

Product Safety Recall

N212329840 Engine Heater Short Circuit



Release Date: December 2021

Revision: 01

Revision Description: This bulletin is being revised to include the procedure to enable the engine-block heater for northern/cold weather areas only. Please discard all previous copies of N212329840.

Attention: It is a violation of Federal law for a dealer to deliver a new motor vehicle or any new or used item of motor vehicle equipment (including a tire) covered by this notification under a sale or lease until the defect or noncompliance is remedied.

All involved vehicles that are in dealer inventory must be held and not delivered to customers, dealer traded, or used for demonstration purposes until the correction contained in this bulletin has been performed on the vehicle.

The pre-shipped parts are being sent to dealers in the following northern/cold weather areas: Alaska, Colorado, Idaho, Maine, Michigan, Minnesota, Montana, North Dakota, New Hampshire, New York, South Dakota, Vermont, Wisconsin, Wyoming and Canada.

Important: For dealers with pre-shipped parts, follow the enable engine-heater block service procedure. For dealers without parts, perform the disable procedure on inventory units only. For customer vehicles, dealers do not need to disable the engine-block heater. If the customer requests the disable procedure be completed, you may proceed. However, advising the customer NOT to use the block heater system is sufficient at this time.

Make	Model	Model Year		RPO	Description
		From	To		
Chevrolet	Silverado 2500/3500	2017	2019	L5P	6.6L, 8-cylinder diesel engine
GMC	Sierra 2500/3500				

Involved vehicles are marked 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	General Motors has decided that a defect which relates to motor vehicle safety exists in certain 2017-2019 model year Chevrolet Silverado 2500/3500 and GMC Sierra 2500/3500 vehicles. In vehicles equipped with the Duramax diesel 6.6 liter engine and the optional engine-block heater cord, a short-circuit condition may develop in the engine-block heater cable or in the terminals that connect the heater cable to the block heater. A short-circuit condition can cause damage to engine components and, in rare cases, start a fire in the engine compartment.
Correction	Cold weather areas with pre-shipped parts: Dealers are to replace the engine-block heater and cord. For warm weather/remaining areas: Dealers are to continue to perform the engine block disable procedure on inventory only vehicles. For customer vehicles, dealers do not need to disable the engine-block heater. If the customer requests the disable procedure be completed, you may proceed. However, advising the customer NOT to use the block heater system is sufficient at this time.

Parts for Disabling Engine-Block Heater

No parts are required for this procedure.

Parts for Enabling Engine-Block Heater

Quantity	Part Name	Part No.
1	Engine Coolant Heater	12724955
1	Power Cord – Engine Coolant Heater	85590391
2	Dex-Cool Engine Coolant	12346290 US 10953464 Canada Obtain locally in compliance w/ GM spec GMW3420 and Material Specification 9985809 (all other countries)
4	Locally Sourced Automotive Quality Wire Tie	NPN

Important: An initial supply of part 12724955 (HEATER ASM-ENG COOL) and 85590391 (CORD ASM-ENG COOL HTR) will be pre-shipped in a Fair Share Allocation based on all impacted VINS of the Dealers registered in Canada

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and the following states: Alaska, Colorado, Idaho, Maine, Michigan, Minnesota, Montana, New York, North Dakota, New Hampshire, South Dakota, Vermont, Wisconsin, Wyoming. This pre-shipment starts the week of 12/20/21 and will continue for several weeks. Additional States will be added as GM finishes shipping to Canada and cold weather states and more parts become available. Pre-shipped parts will be charged to dealer's open parts account. All orders placed prior to and during the pre-ship will be cancelled. A quantity limiter may be in effect.

Note: The per gallon part number for coolant is listed in the part table. If your facility buys the correct coolant in a bulk quantity, do not order the gallon units.

Warranty Information For Disabling Engine-Block Heater (Inventory Only Vehicles)

Labor Operation	Description	Labor Time	Trans. Type	Net Item
9105850	Remove Engine Block Heater Cord	0.4	ZFAT	N/A
9105851	Customer Reimbursement Approved - For USA and Canada dealers only - For Export dealers only	N/A 0.2	ZFAT	*
9105852	Customer Reimbursement Denied – For USA dealers only	N/A	ZFAT	**

Note: To avoid having to “H” route the customer reimbursement transaction for approval, it must be submitted prior to the repair transaction.

