

2020-2024 CHEVY 3.0L LM2-LZ0 EGR INSTRUCTIONS

Installation Guide

Read the complete guide before beginning. Keep removed hardware organized, follow all safety precautions, and verify all connections before operating the vehicle.



PD-2-53235000 • 1 x EGR Block off plate • 1 x Turbo Plate • 1 x Intake Plug • 1 x Coolant Hose • 1 x Ground Cable (Pickup applications only) • 3 x Stainless Hose Clamps (Small) • 3 x Stainless Hose Clamps (Large) • 4 x Cable/Zip Ties • 3 x Barbed Hose Fittings



Installation reference - page 2

Before beginning the installation process, carefully unpack your kit and verify that all components, hardware, and accessories listed in the parts inventory above are present. Inspect each item to ensure nothing is missing, damaged, or incorrectly supplied. Confirming a complete and accurate set of parts before you start will help prevent delays and ensure the installation proceeds smoothly from start to finish.

Note

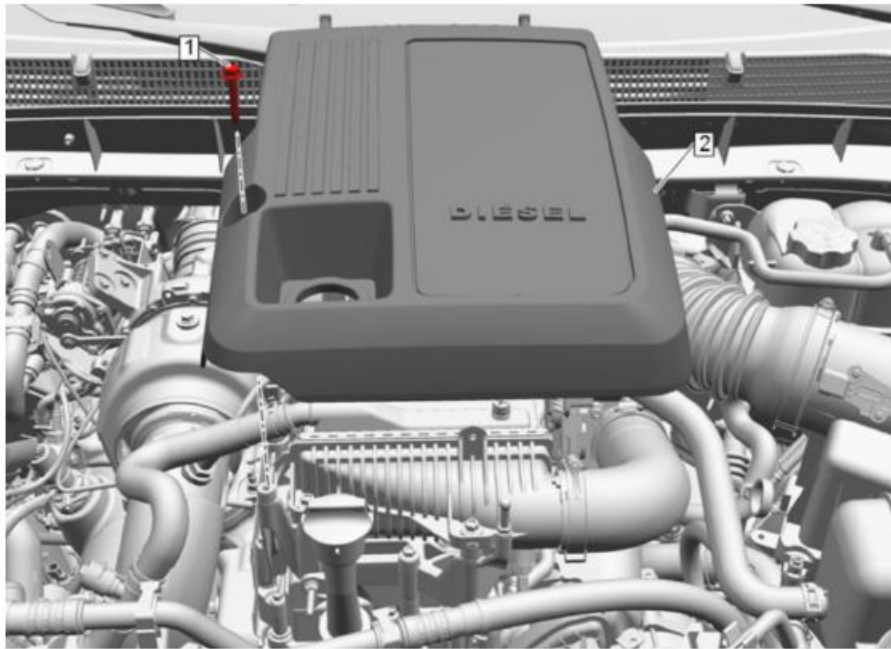
Prior to starting the installation, ensure that both the main and auxiliary batteries (if applicable) are fully disconnected to prevent accidental electrical shorts. After disconnecting the power, allow the vehicle time to cool so that the engine, exhaust components, and surrounding areas are safe to touch, reducing the risk of burns or injury.

Any photos that contain arrows are meant to be used as reference pointing to the front of the vehicle.

STEP 1

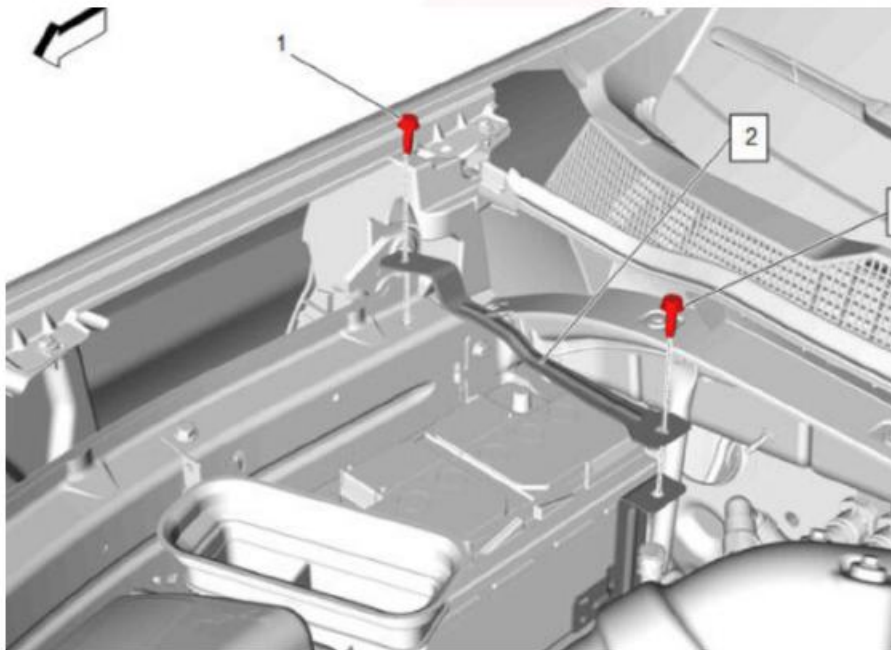
Disconnect batteries & drain engine coolant. Recover A/C refrigerant. Remove passenger side fender liner.

STEP 2



Installation reference - page 3

Remove oil filler cap & plastic intake manifold cover. Reinstall oil filler cap once intake manifold cover is removed to prevent debris from falling into the engine.



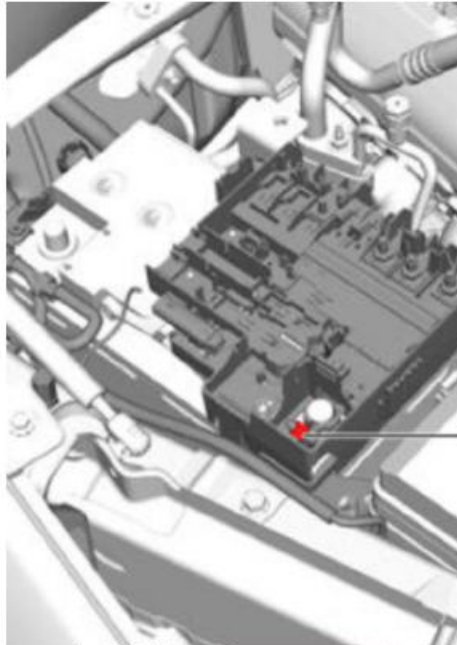
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STEP 3

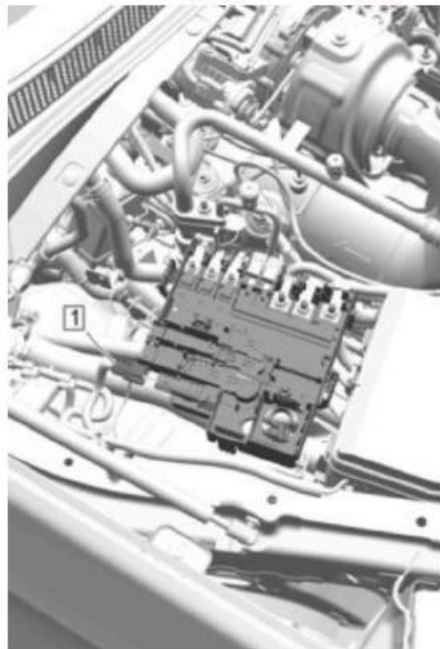
Remove the 2 bolts that are holding the battery tie down, then remove battery tie down. Then remove the power distribution box cover.

