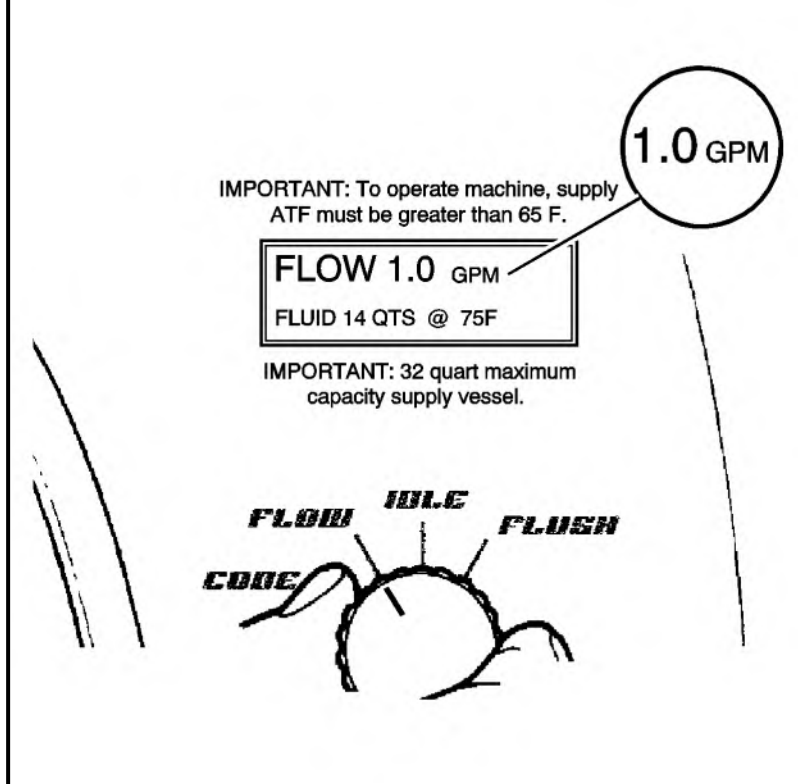


Turn the main function switch to the FLUSH position and allow machine to operate for 30 seconds.

Flow Test

1.





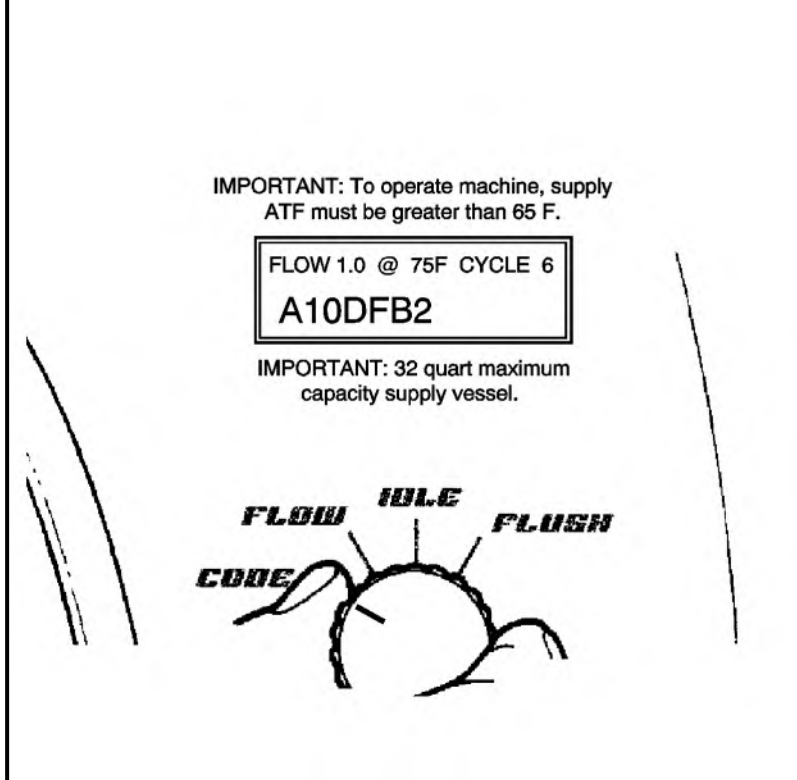
NOTE: If the flow rate is less than 0.5 gpm, the LCD displays an error message. Refer to the Troubleshooting section of the operation information.

Turn the main function switch to the FLOW position and allow the oil to flow for 15 seconds. Observe and note the flow rate; this is the TESTED flow rate.

2. Compare the TESTED flow rate to the MINIMUM flow rate information previously recorded.
 - If the TESTED flow rate is equal to or greater than the MINIMUM flow rate recorded, the oil cooling system is functioning properly. Perform Code Recording Procedure.
 - If the TESTED flow rate is less than the MINIMUM flow rate previously recorded, repeat the back flush and forward flush procedures.
3. If the TESTED flow rate is less than the MINIMUM flow rate after the second test, perform Code Recording Procedure.
 1. Replace the transmission oil cooler.
 2. Reconnect supply and waste hoses to the cooler lines in the normal flow direction. Perform Flow Test.
 3. Perform Code Recording Procedure.

Code Recording Procedure

1.



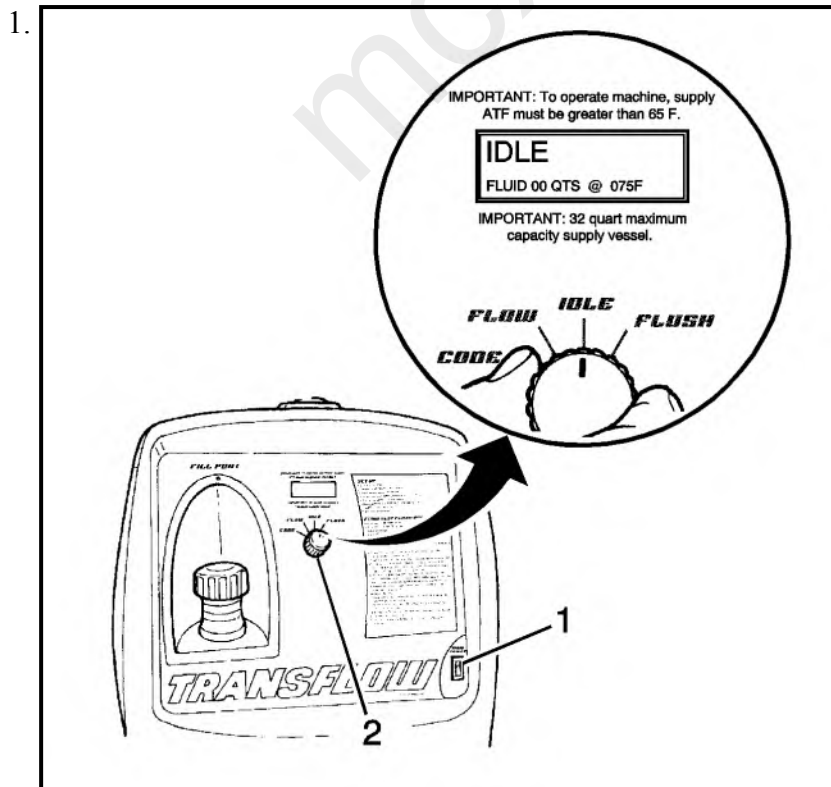
Turn the main function switch to the CODE position.

NOTE:

- If power is interrupted prior to the recording of the seven-character code, the code will be lost and the flow rate test will need to be repeated.
- The flow test must run for a minimum of 8 - 10 seconds and be above 0.5 GPM for a code to be generated.

2. Record TESTED flow rate, temperature, cycle and seven-character flow code information on repair order.

Clean-up



Turn the main function switch (2) to the IDLE position and allow the supply vessel pressure to dissipate.

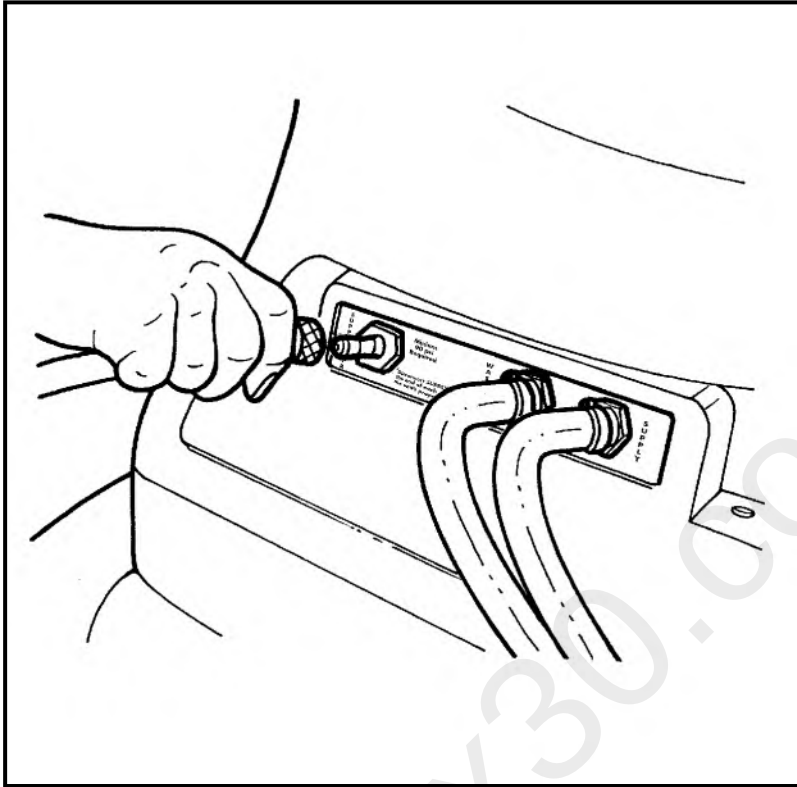
2. Turn the main power switch (1) to the OFF position.

NOTE:

- A small amount of water may drain from the bottom of the unit when the air supply is disconnected. This is a normal operation of the built-in water separator.
- If the fluid in the DT-45096 transmission oil cooling system flush and flow test tool is different than what is used in the transmission, use compressed air to blow the residual transmission fluid out of the oil cooler and lines.

3. Disconnect the supply and waste hoses and the 12-volt power source from the vehicle.

4.



Disconnect the air supply hose from **DT-45096** flush and flow test tool.

5. Remove the **DT-45096 - 50** adapters.

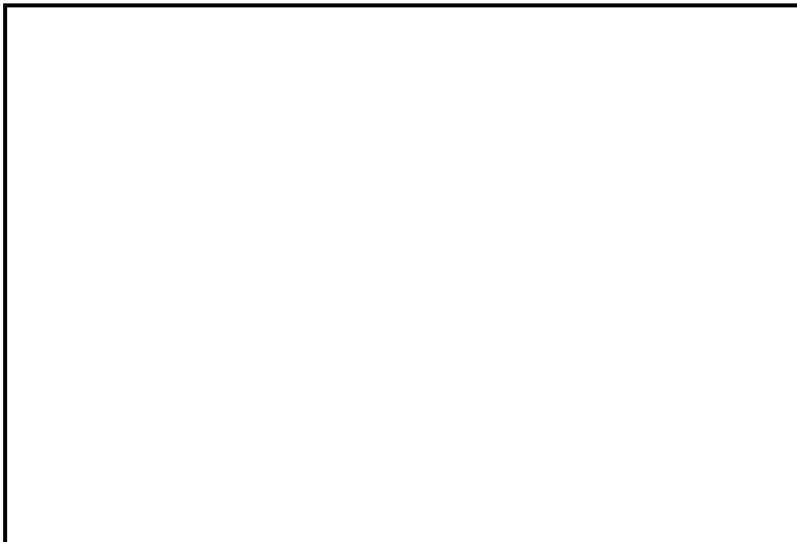
6. Dispose of the waste automatic transmission fluid in accordance with all applicable federal, state, and local requirements.

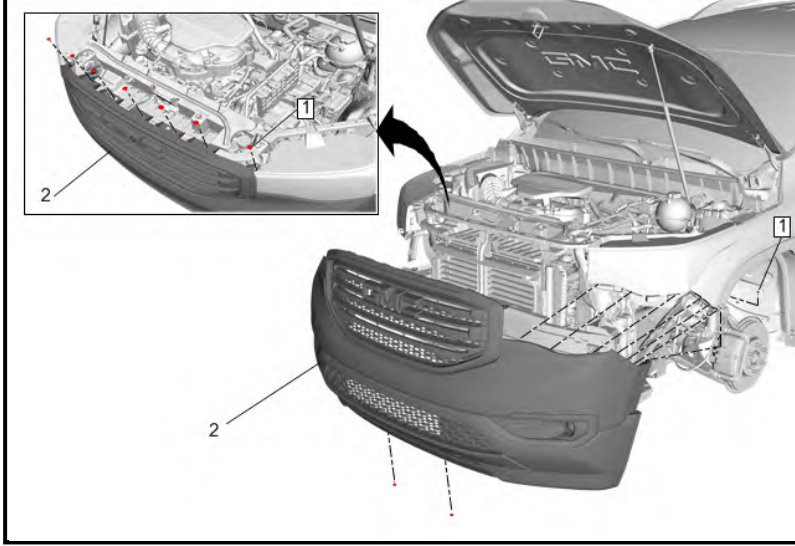
REPAIR INSTRUCTIONS

TRANSMISSION FLUID AUXILIARY COOLER REPLACEMENT (LFY)

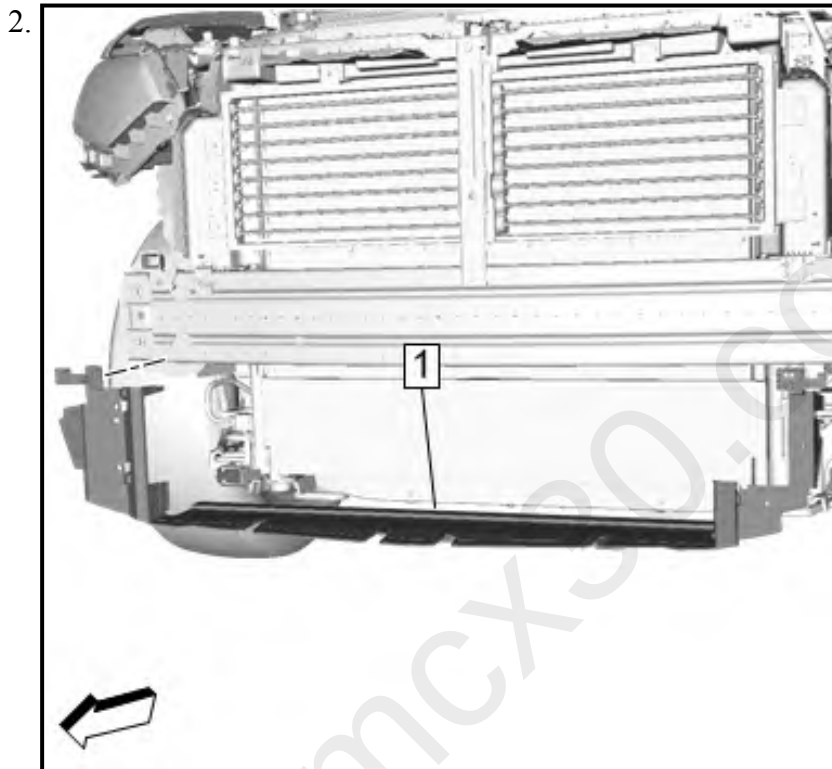
Removal Procedure

1.





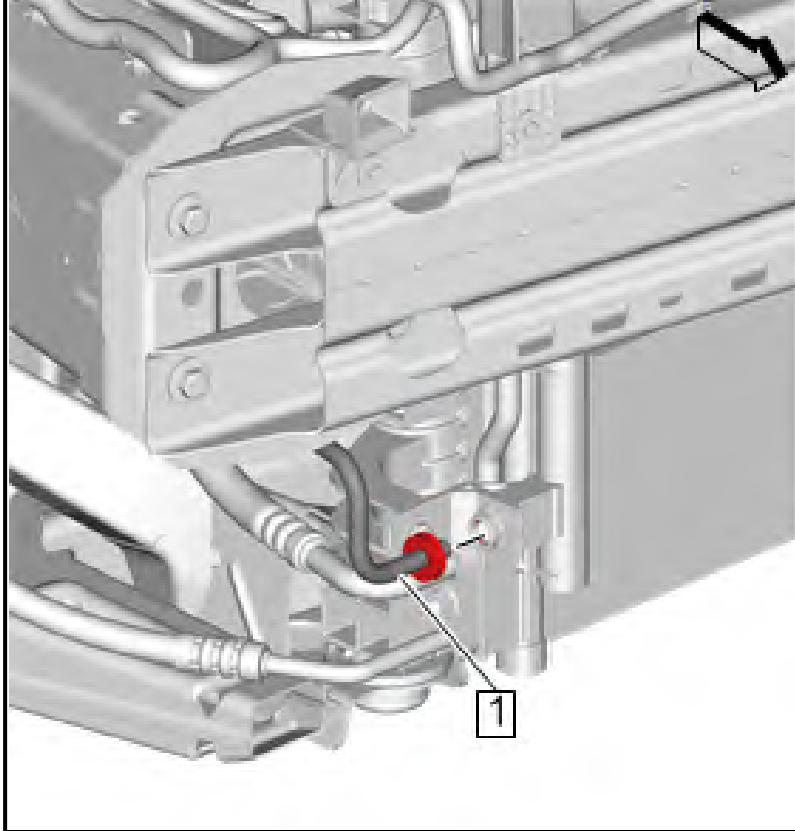
Front Bumper Fascia (2) - Remove - [Front Bumper Fascia Replacement](#)



Radiator Air Lower Baffle (1) - Remove - [Radiator Air Lower Baffle Replacement \(LFY with V08\)](#) [Radiator Air Lower Baffle Replacement \(LFY without V08\)](#)

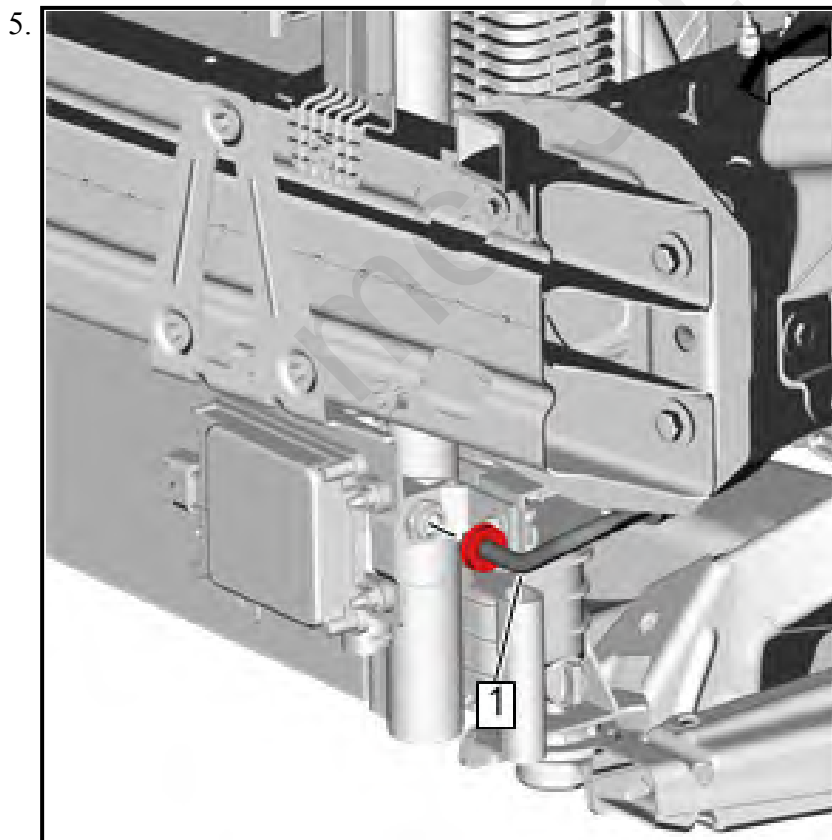
3. Place a drain pan under the vehicle.





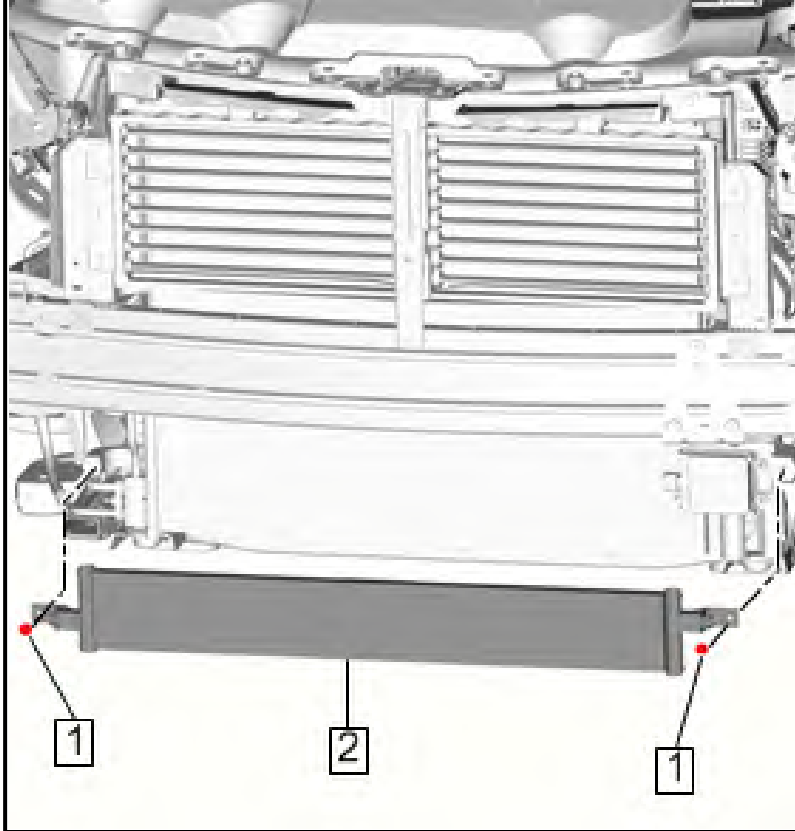
Transmission Fluid Cooler Pipe (1) @ Transmission Fluid Auxiliary Cooler - Disconnect - Transmission Fluid Cooler Hose/Pipe Quick-Connect Fitting Disconnection and Connection

NOTE: Cover or plug all open transmission fluid cooler pipe connection points to help avoid any accidental contamination.



Transmission Fluid Cooler Outlet Pipe (1) @ Transmission Fluid Auxiliary Cooler - Disconnect - Transmission Fluid Cooler Hose/Pipe Quick-Connect Fitting Disconnection and Connection



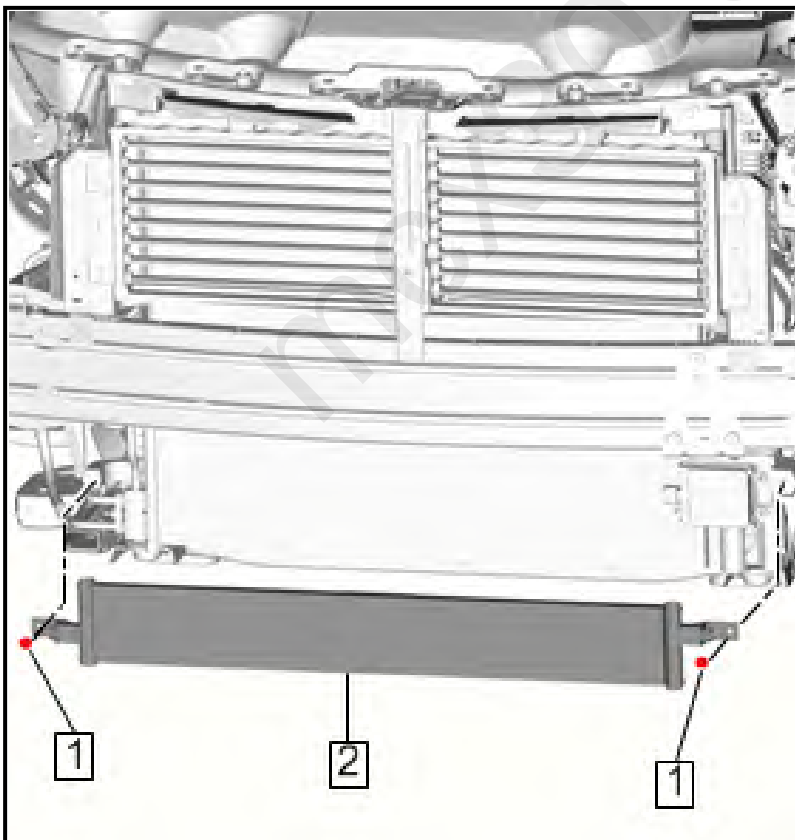


Transmission Fluid Auxiliary Cooler Fastener (1) - Remove [2x]

7. Transmission Fluid Auxiliary Cooler (2) - Remove

Installation Procedure

1.



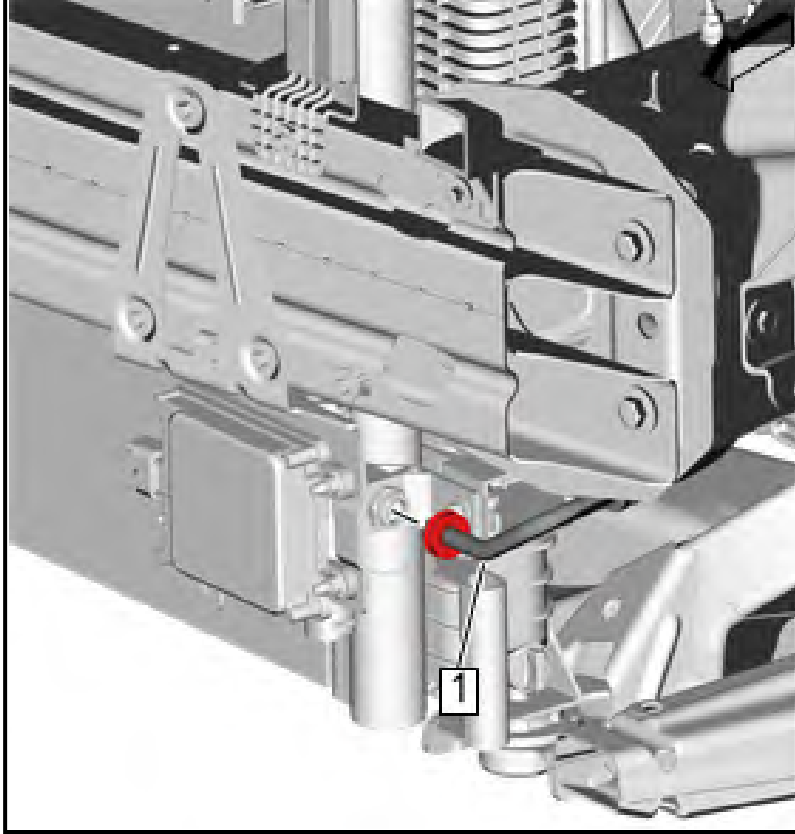
Transmission Fluid Auxiliary Cooler (2) - Install

CAUTION: Refer to **Fastener Caution** .

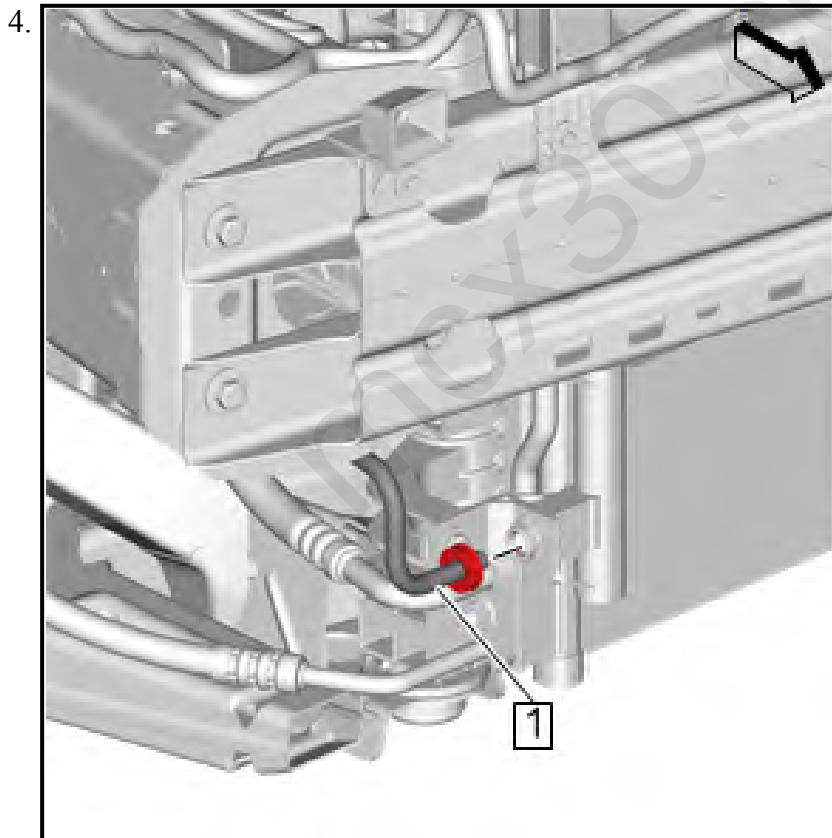
2. Transmission Fluid Auxiliary Cooler Bolt (1) - Install and tighten [2x] 9 N.m (80 lb in)

3.



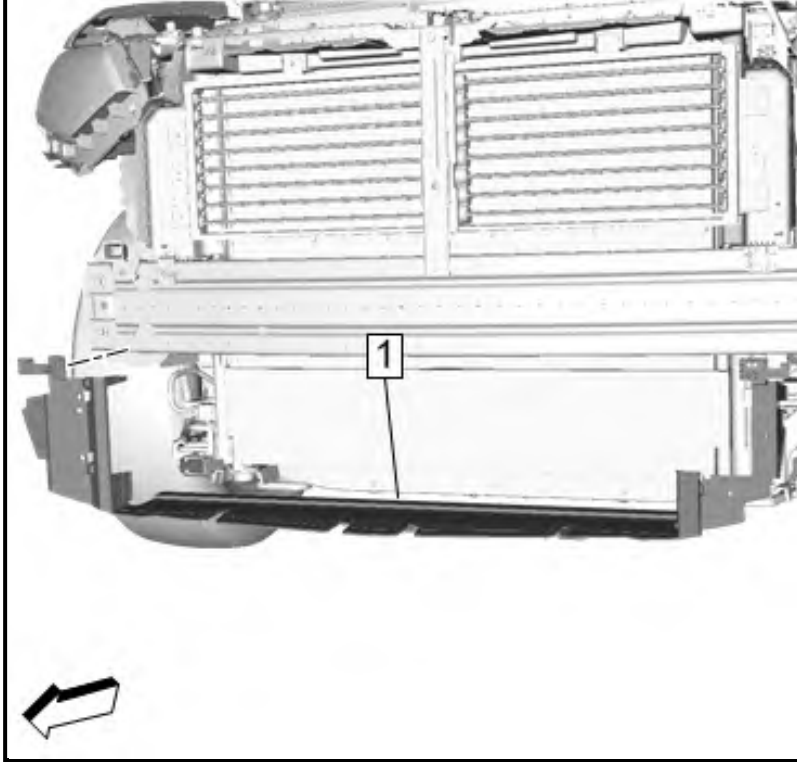


Transmission Fluid Cooler Outlet Pipe (1) @ Transmission Fluid Auxiliary Cooler - Connect - Transmission Fluid Cooler Hose/Pipe Quick-Connect Fitting Disconnection and Connection

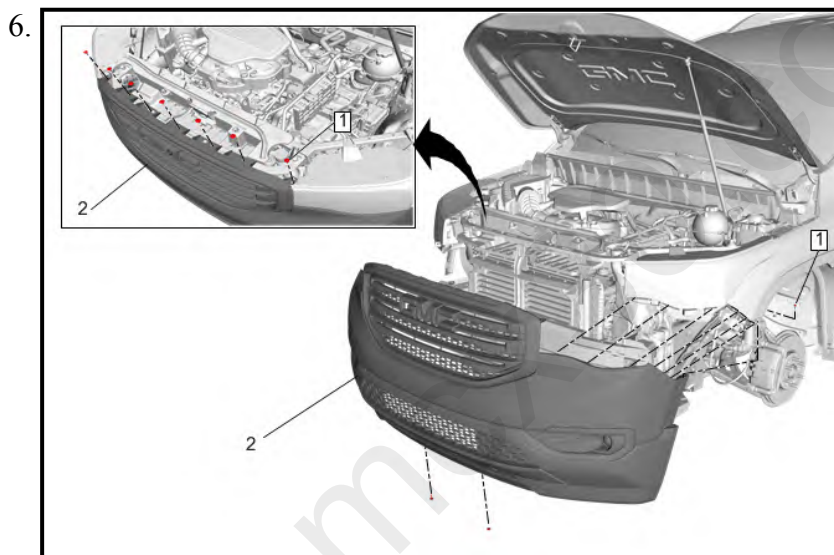


Transmission Fluid Cooler Pipe (1) @ Transmission Fluid Auxiliary Cooler - Connect - Transmission Fluid Cooler Hose/Pipe Quick-Connect Fitting Disconnection and Connection





Radiator Air Lower Baffle (1) - Install - [Radiator Air Lower Baffle Replacement \(LFY with V08\)](#).
[Radiator Air Lower Baffle Replacement \(LFY without V08\)](#).



Front Bumper Fascia (2) - Install - [Front Bumper Fascia Replacement](#)

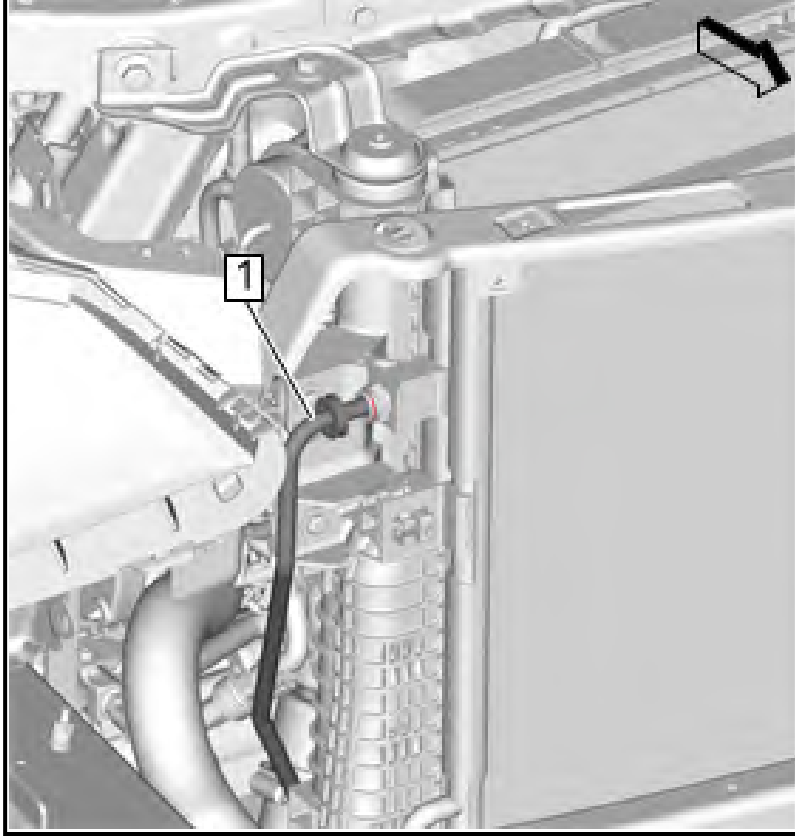
7. Fill the transmission to the proper level with NEW transmission fluid. [Transmission Fluid Level and Condition Check](#)
8. Start the engine and inspect for leaks.

TRANSMISSION FLUID AUXILIARY COOLER REPLACEMENT (LTG)

Removal Procedure

1. Place a drain pan under the vehicle.
2. Intake Air Splash Shield - Remove - [Intake Air Splash Shield Replacement](#)
3. Radiator Air Baffle - Remove - [Radiator Air Baffle Replacement](#)

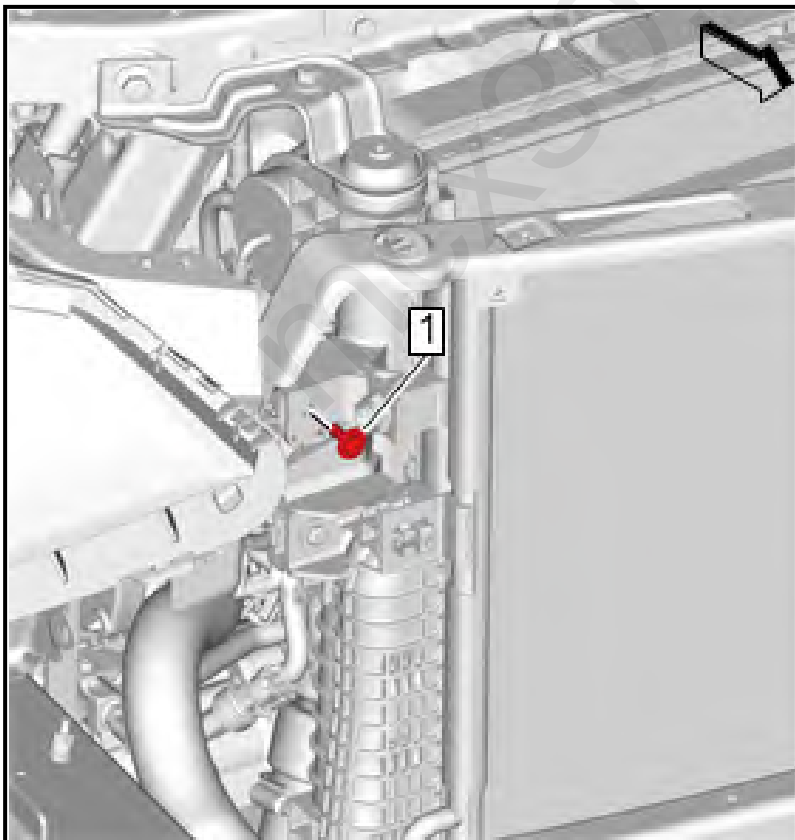




Transmission Fluid Cooler Thermal Bypass Valve (1) @ Transmission Fluid Auxiliary Cooler- Right Side - Disconnect - [Transmission Fluid Cooler Hose/Pipe Quick-Connect Fitting Disconnection and Connection](#)

5. Cap the openings to prevent contamination.

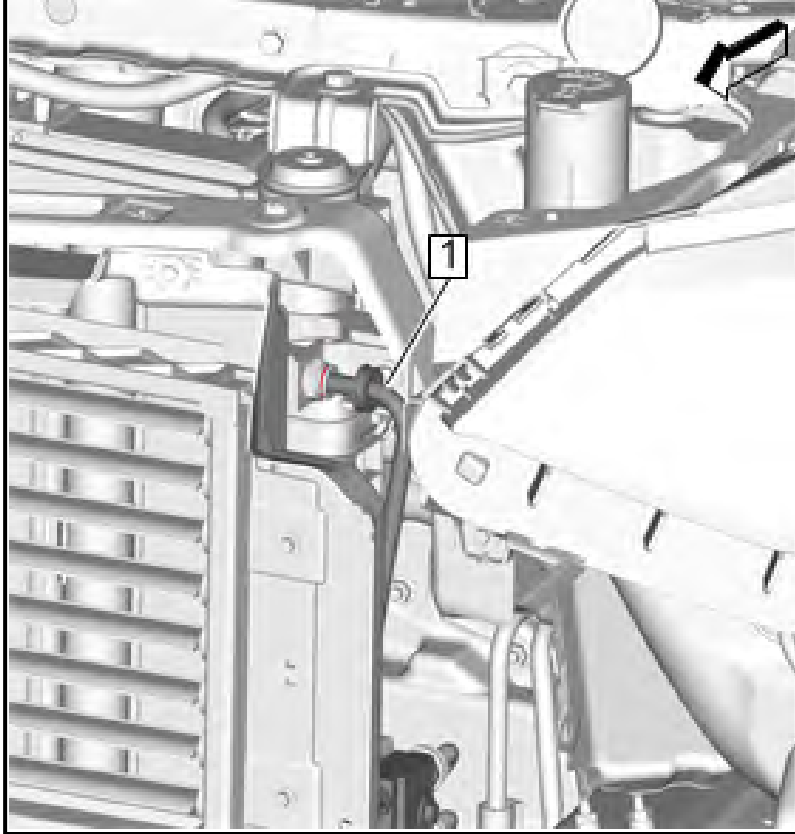
6.