*For USA and Canada: Submit the dollar amount reimbursed to the customer in Net/Reimbursement. Submit \$20.00 USD (\$25.00 CAN) administrative allowance in Net/Admin Allowance.

For Export: Submit the dollar amount reimbursed to the customer in Net/Reimbursement.

**Submit \$10.00 USD (\$12.00 CAN) administrative allowance in Net/Admin Allowance.

Warranty Information For Enabling Engine-Block Heater

Labor Operation	Description	Labor Time	Trans. Type	Net Item
9106096	Install Revised Engine Coolant Heater Element and Cord ADD: Remove Existing Engine Coolant Heater Power Cord	1.5 0.1	ZFAT	N/A
9105851	Customer Reimbursement Approved - For USA and Canada dealers only - For Export dealers only	N/A 0.2	ZFAT	*
9105852	Customer Reimbursement Denied – For USA dealers only	N/A	ZFAT	**

Note: To avoid having to “H” route the customer reimbursement transaction for approval, it must be submitted prior to the repair transaction.

*For USA and Canada: Submit the dollar amount reimbursed to the customer in Net/Reimbursement. Submit \$20.00 USD (\$25.00 CAN) administrative allowance in Net/Admin Allowance.

For Export: Submit the dollar amount reimbursed to the customer in Net/Reimbursement.

**Submit \$10.00 USD (\$12.00 CAN) administrative allowance in Net/Admin Allowance.

Service Procedure For Disabling Engine-Block Heater (Inventory Only Vehicles)

1. Raise the hood and locate the engine heater power cord (it should be bundled at the right-side front of dash area).
2. Locate and remove all of engine compartment power cord attachment points. Route the engine heater power cord assembly to the underside of the vehicle and let it drop.
3. Raise the vehicle and remove the right front wheel. Refer to *Tire and Wheel Removal and Installation (8-Lug Wheel)* in SI.

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4. Looking through the area between the wheelhouse liner and the suspension, locate the engine block heater.



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5. Using wire cutters, cut the engine heater power cord from the plug at the engine block heater. Leave the orange plug clipped into the engine block heater.
6. Remove any existing engine heater power cord fasteners and remove the power cord. Discard the power cord.
7. Print the disclosure letter and place it inside the vehicle in plain view.



NOTICE TO CUSTOMER

This vehicle is equipped with an engine-block heater that is affected by a recently announced GM safety recall. On July 1, 2021, GM notified the National Highway Traffic Safety Administration and Transport Canada that a short-circuit condition could develop in the engine-block heater cable or in the terminals that connect the cable to the block heater. A short-circuit condition can cause damage to engine components and, in rare cases, start a fire in the engine compartment.

Because this condition can only occur when the engine-block heater is on, your dealer has performed a repair on this vehicle that has rendered the engine-block heater temporarily inoperable. GM is developing a final repair that will restore the functionality of the engine-block heater. When this repair is available, you will receive a letter to return to the dealer to receive the repair.

If you sell this vehicle, you should provide this notice to the buyer of your vehicle. Please also retain a copy of this notice in the vehicle's glove compartment.

If you have any questions or need any assistance, please contact your dealer or the appropriate Customer Assistance Center at the number listed below.

Division	Number	Text Telephones (TTY)
Chevrolet	1-800-222-1020	1-800-833-2438
GMC	1-800-462-8782	1-800-889-2438
Puerto Rico – English	1-800-496-9992	
Puerto Rico – Español	1-800-496-9993	
Virgin Islands	1-800-496-9994	

Service Procedure for Enabling Engine-Block Heater

DANGER: When performing the following repairs, ensure the engine and coolant are at room temperature. When removing the engine block heater, the coolant in the engine will drain out. This coolant may injure the technician if the coolant is hot.

Note: It is critical that the radiator surge tank is topped off with an additional **1.6 L (2 qt)** of coolant to fill the upper and lower radiator surge tank chambers. If the coolant tank is not purged and filled properly, there will be air pockets in the coolant tank which will require the customer to return to the dealership to address low coolant warning.

Note: Some vehicles may have had the engine block heater power cord removed under a previous campaign. If the power cord has been removed, proceed directly to step #4.