STEP 4

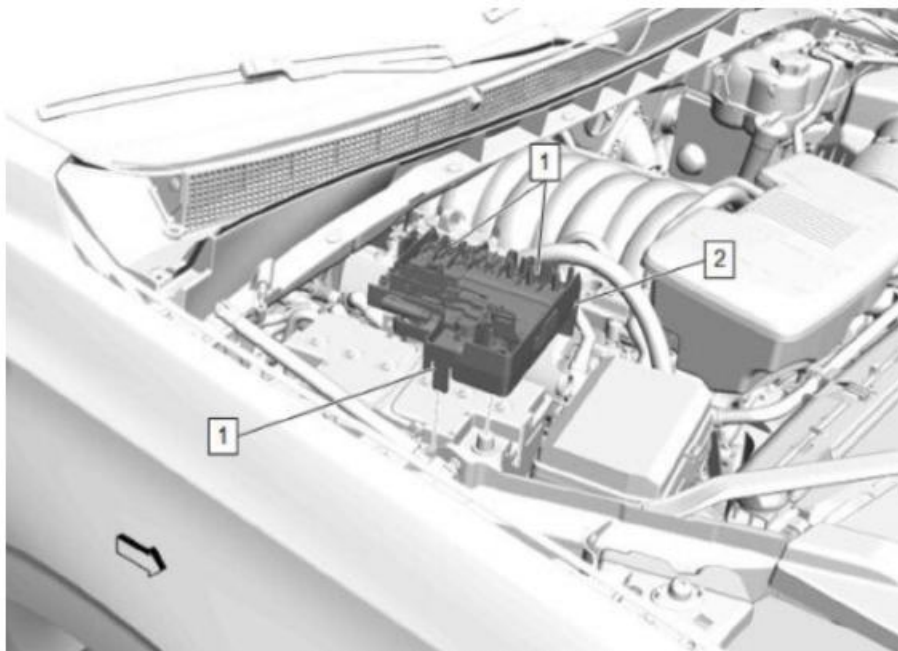
Remove nut holding positive terminal the fuse block. Remove electrical connector (highlighted green) and remove 6 nuts on circled connections and unplug. Unplug two center connections as well. All connectors are labeled to insure they are reinstalled properly.



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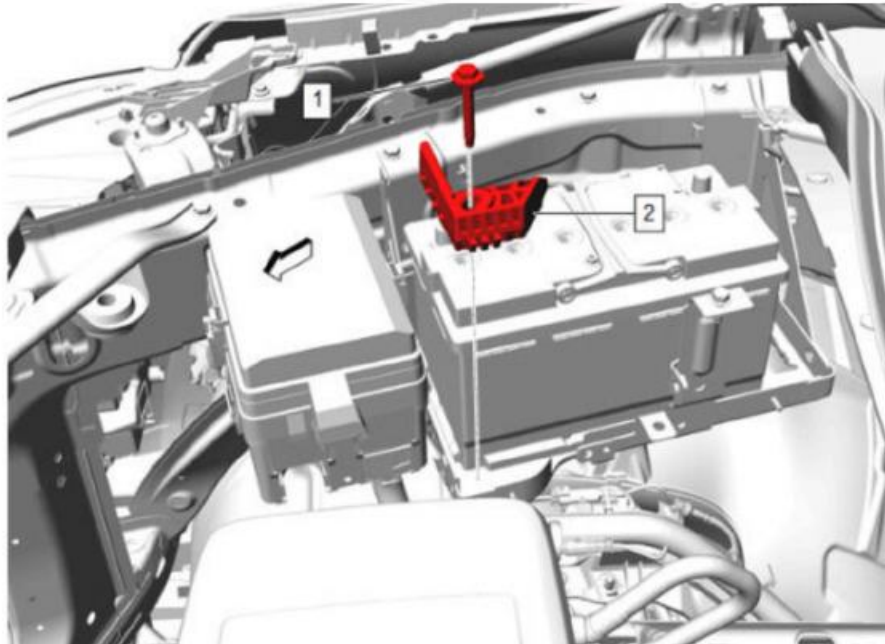
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STEP 5

Undo locking tabs on the power distribution block and remove.



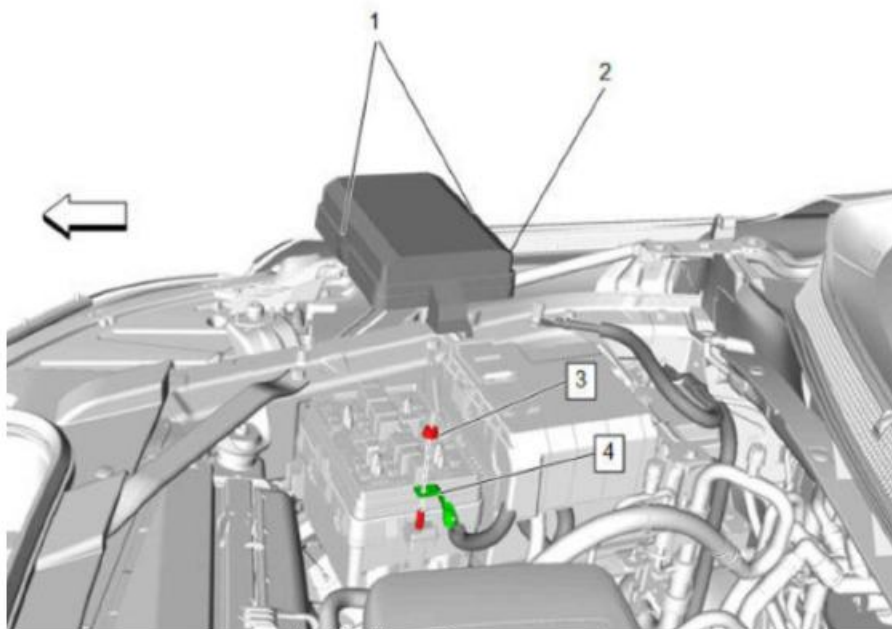
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STEP 6

Remove battery hold down bolt, remove battery retainer.