Transmission Fluid Auxiliary Cooler Bracket Bolt (1) @ Transmission Fluid Auxiliary Cooler- Right Side - Remove

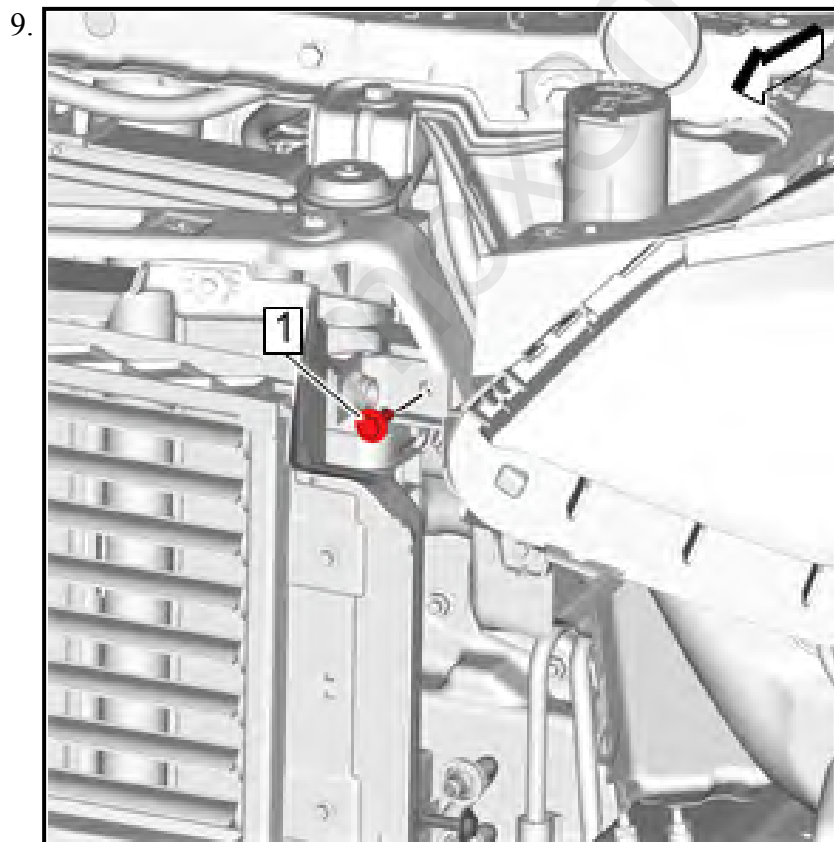
7.





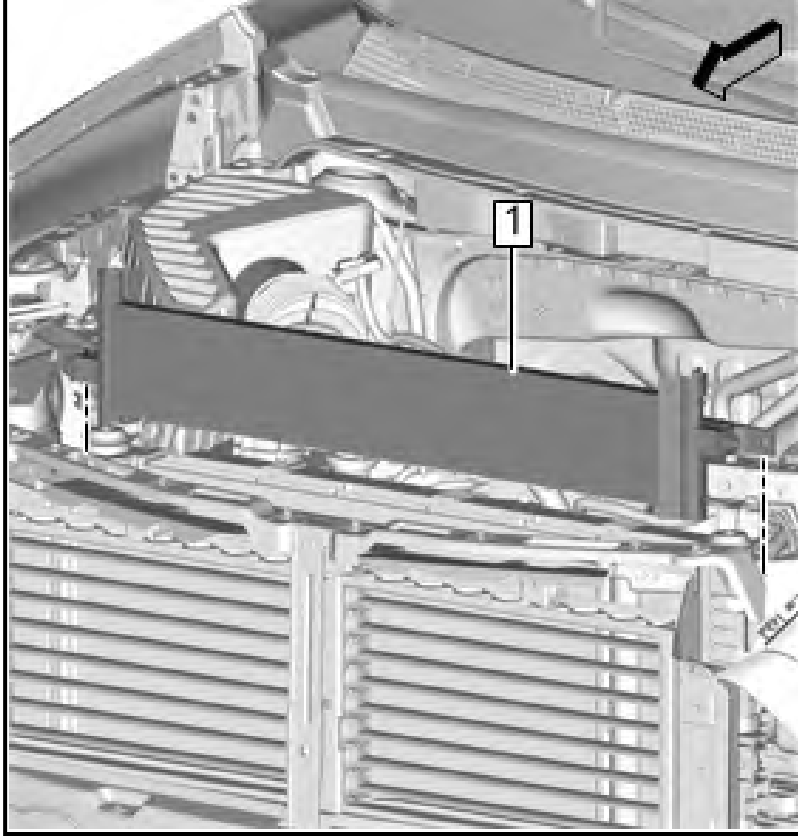
Transmission Fluid Cooler Thermal Bypass Valve (1) @ Transmission Fluid Auxiliary Cooler- Left Side - Disconnect - [Transmission Fluid Cooler Hose/Pipe Quick-Connect Fitting Disconnection and Connection](#)

8. Cap the openings to prevent contamination.



Transmission Fluid Auxiliary Cooler Bracket Bolt (1) @ Transmission Fluid Auxiliary Cooler- Left Side - Remove

10.

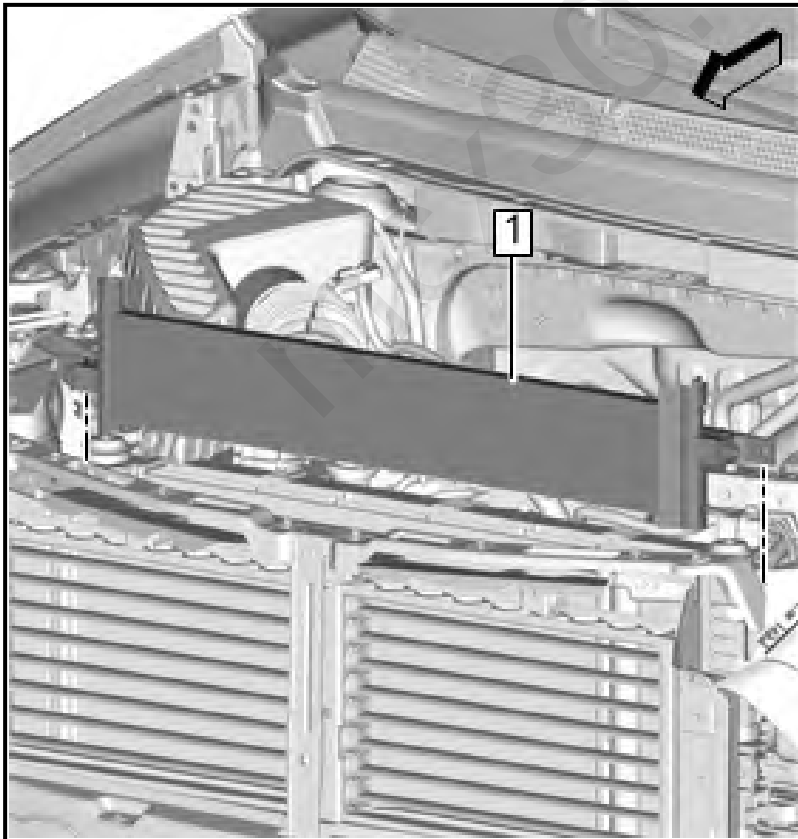


Transmission Fluid Auxiliary Cooler (1) - Remove

11. Transfer components as necessary.

Installation Procedure

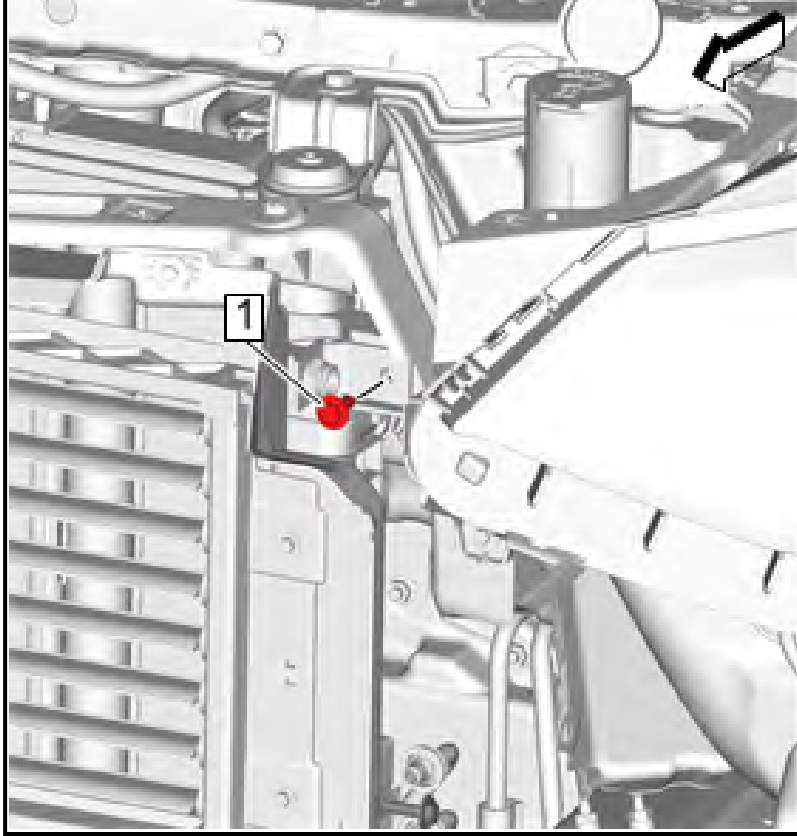
- 1.



Transmission Fluid Auxiliary Cooler (1) - Install

- 2.

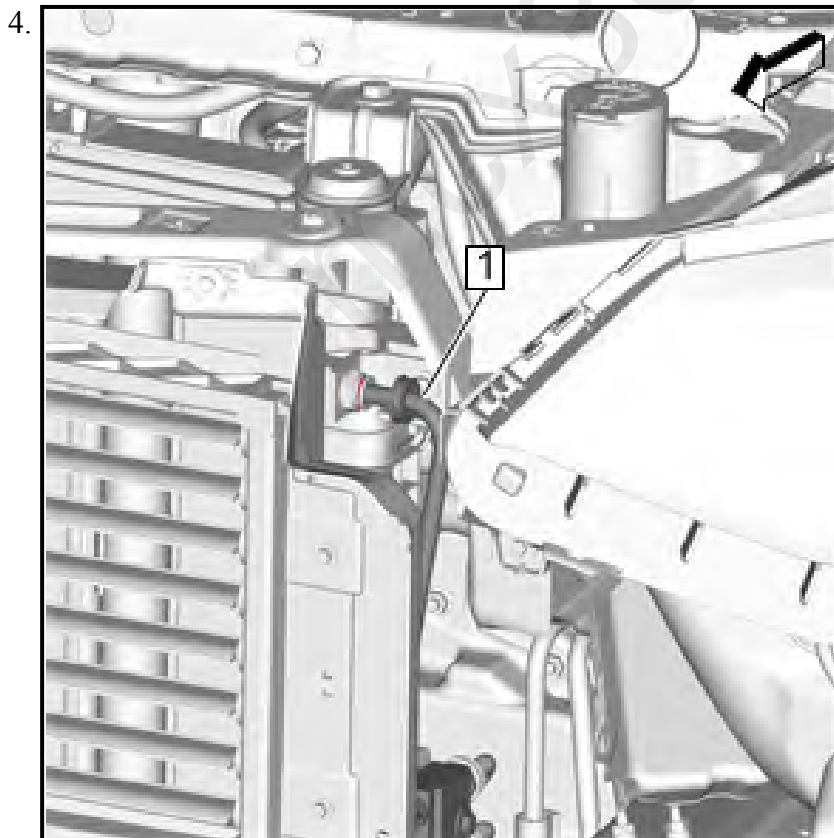




CAUTION: Refer to [Fastener Caution](#) .

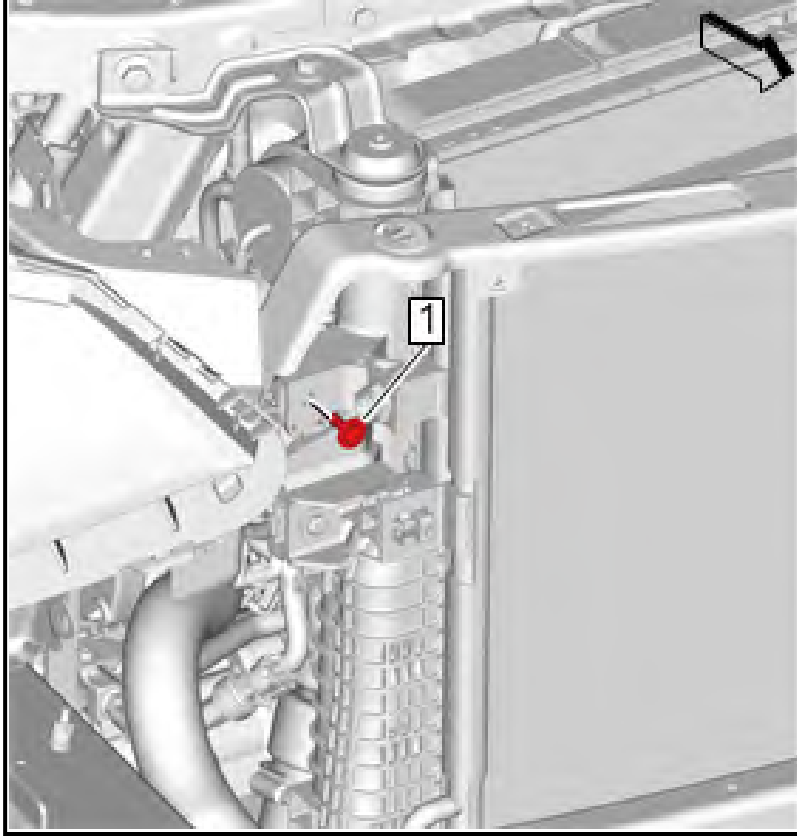
Transmission Fluid Auxiliary Cooler Bracket Bolt (1) @ Transmission Fluid Auxiliary Cooler- Left Side - Install and tighten 9 N.m (80 lb in)

3. Remove the caps from the fittings and plugs from the holes before installing the transmission fluid cooler pipes.



Transmission Fluid Cooler Thermal Bypass Valve (1) @ Transmission Fluid Auxiliary Cooler- Left Side - Connect - [Transmission Fluid Cooler Hose/Pipe Quick-Connect Fitting Disconnection and Connection](#)

5.

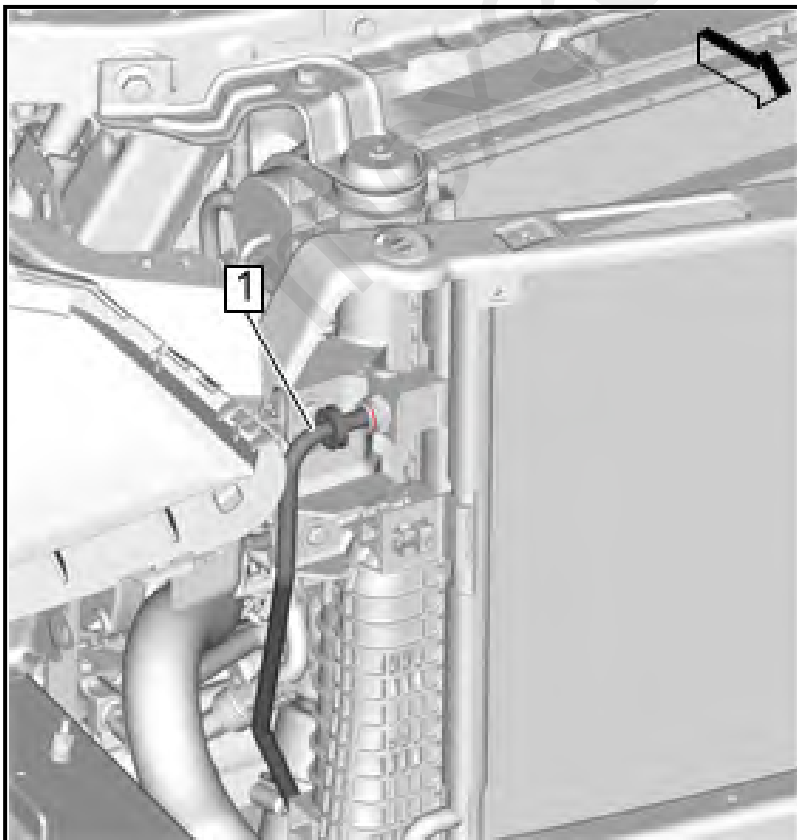


CAUTION: Refer to [Fastener Caution](#) .

Transmission Fluid Auxiliary Cooler Bracket Bolt (1) @ Transmission Fluid Auxiliary Cooler- Right Side - Install and tighten 9 N.m (80 lb in)

6. Remove the caps from the fittings and plugs from the holes before installing the transmission fluid cooler pipes.

7.



Transmission Fluid Cooler Thermal Bypass Valve (1) @ Transmission Fluid Auxiliary Cooler- Right Side - Connect - [Transmission Fluid Cooler Hose/Pipe Quick-Connect Fitting Disconnection and Connection](#)

8. Radiator Air Baffle - Install - [Radiator Air Baffle Replacement](#)

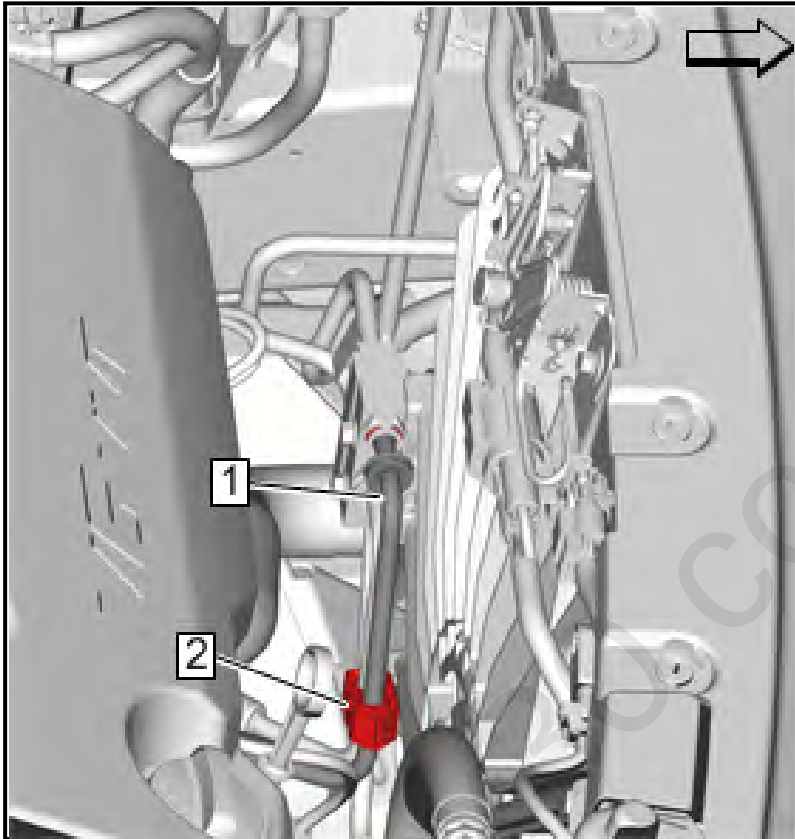
9. Intake Air Splash Shield - Install - [Intake Air Splash Shield Replacement](#)
10. Fill the transmission to the proper level with NEW transmission fluid. - [Transmission Fluid Level and Condition Check](#)
11. Inspect for transmission fluid leaks. - [Fluid Leak Diagnosis](#)
12. Remove the drain pan.

TRANSMISSION FLUID COOLER THERMAL BYPASS VALVE REPLACEMENT (LFY)

Removal Procedure

1. Place a drain pan under the vehicle.

2.



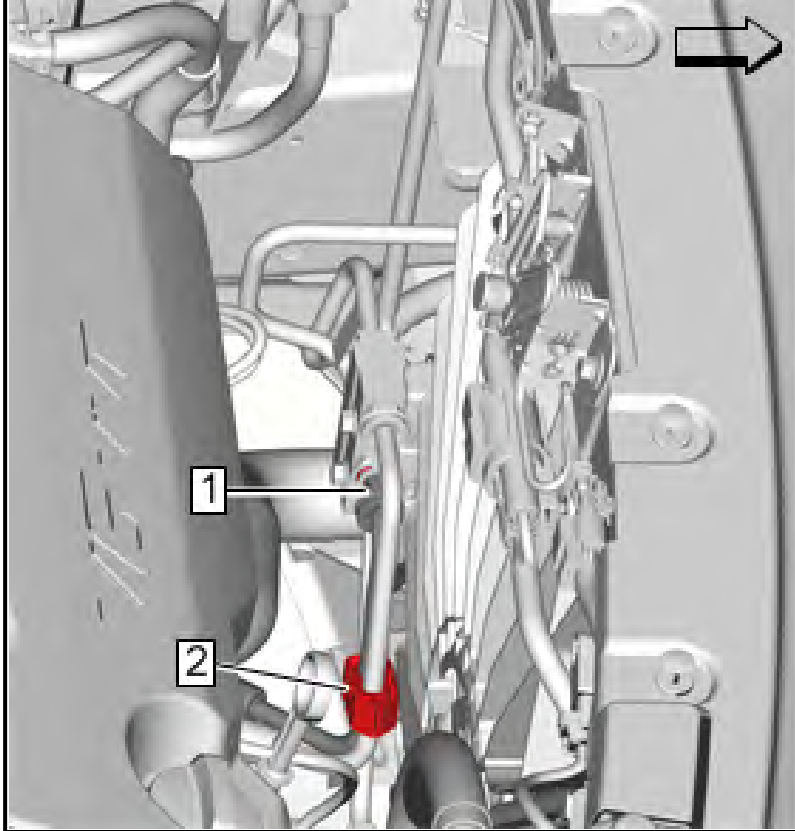
Transmission Fluid Cooler Inlet Pipe Clip (2) @ Cooling Fan - Unclip

NOTE: Cover or plug all open transmission fluid cooler pipe connection points to help avoid any accidental contamination.

3. Transmission Fluid Cooler Outlet Pipe (1) @ Transmission Fluid Cooler Thermal Bypass Valve - Disconnect - [Transmission Fluid Cooler Hose/Pipe Quick-Connect Fitting Disconnection and Connection](#)

4.





Transmission Fluid Cooler Inlet Pipe (1) @ Transmission Fluid Cooler Thermal Bypass Valve - Disconnect - [Transmission Fluid Cooler Hose/Pipe Quick-Connect Fitting Disconnection and Connection](#)

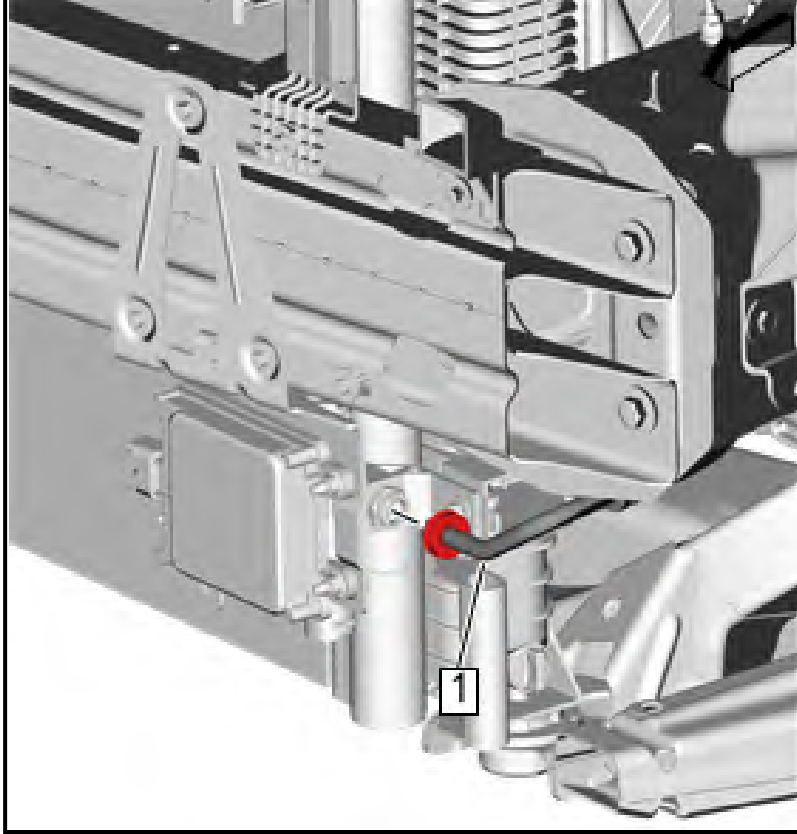
5.



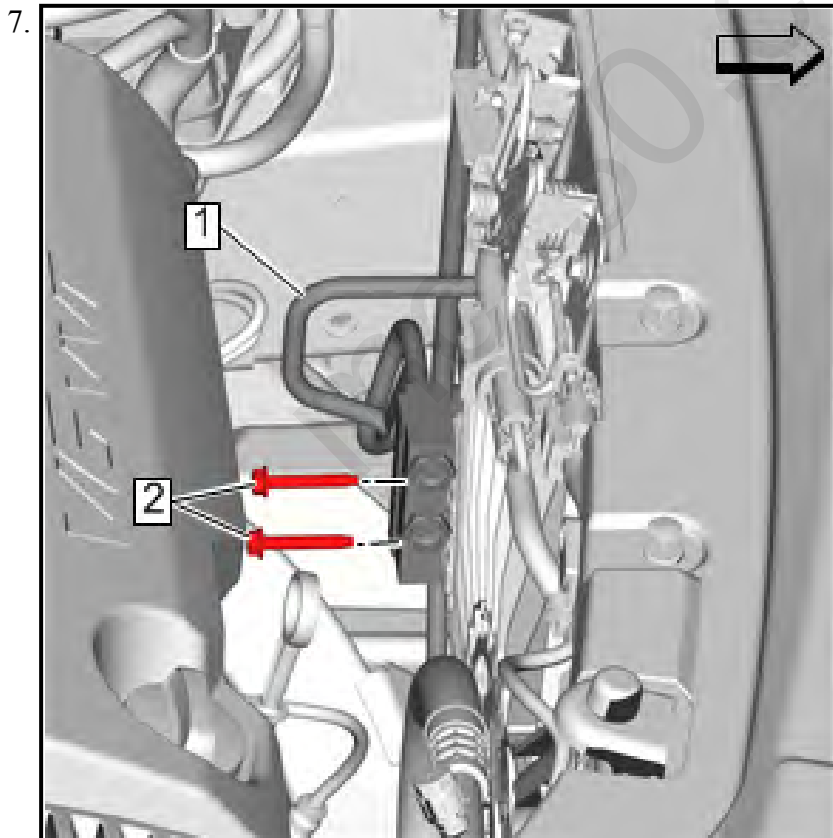
Transmission Fluid Cooler Thermal Bypass Valve (1) @ Radiator - Disconnect - [Transmission Fluid Cooler Hose/Pipe Quick-Connect Fitting Disconnection and Connection](#)

6.





Transmission Fluid Cooler Thermal Bypass Valve (1) @ Transmission Fluid Auxiliary Cooler - Disconnect - [Transmission Fluid Cooler Hose/Pipe Quick-Connect Fitting Disconnection and Connection](#)

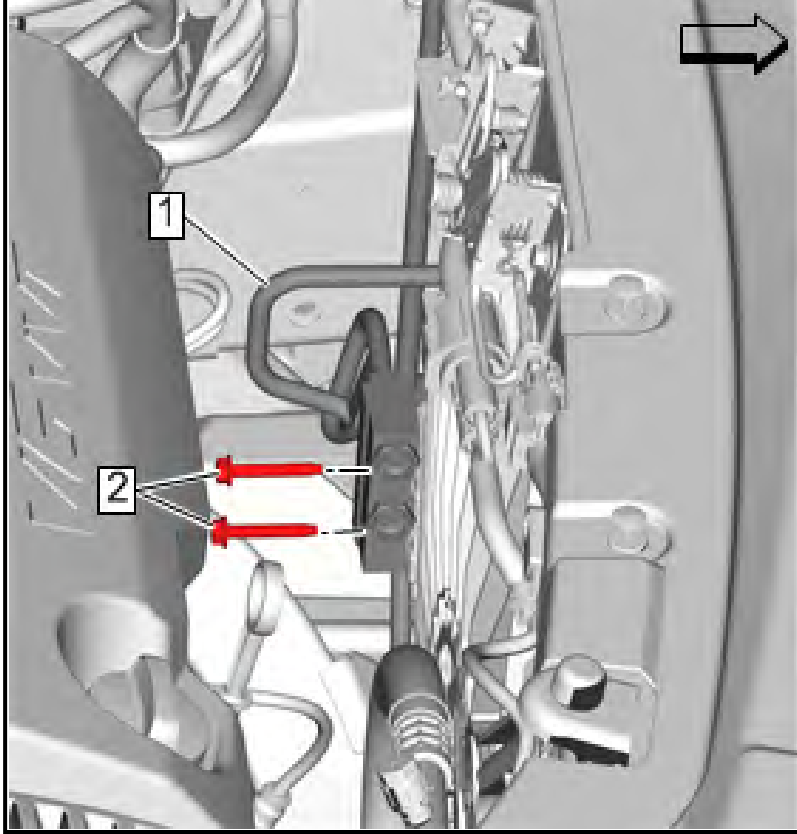


Transmission Fluid Cooler Thermal Bypass Valve Bolt (2) @ Engine Coolant Fan - Disconnect [2x]

8. Remove the transmission fluid cooler thermal bypass valve (1) from the vehicle.

Installation Procedure

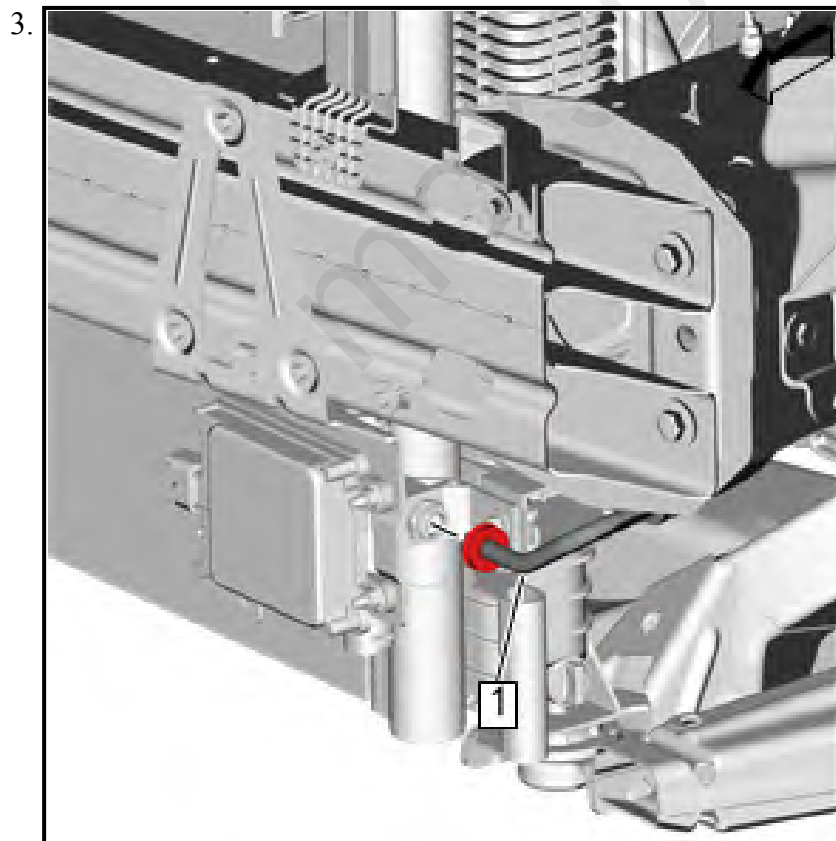




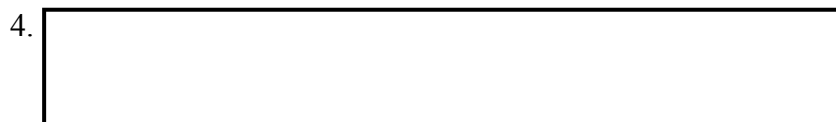
Install the transmission fluid cooler thermal bypass valve (1) to the vehicle.

CAUTION: Refer to [Fastener Caution](#) .

2. Transmission Fluid Cooler Thermal Bypass Valve Bolt (2) @ Engine Coolant Fan - Install and tighten [2x] 9 N.m (80 lb in)

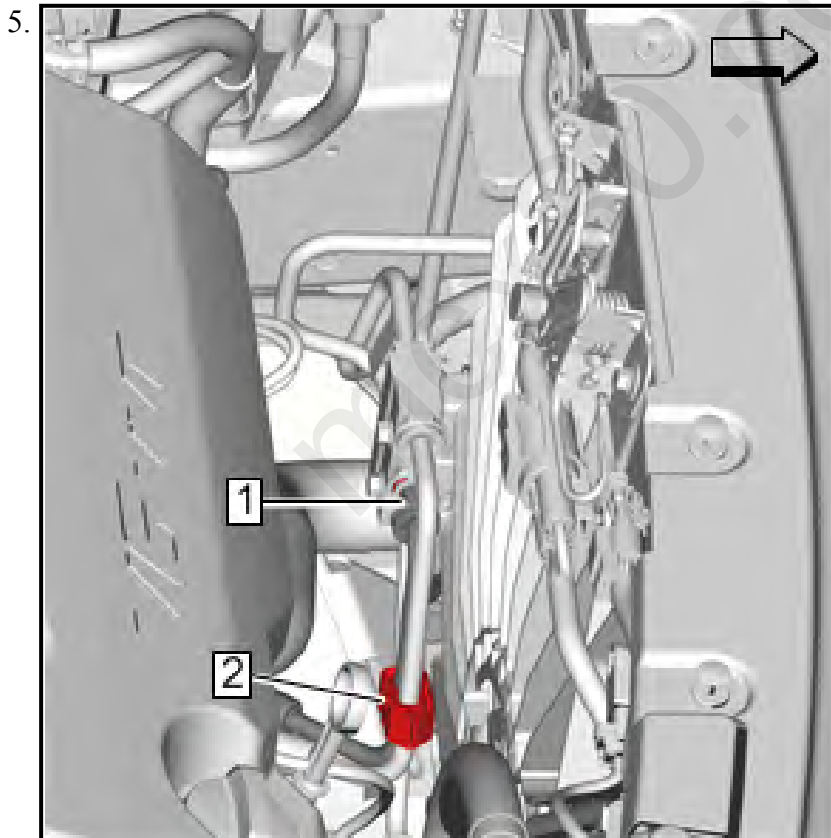


Transmission Fluid Cooler Thermal Bypass Valve (1) @ Transmission Fluid Auxiliary Cooler - Connect - [Transmission Fluid Cooler Hose/Pipe Quick-Connect Fitting Disconnection and Connection](#)



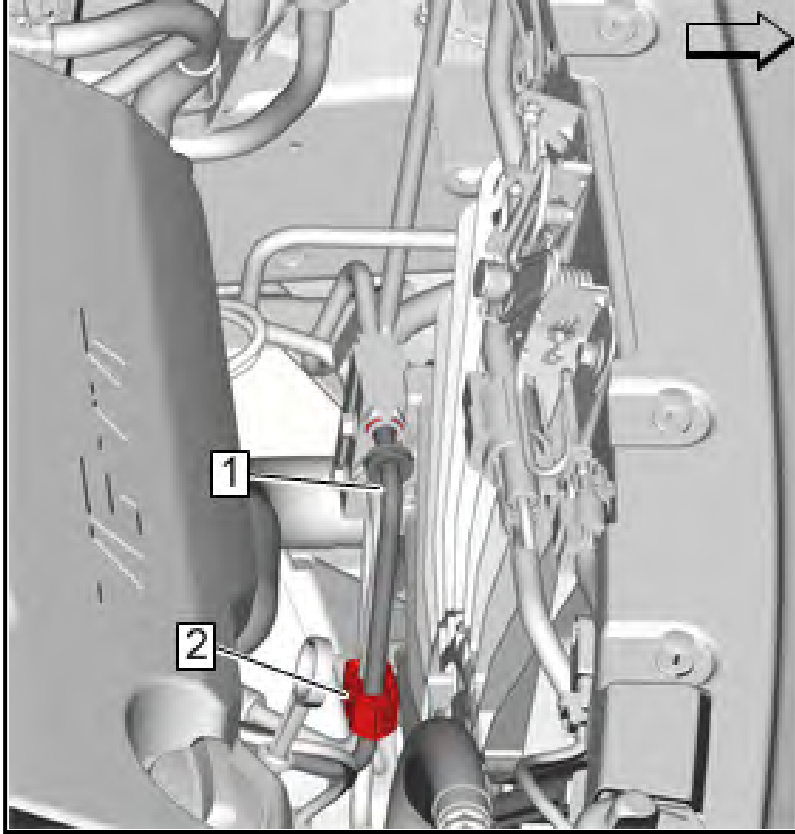


Transmission Fluid Cooler Thermal Bypass Valve (1) @ Radiator - Connect - Transmission Fluid Cooler Hose/Pipe Quick-Connect Fitting Disconnection and Connection



Transmission Fluid Cooler Inlet Pipe (1) @ Transmission Fluid Cooler Thermal Bypass Valve - Connect - Transmission Fluid Cooler Hose/Pipe Quick-Connect Fitting Disconnection and Connection





Transmission Fluid Cooler Outlet Pipe (1) @ Transmission Fluid Cooler Thermal Bypass Valve - Connect - [Transmission Fluid Cooler Hose/Pipe Quick-Connect Fitting Disconnection and Connection](#)

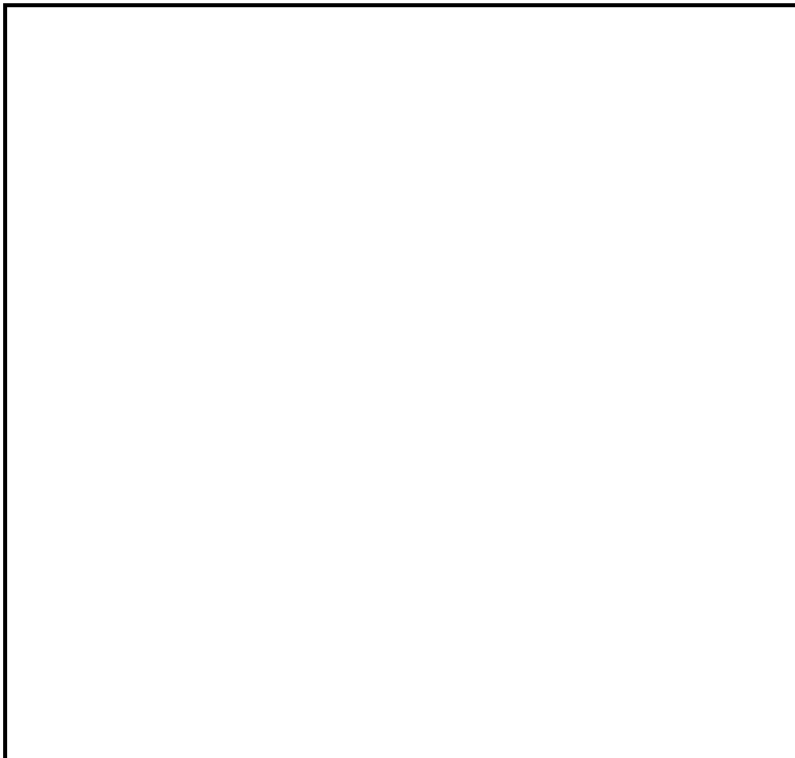
7. Transmission Fluid Cooler Inlet Pipe Clip (2) @ Cooling Fan - Clip
8. Fill the transmission to the proper level with NEW transmission fluid. [Transmission Fluid Level and Condition Check](#)
9. Inspect for transmission fluid leaks.
10. Remove the drain pan.