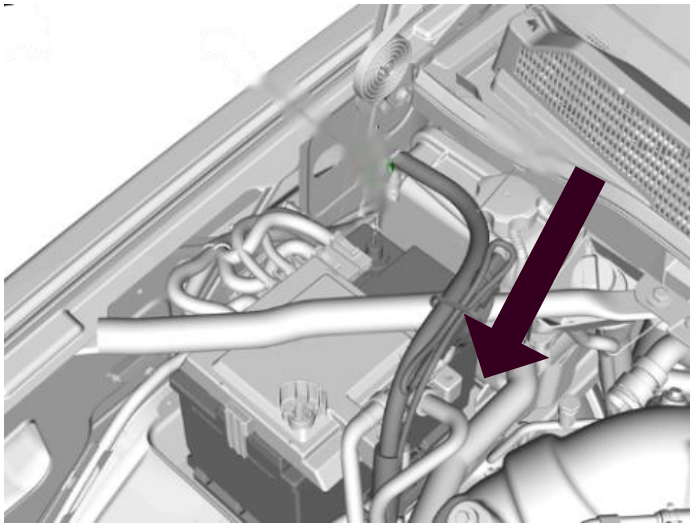
1. Raise the hood and locate the engine heater power cord (bundled at the right-side front of dash area).

Note: Some attachment points may use tape to secure the power cord to the vehicle wiring harness. Use care to not cut the vehicle wiring harness when removing these attachment points.

2. Locate and remove all of engine compartment power cord attachment points.
3. Drop the existing power cord to the underside of the vehicle.
4. Remove the new service engine heater power cord from the box and uncoil the cord.
5. Lower the engine heater element end of the new power cord to the underside of the vehicle.

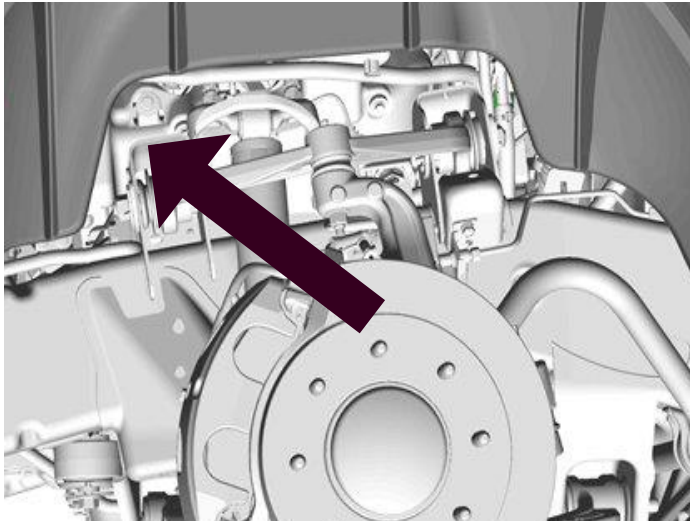
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- Start lowering the cord inboard of the battery toward the front of dash.



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- It should come out in the area identified above.
6. Raise the vehicle and remove the right front wheel. Refer to *Tire and Wheel Removal and Installation (8-Lug Wheel)* in SI.
 7. Remove the right front wheelhouse liner. Refer to *Front Wheelhouse Liner Replacement - Right Side* in SI.

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8. Looking through the area between the frame and suspension, locate the engine block heater.
9. Disconnect the engine block heater plug from the heater element by releasing the retainer clip and unplugging.
10. Remove any existing engine heater power cord fasteners and remove the power cord. Discard the power cord.

Note: It is not necessary to drain the radiator. The engine block coolant will be drained when the engine coolant heater is removed.



Note: The removal of the old coolant heater element requires a 30mm Socket wrench. The installation of the new coolant heater element requires a 26mm socket wrench.

11. Place a large drain pan under the vehicle to capture the coolant. Remove the engine coolant heater. Refer to *Engine Coolant Heater Replacement (L5P)* in SI.
12. After removing the original block heater, take care to remove the old cured thread sealant in the block. Failure to remove the old thread sealant will result in cross threading or binding of the replacement block heater.