STEP 7

Remove battery, and remove fuse box cover.

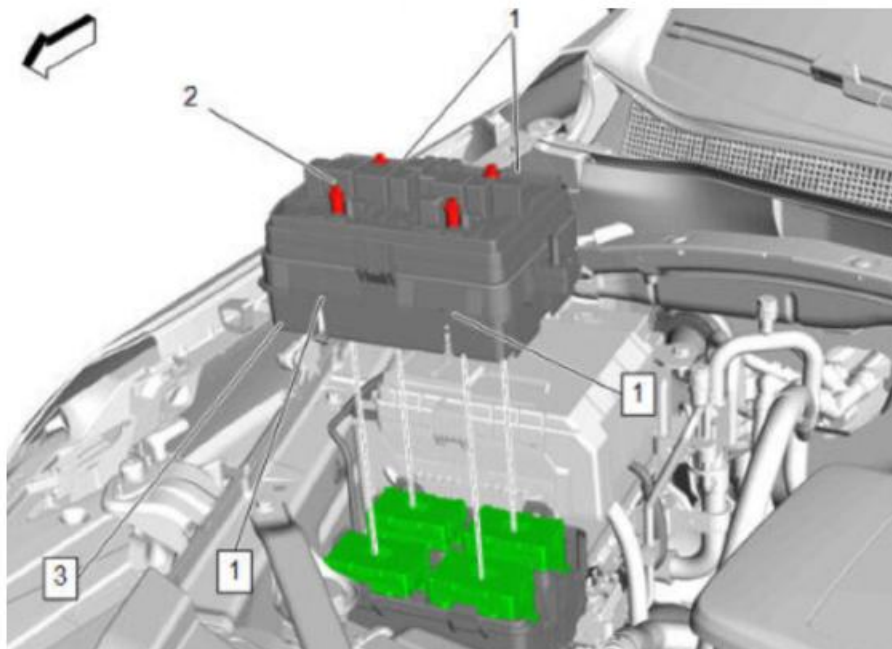


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STEP 8

- Remove 4 bolts holding

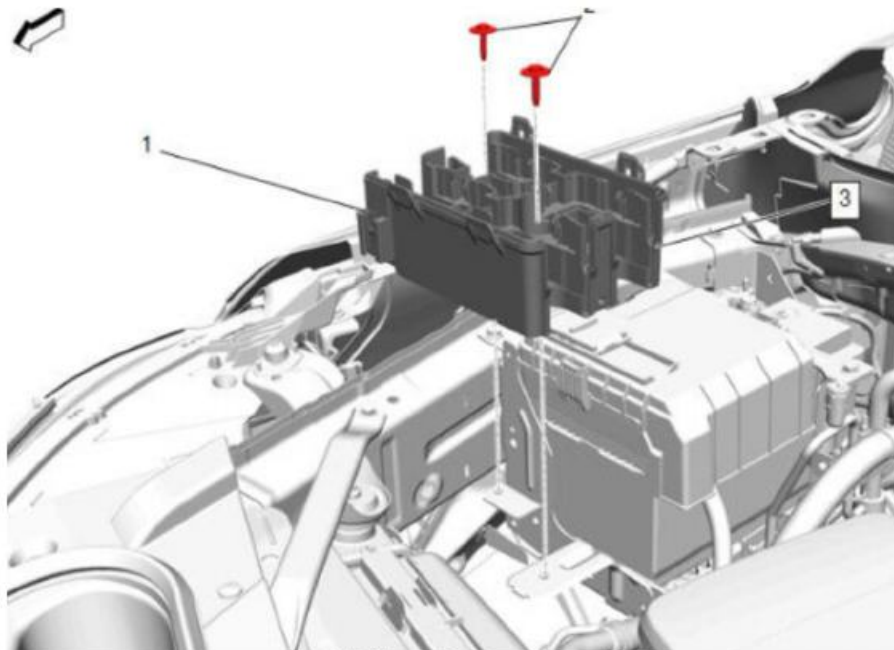
the fuse box down to the pictured connectors. There are 4 retaining tabs that need to be unclipped, after slightly loosening the bolts out first.



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- It is recommended to not

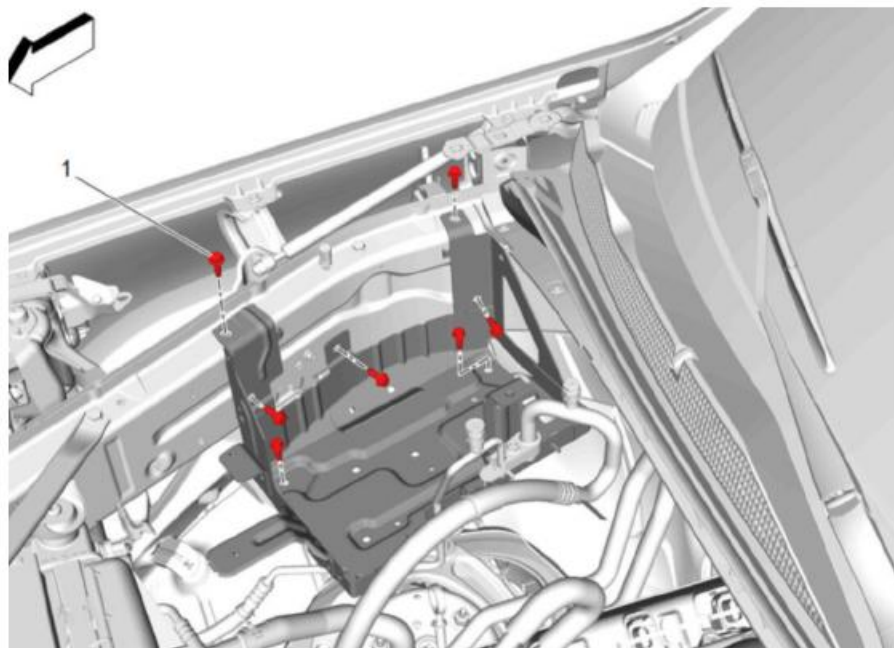
use power tools for this step, and to slowly remove bolts evenly.