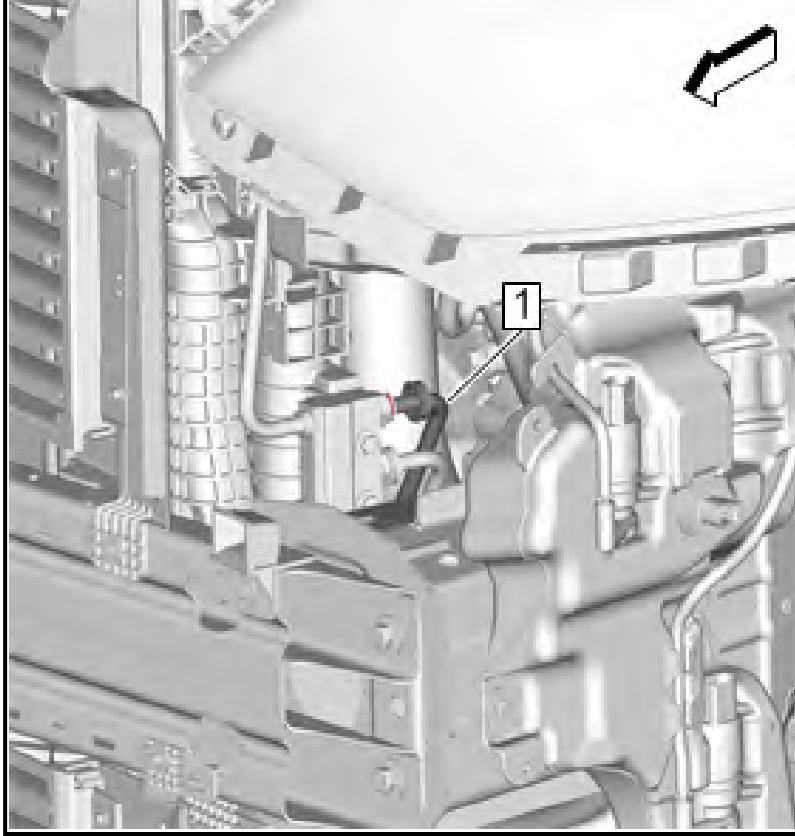
TRANSMISSION FLUID COOLER THERMAL BYPASS VALVE REPLACEMENT (LTG)

Removal Procedure

1. Remove the front bumper fascia. [Front Bumper Fascia Replacement](#)
2. Place a drain pan under the vehicle.

3.

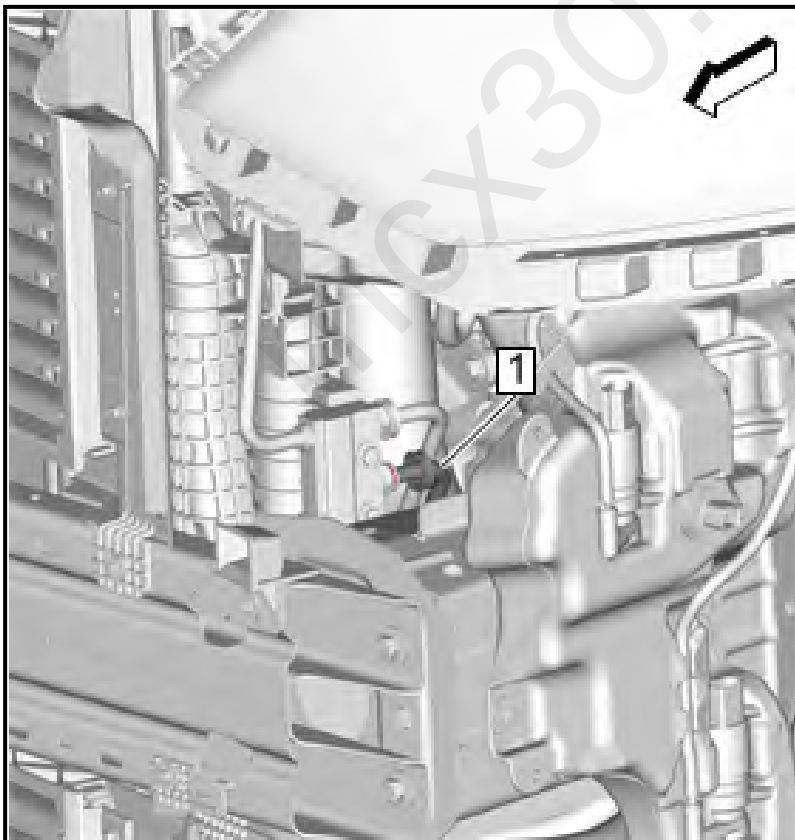




Transmission Fluid Cooler Outlet Pipe (1) @ Transmission Fluid Cooler Thermal Bypass Valve - Disconnect - [Transmission Fluid Cooler Hose/Pipe Quick-Connect Fitting Disconnection and Connection](#)

4. Cap the openings to prevent contamination.

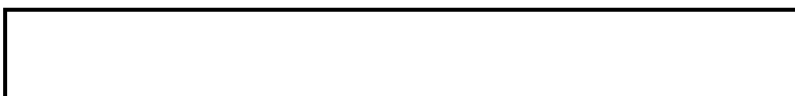
5.

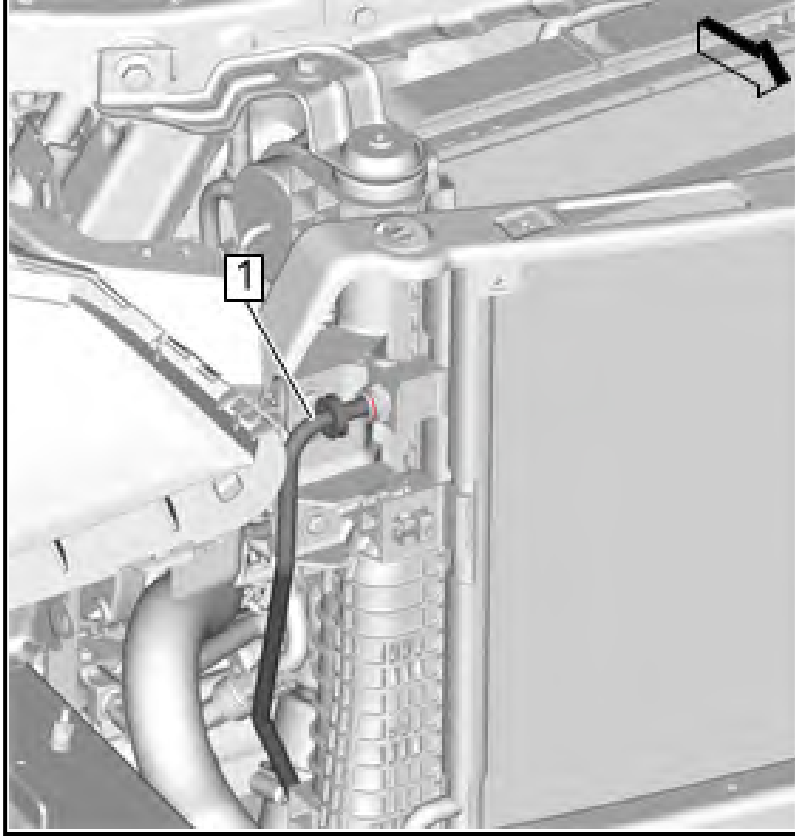


Transmission Fluid Cooler Inlet Pipe (1) @ Transmission Fluid Cooler Thermal Bypass Valve - Disconnect - [Transmission Fluid Cooler Hose/Pipe Quick-Connect Fitting Disconnection and Connection](#)

6. Cap the openings to prevent contamination.

7.

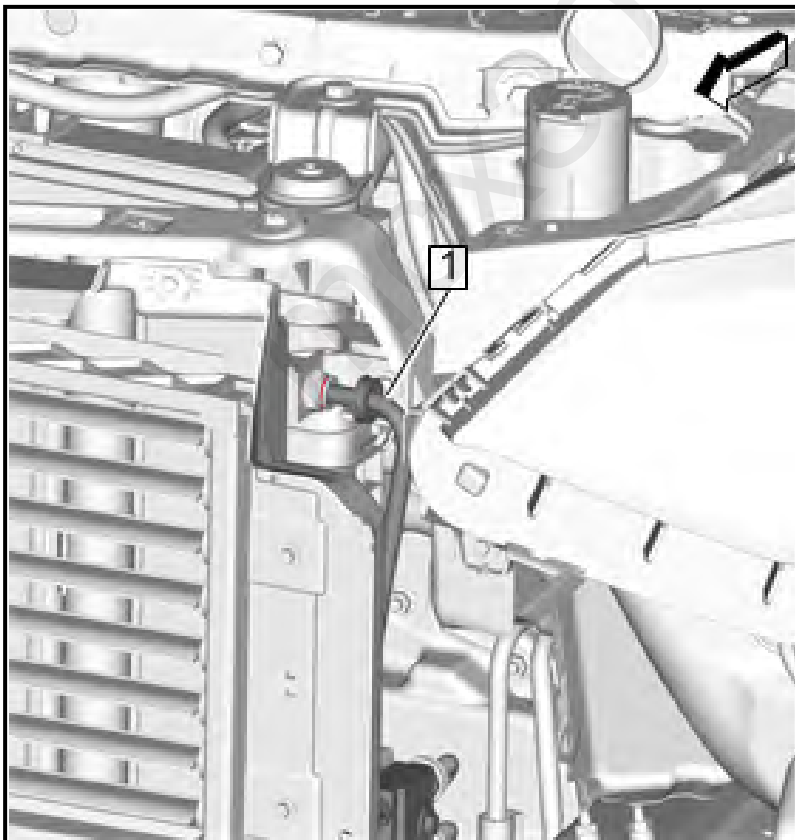




Transmission Fluid Cooler Thermal Bypass Valve (1) @ Transmission Fluid Auxiliary Cooler-Right Side - Disconnect - [Transmission Fluid Cooler Hose/Pipe Quick-Connect Fitting Disconnection and Connection](#)

8. Cap the openings to prevent contamination.

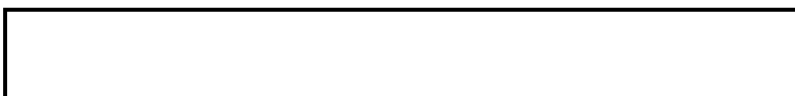
9.

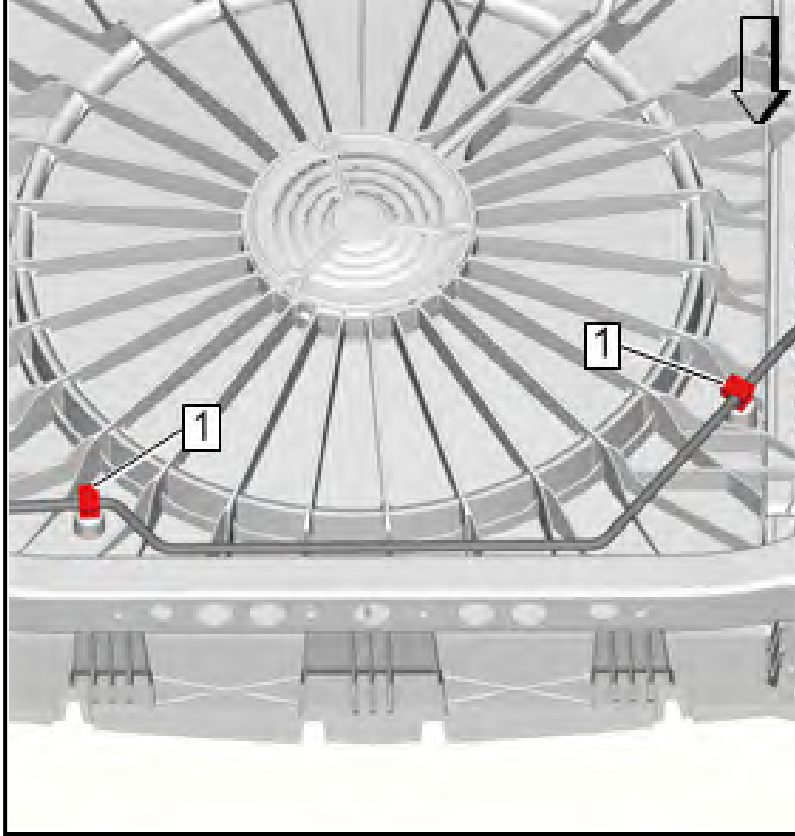


Transmission Fluid Cooler Thermal Bypass Valve (1) @ Transmission Fluid Auxiliary Cooler-Left Side - Disconnect - [Transmission Fluid Cooler Hose/Pipe Quick-Connect Fitting Disconnection and Connection](#)

10. Cap the openings to prevent contamination.

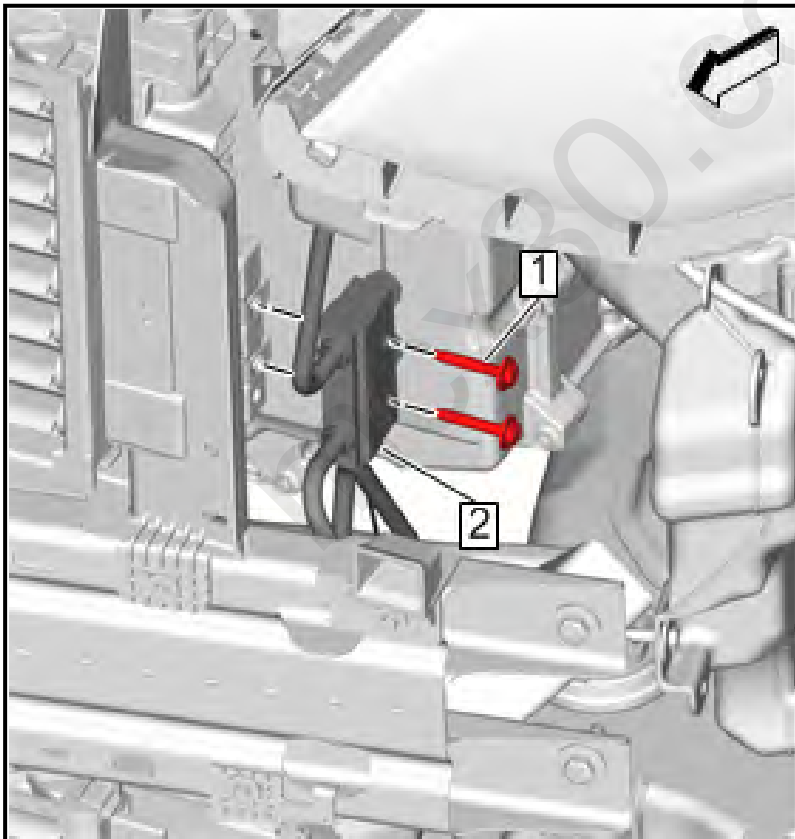
11.





Transmission Fluid Cooler Thermal Bypass Valve Clip (1) @ Engine Coolant Fan - Disengage [2x]

12.



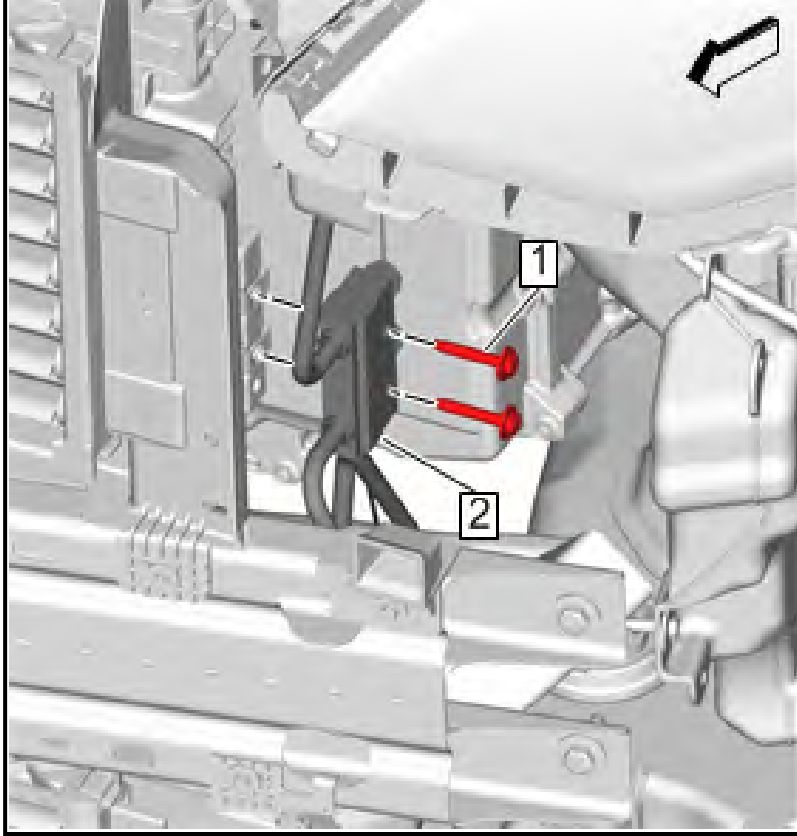
Transmission Fluid Cooler Thermal Bypass Valve Bolt (1) @ Radiator - Remove [2x]

13. Remove the transmission fluid cooler thermal bypass valve (2) from the vehicle.

Installation Procedure

1.

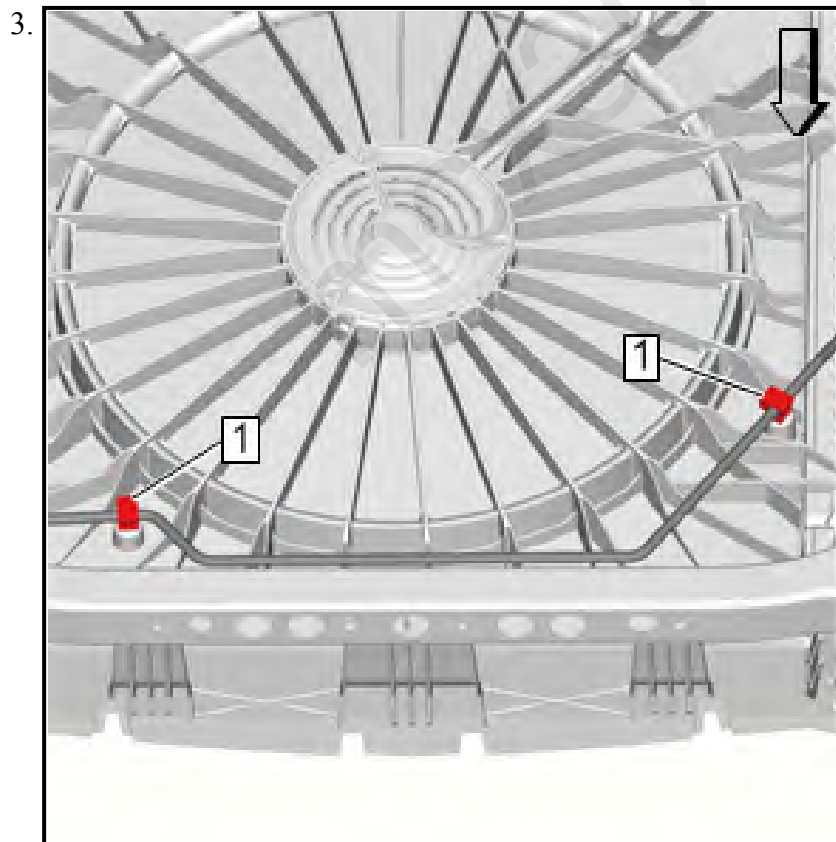




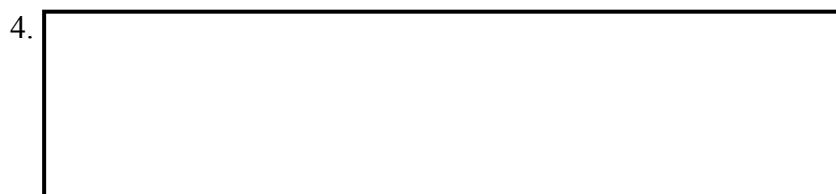
Install the transmission fluid cooler thermal bypass valve (2) to the vehicle.

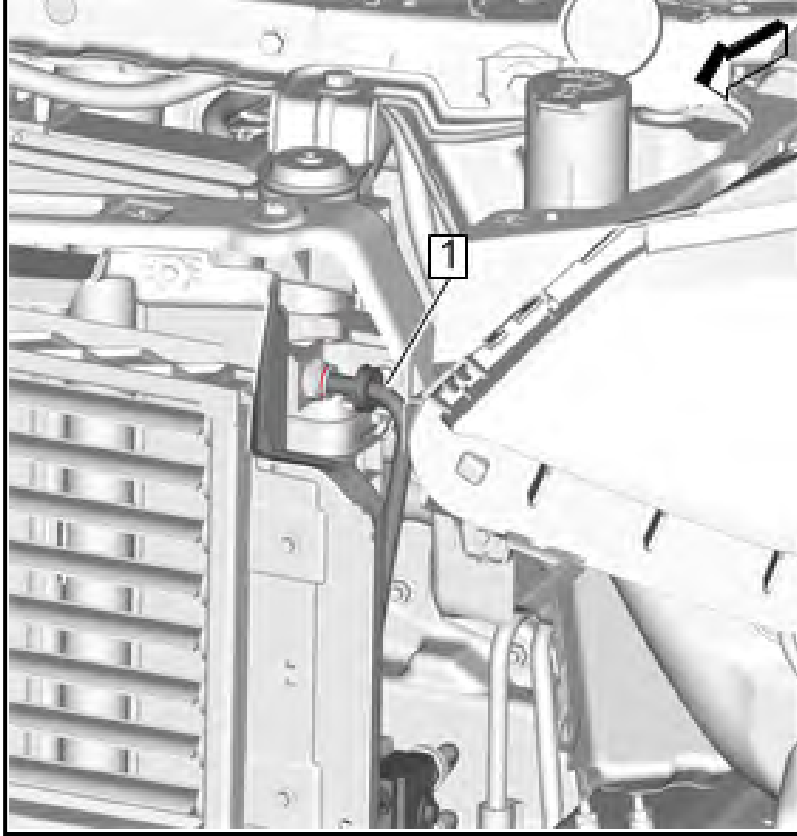
CAUTION: Refer to [Fastener Caution](#) .

2. Transmission Fluid Cooler Thermal Bypass Valve Bolt (1) @ Radiator - Install and tighten [2x] 9 N.m (80 lb in)



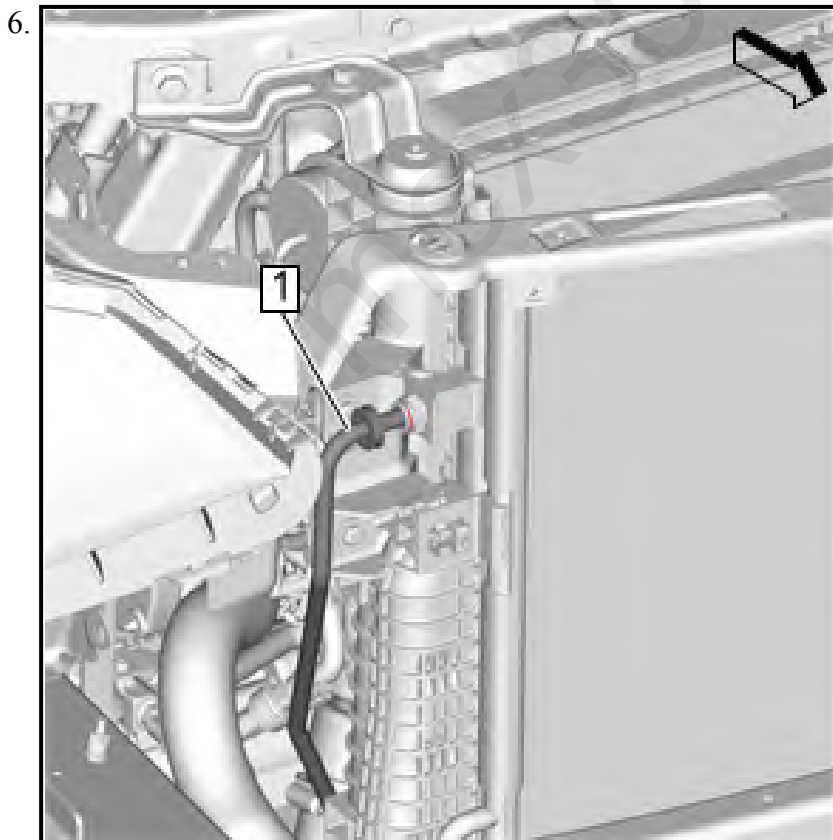
Transmission Fluid Cooler Thermal Bypass Valve Clip (1) @ Engine Coolant Fan - Engage [2x]





Remove the caps from the fittings and plugs from the holes before installing the transmission fluid cooler pipes.

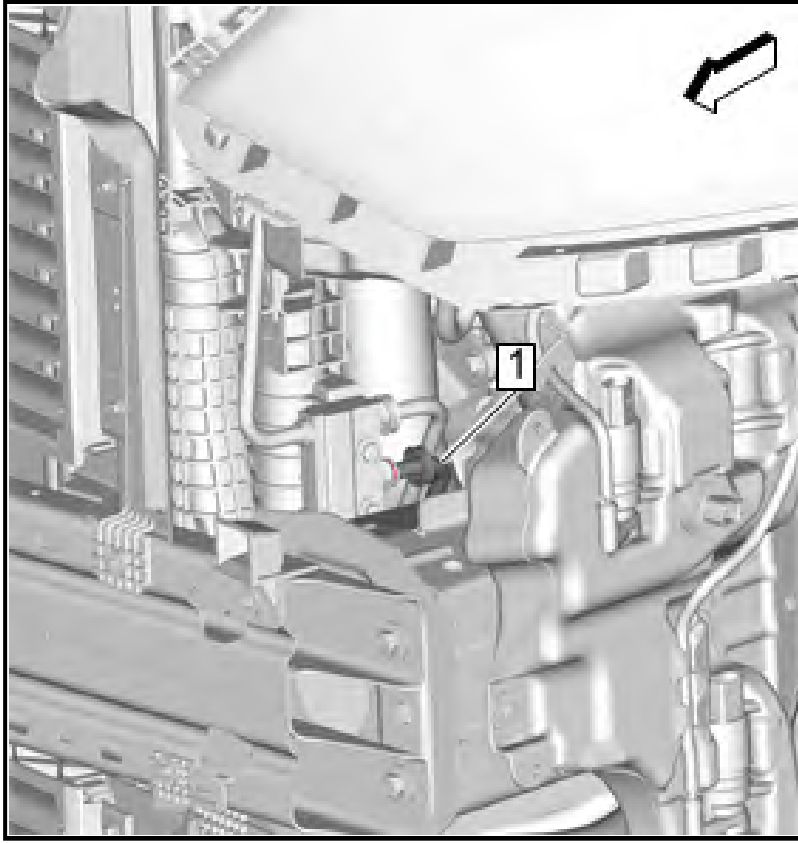
5. Transmission Fluid Cooler Thermal Bypass Valve (1) @ Transmission Fluid Auxiliary Cooler - Connect - **Transmission Fluid Cooler Hose/Pipe Quick-Connect Fitting Disconnection and Connection**



Remove the caps from the fittings and plugs from the holes before installing the transmission fluid cooler pipes.

7. Transmission Fluid Cooler Thermal Bypass Valve (1) @ Transmission Fluid Auxiliary Cooler - Connect - **Transmission Fluid Cooler Hose/Pipe Quick-Connect Fitting Disconnection and Connection**

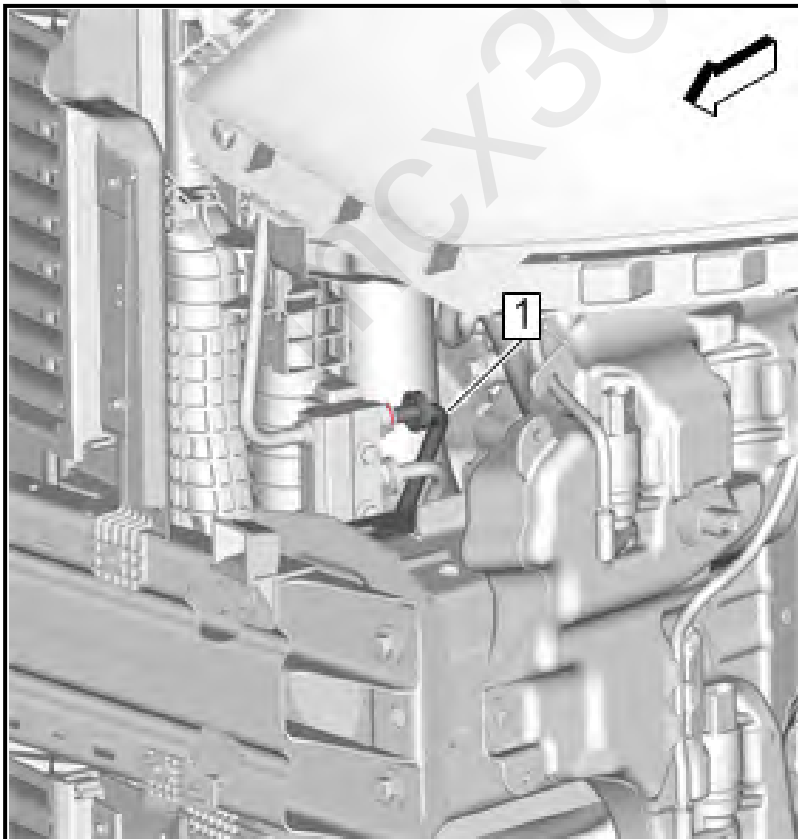
8.



Remove the caps from the fittings and plugs from the holes before installing the transmission fluid cooler pipes.

9. Transmission Fluid Cooler Inlet Pipe (1) @ Transmission Fluid Cooler Thermal Bypass Valve - Connect - [Transmission Fluid Cooler Hose/Pipe Quick-Connect Fitting Disconnection and Connection](#)

10.



Remove the caps from the fittings and plugs from the holes before installing the transmission fluid cooler pipes.

11. Transmission Fluid Cooler Outlet Pipe (1) @ Transmission Fluid Cooler Thermal Bypass Valve - Connect - [Transmission Fluid Cooler Hose/Pipe Quick-Connect Fitting Disconnection and Connection](#)

12. Install the front bumper fascia. [Front Bumper Fascia Replacement](#)
13. Fill the transmission to the proper level with NEW transmission fluid. [Transmission Fluid Level and Condition Check](#)
14. Inspect for transmission fluid leaks.
15. Remove the drain pan.

TRANSMISSION FLUID COOLER HOSE/PIPE QUICK-CONNECT FITTING DISCONNECTION AND CONNECTION

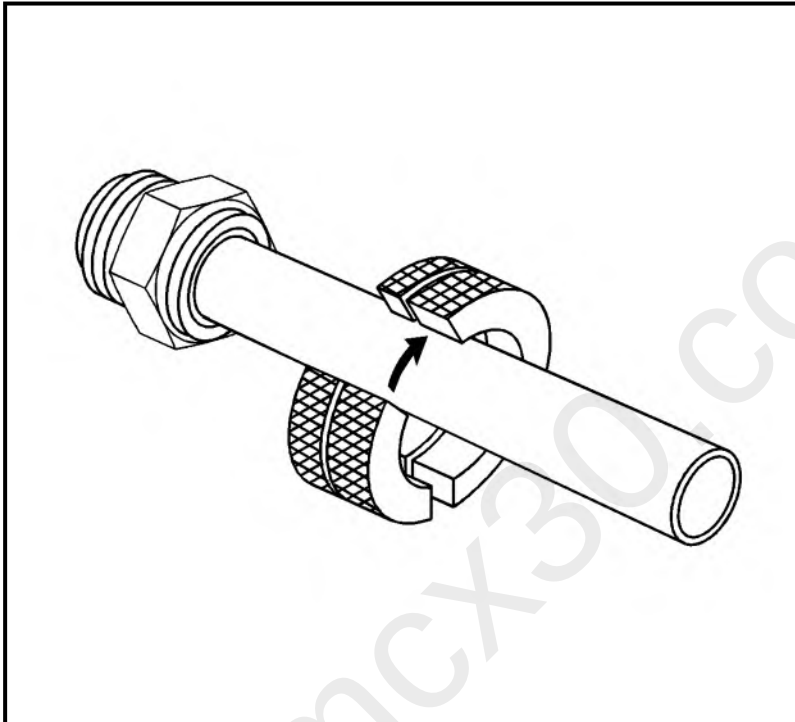
Special Tools

- **DT-28585** Universal Snap Ring Remover for the 5/8 inch Line
- **DT-41623-B** 3/8 inch Line Quick Release Tool

Removal Procedure

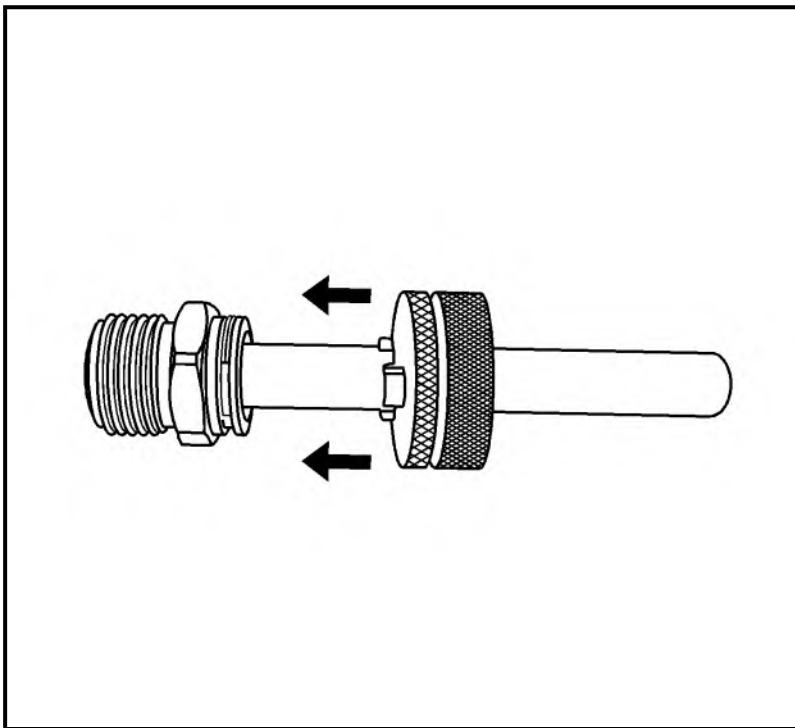
1. Remove the plastic cap from the quick connect fitting by pulling the cap back along the pipe.

2.



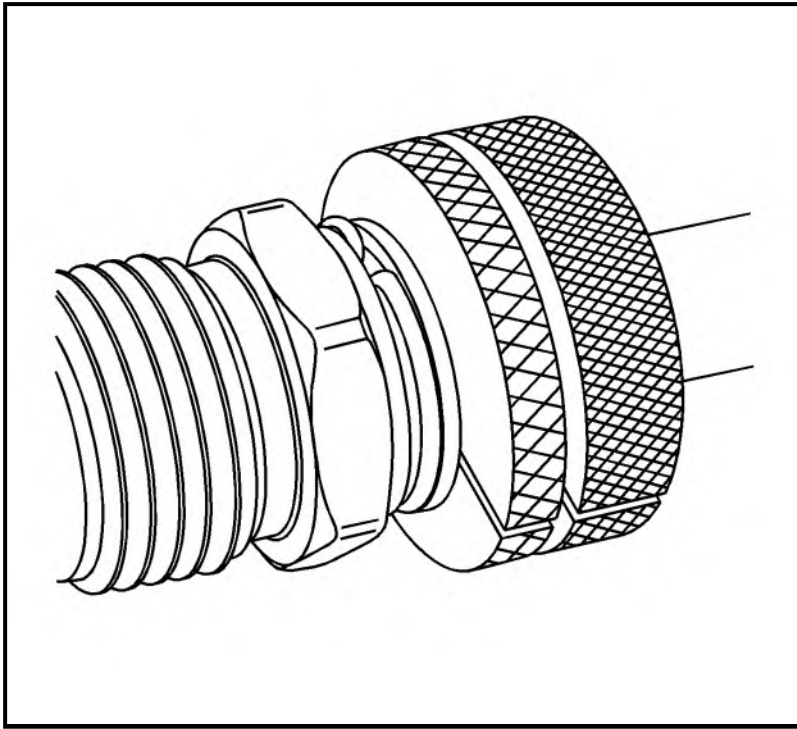
Install the **DT-41623-B** 3/8 inch line quick release tool onto the transmission oil cooler (TOC) pipe, or use the **DT-28585** universal snap ring remover for the 5/8 inch line.

3.



Slide the **DT-41623-B** 3/8 inch line quick release tool toward the TOC pipe fitting, or use the **DT-28585** universal snap ring remover for the 5/8 inch line.

4.

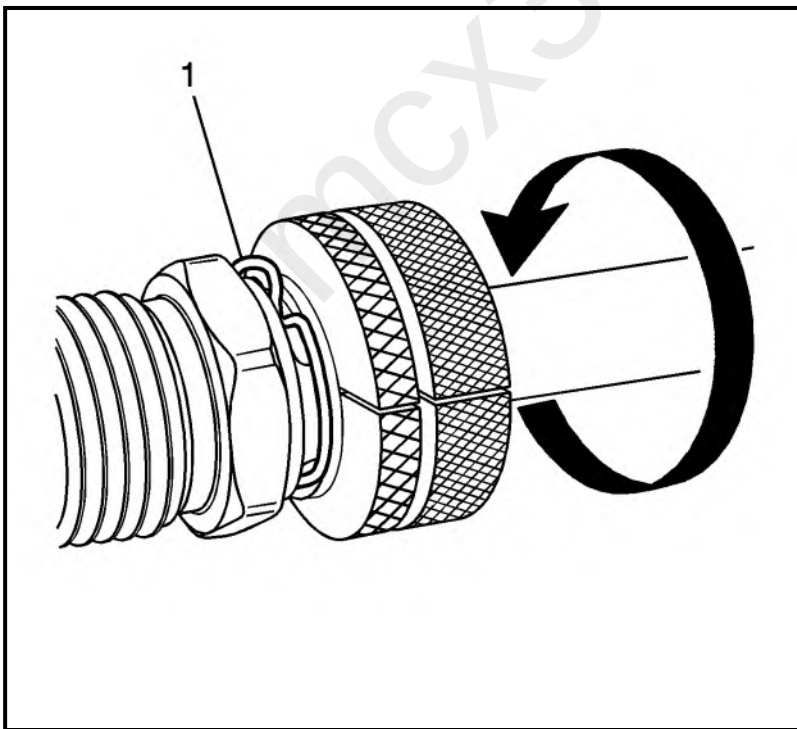


NOTE: Rotate the **DT-41623-B** 3/8 inch line quick release tool to engage the TOC pipe fitting's retainer slots.

The **DT-41623-B** 3/8 inch line quick release tool should be nearly flush with the fitting.

Connect the **DT-41623-B** 3/8 inch line quick release tool onto the TOC pipe fitting.