Caution: Do not under torque the engine coolant heater. This can result in a coolant leak. A torque wrench, with tactile or audible feedback when torque has been achieved, should be used. Tighten to 90 N.m. (66 lb ft). DO NOT OVERTIGHTEN. Hand start the block heater carefully and secure at least 3 full turns before further tightening with a socket wrench.

Note: The new engine block heater element has the thread sealer applied at the time of manufacture. DO NOT INSTALL ADDITIONAL SEALER to the threads.

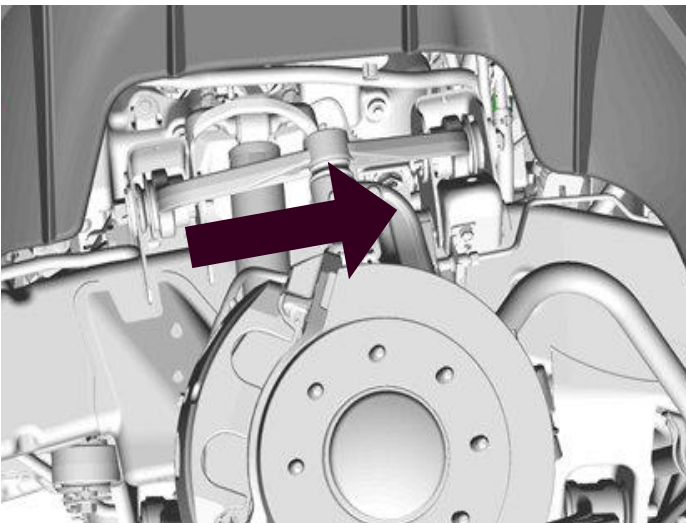
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13. Hand start the block heater carefully and secure at least 3 full turns before further tightening with a socket wrench.
14. Tighten to 90 N.m. (66 lb ft). **DO NOT OVERTIGHTEN.** A torque wrench, with tactile or audible feedback when torque has been achieved, should be used.

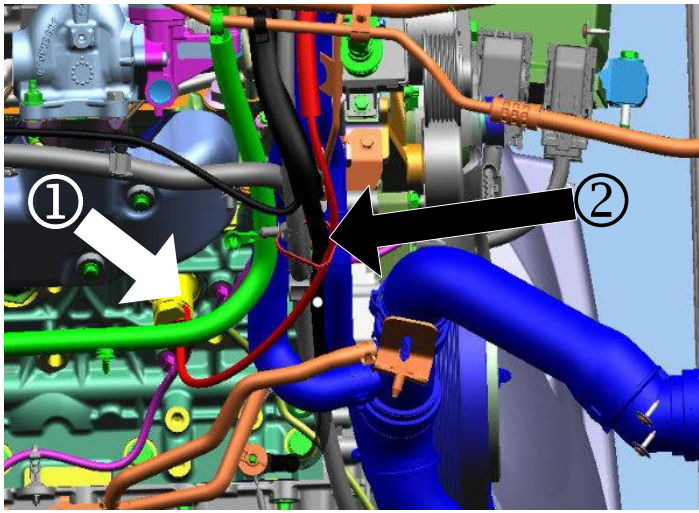


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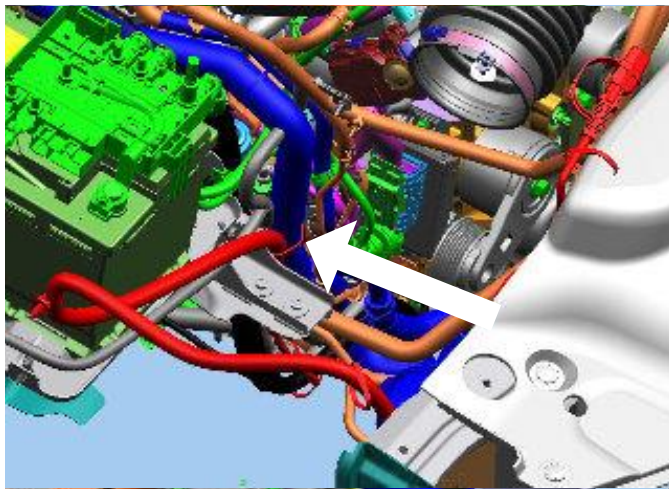
15. Slide the new power cord forward in the vehicle, toward the coolant heater element. Place the power cord connector near the coolant heater element. **DO NOT CONNECT** the power cord to the heater element at this time, it will be connected after the cooling system pressure test.