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STEP 9

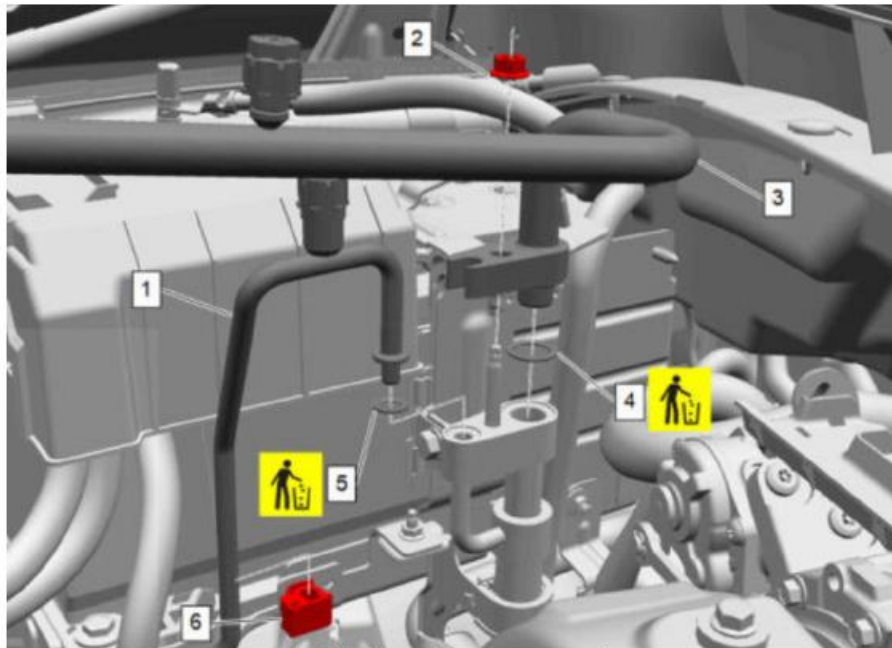
Remove electrical connectors (previously highlighted in green) and remove two bolts and remove fuse box base.



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STEP 9

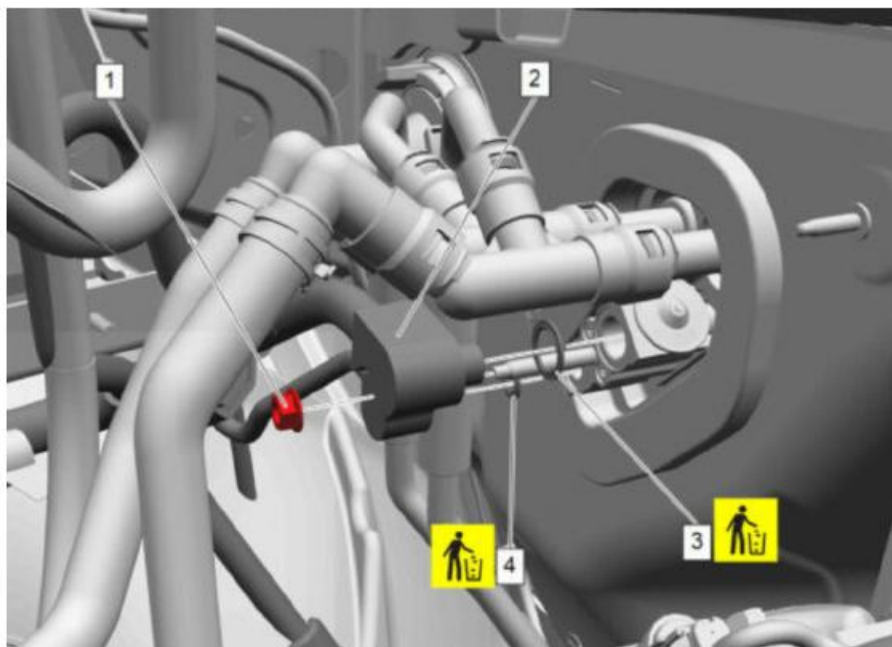
Remove bolts from battery tray and remove from vehicle, be sure to disconnect anything else that is attached to it.



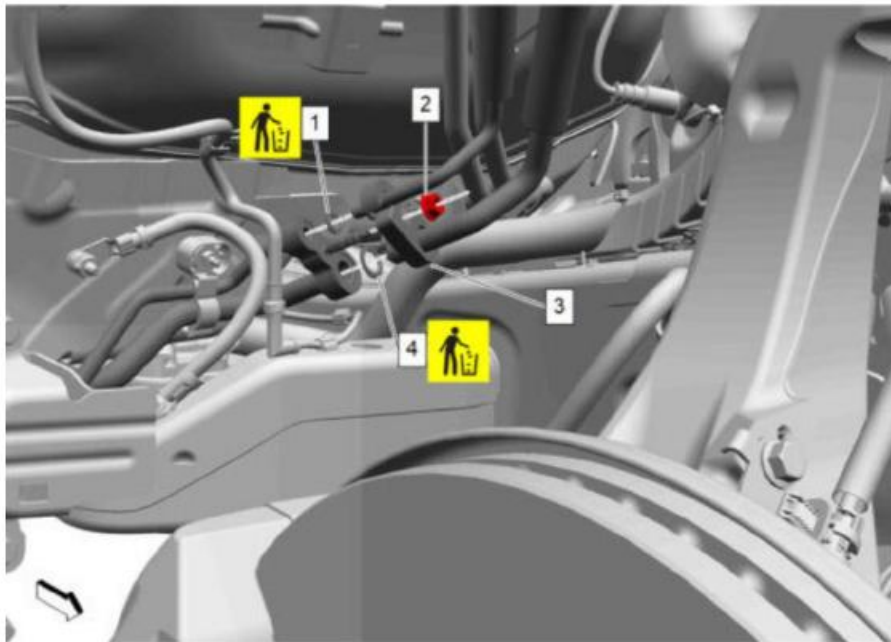
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STEP 10

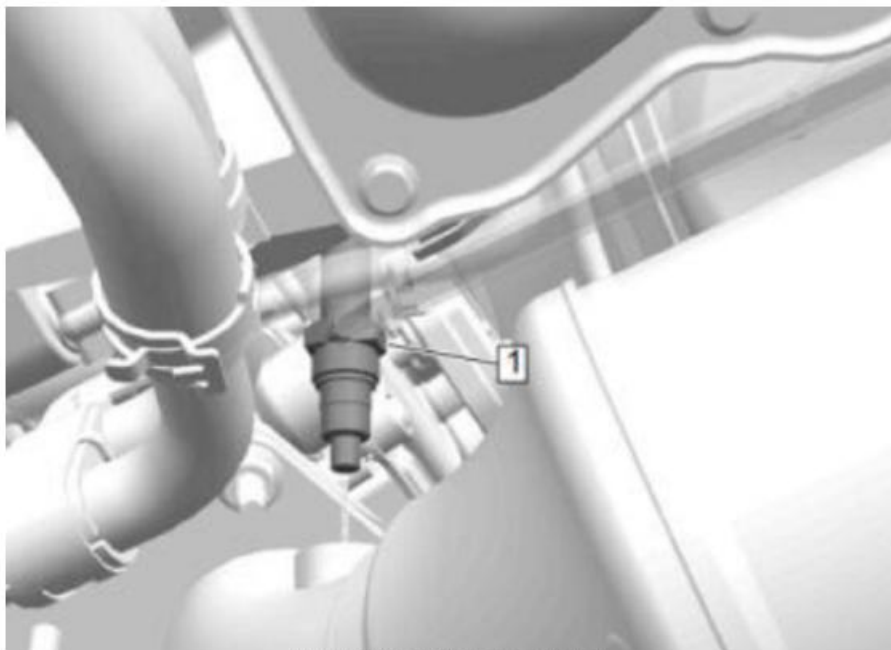
Undo A/C line fasteners. Reposition upper A/C lines out of the way and remove the bottom lines from the vehicle.