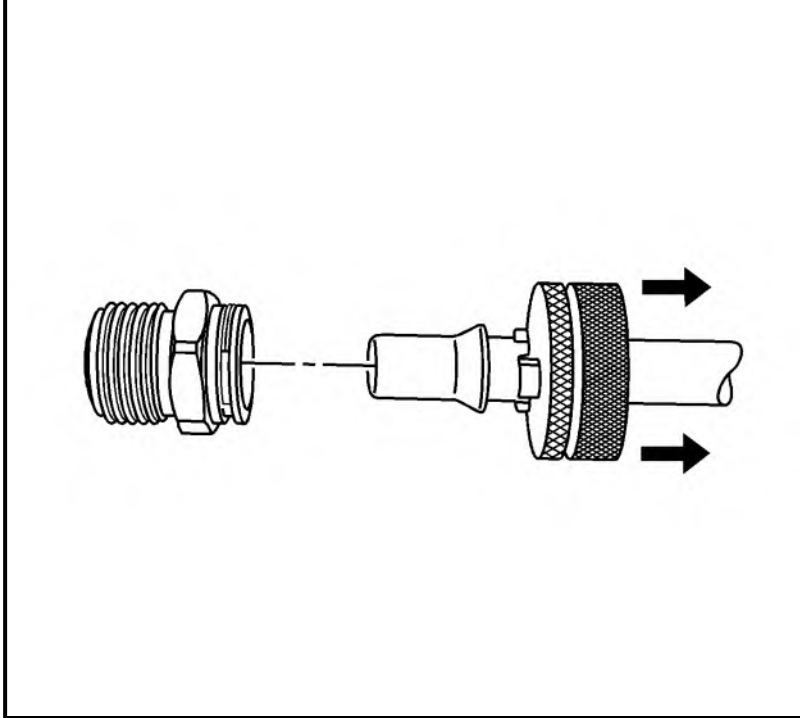
5.



Rotate the **DT-41623-B** 3/8 inch line quick release tool or use the **DT-28585** universal snap ring remover for the 5/8 inch line until the retainer clip (1) rises above the fitting retainer seat.

6.



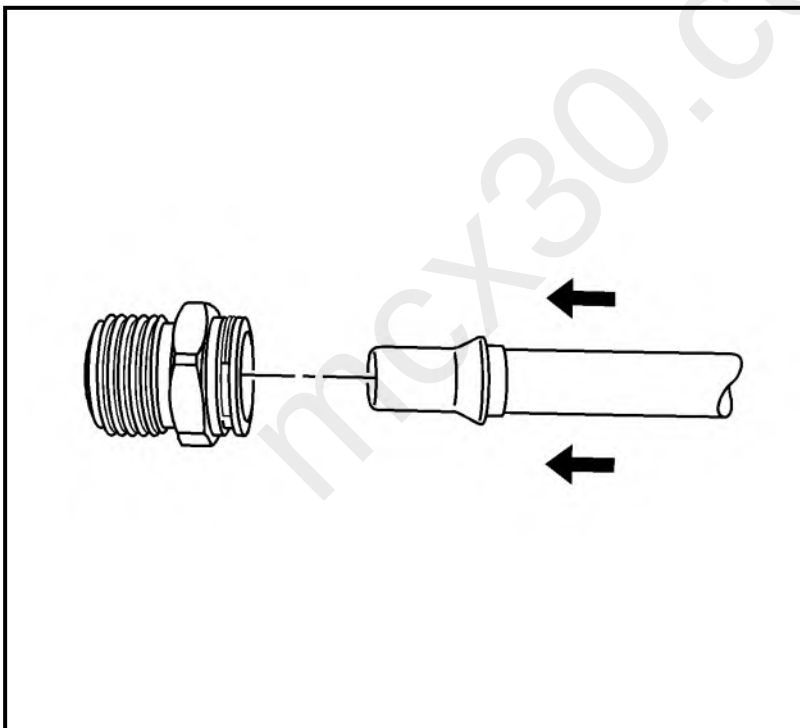


Pull back on the TOC pipe to disengage the pipe from the TOC pipe fitting.

7. Remove the **DT-41623-B** 3/8 inch line quick release tool or the **DT-28585** universal snap ring remover for the 5/8 inch line from the TOC pipe.

Installation Procedure

1.



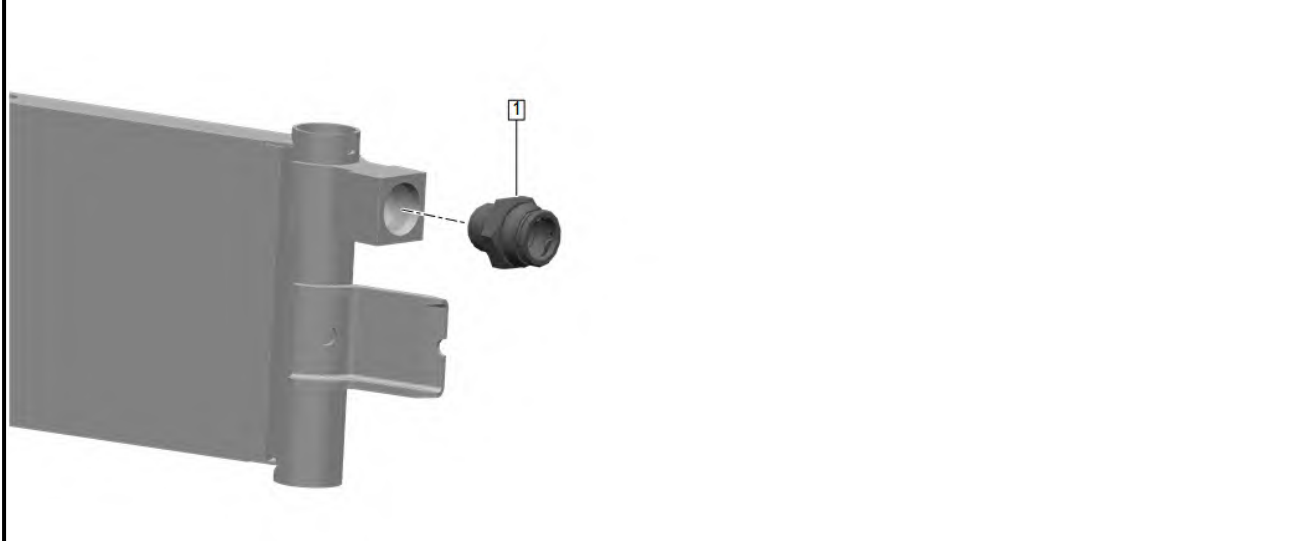
NOTE: Discard the TOC retaining clip and install a new retaining clip.

Install the TOC pipe into the TOC pipe fitting.

A distinct snap should be heard or felt when assembling the TOC pipe to the fitting.

2. Install the plastic cap onto the quick connect fitting. The plastic cap should snap onto fitting and spin freely by hand.
3. To ensure the cooler line is properly installed, give the cooler pipe a gentle pull.

TRANSMISSION FLUID COOLER PIPE FITTING REPLACEMENT

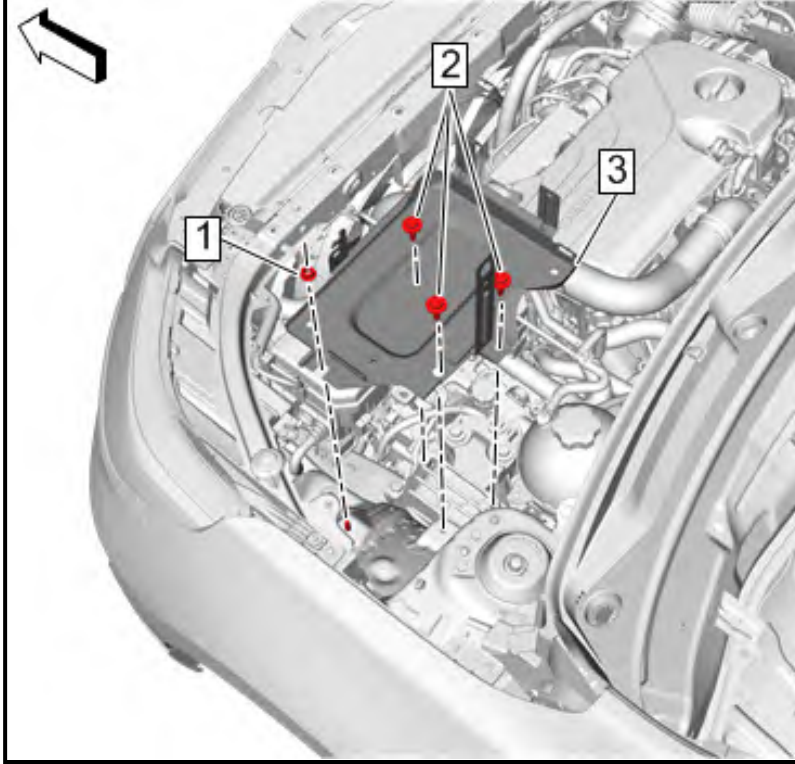


Callout	Component Name
Preliminary Procedures 1. Place a drain pan under the transmission fluid cooler pipe. 2. Remove the transmission fluid cooler pipe from the auxiliary oil cooler. Transmission Fluid Cooler Hose/Pipe Quick-Connect Fitting Disconnection and Connection 3. Cap the fittings and plug the holes when removing the transmission fluid cooler pipe from the auxiliary oil cooler.	
1	Transmission Fluid Cooler Pipe Connector NOTE: The correct thread engagement is critical, hand start the fitting. Cross-threaded fittings can achieve proper tightness and still leak. Procedure 1. Inspect the transmission fluid level. 2. Inspect for transmission fluid leaks. CAUTION: Refer to Component Fastener Tightening Caution . Tighten 20 N.m (15 lb ft)

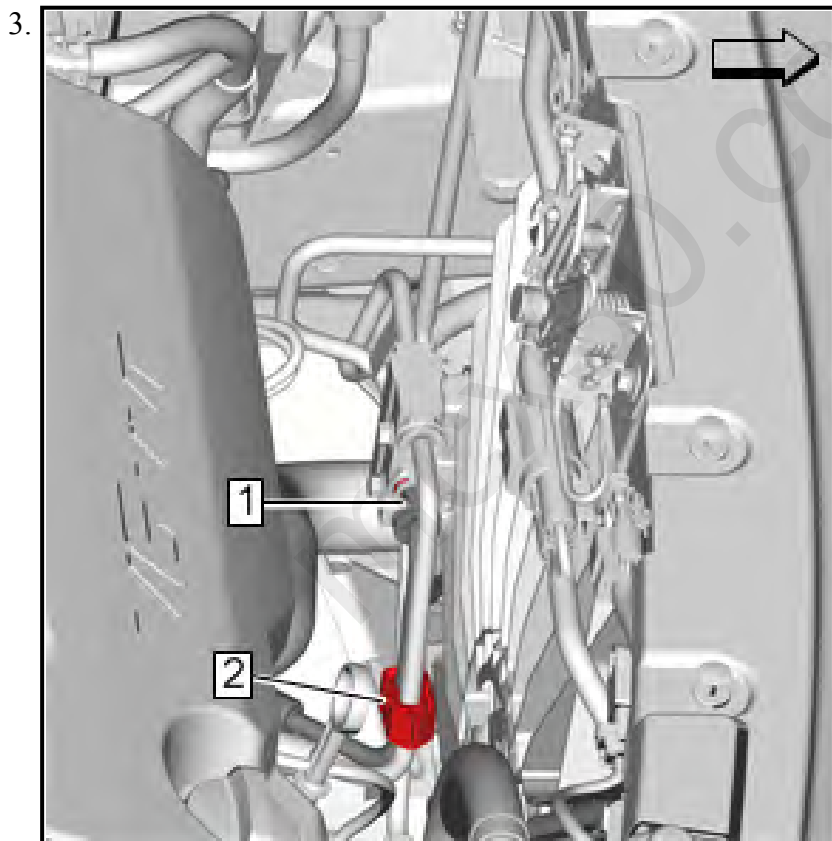
TRANSMISSION FLUID COOLER INLET PIPE REPLACEMENT (LFY WITH V08)

1. Place a drain pan under the vehicle.

2.



Battery Tray (3) - Remove - [Battery Tray Replacement](#)

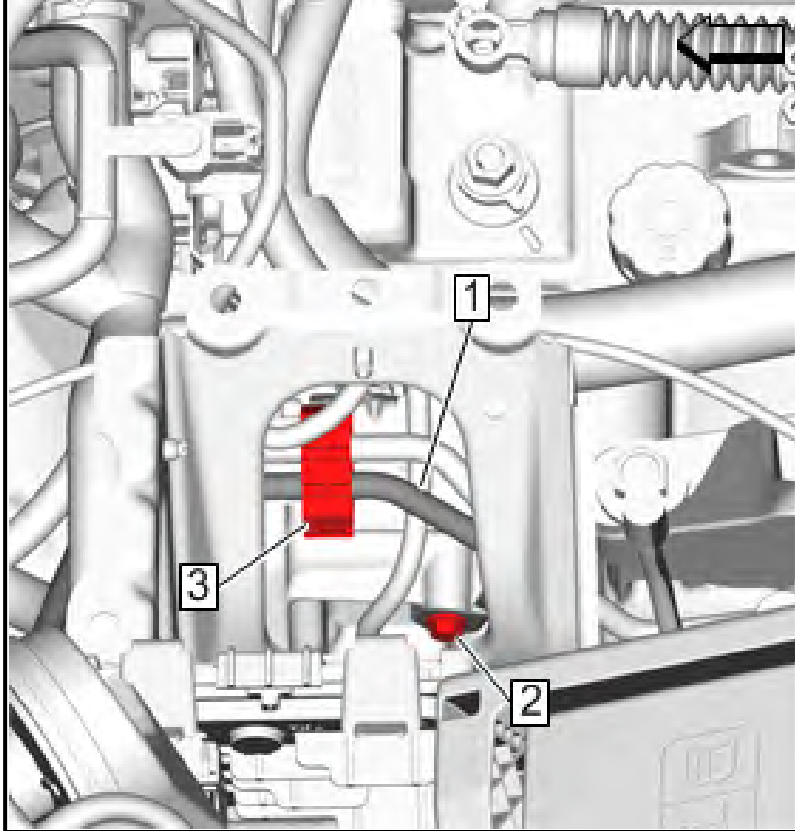


NOTE: Cover or plug all open transmission fluid cooler pipe connection points to help avoid any accidental contamination.

Transmission Fluid Cooler Inlet Pipe (1) @ Transmission Fluid Cooler Thermal Bypass Valve - Disconnect - [Transmission Fluid Cooler Hose/Pipe Quick-Connect Fitting Disconnection and Connection](#)

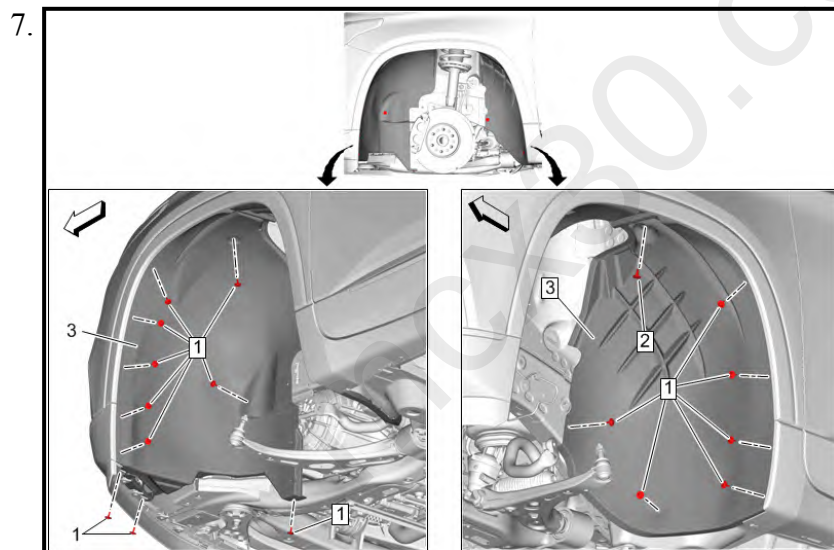
4. Transmission Fluid Cooler Inlet Pipe (1) @ Transmission Fluid Cooler Inlet Pipe Clip (2) - Unclip



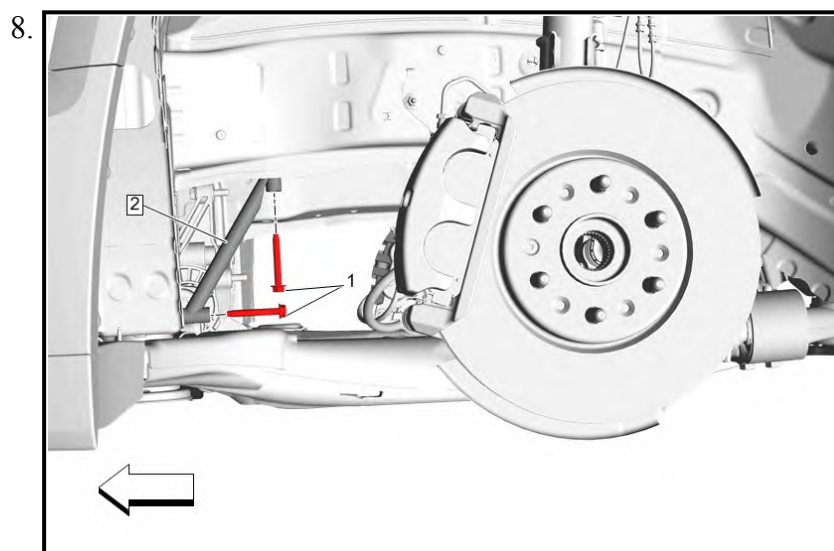


Transmission Fluid Cooler Inlet Pipe Bolt (2) @ Transmission - Remove

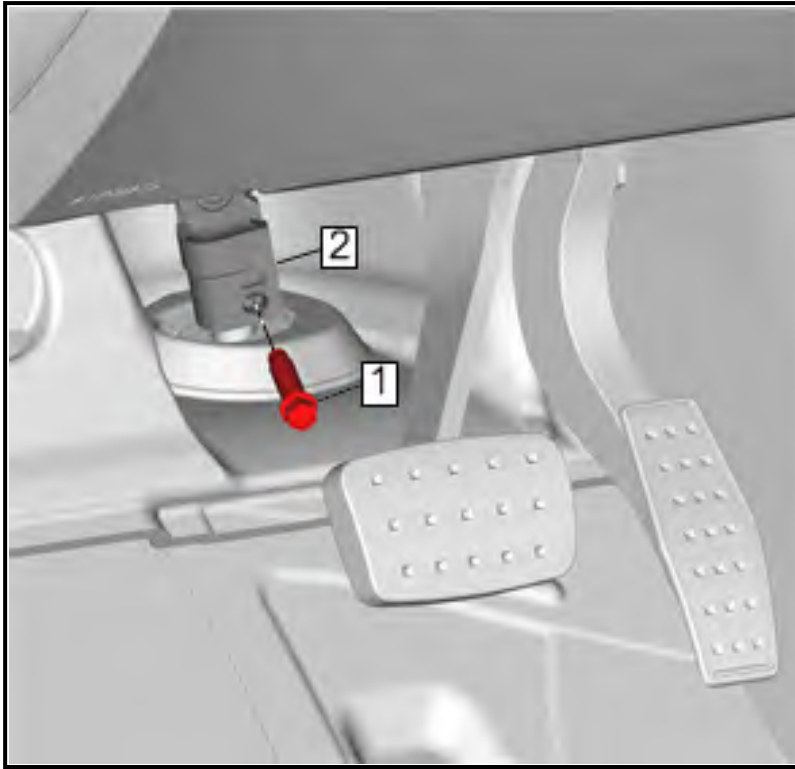
6. Transmission Fluid Cooler Inlet Pipe (1) @ Transmission Fluid Cooler Inlet Pipe Clip (3) - Unclip



Front Wheelhouse Liner-Left Side (3) - Remove - [Front Wheelhouse Liner Replacement](#)



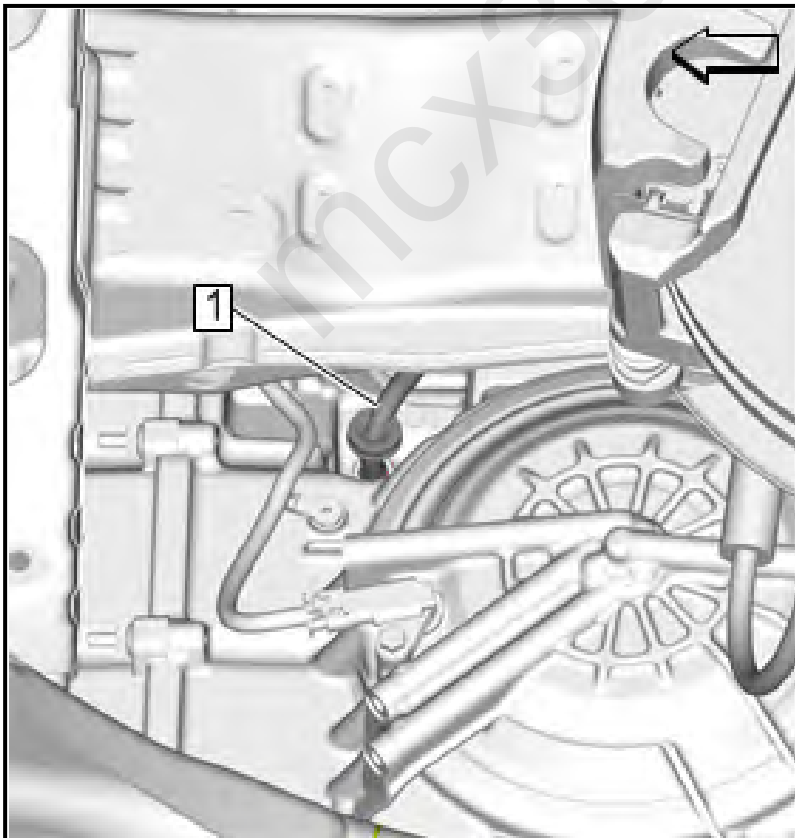
9.



Intermediate Steering Shaft (2) @ Steering Gear - Remove - [Intermediate Steering Shaft Replacement](#)

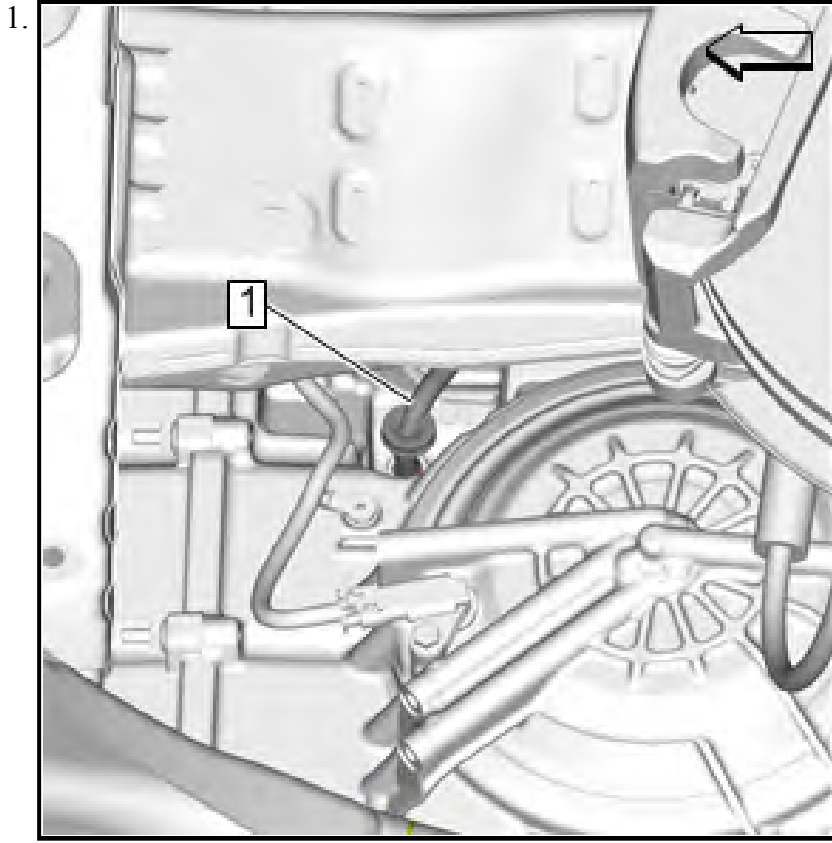
10. Lower left side of drivetrain and front suspension cradle to allow access to the transmission fluid cooler inlet pipe. [Drivetrain and Front Suspension Cradle Replacement \(All Wheel Drive\)](#).
[Drivetrain and Front Suspension Cradle Replacement \(Front Wheel Drive\)](#).

11.



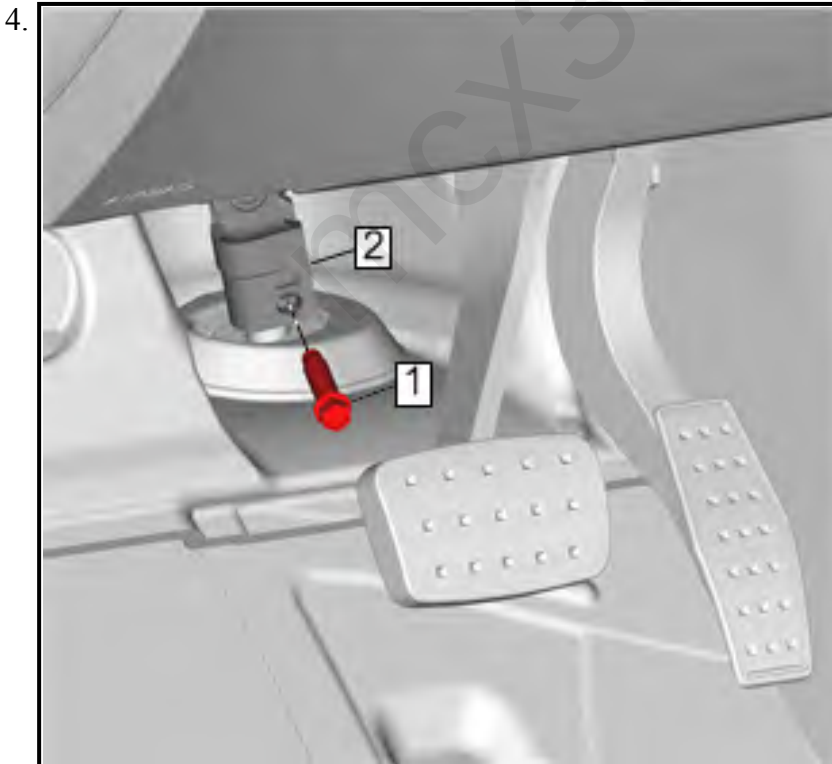
Transmission Fluid Cooler Inlet Pipe (1) @ Transmission - Remove - [Transmission Fluid Cooler Hose/Pipe Quick-Connect Fitting Disconnection and Connection](#)

12. Remove the transmission fluid cooler inlet pipe (1) from vehicle.



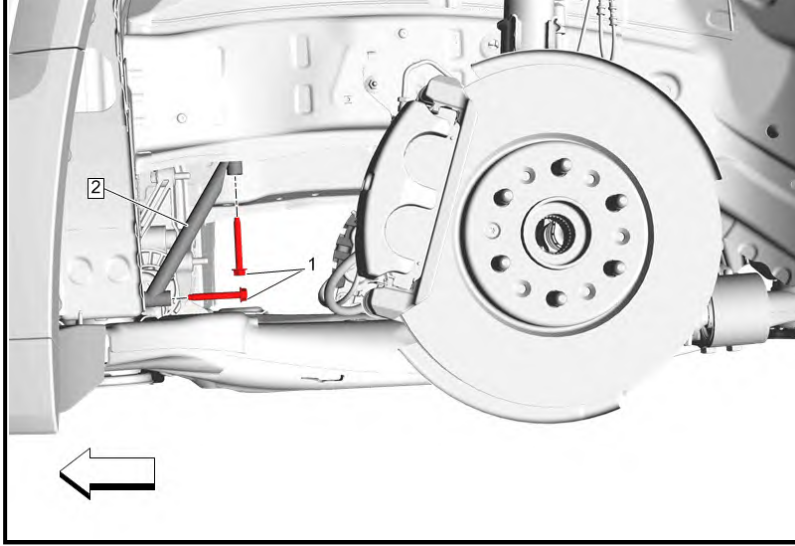
Install the transmission fluid cooler inlet (1) to vehicle.

2. Transmission Fluid Cooler Inlet Pipe (1) @ Transmission - Install - [Transmission Fluid Cooler Hose/Pipe Quick-Connect Fitting Disconnection and Connection](#)
3. Raise and install left side of drivetrain and front suspension cradle. [Drivetrain and Front Suspension Cradle Replacement \(All Wheel Drive\)](#), [Drivetrain and Front Suspension Cradle Replacement \(Front Wheel Drive\)](#)

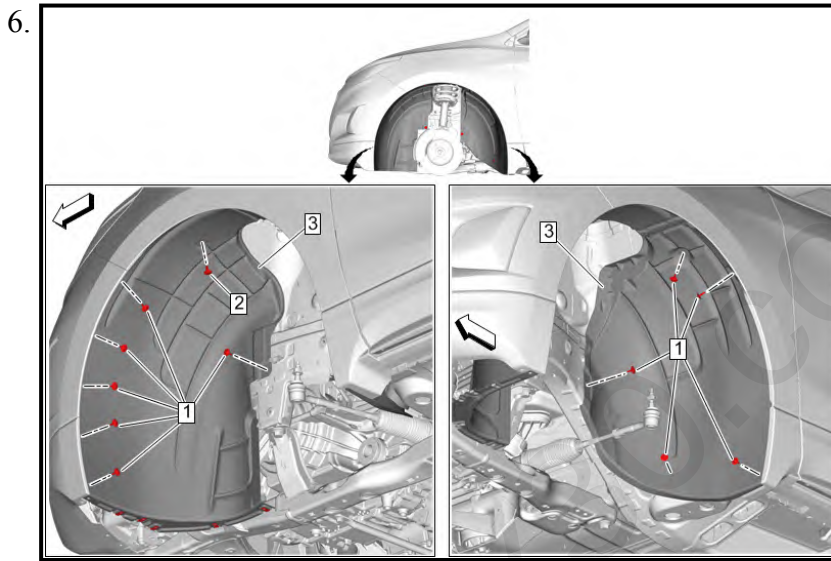


Intermediate Steering Shaft (2) @ Steering Gear - Install - [Intermediate Steering Shaft Replacement](#)

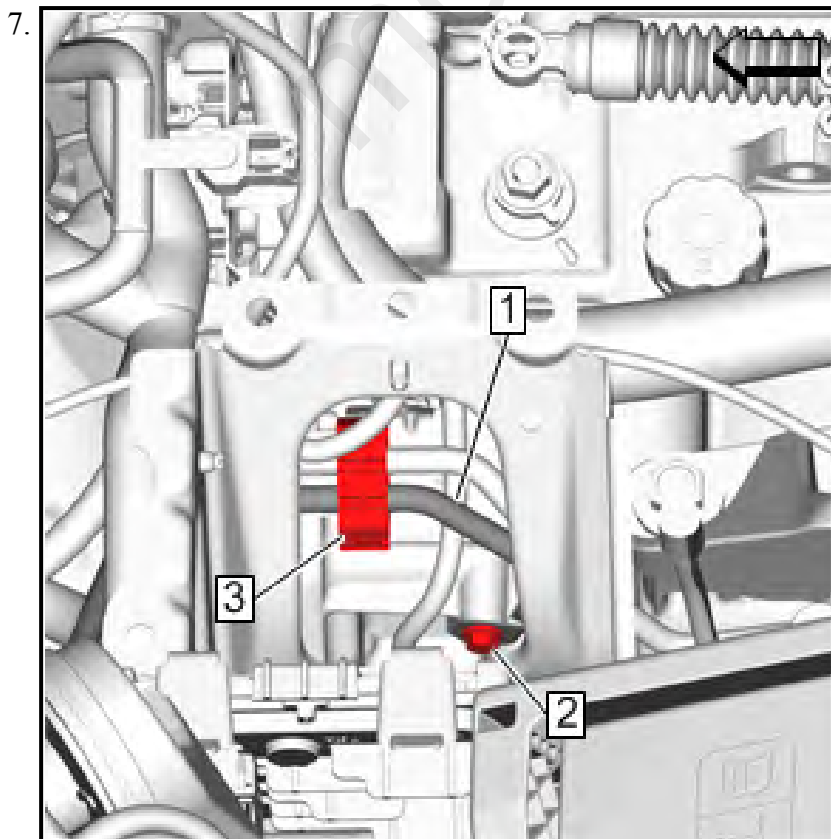




Front End Sheet Metal Diagonal Brace-Left Side (3) - Install - [Front End Sheet Metal Diagonal Brace Replacement - Left Side](#)



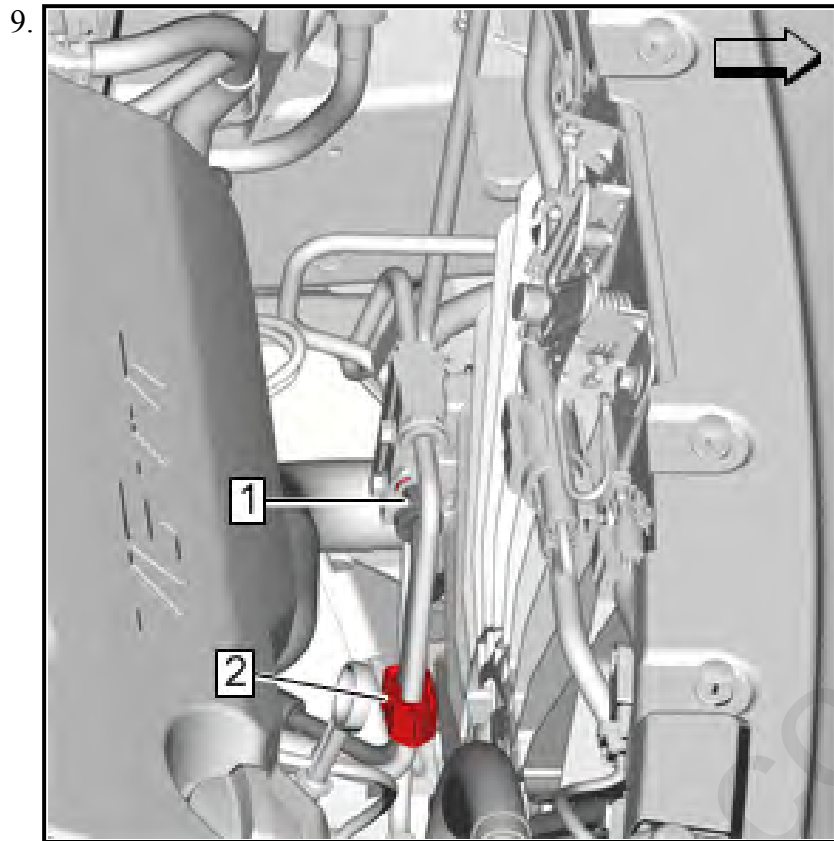
Front Wheelhouse Liner-Left Side (3) - Install - [Front Wheelhouse Liner Replacement](#)



Transmission Fluid Cooler Inlet Pipe (1) @ Transmission Fluid Cooler Inlet Pipe Clip (3) - Clip

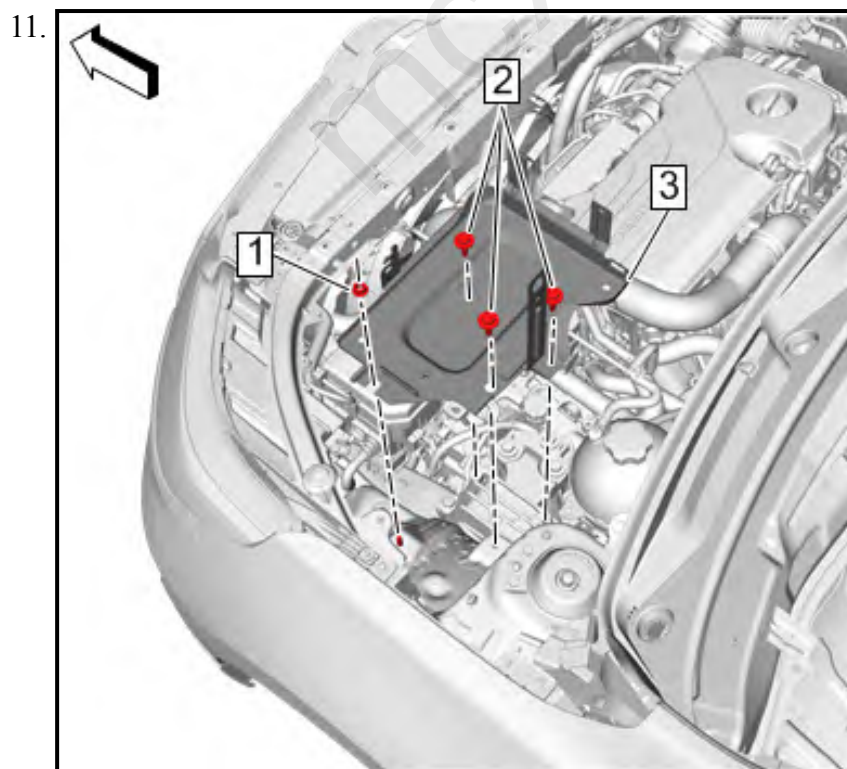
CAUTION: Refer to [Fastener Caution](#) .

8. Transmission Fluid Cooler Inlet Pipe Bolt (2) @ Transmission - Install and tighten 9 N.m (80 lb in)



Transmission Fluid Cooler Inlet Pipe (1) @ Transmission Fluid Cooler Thermal Bypass Valve -
Install - [Transmission Fluid Cooler Hose/Pipe Quick-Connect Fitting Disconnection and Connection](#)

10. Transmission Fluid Cooler Inlet Pipe (1) @ Transmission Fluid Cooler Inlet Pipe Clip (2) - Clip



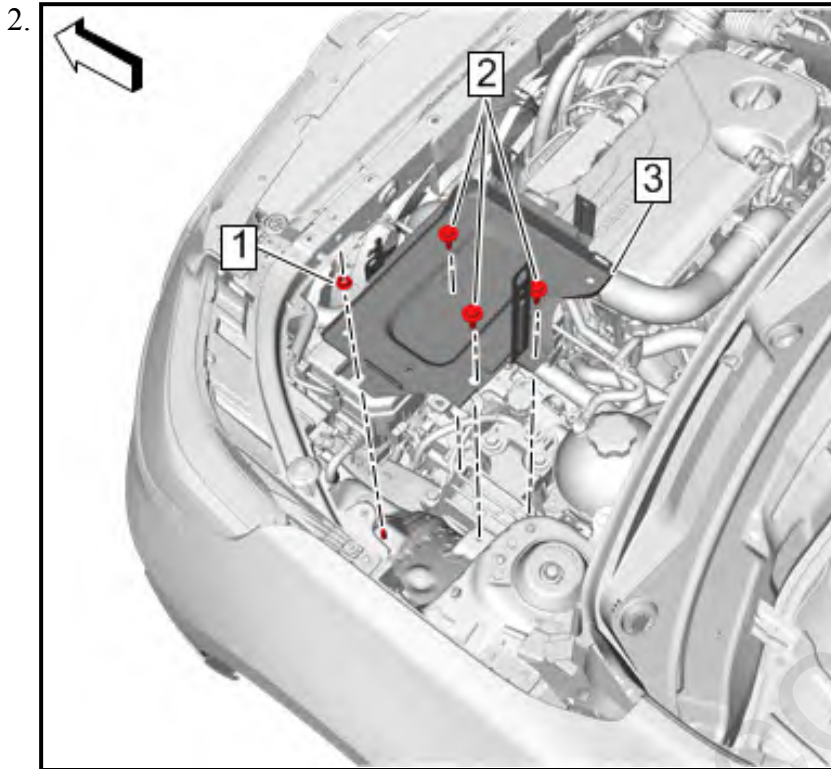
Battery Tray (3) - Install - [Battery Tray Replacement](#)

12. Remove the drain pan.

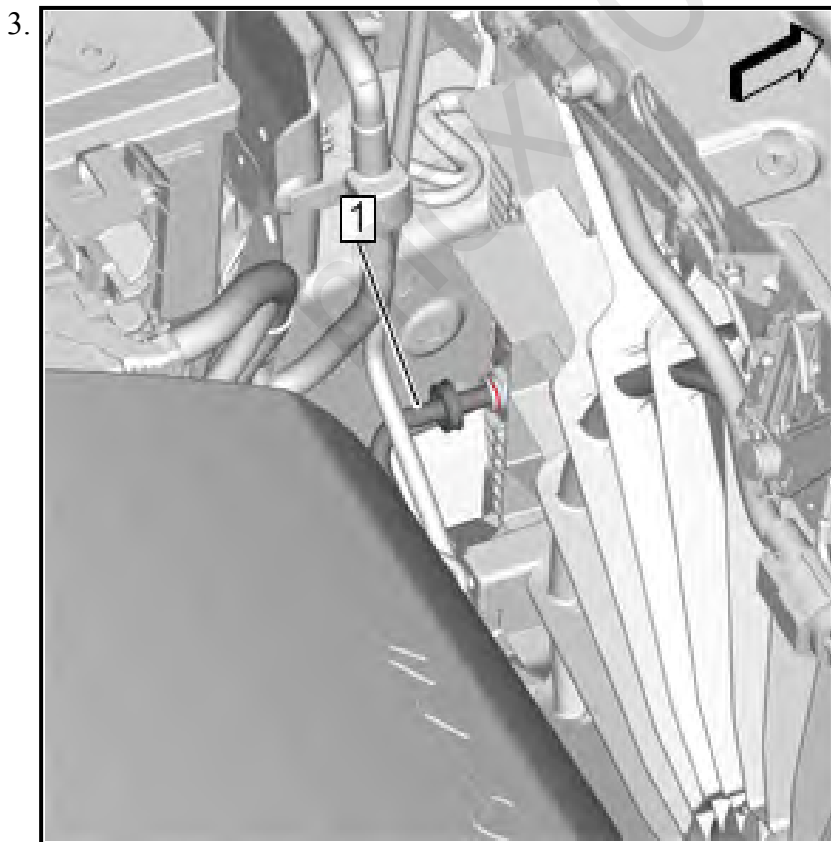
13. Fill and inspect the transmission fluid level. [Transmission Fluid Level and Condition Check](#)
14. Inspect for transmission fluid leaks.