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16. Route the new engine coolant heater power cord (shown in red) to the upper motor compartment. Begin at the Element (1) and secure the wire tie (2) around the negative battery cable (black) and the engine chassis harness (grey).
17. Lower the vehicle.



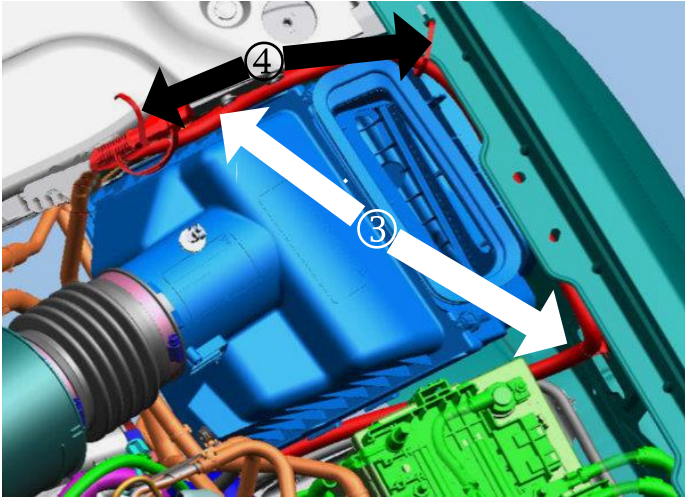
18. Route the power cord (shown in red) as shown and secure to the surge tank hose (blue) with a wire tie.

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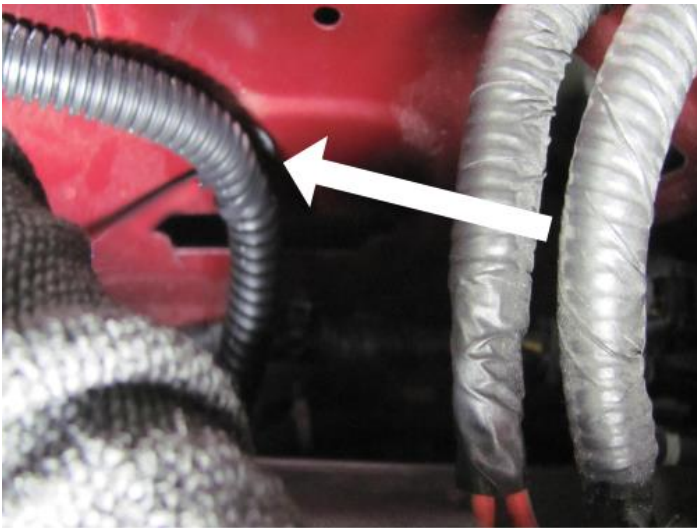


Engine Compartment Routing Overview



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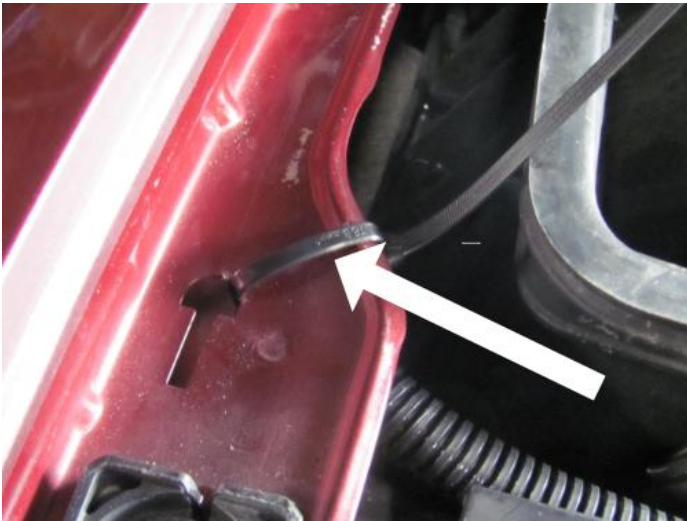
Push pin attachments (3), wire tie attachments (4).



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19. Position the power cord along the inner fender and secure to the existing hole using the first (closest to the heater element) push pin wire tie attached to the harness.