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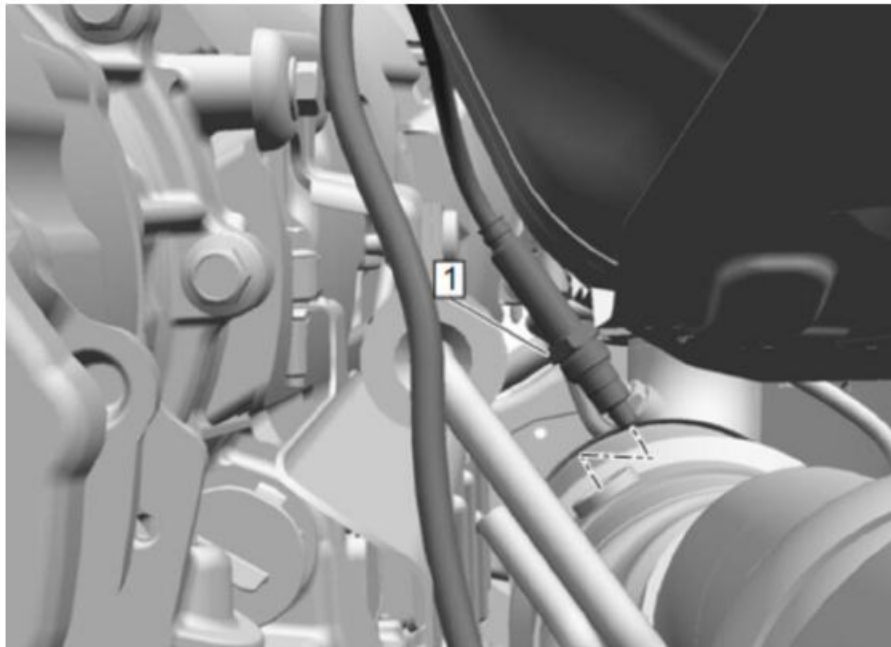
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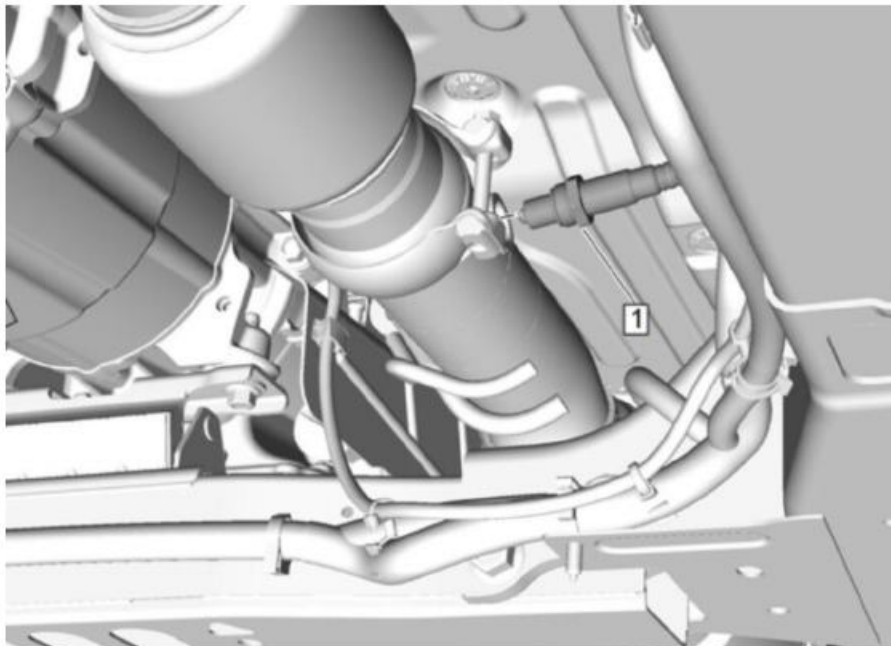
STEP 11

- Remove nitrogen oxide sensors and particulate sensor and move them out of the way. These sensors will remain plugged in to their connectors at this time.



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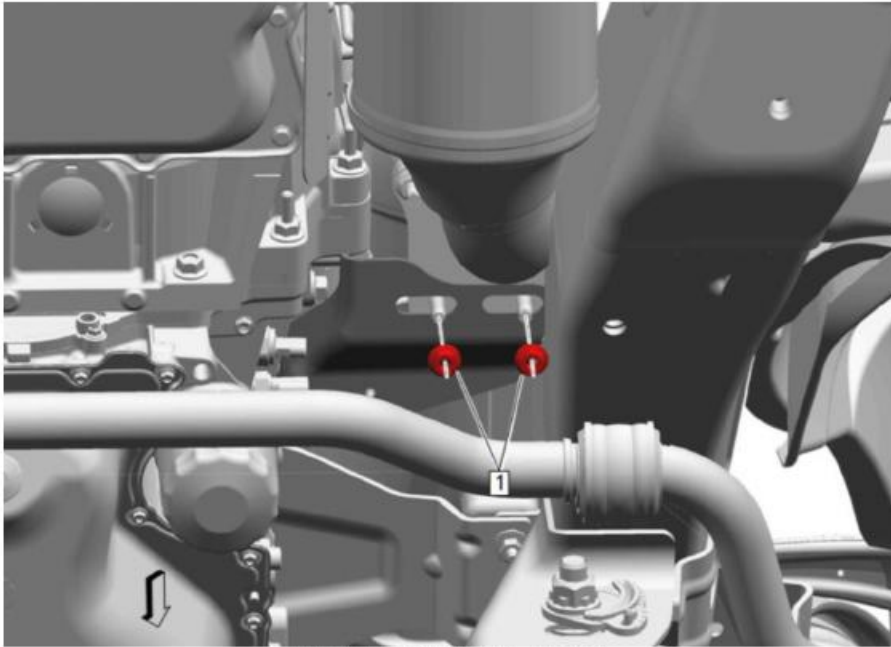
- Remove exhaust clamp that is next to the particulate sensor.