TRANSMISSION FLUID COOLER INLET PIPE REPLACEMENT (LFY WITHOUT V08)

1. Place a drain pan under the vehicle.

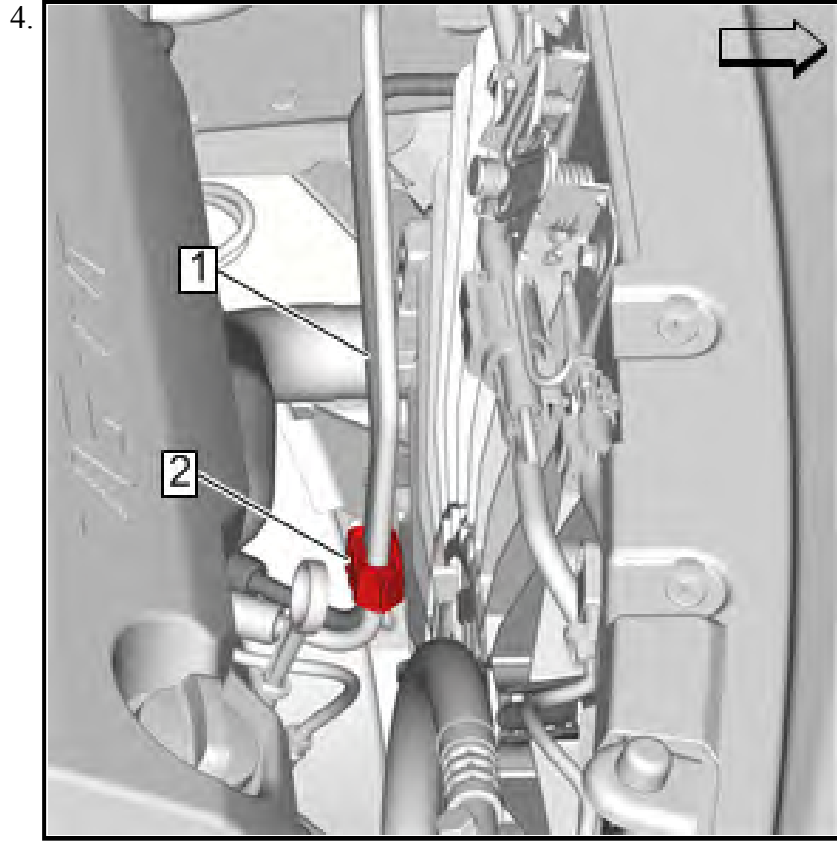


Battery Tray (3) - Remove - [Battery Tray Replacement](#)

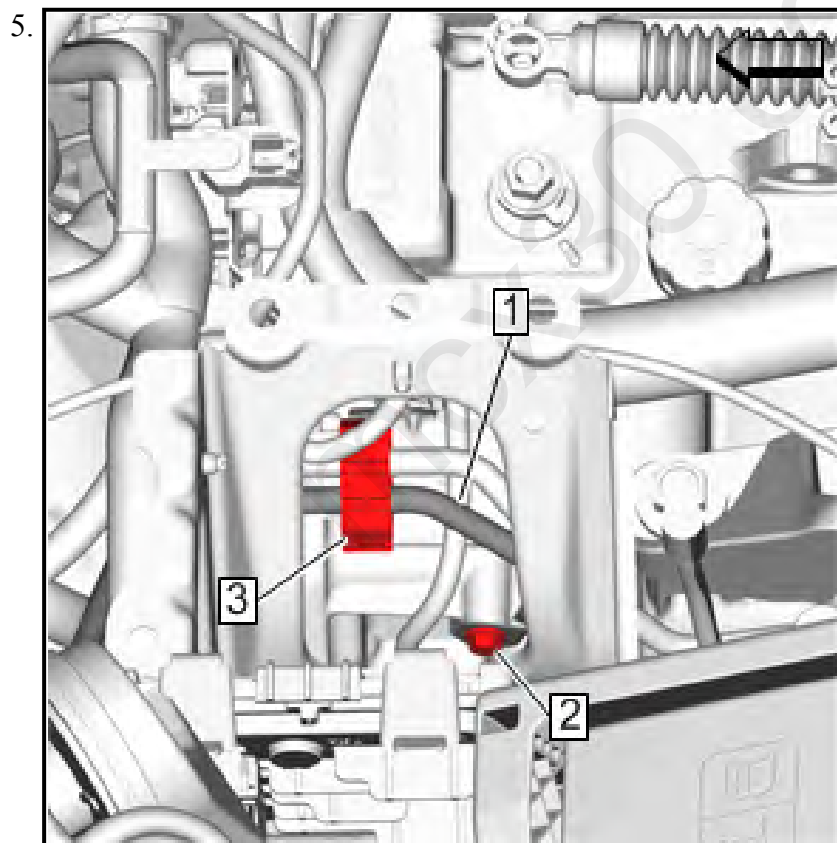


NOTE: Cover or plug all open transmission fluid cooler pipe connection points to help avoid any accidental contamination.

Transmission Fluid Cooler Inlet Pipe (1) @ Radiator - Disconnect - [Transmission Fluid Cooler Hose/Pipe Quick-Connect Fitting Disconnection and Connection](#)



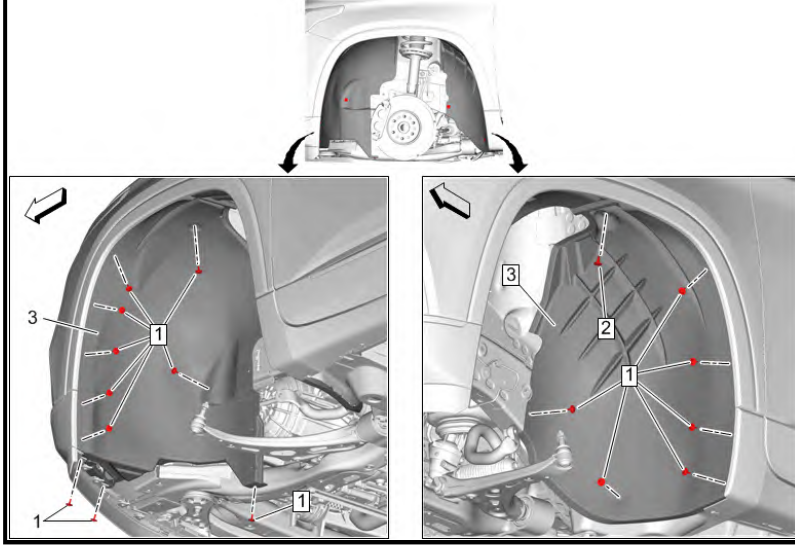
Transmission Fluid Cooler Inlet Pipe (1) @ Transmission Fluid Cooler Inlet Pipe Clip (2) - Unclip



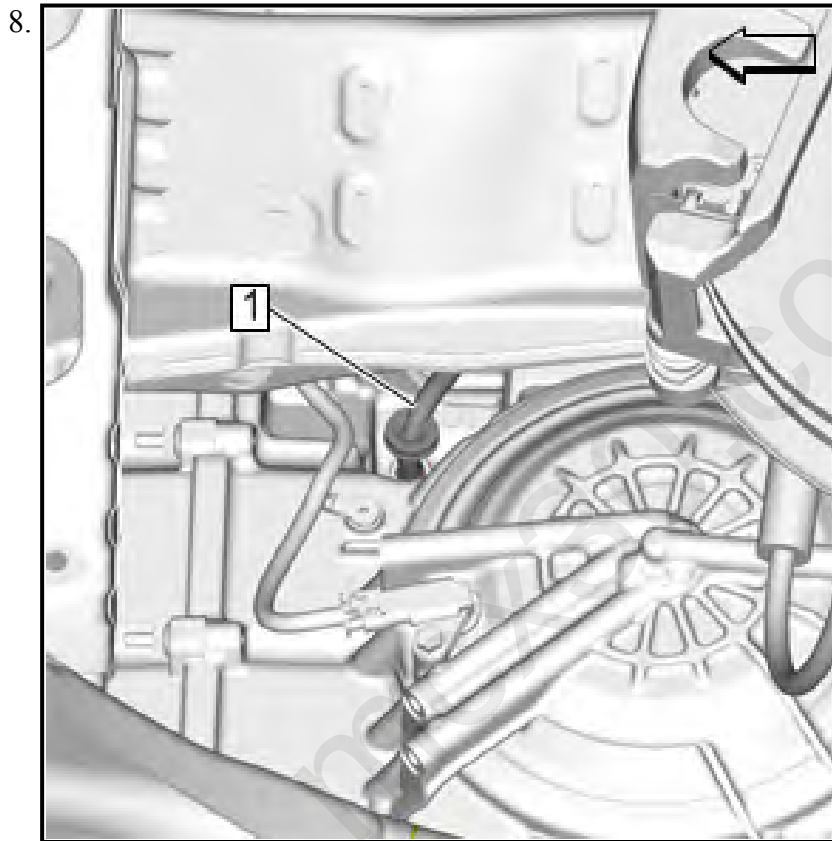
Transmission Fluid Cooler Inlet Pipe Bolt (2) @ Transmission - Remove

6. Transmission Fluid Cooler Inlet Pipe (1) @ Transmission Fluid Cooler Inlet Pipe Clip (3) - Unclip





Front Wheelhouse Liner-Left Side (3) - Remove - [Front Wheelhouse Liner Replacement](#)



Transmission Fluid Cooler Inlet Pipe (1) @ Transmission - Remove - [Transmission Fluid Cooler Hose/Pipe Quick-Connect Fitting Disconnection and Connection](#)

9. Remove the transmission fluid cooler inlet pipe (1) from vehicle.

Installation Procedure





Install the transmission fluid cooler inlet (1) to vehicle.

Transmission Fluid Cooler Inlet Pipe (1) @ Transmission - Install - **Trans Hose/Pipe Quick-Connect Fitting Disconnection and Connection**

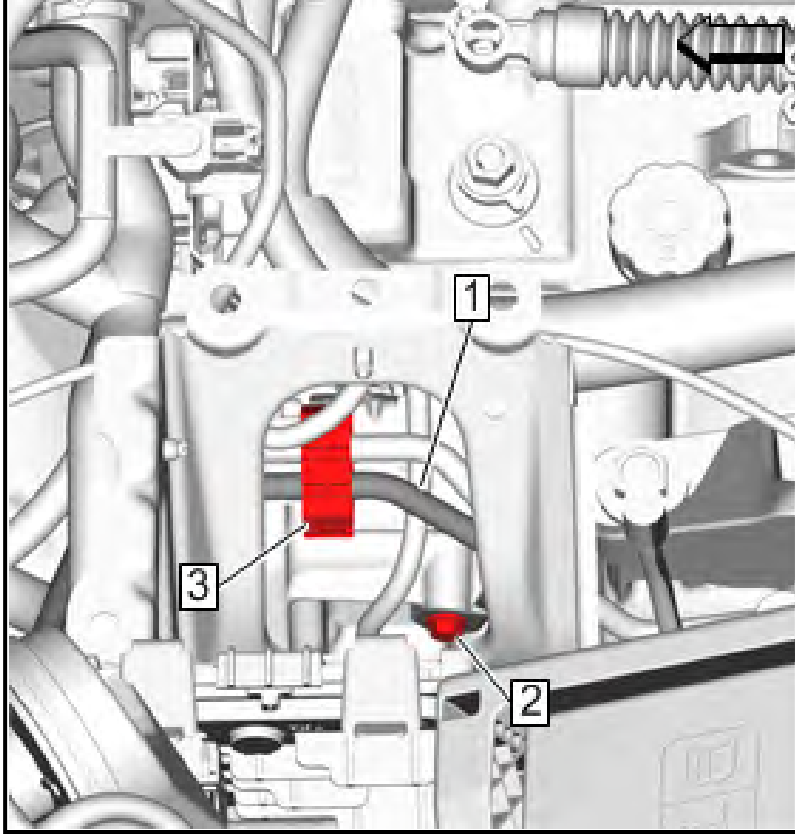


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Front Wheelhouse Liner-Left Side (3) - Install - Front Wheelhouse Liner Replacement

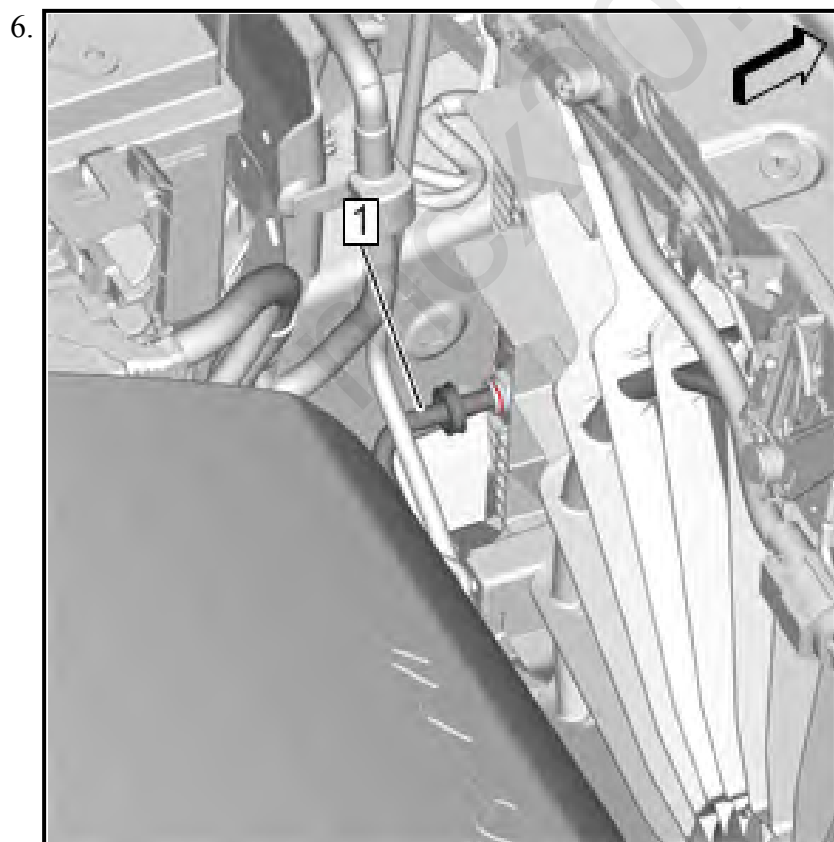
- | Case No. | Case Name | Case Type | Case Status | Case Date | Case Time | Case Location | Case Description | Case Notes | Case Comments |
|----------|---------------|-----------|-------------|------------|-----------|---------------|---|--|--|
| 1 | John Doe | Medical | Open | 2023-01-01 | 10:00 | Room 101 | John Doe, 45 years old, male, presented with chest pain and shortness of breath. Vital signs: BP 120/80, HR 90, RR 20, SpO2 98%. | ECG: Sinus tachycardia. CXR: Clear lungs. Bloodwork: Troponin negative, BNP 100. | Diagnosis: Anxiety disorder. Treatment: Lorazepam 1mg PO. Discharge: Home with follow-up in 2 weeks. |
| 2 | Jane Smith | Medical | Closed | 2023-01-02 | 11:30 | Room 202 | Jane Smith, 60 years old, female, presented with abdominal pain and nausea. Vital signs: BP 110/70, HR 80, RR 18, SpO2 96%. | ECG: Normal. CXR: No free air. Bloodwork: WBC 12,000, CRP 10. | Diagnosis: Appendicitis. Treatment: Appendectomy. Discharge: Home with follow-up in 1 week. |
| 3 | Michael Brown | Medical | Open | 2023-01-03 | 14:00 | Room 303 | Michael Brown, 30 years old, male, presented with fever and cough. Vital signs: BP 130/90, HR 100, RR 22, SpO2 95%. | ECG: Sinus tachycardia. CXR: Consolidation in the right lung. Bloodwork: WBC 15,000, CRP 20. | Diagnosis: Bacterial pneumonia. Treatment: Amoxicillin 500mg TID. Discharge: Home with follow-up in 1 week. |
| 4 | Sarah Johnson | Medical | Closed | 2023-01-04 | 16:00 | Room 404 | Sarah Johnson, 55 years old, female, presented with dizziness and lightheadedness. Vital signs: BP 90/60, HR 60, RR 16, SpO2 98%. | ECG: Sinus bradycardia. CXR: No abnormalities. Bloodwork: WBC 8,000, CRP 5. | Diagnosis: Hypotension. Treatment: IV fluids. Discharge: Home with follow-up in 1 week. |
| 5 | David Wilson | Medical | Open | 2023-01-05 | 18:00 | Room 505 | David Wilson, 70 years old, male, presented with confusion and disorientation. Vital signs: BP 140/100, HR 110, RR 24, SpO2 94%. | ECG: Sinus tachycardia. CXR: No abnormalities. Bloodwork: WBC 18,000, CRP 30. | Diagnosis: Sepsis. Treatment: IV antibiotics. Discharge: ICU for further monitoring. |
| 6 | Emily Davis | Medical | Closed | 2023-01-06 | 19:00 | Room 606 | Emily Davis, 25 years old, female, presented with severe headache and vomiting. Vital signs: BP 150/100, HR 120, RR 20, SpO2 97%. | ECG: Sinus tachycardia. CXR: No abnormalities. Bloodwork: WBC 10,000, CRP 15. | Diagnosis: Migraine. Treatment: IV painkillers. Discharge: Home with follow-up in 1 week. |
| 7 | Robert Miller | Medical | Open | 2023-01-07 | 20:00 | Room 707 | Robert Miller, 65 years old, male, presented with chest pain and sweating. Vital signs: BP 160/110, HR 130, RR 24, SpO2 93%. | ECG: ST-segment elevation. CXR: No abnormalities. Bloodwork: Troponin positive, BNP 200. | Diagnosis: Myocardial infarction. Treatment: Percutaneous coronary intervention. Discharge: Home with follow-up in 1 week. |
| 8 | Lisa Anderson | Medical | Closed | 2023-01-08 | 21:00 | Room 808 | Lisa Anderson, 40 years old, female, presented with severe abdominal pain and diarrhea. Vital signs: BP 100/70, HR 90, RR 18, SpO2 96%. | ECG: Normal. CXR: No free air. Bloodwork: WBC 14,000, CRP 18. | Diagnosis: Gastroenteritis. Treatment: IV fluids. Discharge: Home with follow-up in 1 week. |
| 9 | James Taylor | Medical | Open | 2023-01-09 | 22:00 | Room 909 | James Taylor, 50 years old, male, presented with fever and chills. Vital signs: BP 120/80, HR 100, RR 22, SpO2 95%. | ECG: Sinus tachycardia. CXR: Consolidation in the left lung. Bloodwork: WBC 16,000, CRP 25. | Diagnosis: Bacterial pneumonia. Treatment: Amoxicillin 500mg TID. Discharge: Home with follow-up in 1 week. |
| 10 | Maria Garcia | Medical | Closed | 2023-01-10 | 23:00 | Room 1010 | Maria Garcia, 35 years old, female, presented with severe headache and vomiting. Vital signs: BP 150/100, HR 120, RR 20, SpO2 97%. | ECG: Sinus tachycardia. CXR: No abnormalities. Bloodwork: WBC 10,000, CRP 15. | Diagnosis: Migraine. Treatment: IV painkillers. Discharge: Home with follow-up in 1 week. |



Transmission Fluid Cooler Inlet Pipe (1) @ Transmission Fluid Cooler Inlet Pipe Clip (3) - Clip

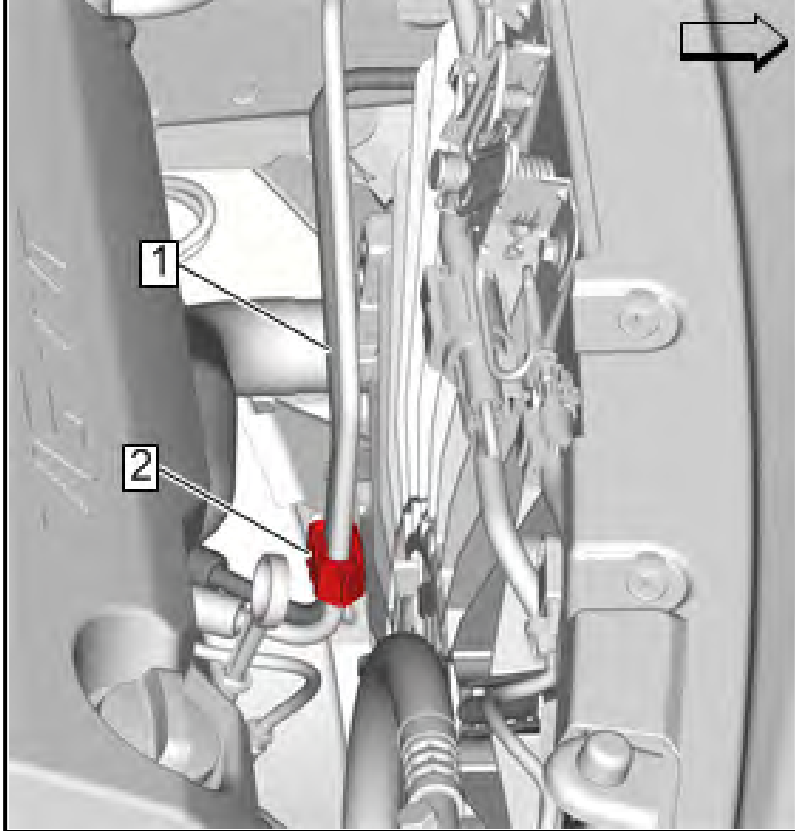
CAUTION: Refer to [Fastener Caution](#) .

5. Transmission Fluid Cooler Inlet Pipe Bolt (2) @ Transmission - Install and tighten 22 N.m (16 lb ft)

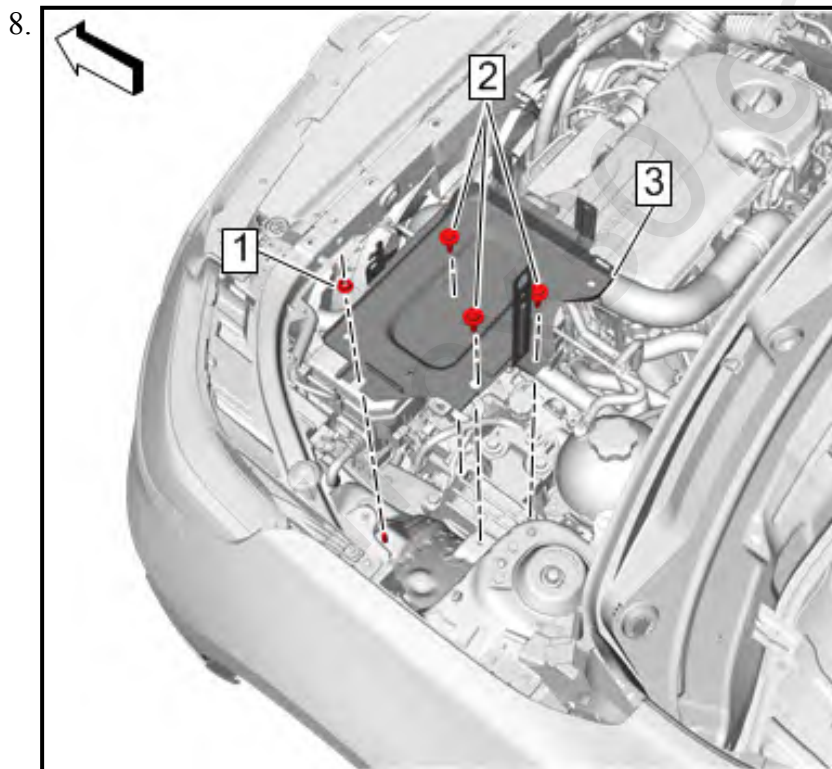


Transmission Fluid Cooler Inlet Pipe (1) @ Radiator - Install - [Transmission Fluid Cooler Hose/Pipe Quick-Connect Fitting Disconnection and Connection](#)





Transmission Fluid Cooler Inlet Pipe (1) @ Transmission Fluid Cooler Inlet Pipe Clip (2) - Clip



Battery Tray (3) - Install - [Battery Tray Replacement](#)

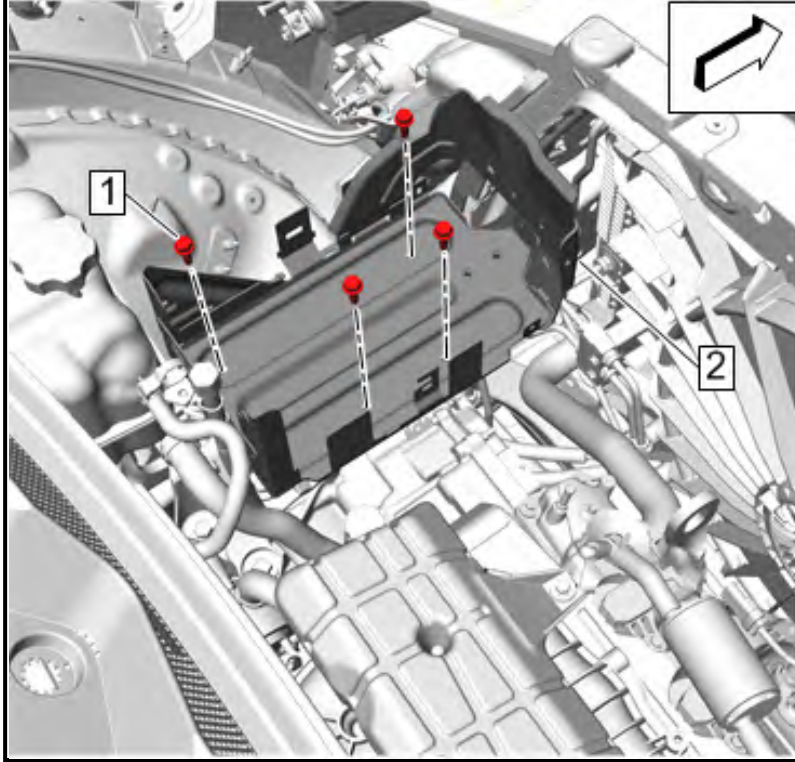
9. Remove the drain pan.
10. Fill and inspect the transmission fluid level. [Transmission Fluid Level and Condition Check](#)
11. Inspect for transmission fluid leaks.

TRANSMISSION FLUID COOLER INLET PIPE REPLACEMENT (LTG)

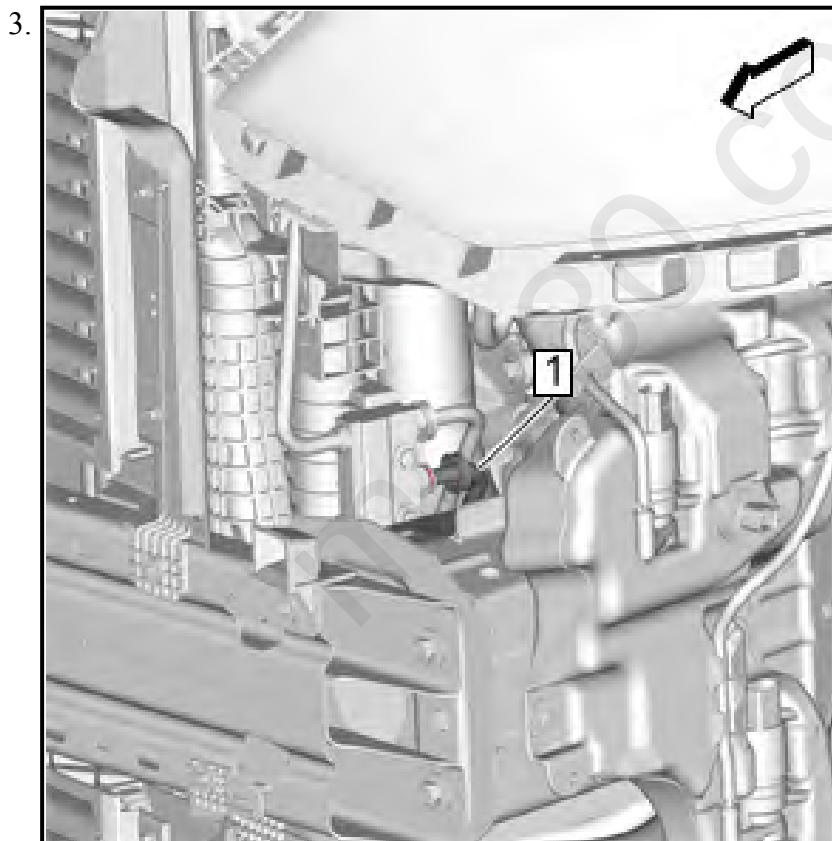
Removal Procedure

1. Place a drain pan under the vehicle.

2.



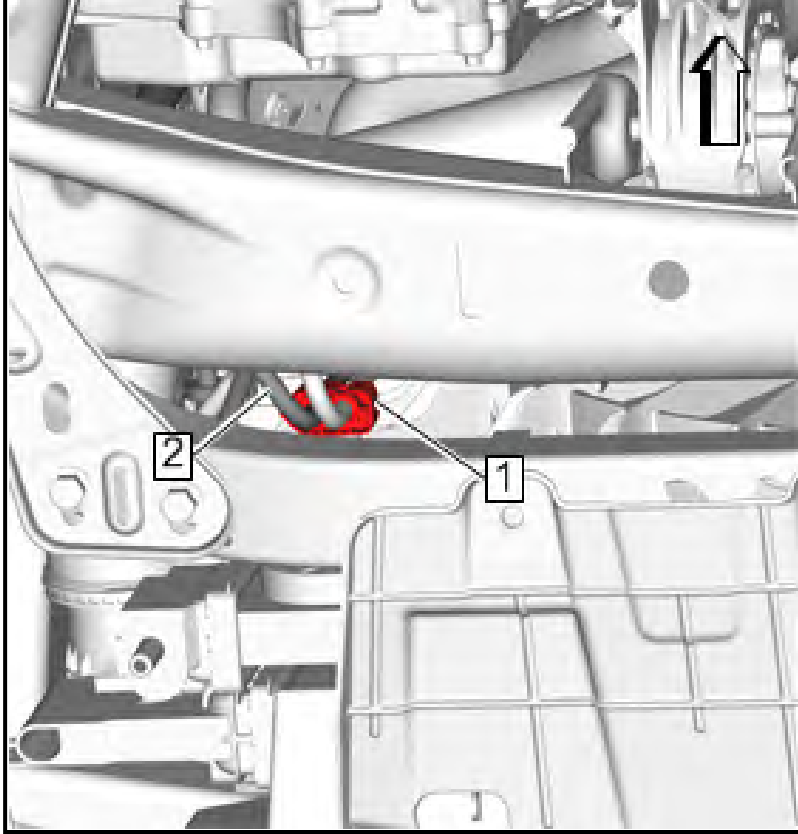
Remove the battery tray. (2) [Battery Tray Replacement](#)



Transmission Fluid Cooler Inlet Pipe (1) @ Transmission Fluid Cooler Thermal Bypass Valve - Disconnect - [Transmission Fluid Cooler Hose/Pipe Quick-Connect Fitting Disconnection and Connection](#)

4. Cap the openings to prevent contamination.





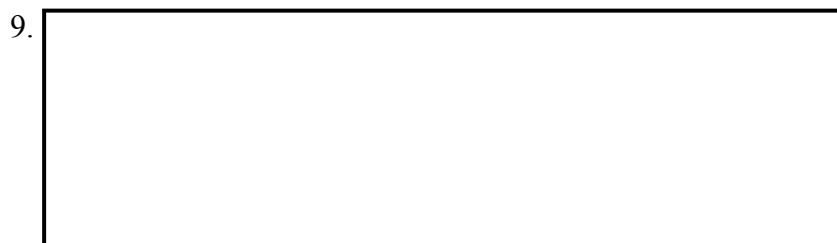
Transmission Fluid Cooler Inlet Pipe Clip (1) @ Engine Coolant Fan - Disengage

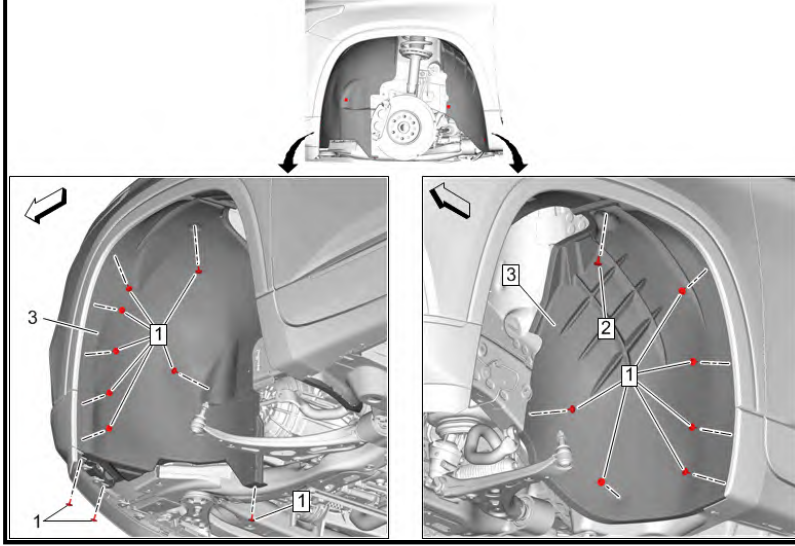
6. Transmission Fluid Cooler Inlet Pipe (2) @ Transmission Fluid Cooler Outlet Pipe Clip (1) - Remove



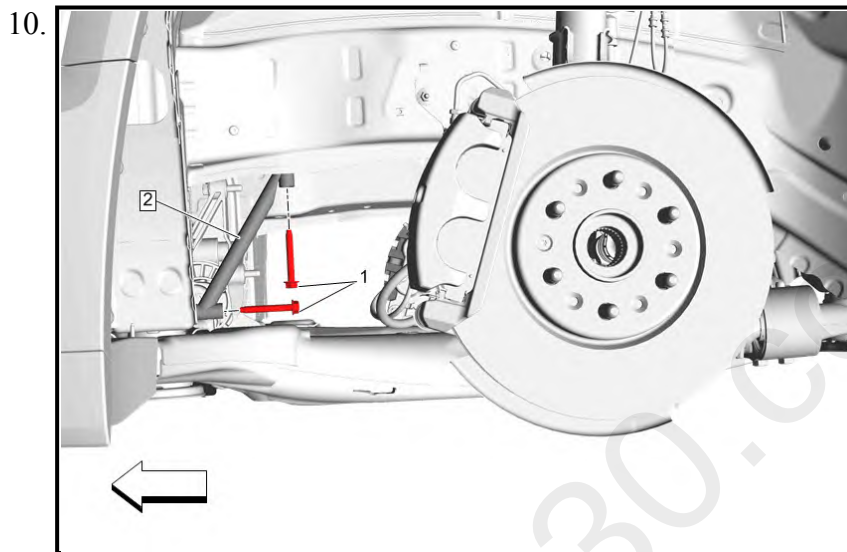
Transmission Fluid Cooler Inlet Pipe Clip (1) @ Transmission - Disengage

8. Transmission Fluid Cooler Inlet Pipe (2) @ Transmission Fluid Cooler Outlet Pipe Clip (1) - Remove

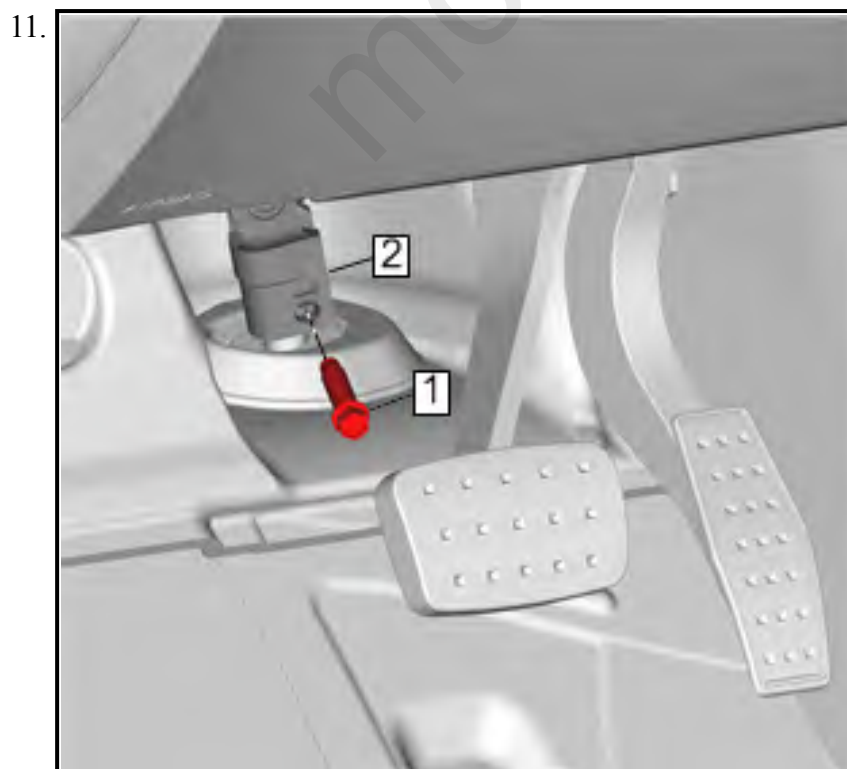




Front Wheelhouse Liner-Left Side (3) - Remove - [Front Wheelhouse Liner Replacement](#)

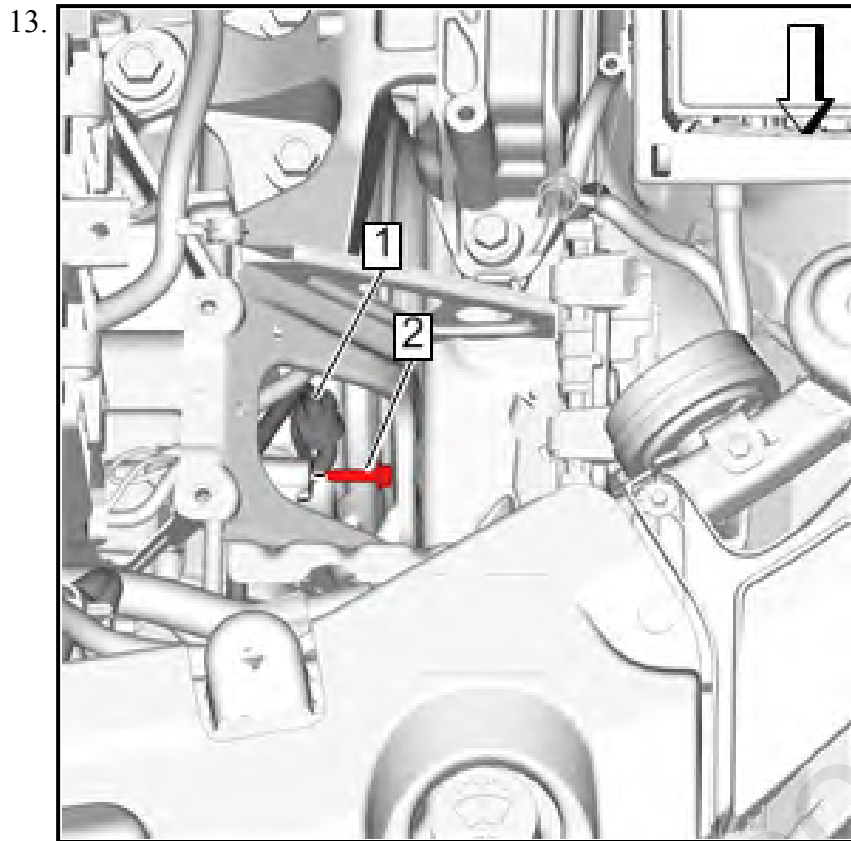


Front End Sheet Metal Diagonal Brace-Left Side (3) - Remove - [Front End Sheet Metal Diagonal Brace Replacement - Left Side](#)



Intermediate Steering Shaft (2) @ Steering Gear - Remove - [Intermediate Steering Shaft Replacement](#)

12. Lower left side of drivetrain and front suspension cradle to allow access to the transmission fluid cooler inlet pipe. [Drivetrain and Front Suspension Cradle Replacement \(All Wheel Drive\)](#).
[Drivetrain and Front Suspension Cradle Replacement \(Front Wheel Drive\)](#).