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20. Secure the power cord to the fender flange with a wire tie as shown. Some vehicles may have a hood seal or headlamp attachment at this location. Position the wire tie under the seal/bracket.



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21. Locate the drill location on the front compartment front sight shield. Mark the location.

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22. Drill a 5mm (13/64 in.) hole in the marked area. Use care to not damage components below the drill location.
23. Route the power cord from the fender flange area under the front compartment front sight shield.



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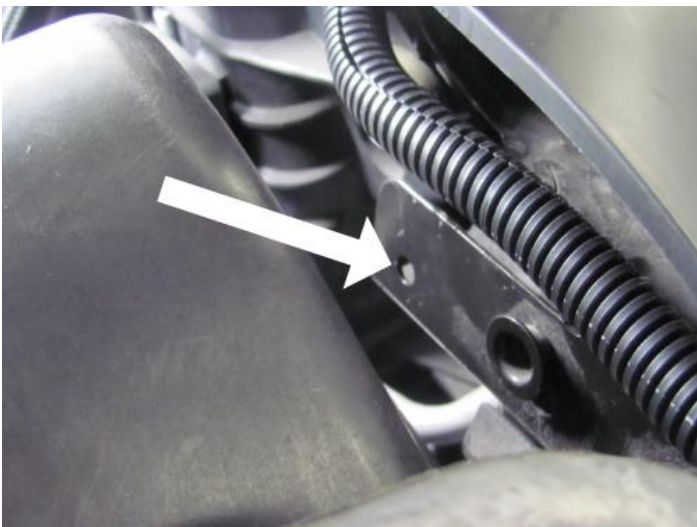
24. Create a gentle bend in the power cord and place the power cord plug over the hole in the site shield. Ensure the prongs on the power cord plug are facing toward the right fender.

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25. Secure the power cord plug to the front compartment front sight shield with a wire tie as shown. Ensure the prongs are facing toward the right front fender.



26. Locate the hole on the passenger side upper tie bar bracket.

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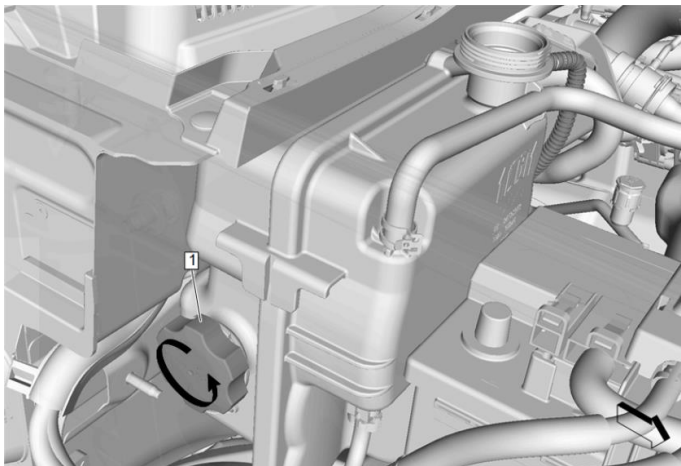


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27. Position the harness up under the front compartment front sight shield and secure it using the second (closest to the electrical plug) push pin wire tie on the harness.
28. Trim all wire ties as necessary.

Important: The Vac-N-Fill Procedure must be used when refilling the cooling system. If the Vac-N-Fill Procedure is not used, the customer will return to the dealership with a low coolant condition.

29. Fill the cooling system. Refer to *Cooling System Draining and Filling (Vac N Fill)* in SI.
30. Pressurize the cooling system. Refer to *Cooling System Leak Testing (L5P)* in SI.
31. Partially raise the vehicle and inspect the new engine block heater for coolant leaks.
 - Inspect the interface between the engine block heater and the engine block (threaded area) for leaks.
 - Check the cavity where the electrical connector fits for leaks.
32. Plug the new engine coolant heater cord assembly into the heater and secure it with the metal clip.
33. Reinstall the right front wheelhouse liner. Refer to *Front Wheelhouse Liner Replacement - Right Side* in SI.
34. Reinstall the right front wheel and tire. Refer to *Tire and Wheel Removal and Installation (8-Lug Wheel)* in SI.
35. Remove the leak testing equipment from the surge tank.