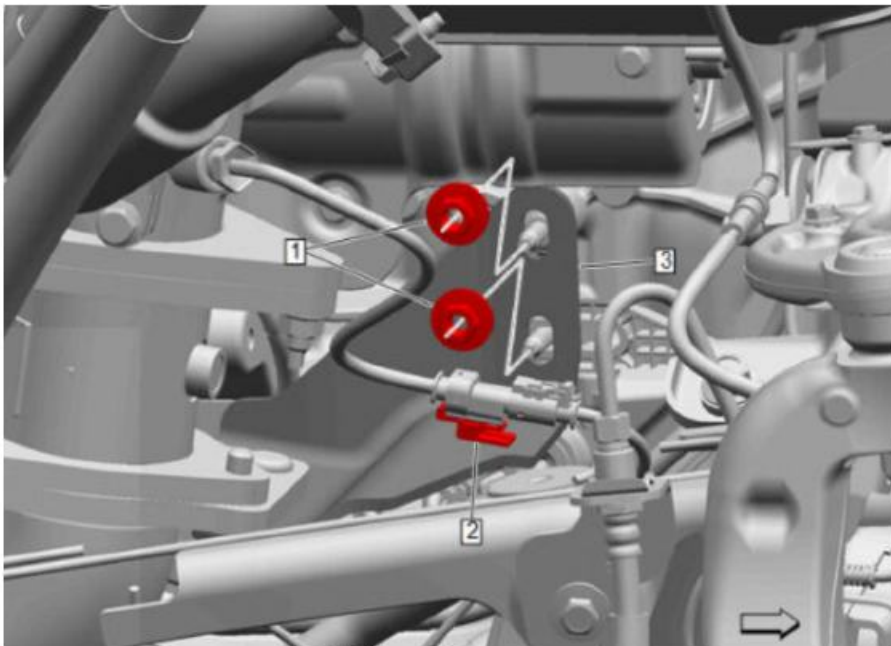
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STEP 12

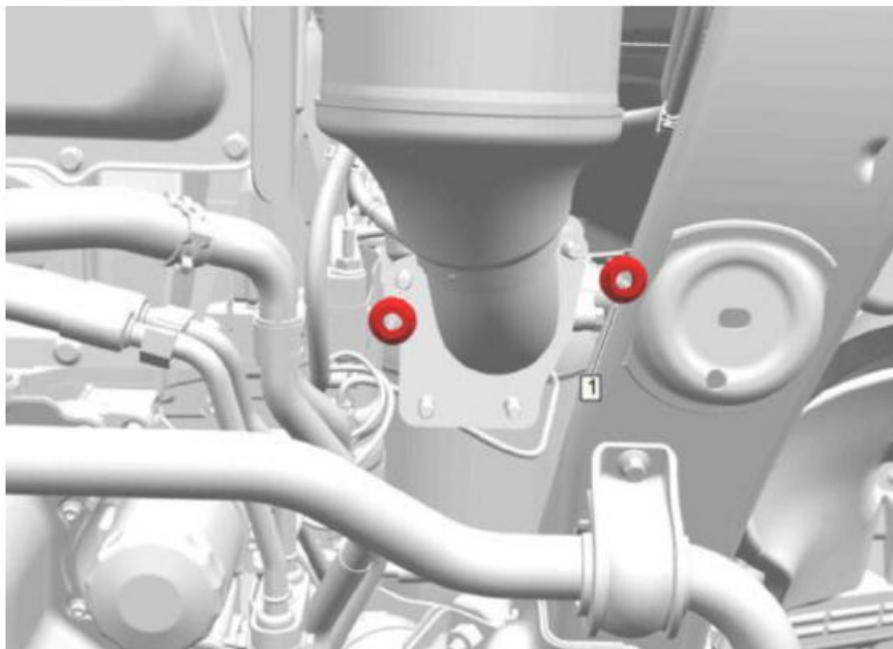
- (Lower) Remove two nuts that are holding the front pipe to support bracket, and remove two more nuts that holding the bracket to the engine block. Remove bracket.
- (Upper) Remove two nuts on flange.
- Maneuver catalytic converter out.



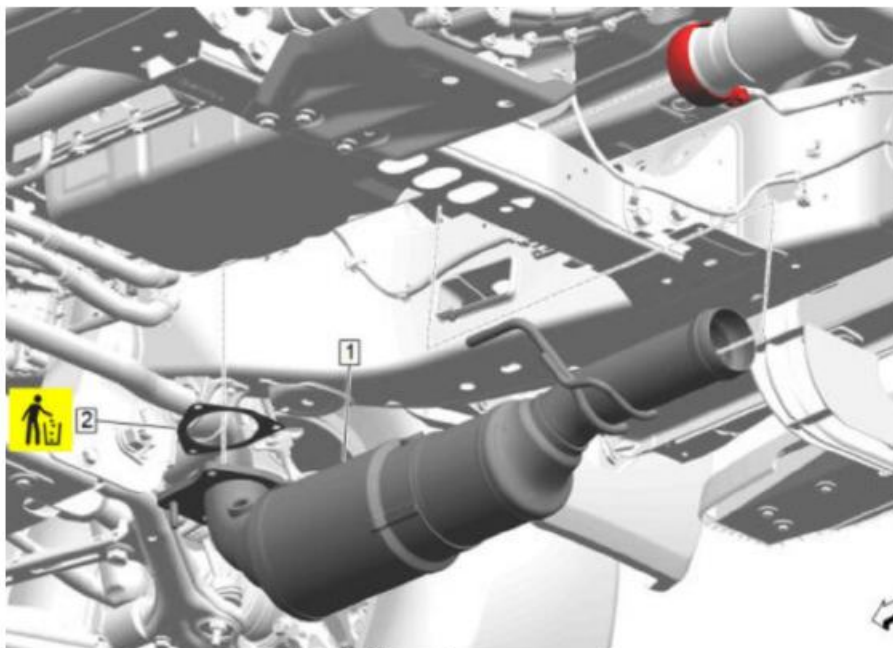
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Installation reference - page 8