Transmission Fluid Cooler Inlet Pipe Bolt (2) @ Transmission - Remove

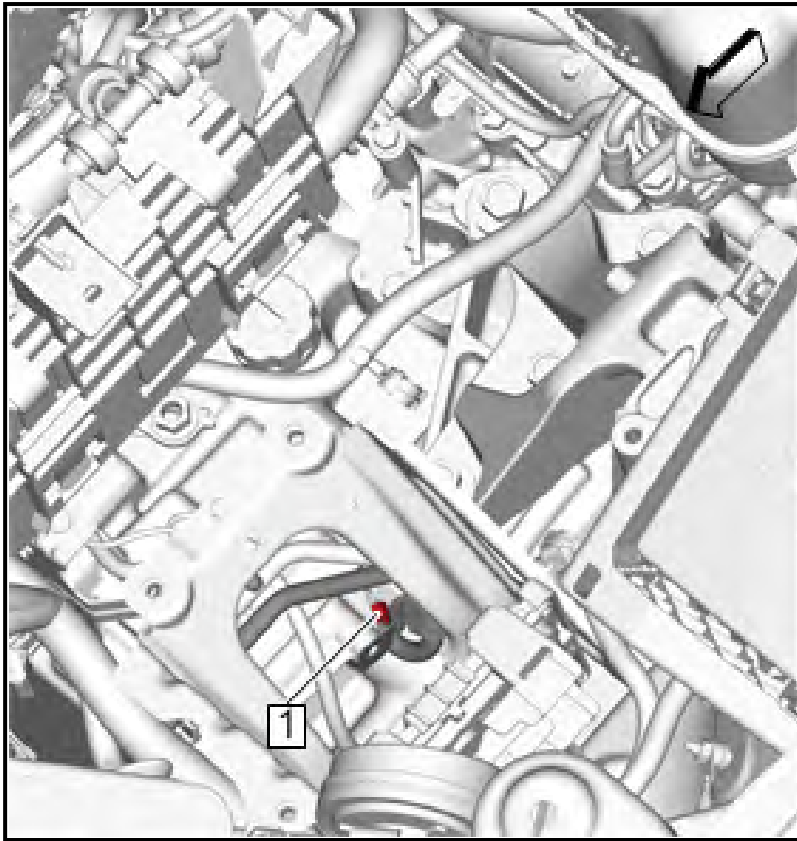
14. Transmission Fluid Cooler Inlet Pipe (1) @ Transmission - Remove



Transmission Fluid Cooler Inlet Pipe (1) @ Transmission - Disconnect - [Transmission Fluid Cooler Hose/Pipe Quick-Connect Fitting Disconnection and Connection](#)

16. Cap the openings to prevent contamination.
17. Remove the transmission fluid cooler inlet pipe (1) from the vehicle.

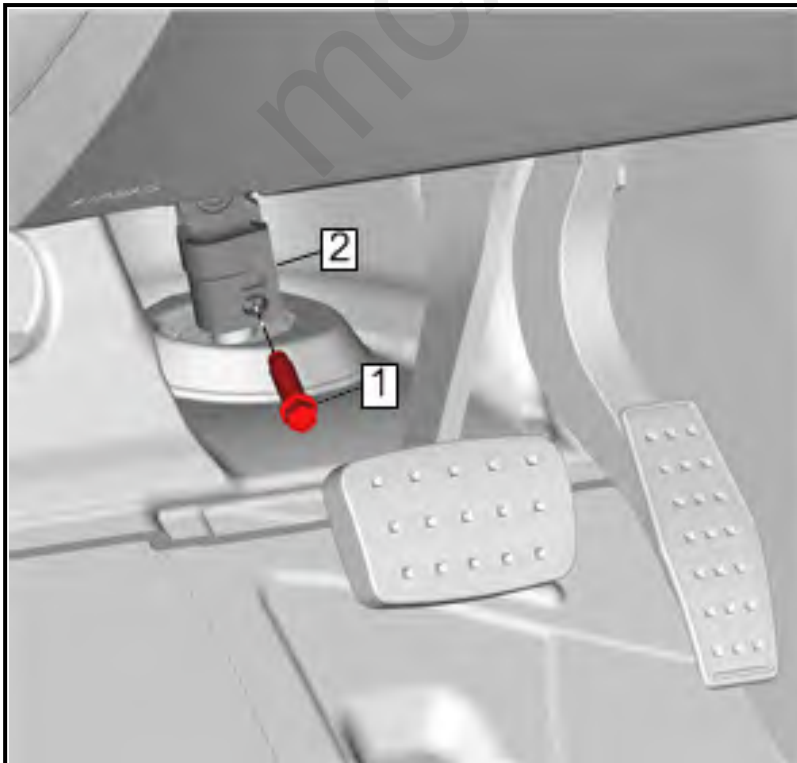
1.



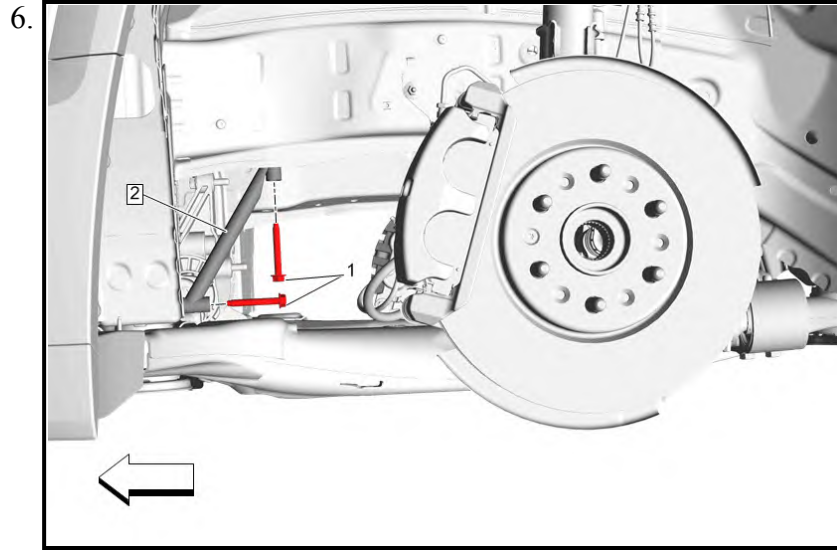
Install the transmission fluid cooler outlet pipe (3) to the vehicle.

2. Remove the caps from the fittings and plugs from the holes before installing the transmission fluid cooler pipes.
3. Transmission Fluid Cooler Inlet Pipe (1) @ Transmission - Connect - [Transmission Fluid Cooler Hose/Pipe Quick-Connect Fitting Disconnection and Connection](#)
4. Raise and install left side of drivetrain and front suspension cradle. [Drivetrain and Front Suspension Cradle Replacement \(All Wheel Drive\)](#). [Drivetrain and Front Suspension Cradle Replacement \(Front Wheel Drive\)](#).

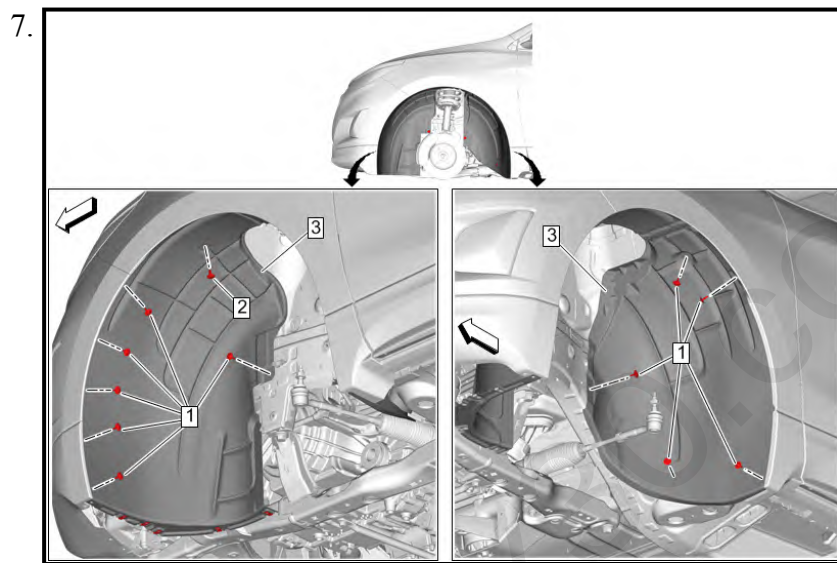
5.



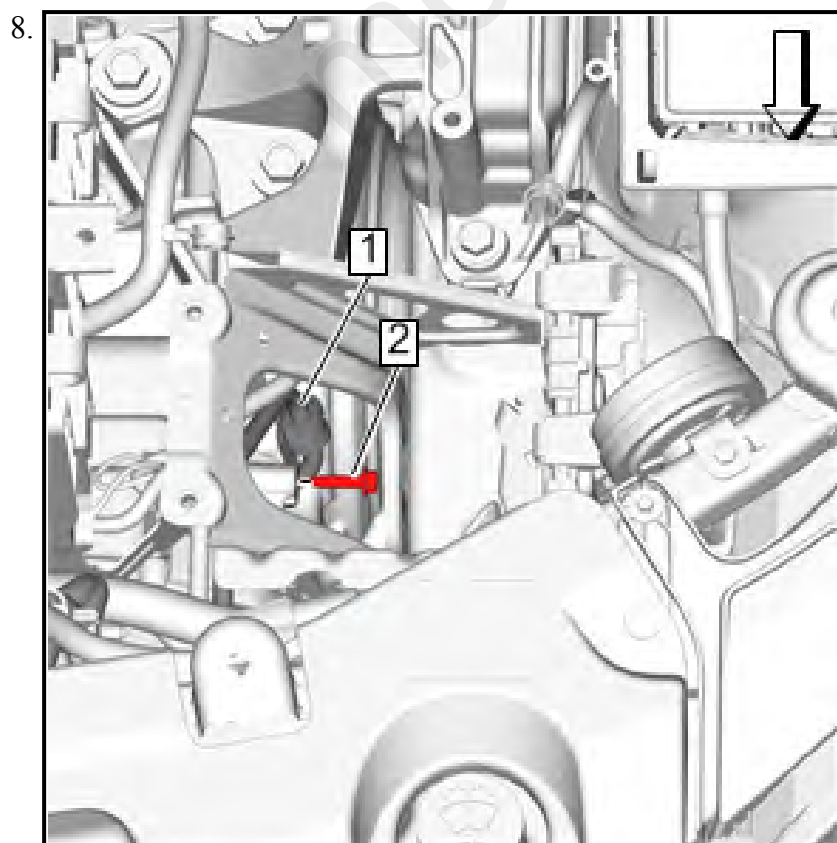
Intermediate Steering Shaft (2) @ Steering Gear - Install - [Intermediate Steering Shaft Replacement](#)



Front End Sheet Metal Diagonal Brace-Left Side (3) - Install - [Front End Sheet Metal Diagonal Brace Replacement - Left Side](#)

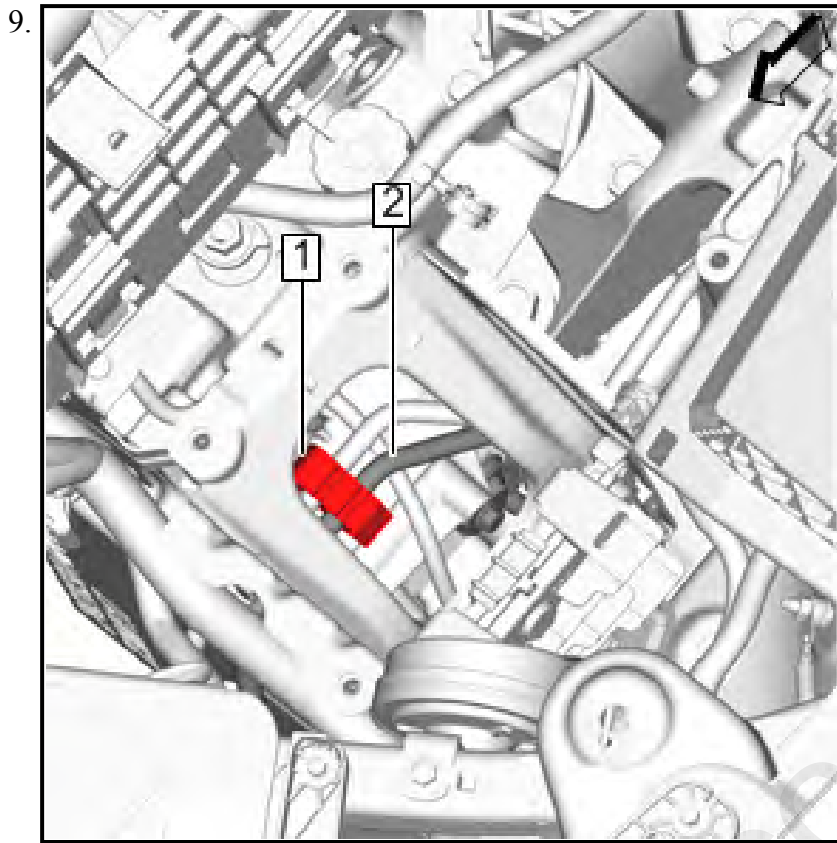


Front Wheelhouse Liner-Left Side (3) - Install - [Front Wheelhouse Liner Replacement](#)



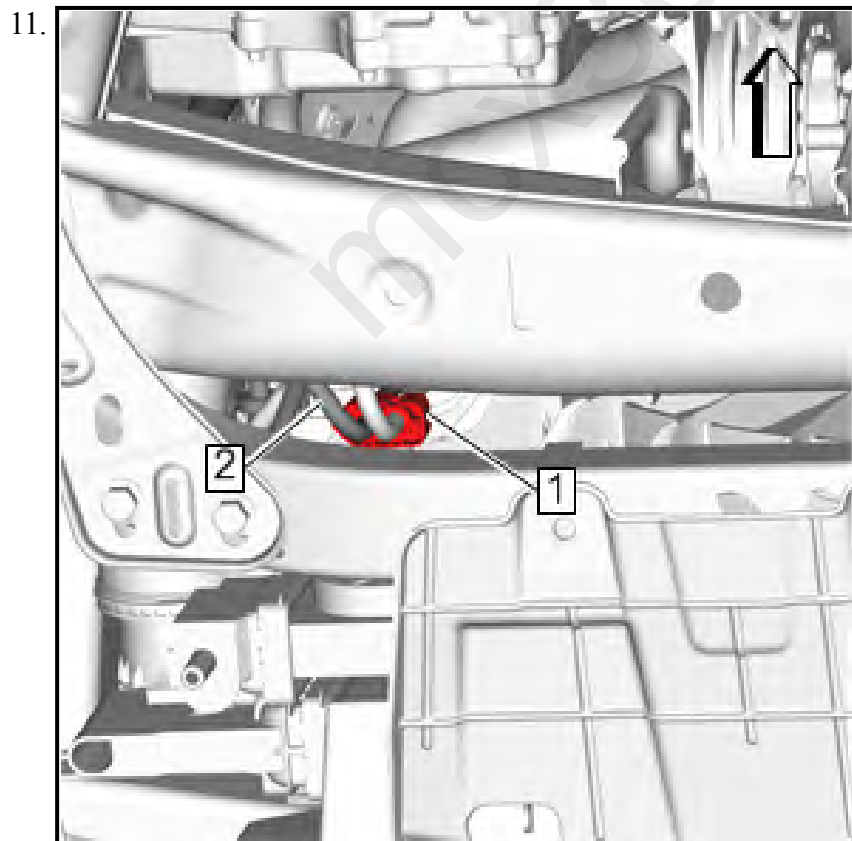
CAUTION: Refer to [Fastener Caution](#) .

Transmission Fluid Cooler Inlet Pipe Bolt (2) @ Transmission - Install and tighten 9 N.m (80 lb in)



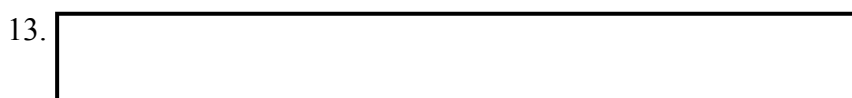
Transmission Fluid Cooler Inlet Pipe (2) @ Transmission Fluid Cooler Inlet Pipe Clip (1) - Install

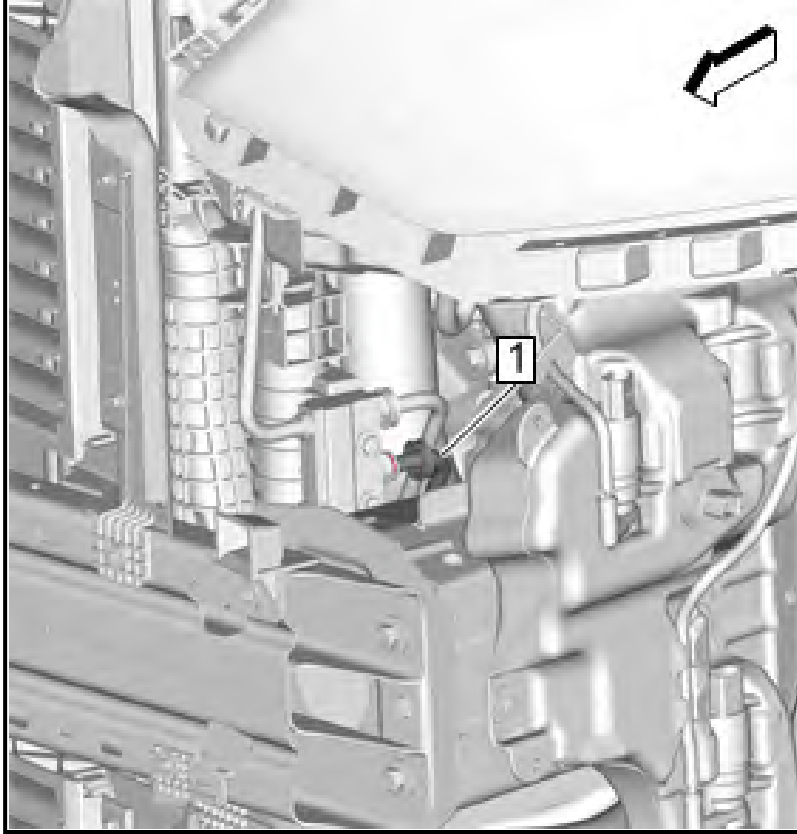
10. Transmission Fluid Cooler Inlet Pipe Clip (1) @ Transmission - Engage



Transmission Fluid Cooler Inlet Pipe (2) @ Transmission Fluid Cooler Inlet Pipe Clip (1) - Install

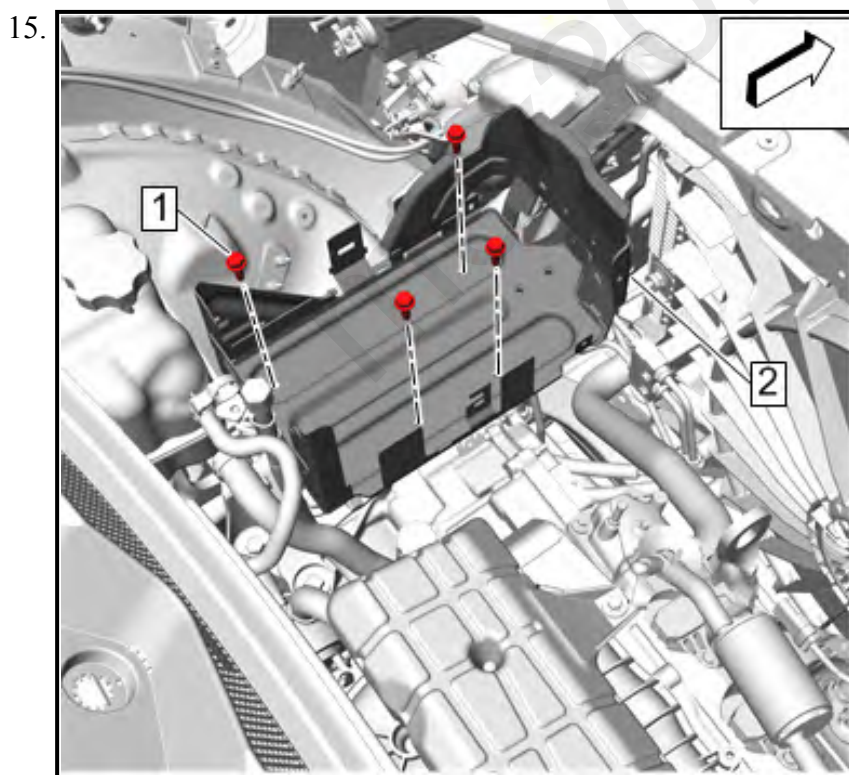
12. Transmission Fluid Cooler Inlet Pipe Clip (1) @ Engine Coolant Fan - Engage





Remove the caps from the fittings and plugs from the holes before installing the transmission fluid cooler pipes.

14. Transmission Fluid Cooler Inlet Pipe (1) @ Transmission Fluid Cooler Thermal Bypass Valve - Connect - [Transmission Fluid Cooler Hose/Pipe Quick-Connect Fitting Disconnection and Connection](#)



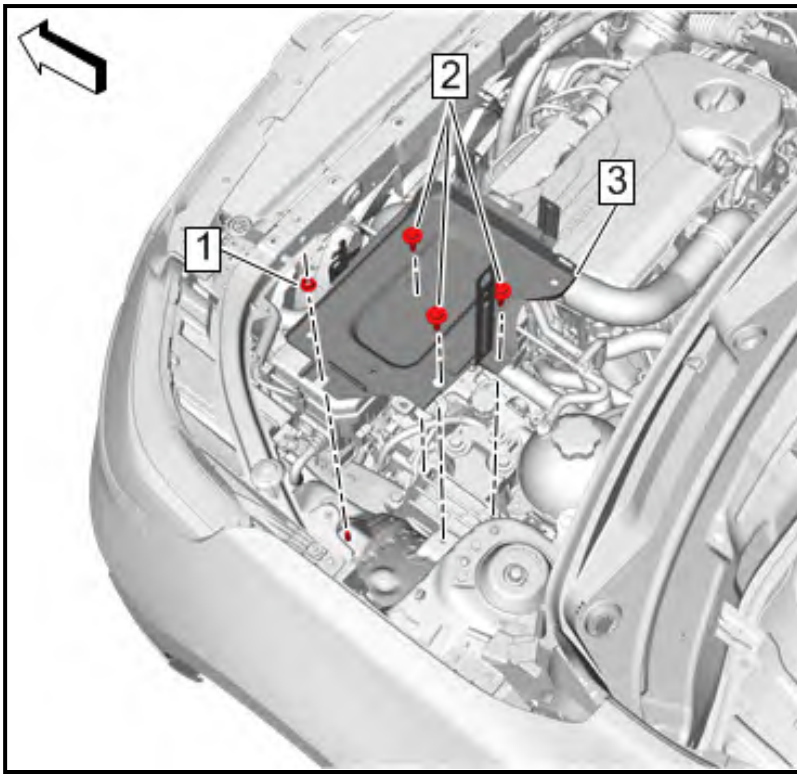
Install the battery tray. [Battery Tray Replacement](#)

16. Fill the transmission to the proper level with NEW transmission fluid. [Transmission Fluid Level and Condition Check](#)
17. Inspect for transmission fluid leaks.
18. Remove the drain pan.

TRANSMISSION FLUID COOLER OUTLET PIPE REPLACEMENT (LFY WITH V08)

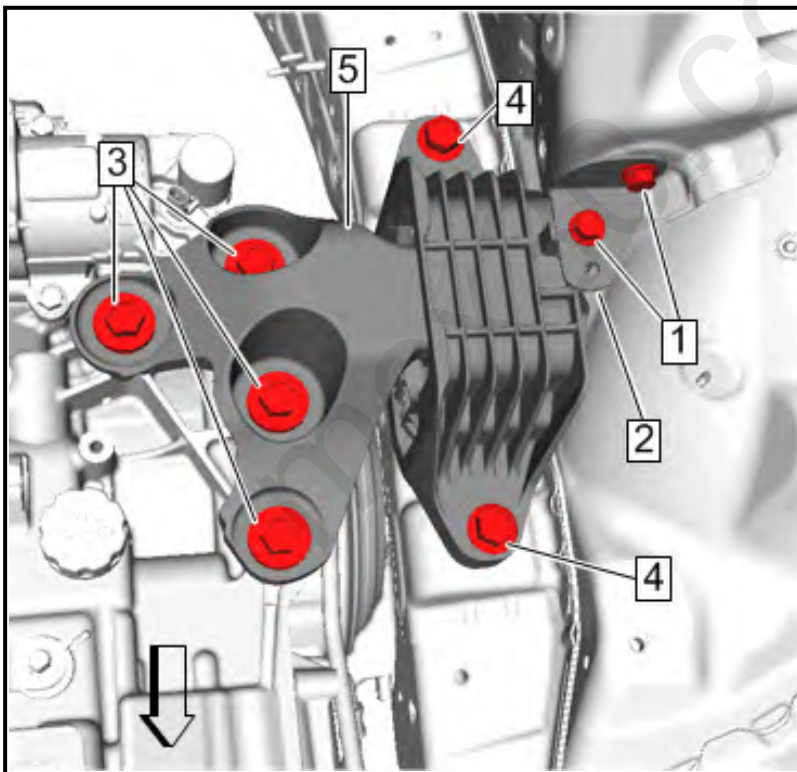
1. Place a drain pan under the vehicle.

2.



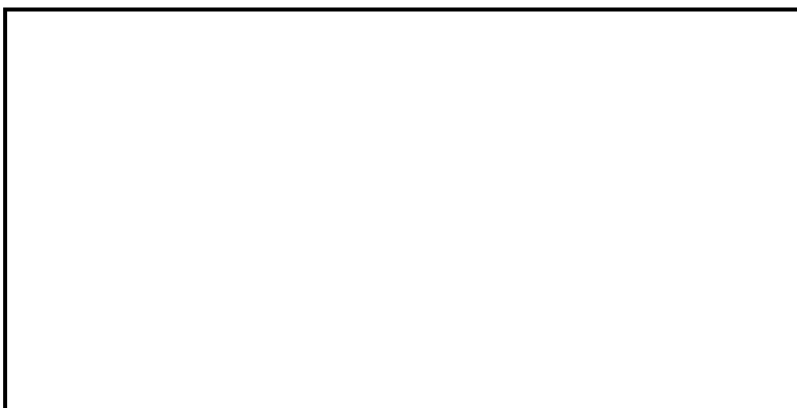
Battery Tray (3) - Remove - [Battery Tray Replacement](#)

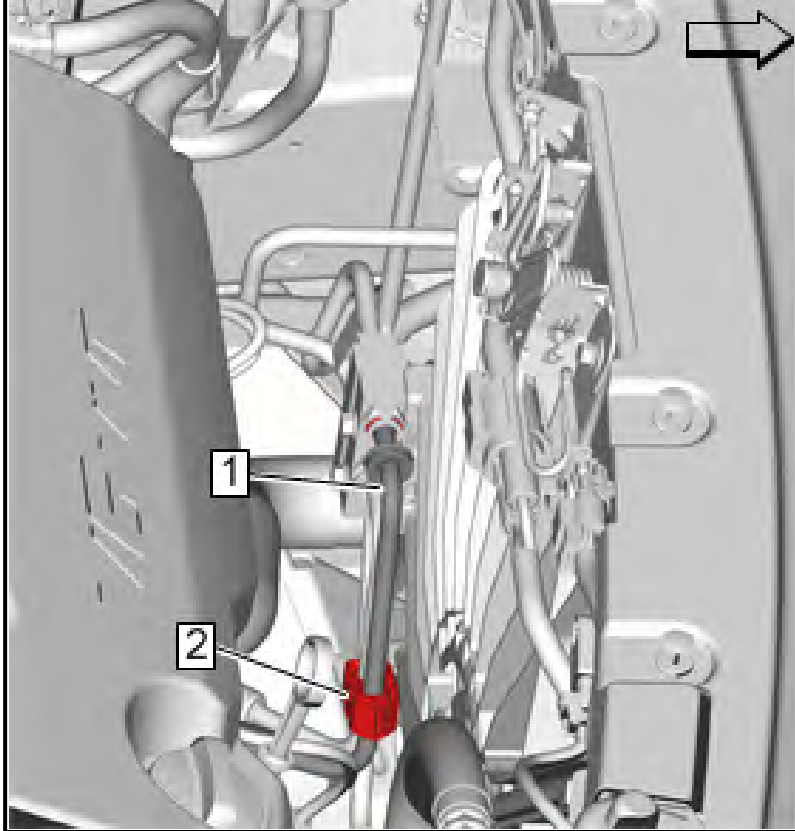
3.



Transmission Mount-Left Side (5) - Remove - [Transmission Mount Replacement \(Left\)](#), [Transmission Mount Replacement \(Front\)](#)

4.

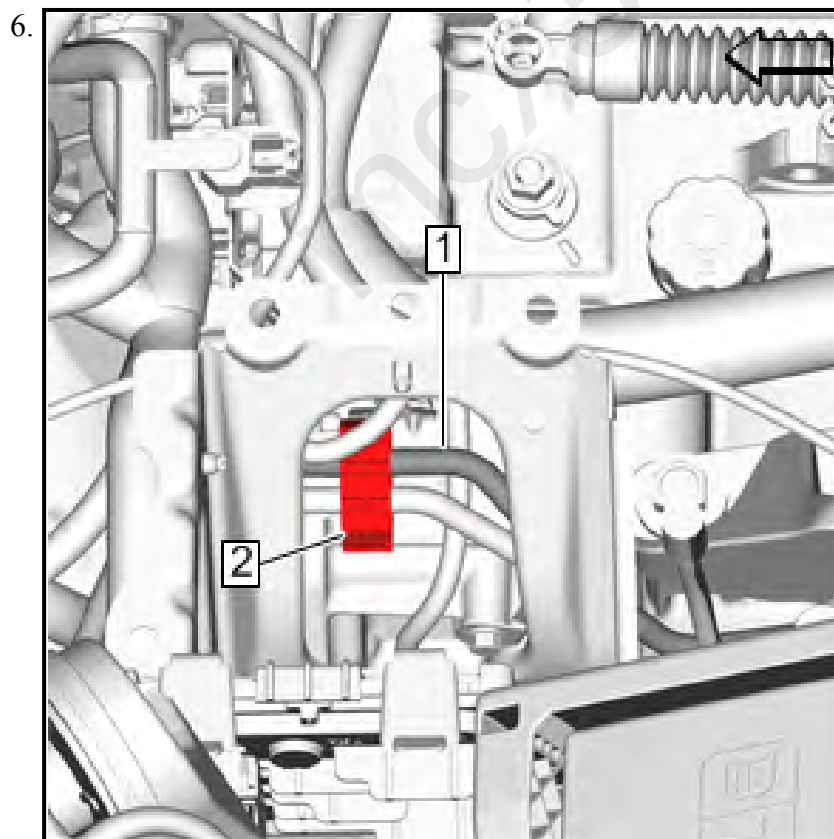




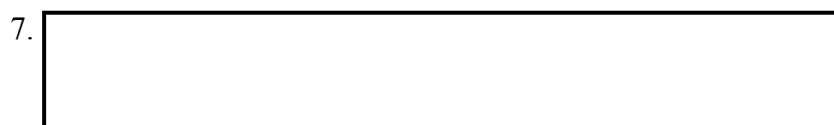
NOTE: Cover or plug all open transmission fluid cooler pipe connection points to help avoid any accidental contamination.

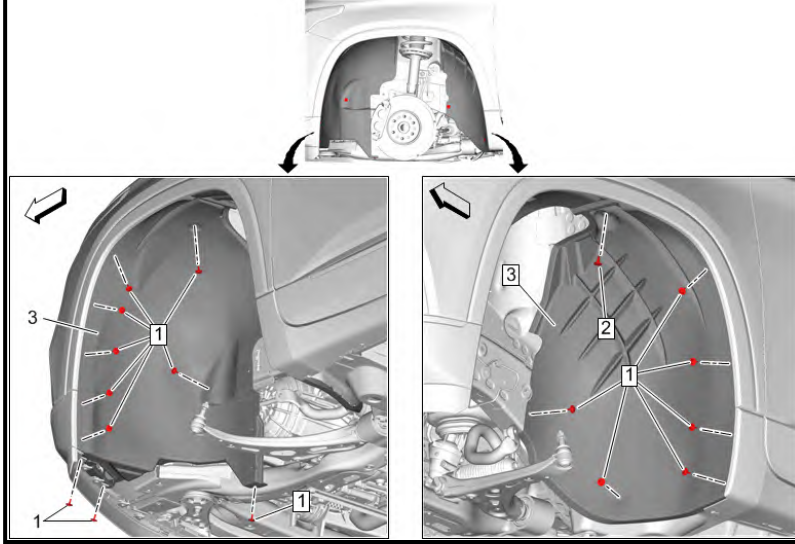
Transmission Fluid Cooler Outlet Pipe (1) @ Transmission Fluid Cooler Thermal Bypass Valve - Disconnect - [Transmission Fluid Cooler Hose/Pipe Quick-Connect Fitting Disconnection and Connection](#)

5. Transmission Fluid Cooler Outlet Pipe (1) @ Transmission Fluid Cooler Outlet Pipe Clip (2) - Unclip

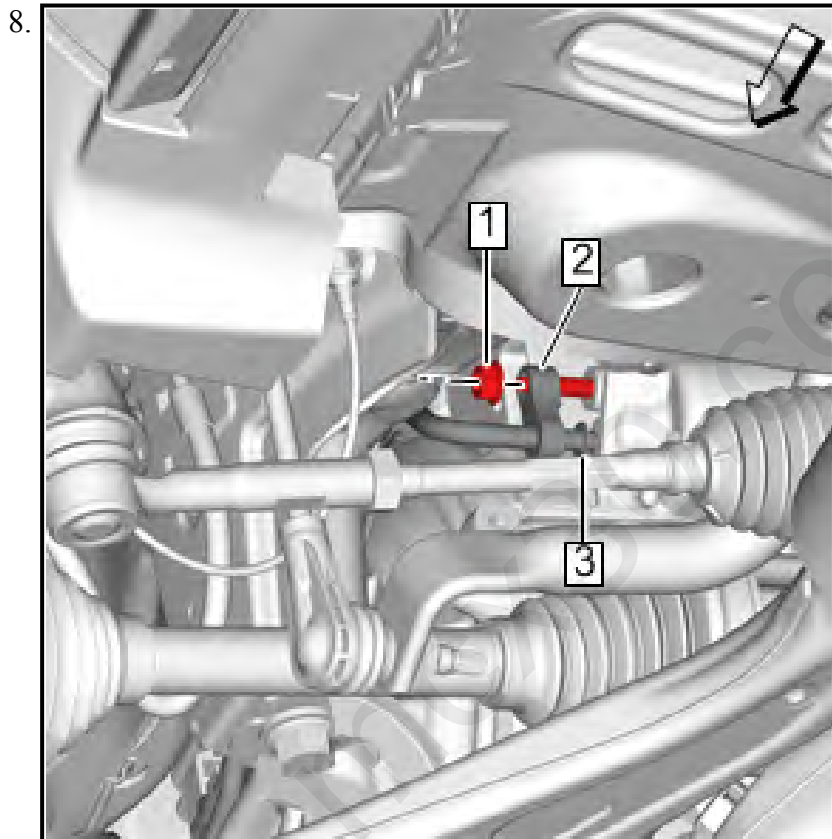


Transmission Fluid Cooler Outlet Pipe (1) @ Transmission - Unclip





Front Wheelhouse Liner-Left Side (3) - Remove - [Front Wheelhouse Liner Replacement](#)

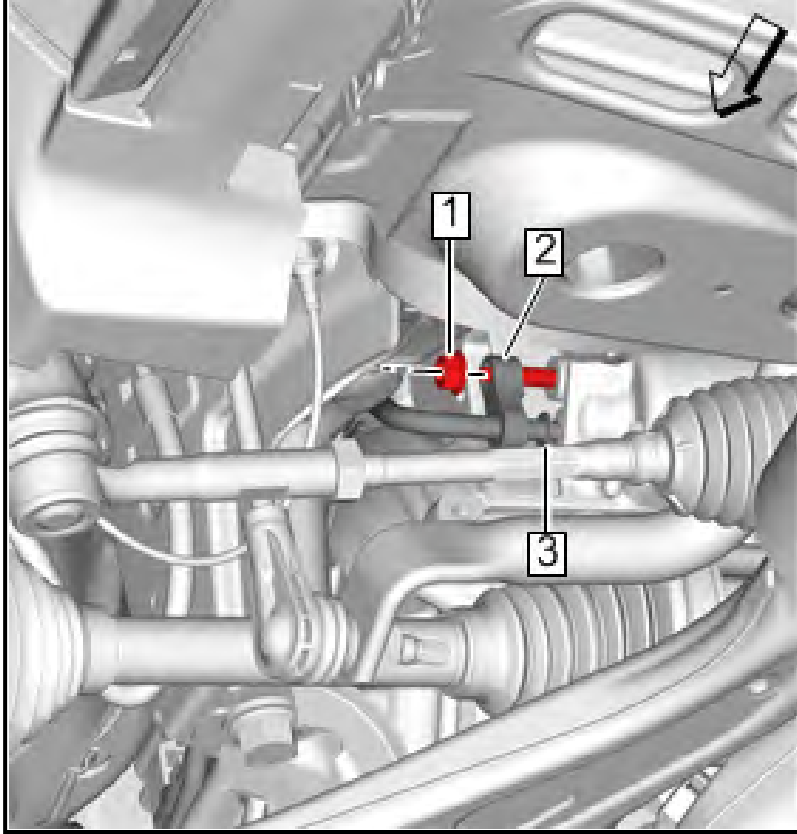


Transmission Fluid Cooler Outlet Pipe Nut (1) @ Transmission - Remove

9. Transmission Fluid Cooler Outlet Pipe (2) @ Transmission - Remove
10. Transmission Fluid Cooler Outlet Pipe Seal (3) @ Transmission - Remove and DISCARD
11. Remove the transmission fluid cooler outlet pipe (2) from vehicle.