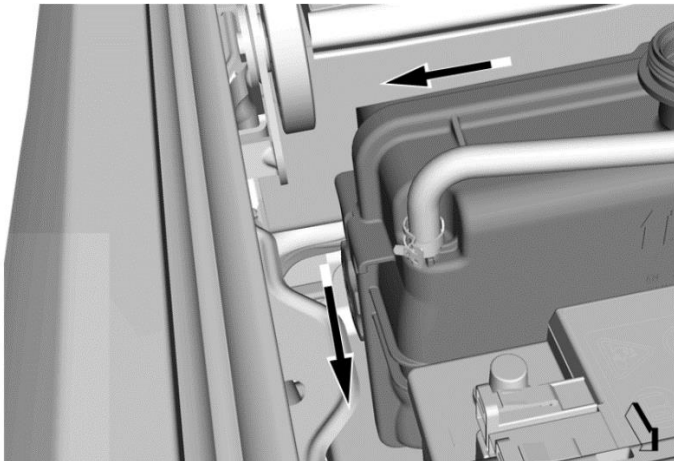


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36. Open the lower radiator surge tank cap (1) a $\frac{1}{4}$ of a turn counterclockwise.

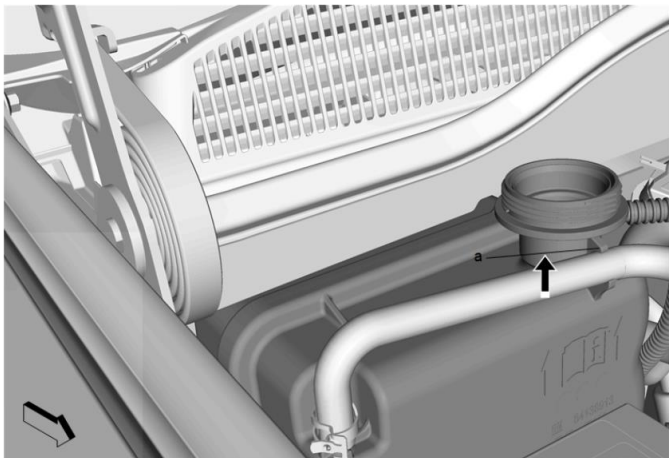
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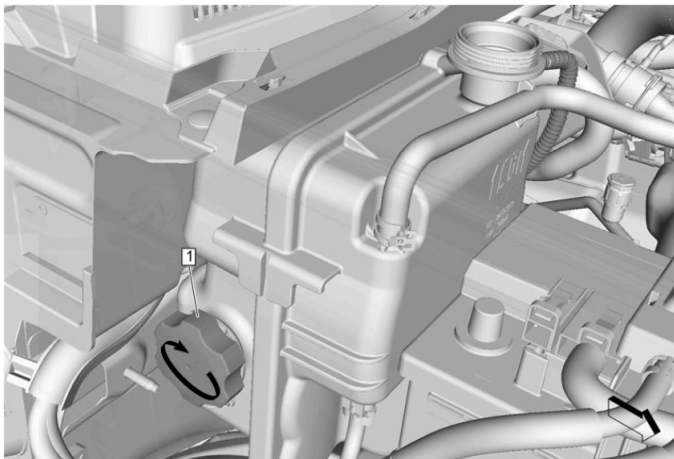
37. Using a funnel, slowly fill the radiator surge tank with **1.6 L (2 qt)** of coolant to fill the lower radiator surge tank chamber. The overflow tube will flow to the left and down as shown above, and slowly move to the lower radiator surge tank chamber.



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38. When completed, the radiator surge tank should be filled as shown above (a).

Note: Be sure the lower radiator surge tank cap is completely closed and locked in place to avoid getting air into the cooling system after filling. There will be a snap sound when the cap is completely closed and locked in place.