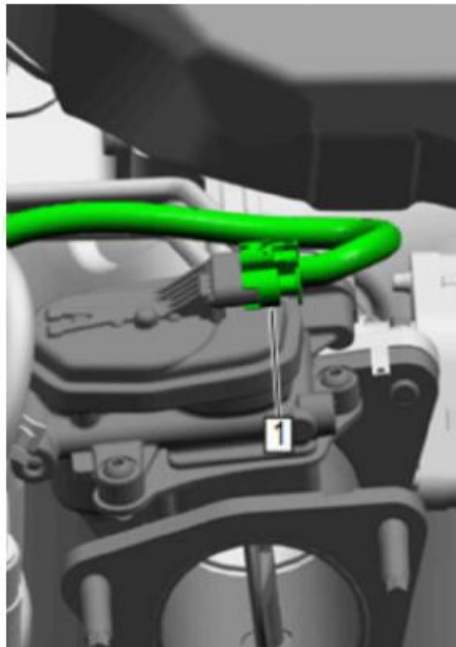


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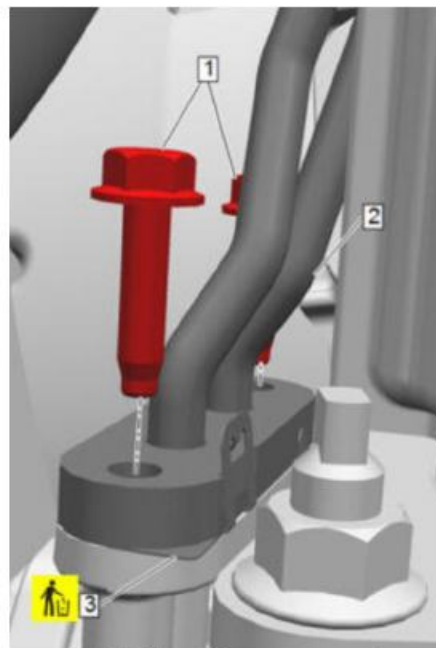


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STEP 13

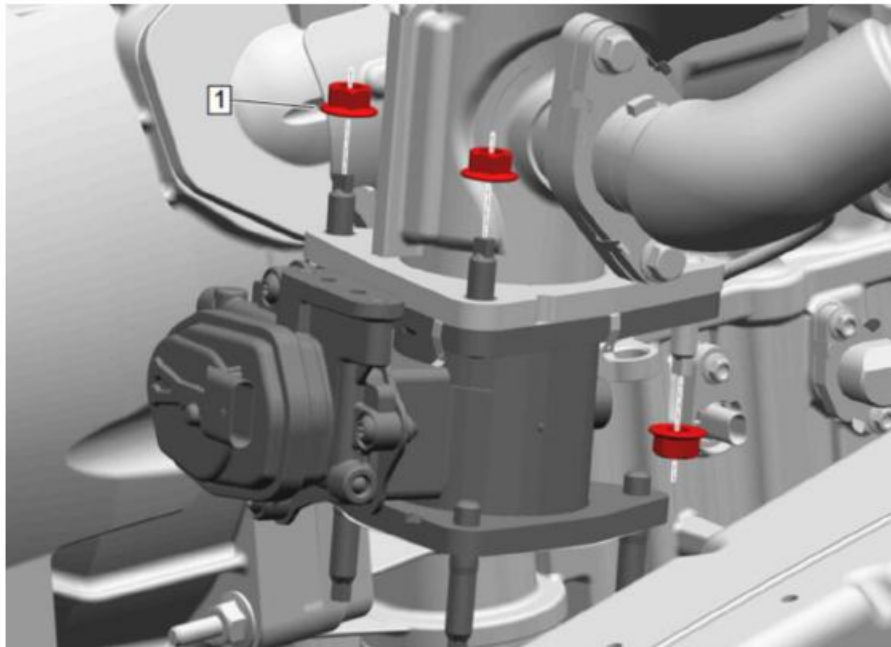


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Installation reference - page 9

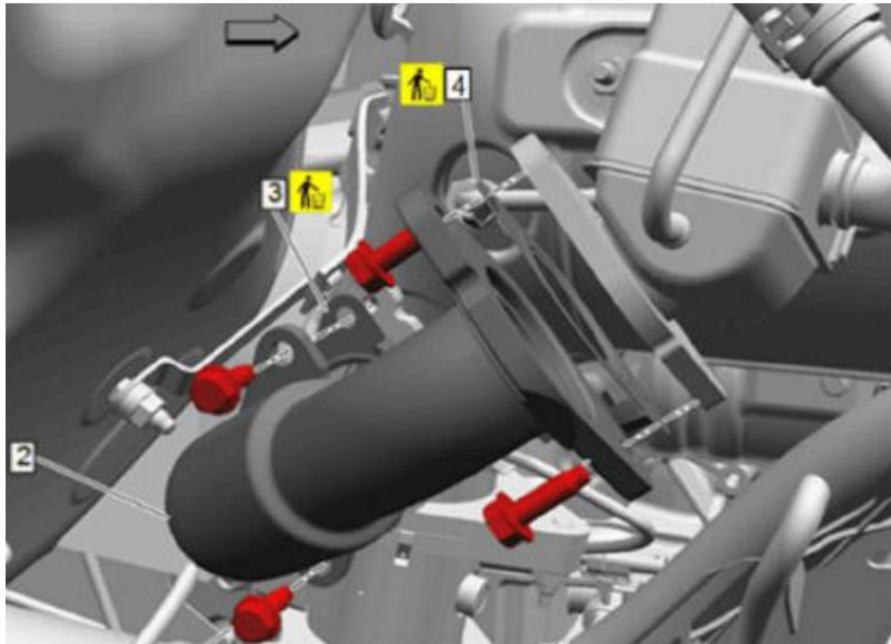
- Disconnect exhaust back pressure valve electrical connector (highlighted in green)
- Remove coolant line bolts (highlighted in red)



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STEP 14

Remove 3 nuts that secure exhaust back pressure valve. Remove exhaust back pressure valve.



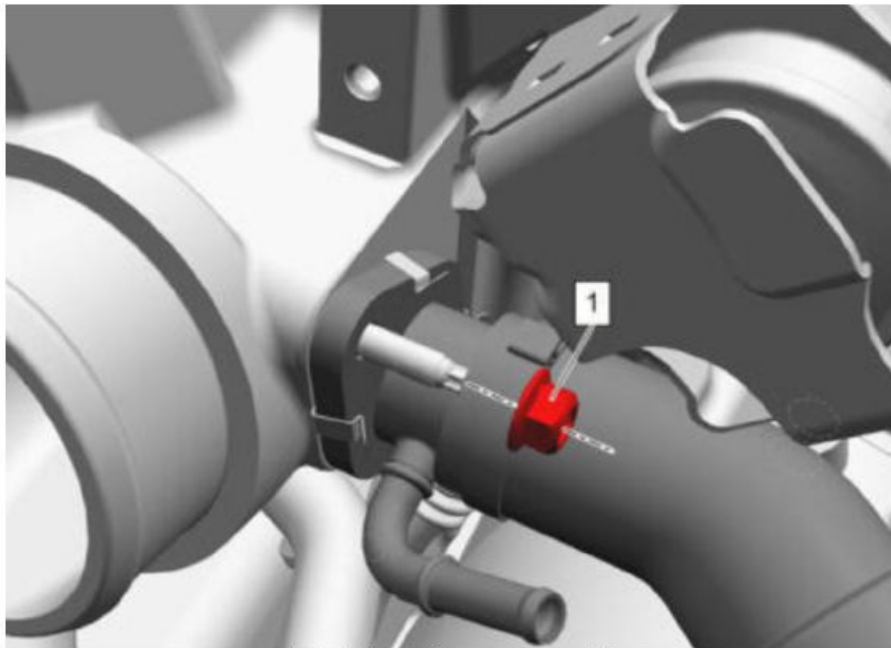
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STEP 15

Remove 4 bolts holding EGR inlet pipe. Remove inlet pipe.