Installation Procedure



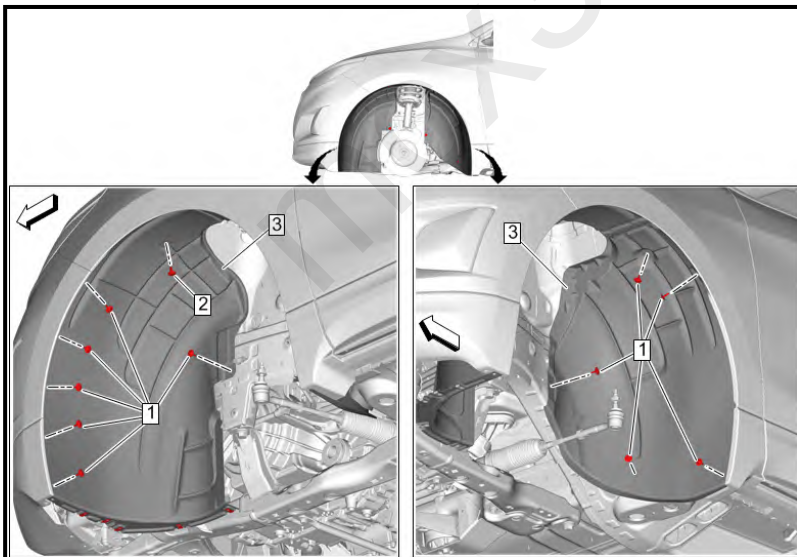


Install the transmission fluid cooler outlet pipe (2) to vehicle.

2. Transmission Fluid Cooler Outlet Pipe Seal (3) @ Transmission - Install a NEW seal.
3. Transmission Fluid Cooler Outlet Pipe (2) @ Transmission - Install

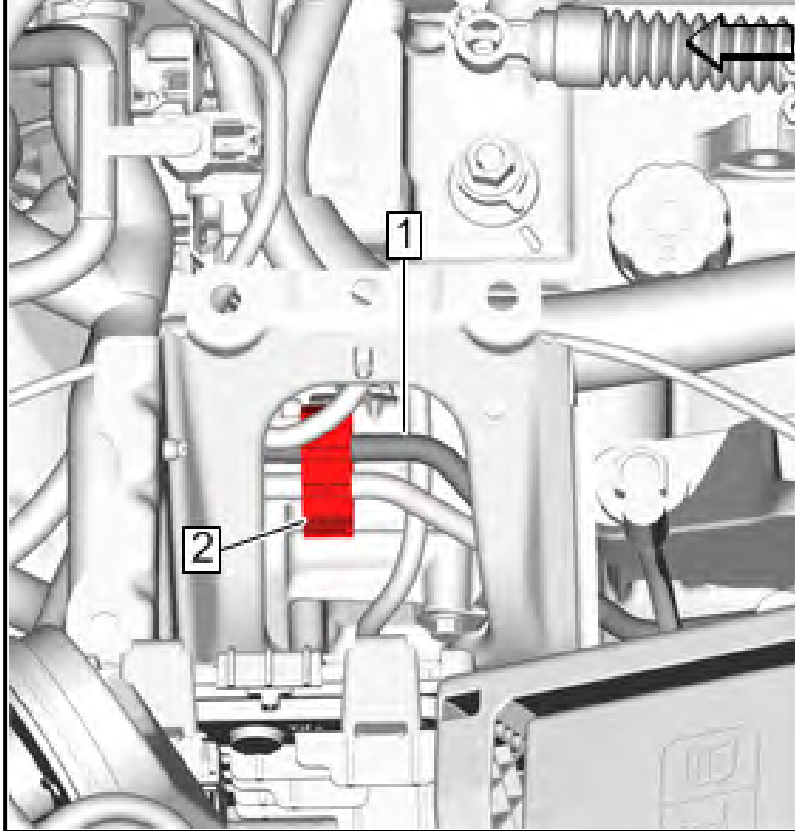
CAUTION: Refer to [Fastener Caution](#) .

4. Transmission Fluid Cooler Outlet Pipe Nut (1) @ Transmission - Install and tighten 22 N.m (16 lb ft)
- 5.

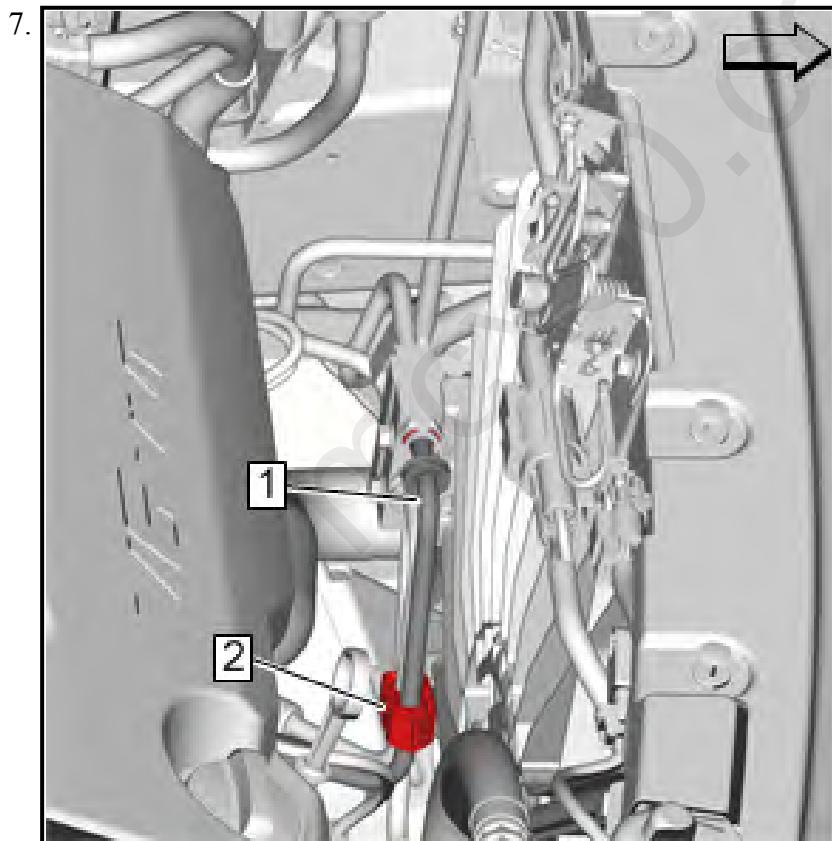


Front Wheelhouse Liner-Left Side (3) - Install - [Front Wheelhouse Liner Replacement](#)

- 6.

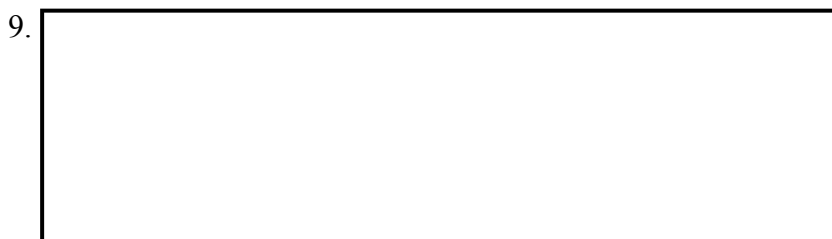


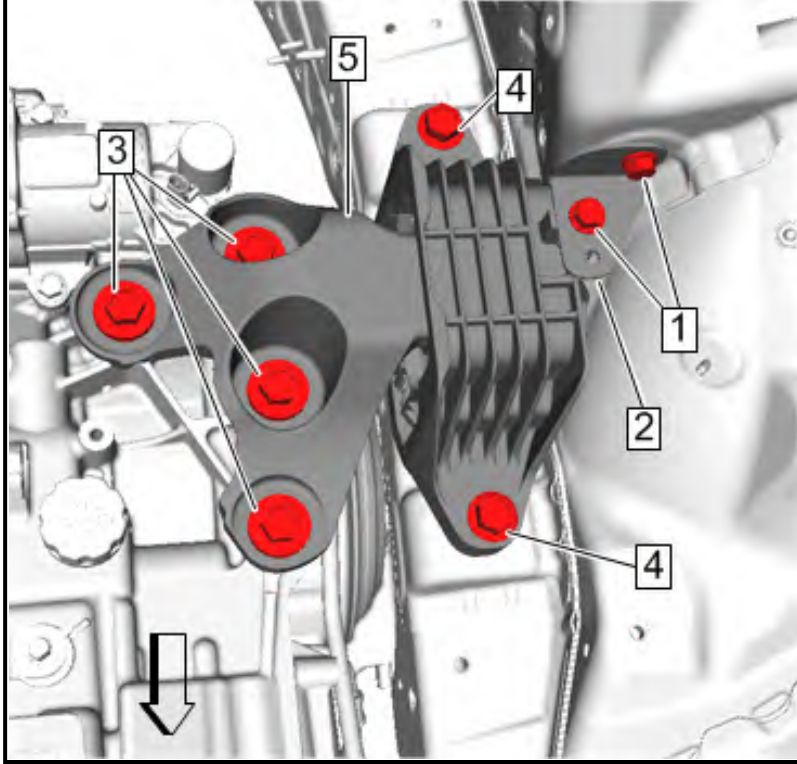
Transmission Fluid Cooler Outlet Pipe (1) @ Transmission - Clip



Transmission Fluid Cooler Outlet Pipe (1) @ Transmission Fluid Cooler Thermal Bypass Valve - Connect - [Transmission Fluid Cooler Hose/Pipe Quick-Connect Fitting Disconnection and Connection](#)

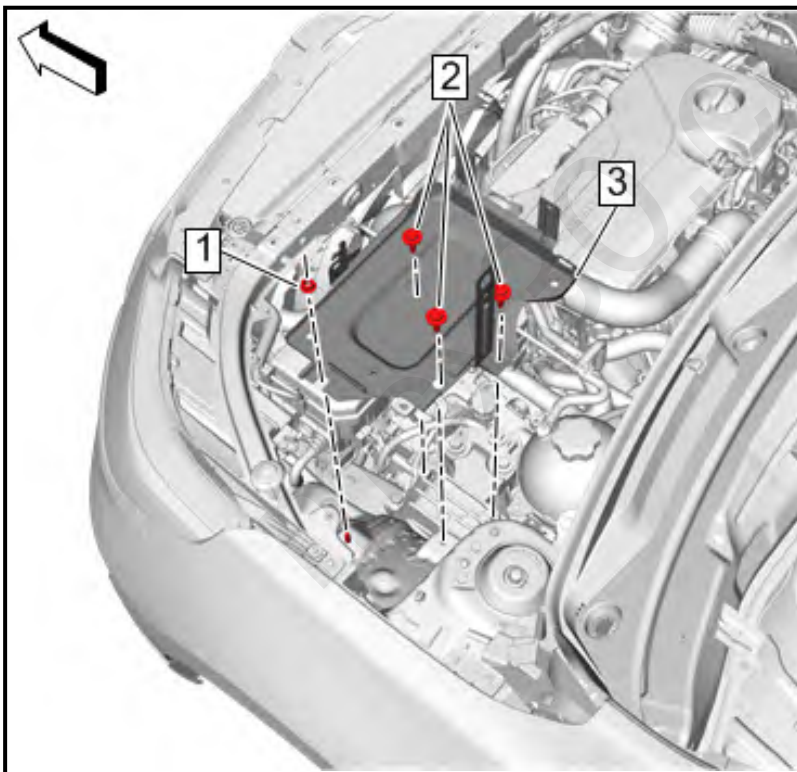
8. Transmission Fluid Cooler Outlet Pipe (1) @ Transmission Fluid Cooler Outlet Pipe Clip (2) - Clip





Transmission Mount-Left Side (5) - Install - [Transmission Mount Replacement \(Left\)](#), [Transmission Mount Replacement \(Front\)](#)

10.



Battery Tray (3) - Install - [Battery Tray Replacement](#)

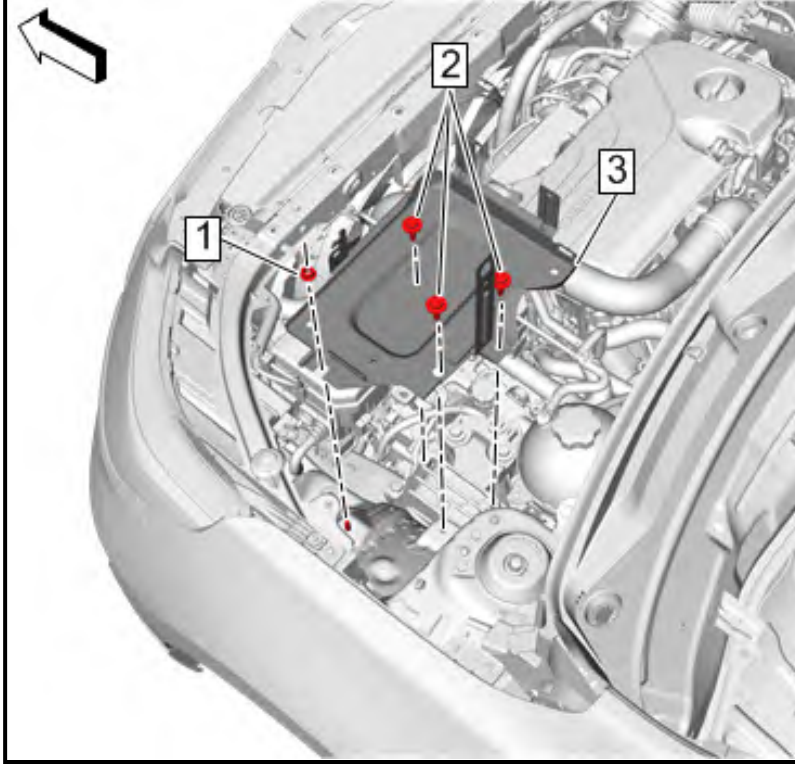
11. Remove the drain pan.
12. Fill and inspect the transmission fluid level. [Transmission Fluid Level and Condition Check](#)
13. Inspect for transmission fluid leaks.

TRANSMISSION FLUID COOLER OUTLET PIPE REPLACEMENT (LFY WITHOUT V08)

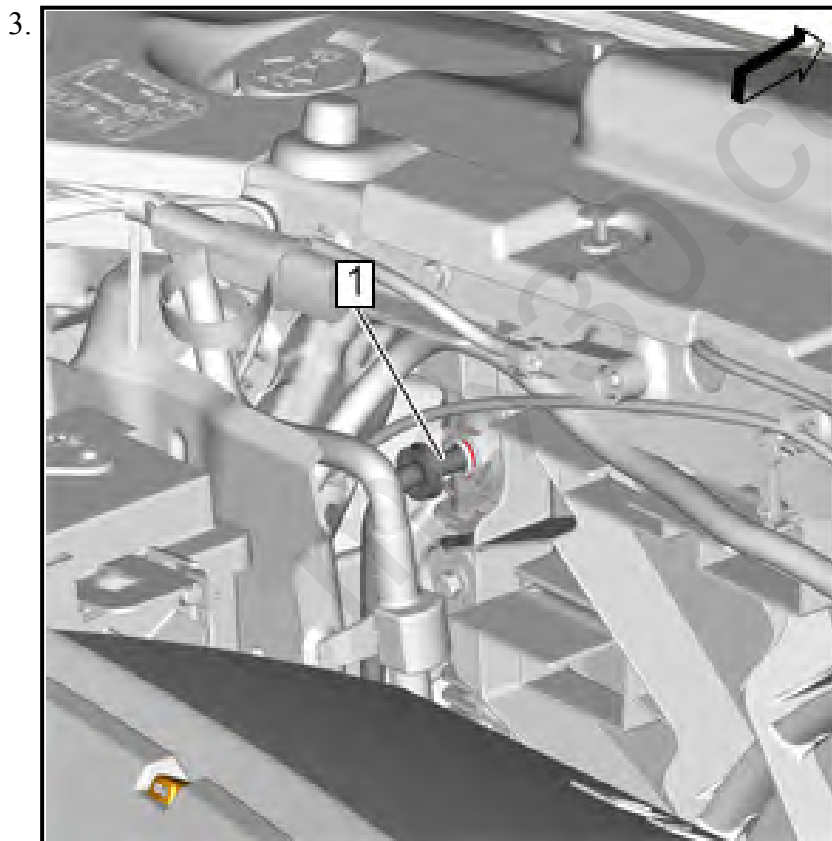
1. Place a drain pan under the vehicle.

2.





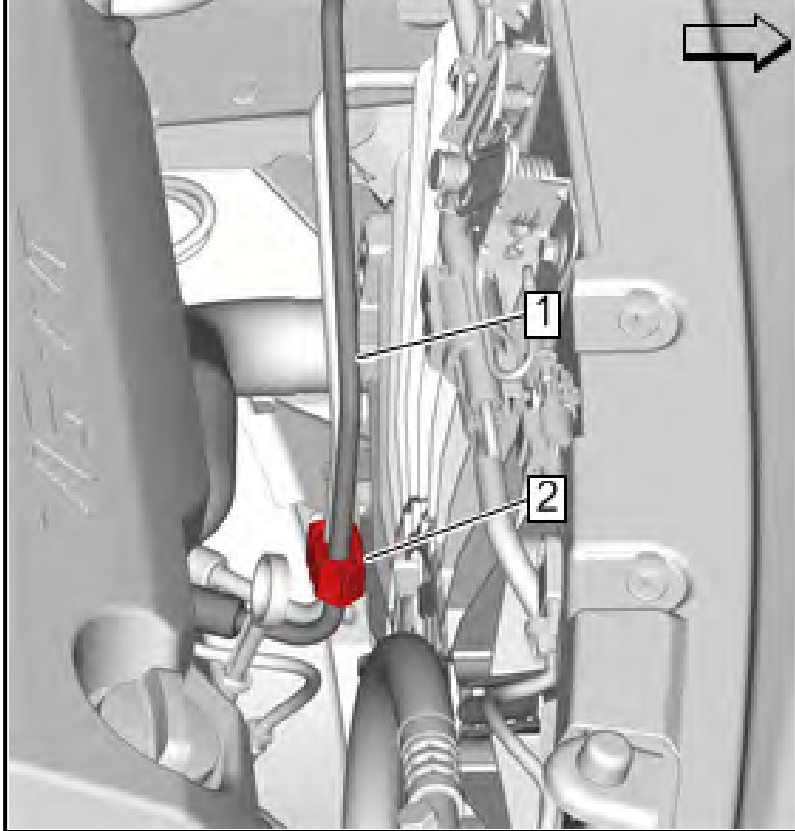
Battery Tray (3) - Remove - [Battery Tray Replacement](#)



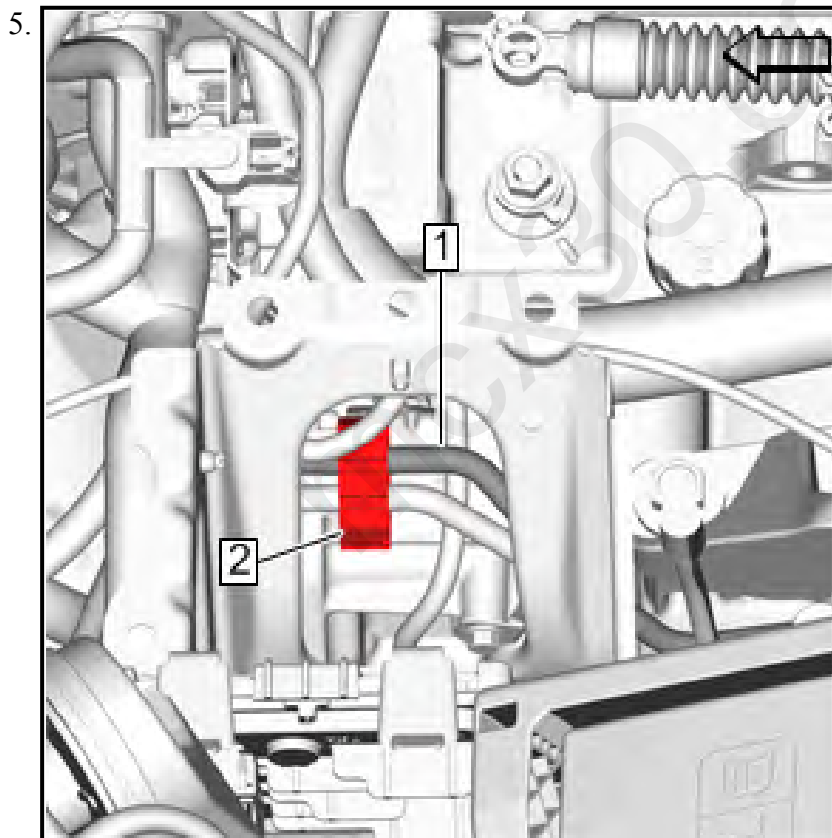
NOTE: Cover or plug all open transmission fluid cooler pipe connection points to help avoid any accidental contamination.

Transmission Fluid Cooler Outlet Pipe (1) @ Radiator - Disconnect - [Transmission Fluid Cooler Hose/Pipe Quick-Connect Fitting Disconnection and Connection](#)



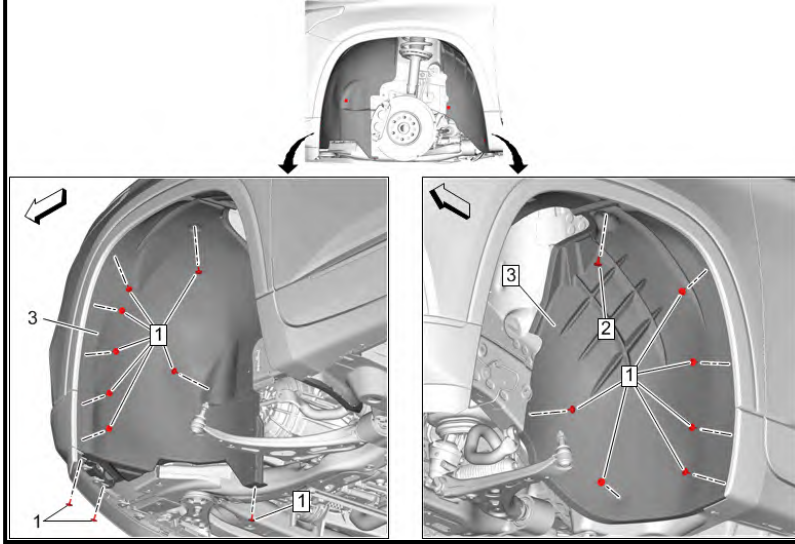


Transmission Fluid Cooler Outlet Pipe (1) @ Transmission Fluid Cooler Outlet Pipe Clip (2) - Unclip

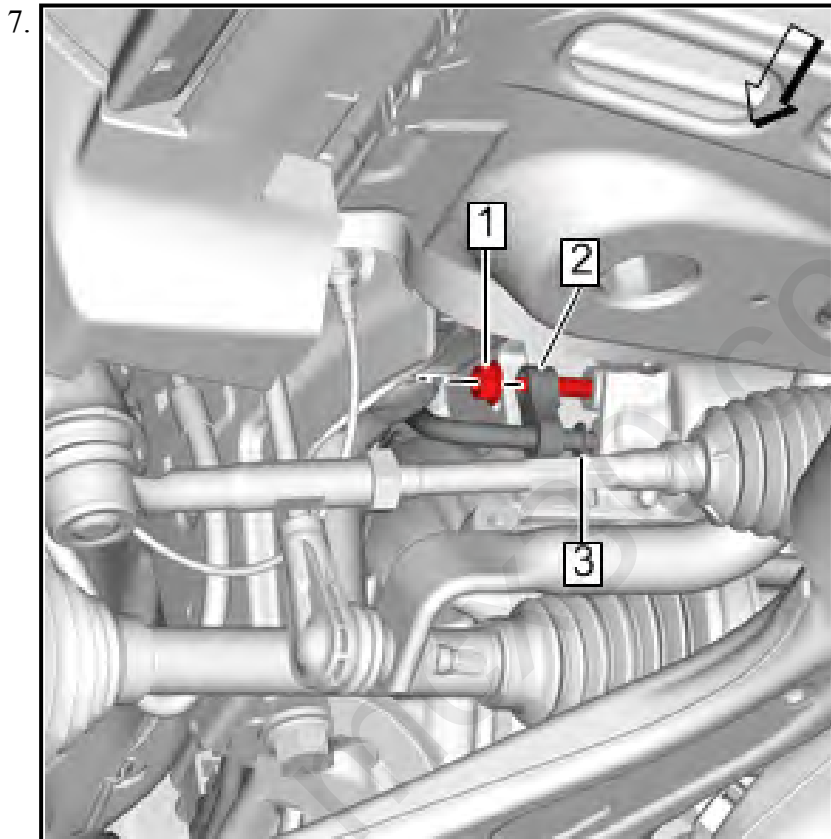


Transmission Fluid Cooler Outlet Pipe (1) @ Transmission Fluid Cooler Outlet Pipe Clip (2) - Unclip





Front Wheelhouse Liner-Left Side (3) - Remove - [Front Wheelhouse Liner Replacement](#)



Transmission Fluid Cooler Outlet Pipe Nut (1) @ Transmission - Remove

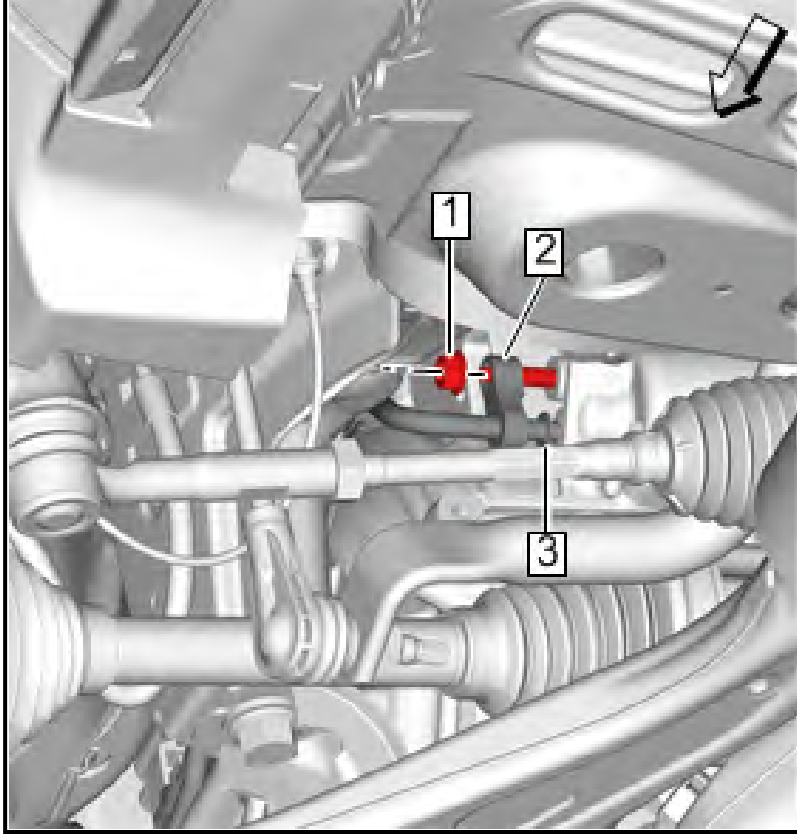
8. Transmission Fluid Cooler Outlet Pipe (2) @ Transmission - Remove

9. Transmission Fluid Cooler Outlet Pipe Seal (3) @ Transmission - Remove and DISCARD

10. Remove the transmission fluid cooler outlet pipe (2) from vehicle.

Installation Procedure



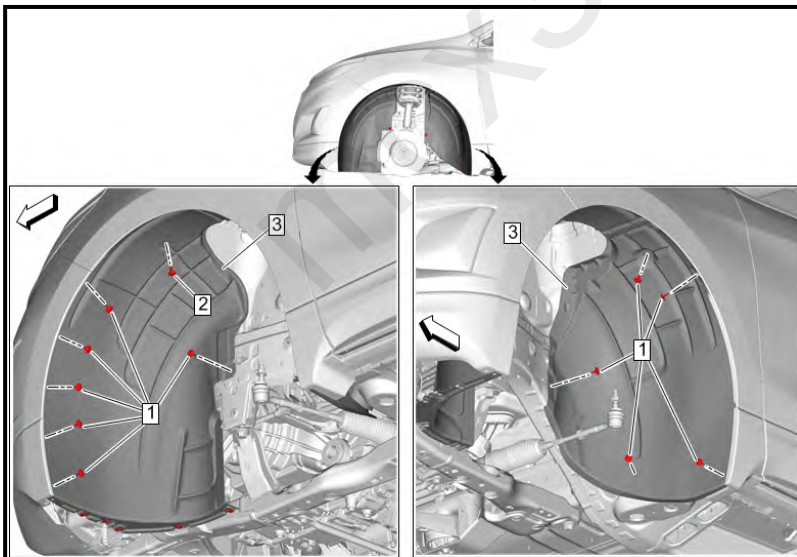


Install the transmission fluid cooler outlet pipe (2) to vehicle.

2. Transmission Fluid Cooler Outlet Pipe Seal (3) @ Transmission - Install a NEW seal.
3. Transmission Fluid Cooler Outlet Pipe (2) @ Transmission - Install

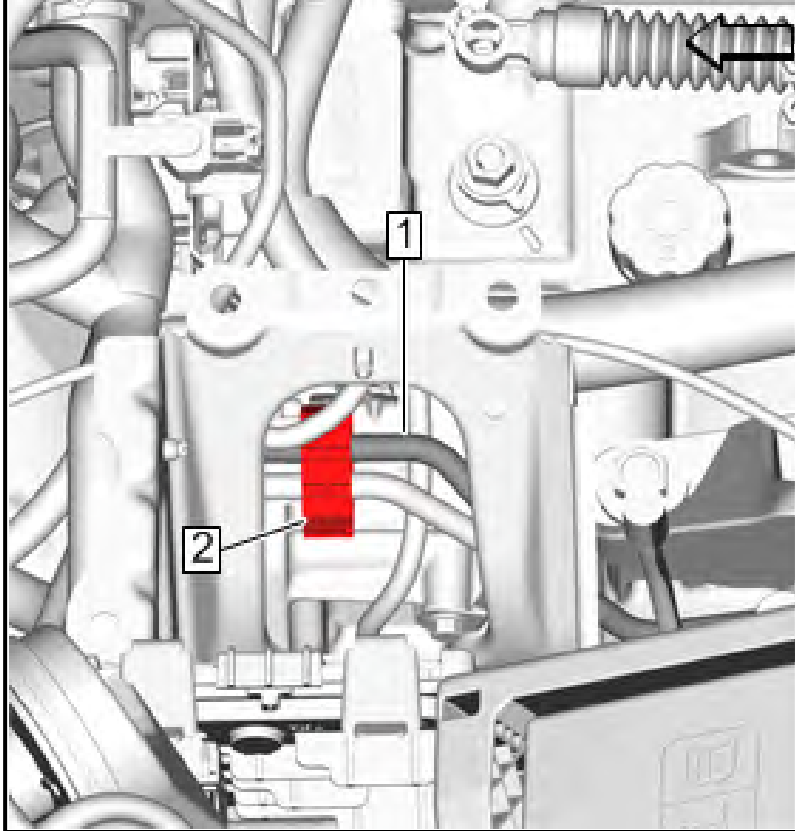
CAUTION: Refer to [Fastener Caution](#) .

4. Transmission Fluid Cooler Outlet Pipe Nut (1) @ Transmission - Install and tighten 22 N.m (16 lb ft)
- 5.

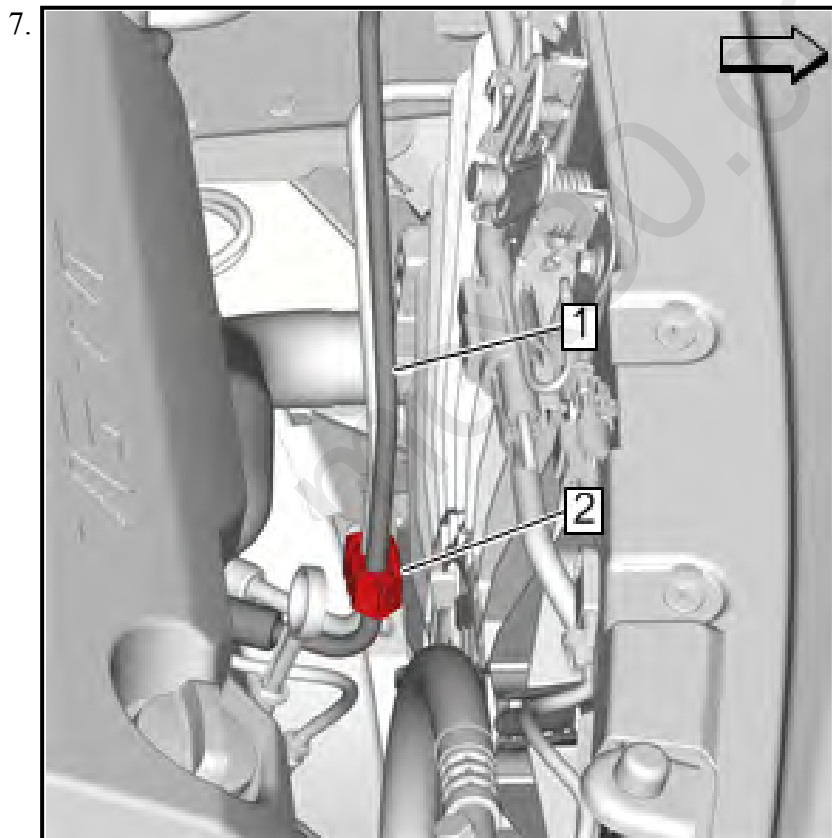


Front Wheelhouse Liner-Left Side (3) - Install - [Front Wheelhouse Liner Replacement](#)

- 6.



Transmission Fluid Cooler Outlet Pipe (1) @ Transmission Fluid Cooler Outlet Pipe Clip (2) - Clip

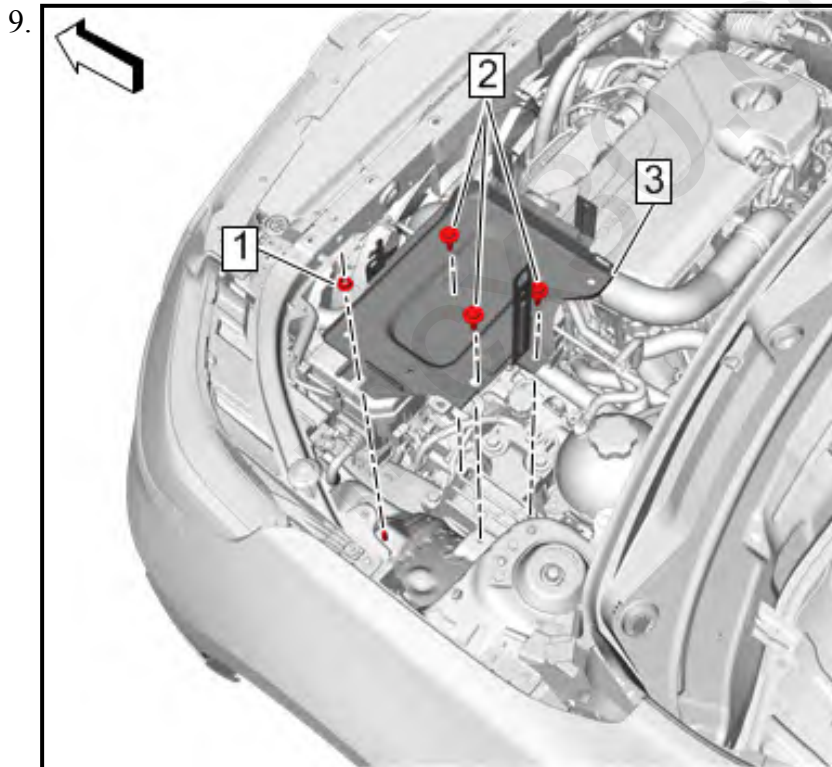


Transmission Fluid Cooler Outlet Pipe (1) @ Transmission Fluid Cooler Outlet Pipe Clip (2) - Clip





Transmission Fluid Cooler Outlet Pipe (1) @ Radiator - Connect - [Transmission Fluid Cooler Hose/Pipe Quick-Connect Fitting Disconnection and Connection](#)



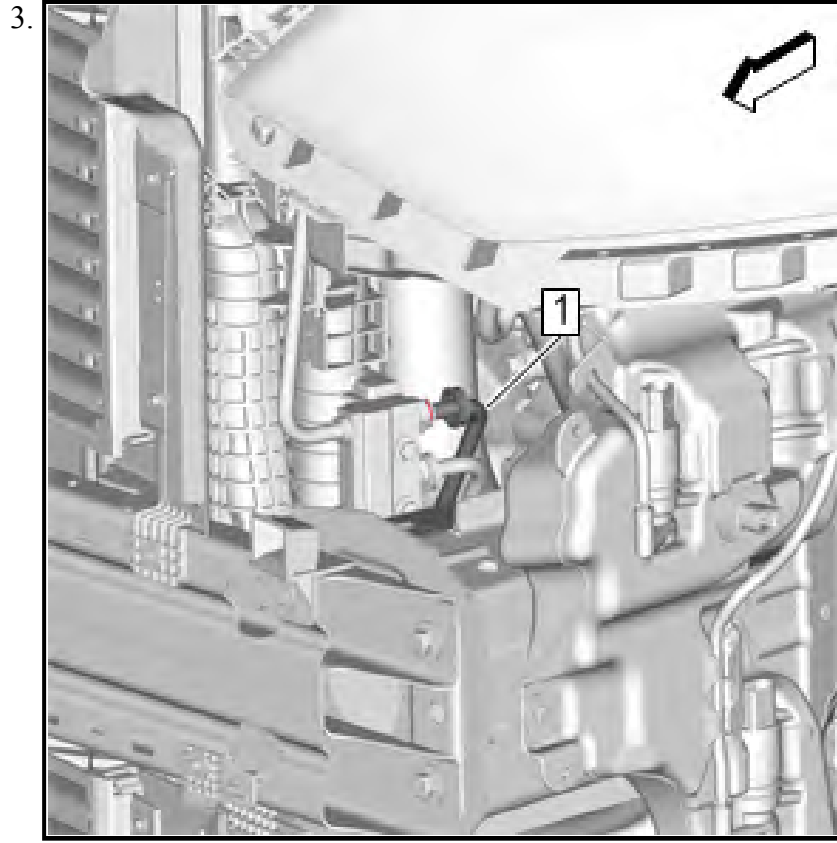
Battery Tray (3) - Install - [Battery Tray Replacement](#)

10. Remove the drain pan.
11. Fill and inspect the transmission fluid level. [Transmission Fluid Level and Condition Check](#)
12. Inspect for transmission fluid leaks.