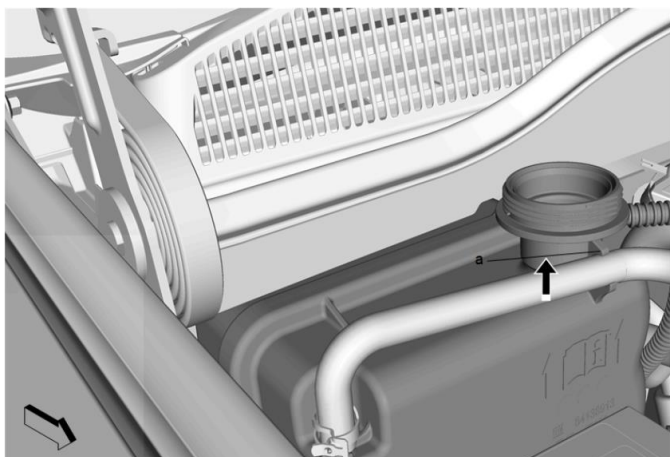


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39. Close the lower radiator surge tank cap (1) clockwise.

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40. If the coolant level is below the fill neck level shown (a) add coolant to the fill neck level shown.
41. Install radiator surge tank cap by turning counterclockwise.
42. Rinse away any excess coolant from the engine and the engine compartment.
43. Perform the following check list before delivering the vehicle to the customer:
 - Drain/fill/burp coolant system with vac/fill equipment.
 - Cord attached with 4 tie straps.
 - Cord attached with 2 push pin wire ties.
 - Engine block heater torqued to 90 N.m. (66 lb ft).
 - Cord properly connected to heater with metal clip engaged.

Dealer Responsibility – For USA & Export (USA States, Territories, and Possessions)

It is a violation of Federal law for a dealer to deliver a new motor vehicle or any new or used item of motor vehicle equipment (including a tire) covered by this notification under a sale or lease until the defect or noncompliance is remedied.

The US National Traffic and Motor Vehicle Safety Act provides that each vehicle that is subject to a recall of this type must be adequately repaired within a reasonable time after the customer has tendered it for repair. A failure to repair within sixty days after tender of a vehicle is prima facie evidence of failure to repair within a reasonable time. If the condition is not adequately repaired within a reasonable time, the customer may be entitled to an identical or reasonably equivalent vehicle at no charge or to a refund of the purchase price less a reasonable allowance for depreciation. To avoid having to provide these burdensome remedies, every effort must be made to promptly schedule an appointment with each customer and to repair their vehicle as soon as possible. In the recall notification letters, customers are told how to contact the US National Highway Traffic Safety Administration if the recall is not completed within a reasonable time.

Dealer Responsibility – All

All new, used, GM Certified Used, courtesy transportation vehicles, dealer shuttle vehicles, etc. in dealers' possession and subject to this recall must be held and inspected/repaired 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.

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.

Dealers are to service all vehicles subject to this recall at no charge to customers, regardless of mileage, age of vehicle, or ownership, from this time forward.

In summary, whenever a vehicle subject to this field action enters your vehicle inventory you must take the steps necessary to ensure the program correction has been made before selling the vehicle. In addition, for vehicles entering

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your facility for service, you are required to ensure the customer is aware of the open field action and make every reasonable effort to implement the program correction as set forth in this bulletin prior to releasing the vehicle.

Dealer Reports

For dealers with involved vehicles, a listing has been prepared and will be available through GM GlobalConnect Maxis Field Action Reports or sent directly to export dealers. The Inventory tab of the dealer reports will contain VINs that apply to this recall. This information is intended to assist dealers with the **PROMPT COMPLETION** of these vehicles. The Customer In-Service tab will contain customer names and addresses from Motor Vehicle Registration Records. The use of such motor vehicle registration data for any purpose other than follow-up necessary to complete this recall may be a violation of law in several states.

Courtesy Transportation – For USA & Canada

Courtesy transportation is available for customers whose vehicles are involved in a product program and still within the warranty coverage period. See General Motors Service Policies and Procedures Manual for courtesy transportation program details.

Customer Notification

USA & Canada - General Motors will notify customers of this recall on their vehicle.

Export - Letters will be sent to known owners of record located within areas covered by the US National Traffic and Motor Vehicle Safety Act.

Customer Reimbursement

Customer requests for reimbursement of previously paid repairs to correct the condition described in the bulletin can be submitted at anytime to the dealer. See General Motors Service Policies and Procedures Manual, Product Field Action Customer Reimbursement Procedure (USA & Canada) or local Policies and Procedures, for details.

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**