TRANSMISSION FLUID COOLER OUTLET PIPE REPLACEMENT (LTG)

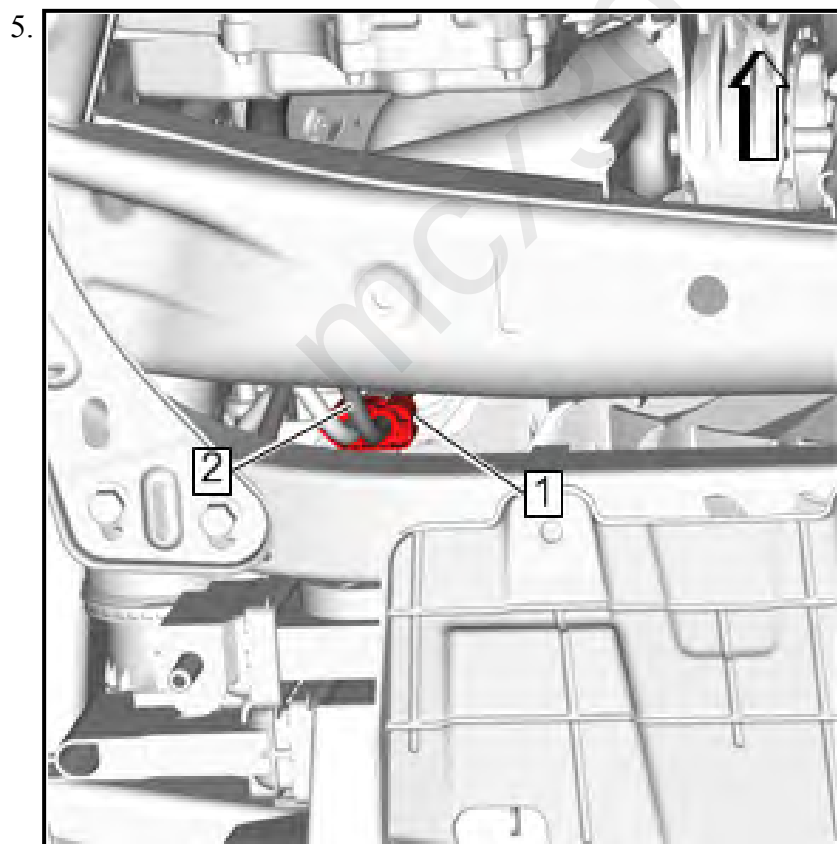
Removal Procedure

1. Remove the battery tray. [Battery Tray Replacement](#)
2. Place a drain pan under the vehicle.



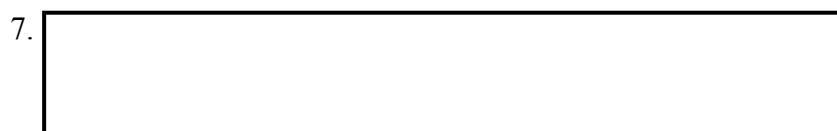
Transmission Fluid Cooler Outlet Pipe (1) @ Transmission Fluid Cooler Thermal Bypass Valve - Disconnect - Transmission Fluid Cooler Hose/Pipe Quick-Connect Fitting Disconnection and Connection

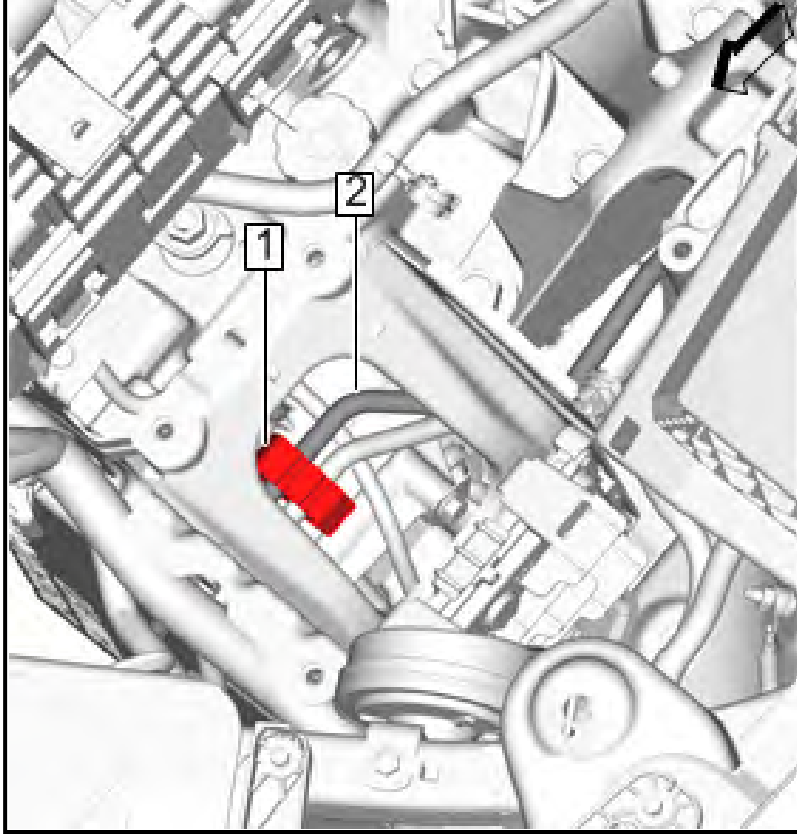
4. Cap the openings to prevent contamination.



Transmission Fluid Cooler Outlet Pipe Clip (1) @ Engine Coolant Fan - Disengage

6. Transmission Fluid Cooler Outlet Pipe (2) @ Transmission Fluid Cooler Outlet Pipe Clip (1) - Remove

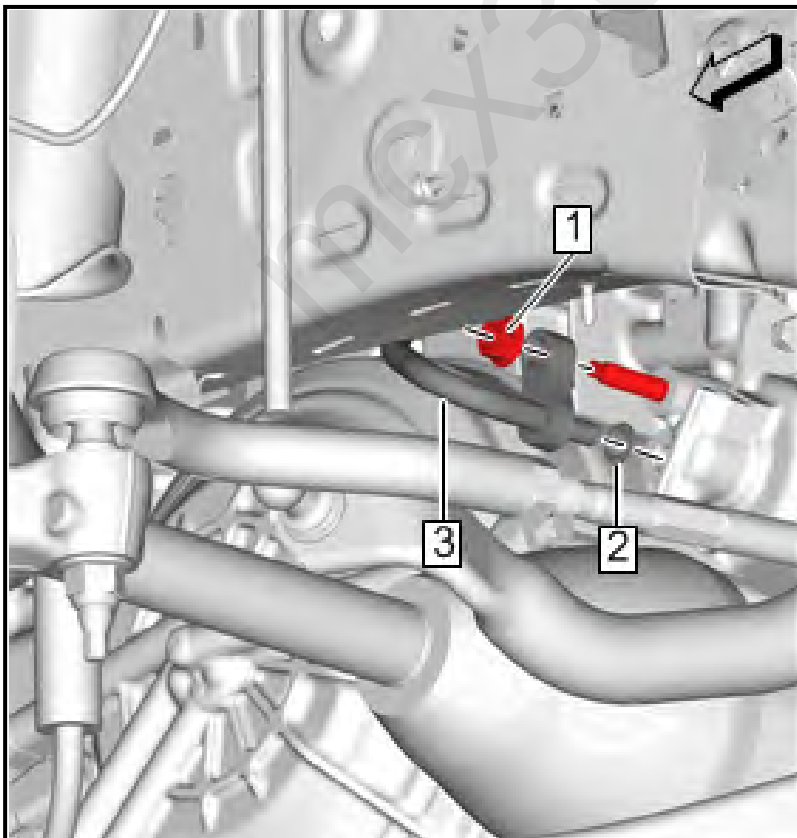




Transmission Fluid Cooler Outlet Pipe Clip (1) @ Transmission Fluid Cooler Outlet Pipe (2) - Disengage

8. Transmission Fluid Cooler Outlet Pipe (2) @ Transmission Fluid Cooler Outlet Pipe Clip (1) - Remove
9. Front Compartment Splash Shield- Left Side - Remove - [Front Compartment Splash Shield Replacement - Left Side](#)

10.

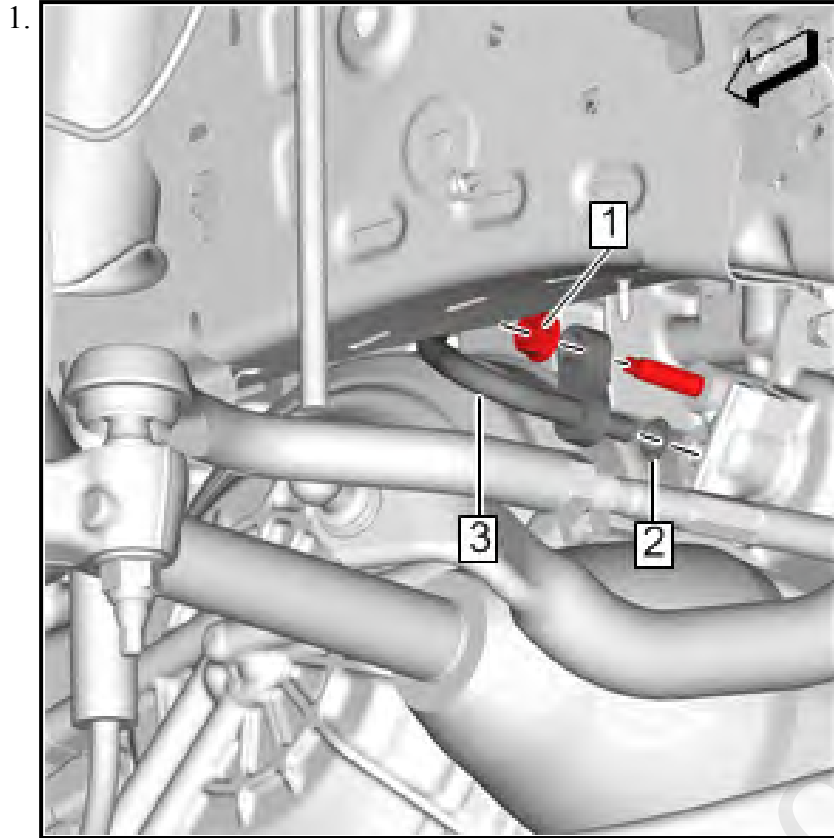


Transmission Fluid Cooler Outlet Pipe Nut (1) @ Transmission - Remove

11. Transmission Fluid Cooler Outlet Pipe (3) @ Transmission - Remove
12. Remove and DISCARD the seal. (2)
13. Cap the openings to prevent contamination.

14. Remove the transmission fluid cooler outlet pipe (3) from the vehicle.

Installation Procedure

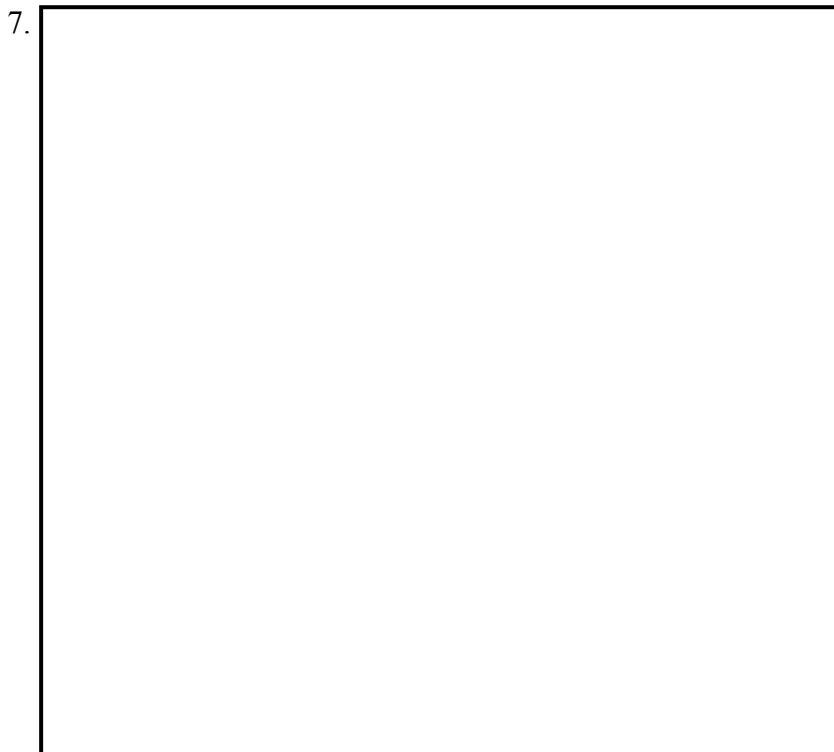


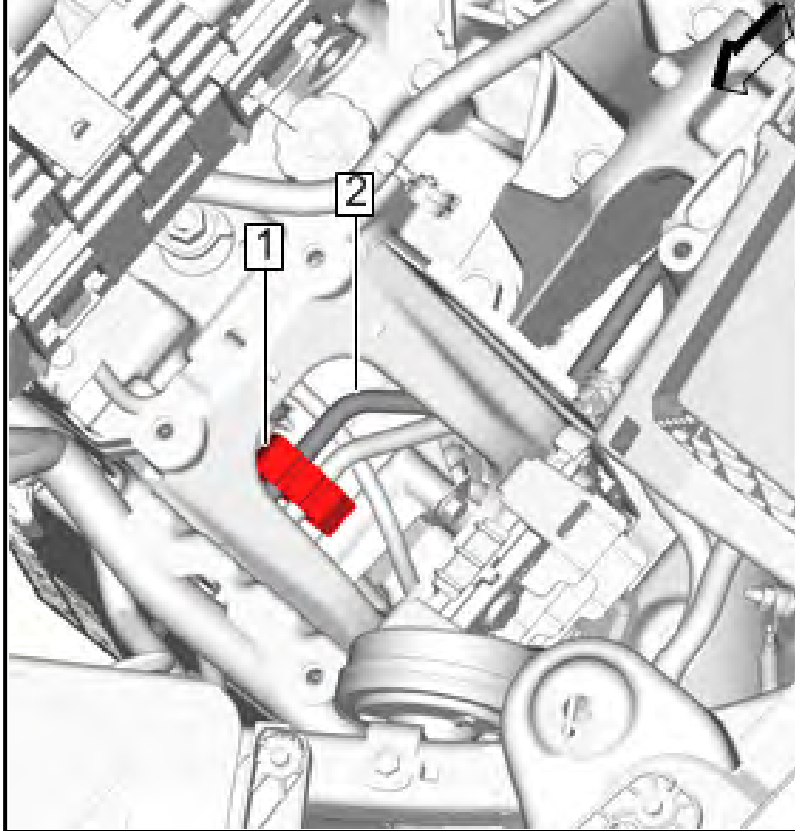
Install the transmission fluid cooler outlet pipe (3) to the vehicle.

2. Remove the caps from the fittings and plugs from the holes before installing the transmission fluid cooler pipes.
3. Install a NEW seal. (2)
4. Transmission Fluid Cooler Outlet Pipe (3) @ Transmission - Install

CAUTION: Refer to [Fastener Caution](#) .

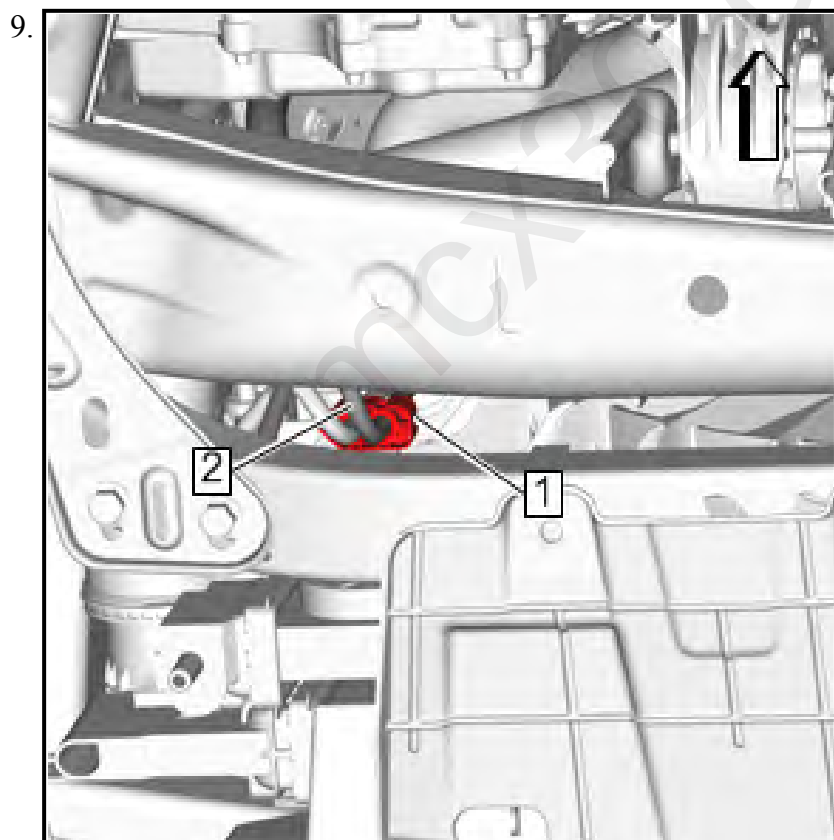
5. Transmission Fluid Cooler Outlet Pipe Nut (1) @ Transmission - Install and tighten 22 N.m (16 lb ft)
6. Front Compartment Splash Shield- Left Side - Install - [Front Compartment Splash Shield Replacement - Left Side](#)





Transmission Fluid Cooler Outlet Pipe (2) @ Transmission Fluid Cooler Outlet Pipe Clip (1) - Install

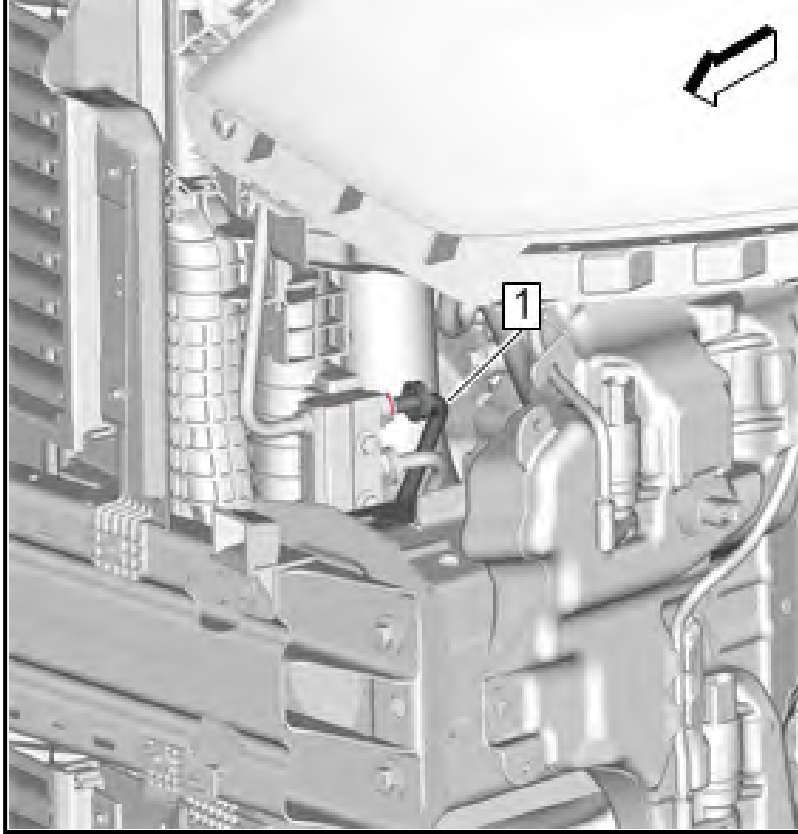
8. Transmission Fluid Cooler Outlet Pipe Clip (1) @ Transmission Fluid Cooler Outlet Pipe (2) - Engage



Transmission Fluid Cooler Outlet Pipe (2) @ Transmission Fluid Cooler Outlet Pipe Clip (1) - Install

10. Transmission Fluid Cooler Outlet Pipe Clip (1) @ Engine Coolant Fan - Engage





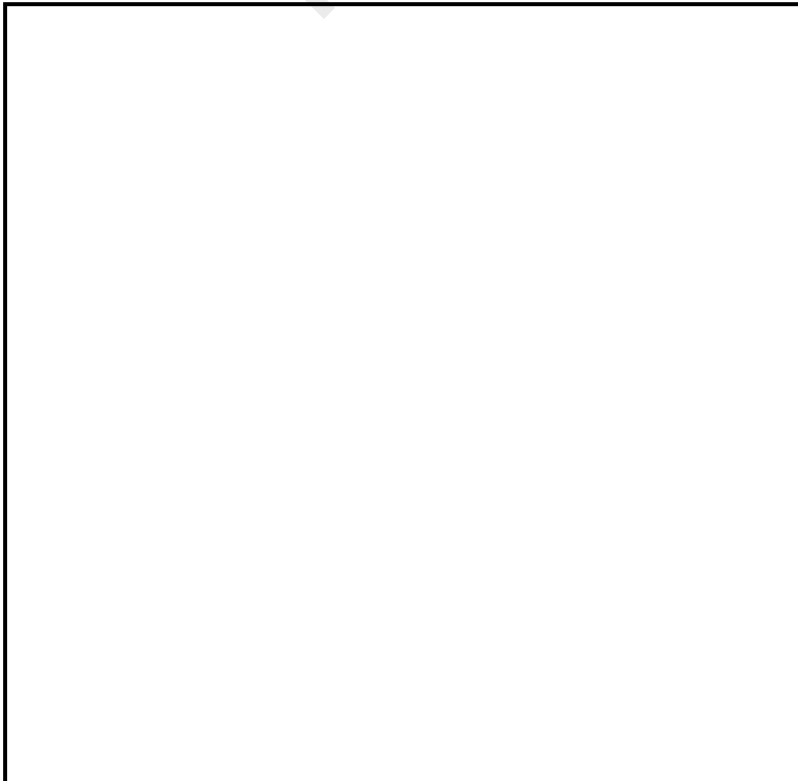
Remove the caps from the fittings and plugs from the holes before installing the transmission fluid cooler pipes.

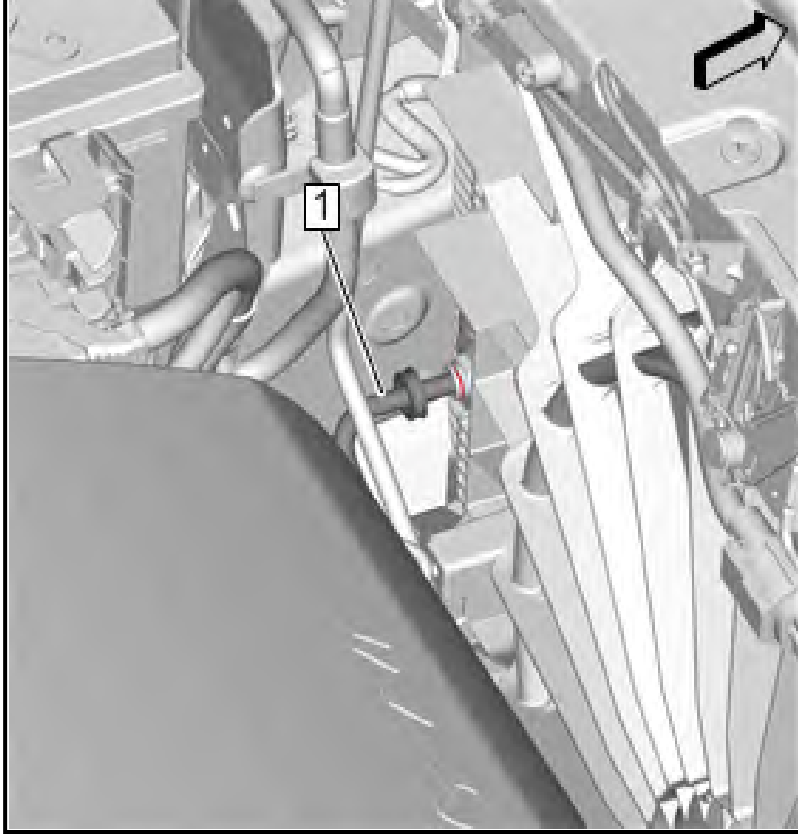
12. Transmission Fluid Cooler Outlet Pipe (1) @ Transmission Fluid Cooler Thermal Bypass Valve - Connect - [Transmission Fluid Cooler Hose/Pipe Quick-Connect Fitting Disconnection and Connection](#)
13. Install the battery tray. [Battery Tray Replacement](#)
14. Fill the transmission to the proper level with NEW transmission fluid. [Transmission Fluid Level and Condition Check](#)
15. Inspect for transmission fluid leaks.
16. Remove the drain pan.

TRANSMISSION FLUID COOLER PIPE REPLACEMENT (WITH V08)

1. Place a drain pan under the vehicle.

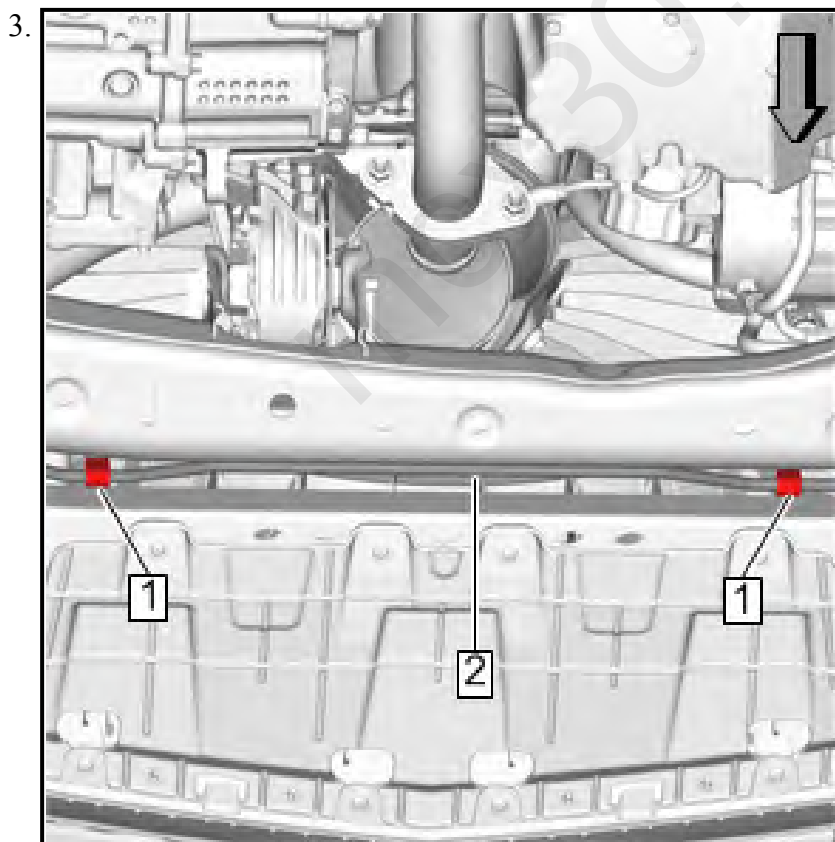
2.





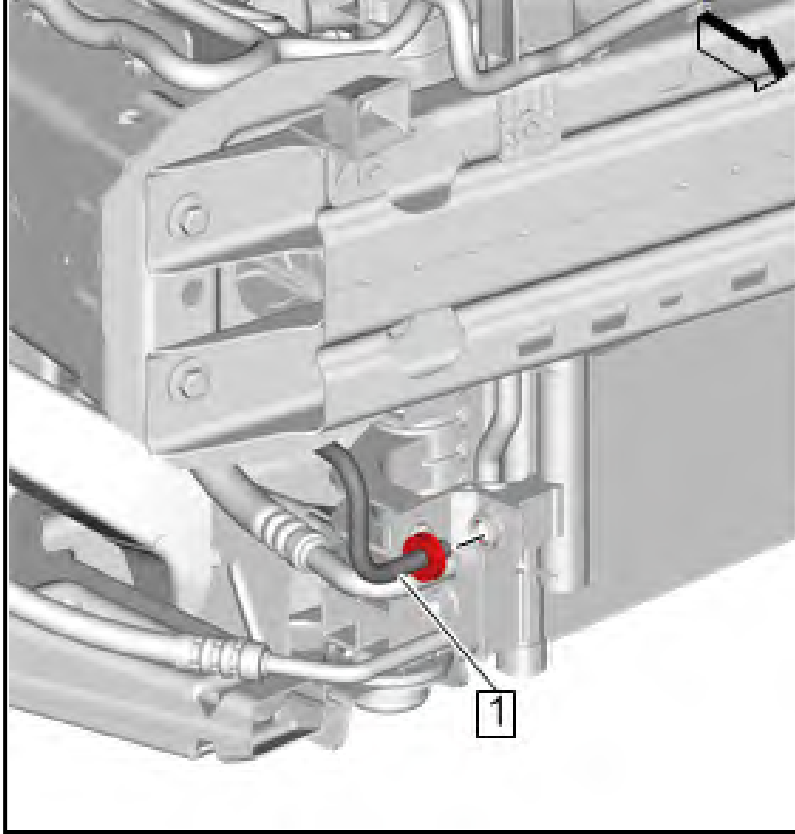
NOTE: Cover or plug all open transmission fluid cooler pipe connection points to help avoid any accidental contamination.

Transmission Fluid Cooler Pipe (1) @ Radiator - Disconnect - [Transmission Fluid Cooler Hose/Pipe Quick-Connect Fitting Disconnection and Connection](#)



Transmission Fluid Cooler Pipe (2) @ Transmission Fluid Cooler Pipe Clip (1) - Unclip [2x]



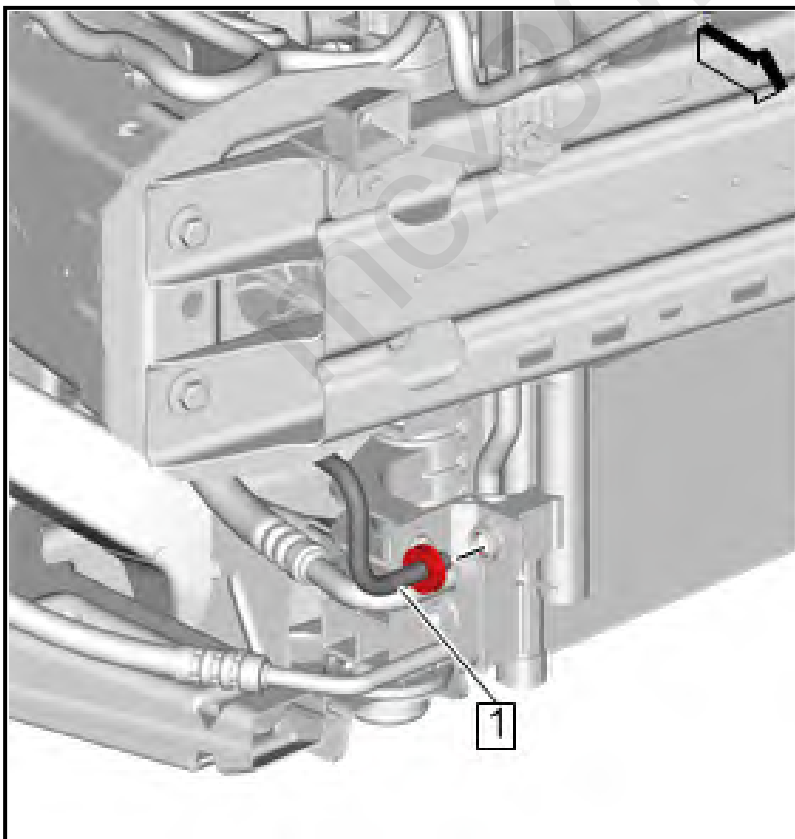


Transmission Fluid Cooler Pipe (1) @ Transmission Fluid Auxiliary Cooler - Remove - Transmission Fluid Cooler Hose/Pipe Quick-Connect Fitting Disconnection and Connection

5. Remove the transmission fluid cooler pipe (1) from vehicle.

Installation Procedure

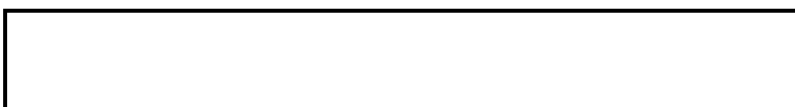
1.

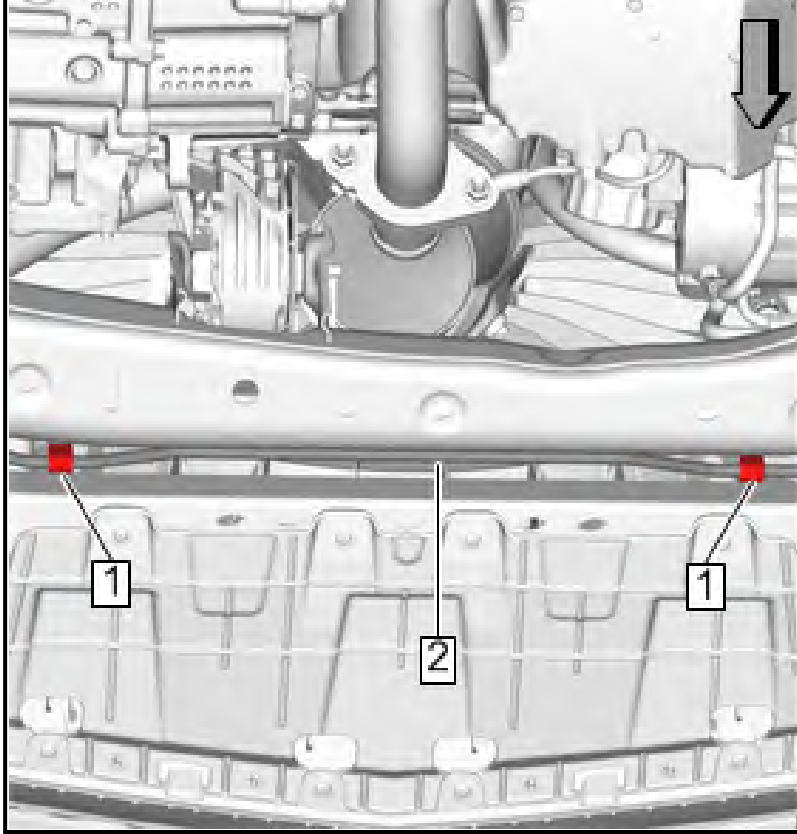


Install the transmission fluid cooler pipe (1) to vehicle.

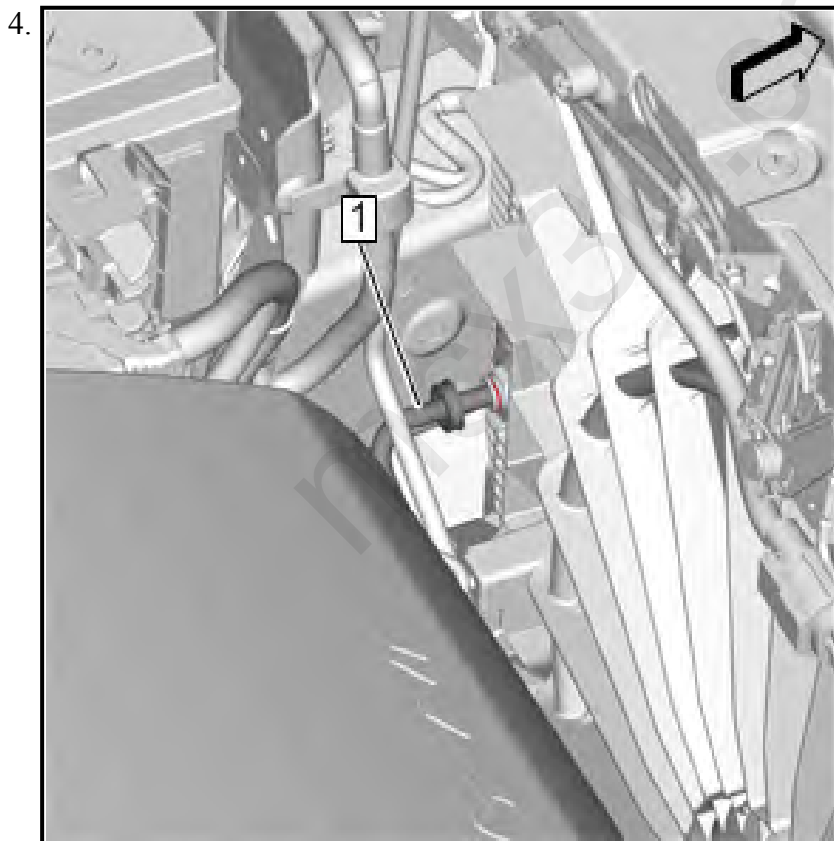
2. Transmission Fluid Cooler Pipe (1) @ Transmission Fluid Auxiliary Cooler - Install - Transmission Fluid Cooler Hose/Pipe Quick-Connect Fitting Disconnection and Connection

3.





Transmission Fluid Cooler Pipe (2) @ Transmission Fluid Cooler Pipe Clip (1) - Clip [2x]

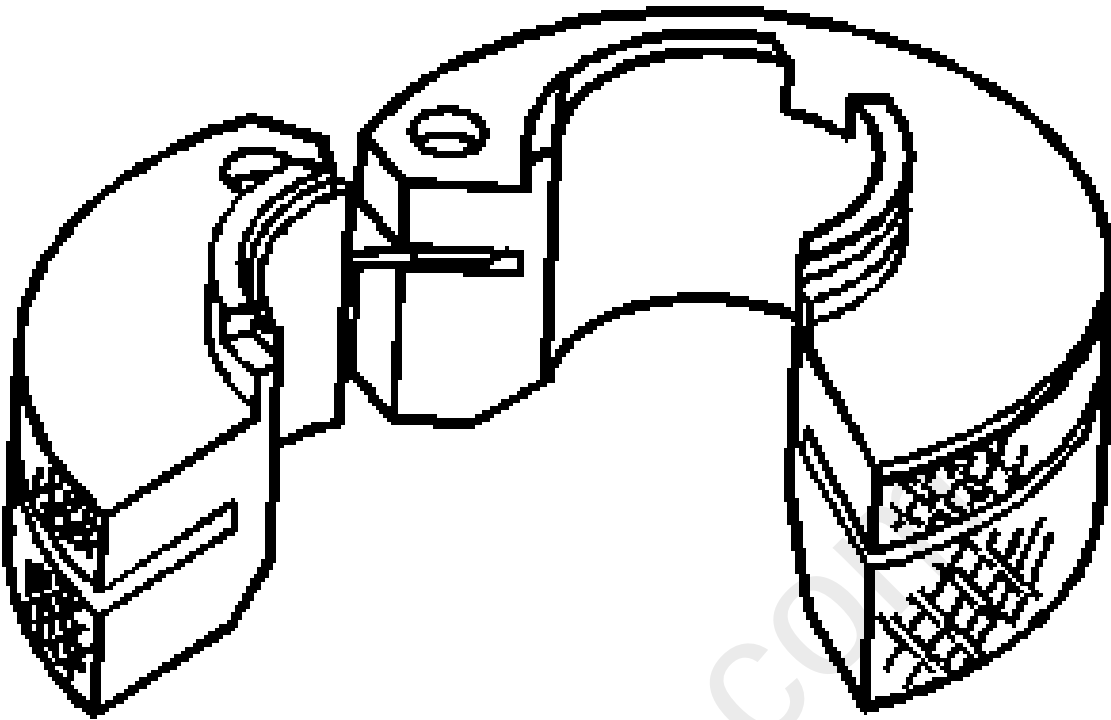


Transmission Fluid Cooler Pipe (1) @ Radiator - Install - [Transmission Fluid Cooler Hose/Pipe Quick-Connect Fitting Disconnection and Connection](#)

5. Remove the drain pan.
6. Fill and inspect the transmission fluid level. [Transmission Fluid Level and Condition Check](#)
7. Inspect for transmission fluid leaks.

SPECIAL TOOLS AND EQUIPMENT

SPECIAL TOOLS

Illustration	Tool Number/ Description
	DT 41623-B J 41623-B Cooler Quick Connect Tool
	DT 45096 J 45096 Transmission Oil Cooling System Flush and Flow Test Tool

Illustration

Tool
Number/
Description



Illustration	Tool Number/ Description
 The image shows two identical blue metal adapter tools. Each tool consists of a long, cylindrical body with a threaded section in the middle. At one end, there is a flange with a central hole and a smaller side hole. At the other end, there is a threaded connector. The tools are shown diagonally, one above the other.	DT 45096-30 J 45096-30 Cooler Flushing Adapter

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Illustration	Tool Number/ Description
	DT 45201 J 45201 Cooler Line Seal Remover

Illustration	Tool Number/ Description
	DT 47770 Seal Installer