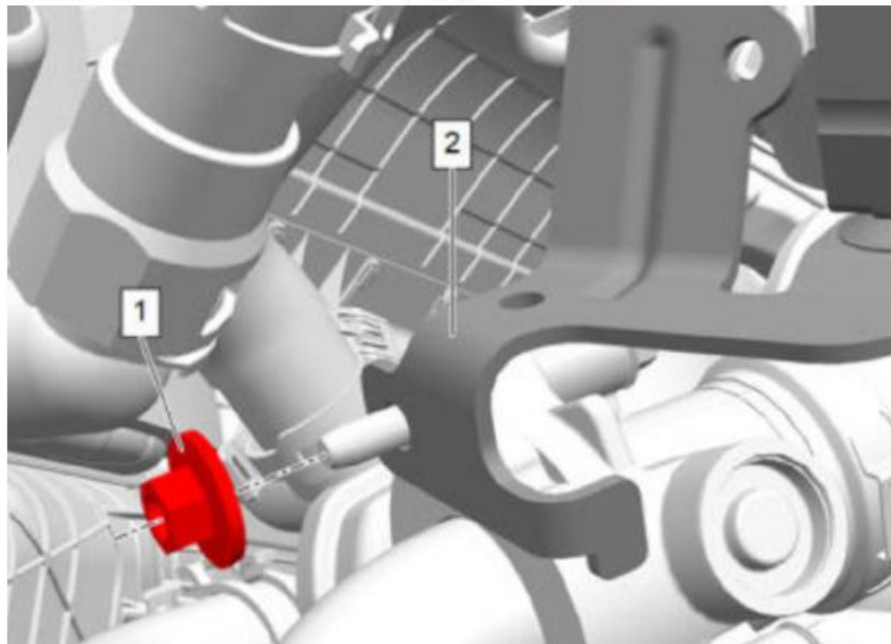
STEP 16

Remove all hardware (highlighted red) and disconnect one electrical connector (highlighted green). Also disconnect electrical connector (circled green).

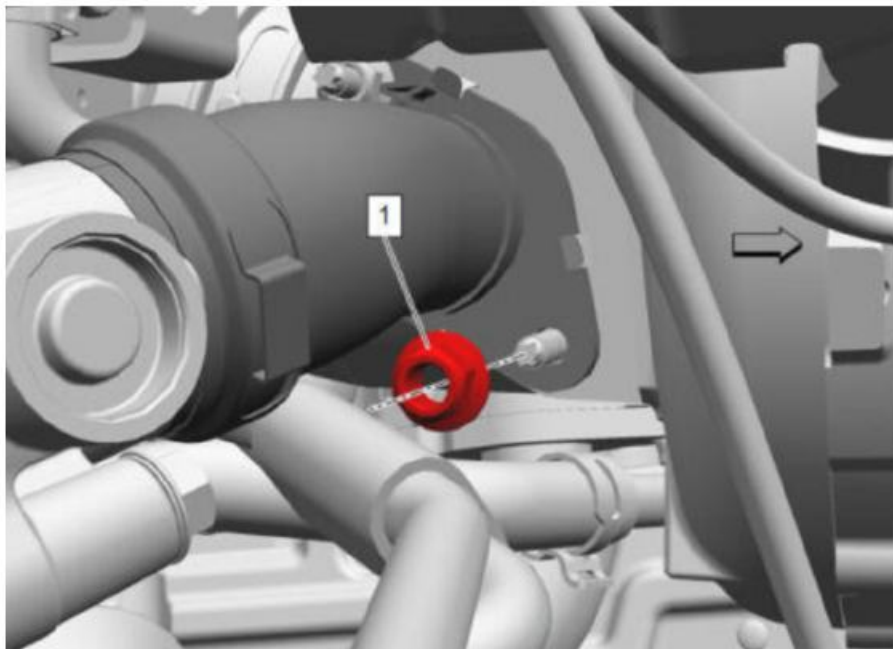


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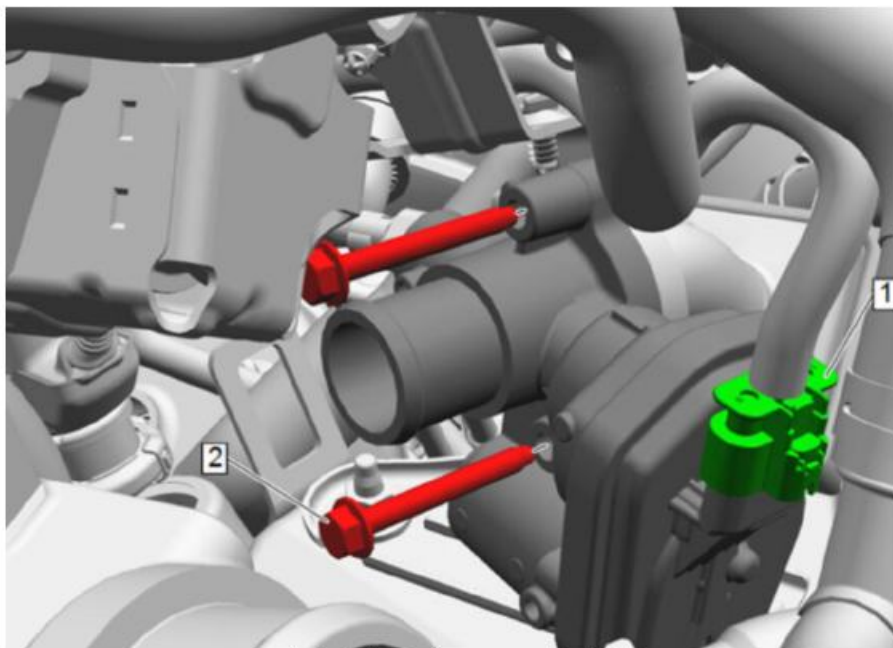
Leave parts in place for now.



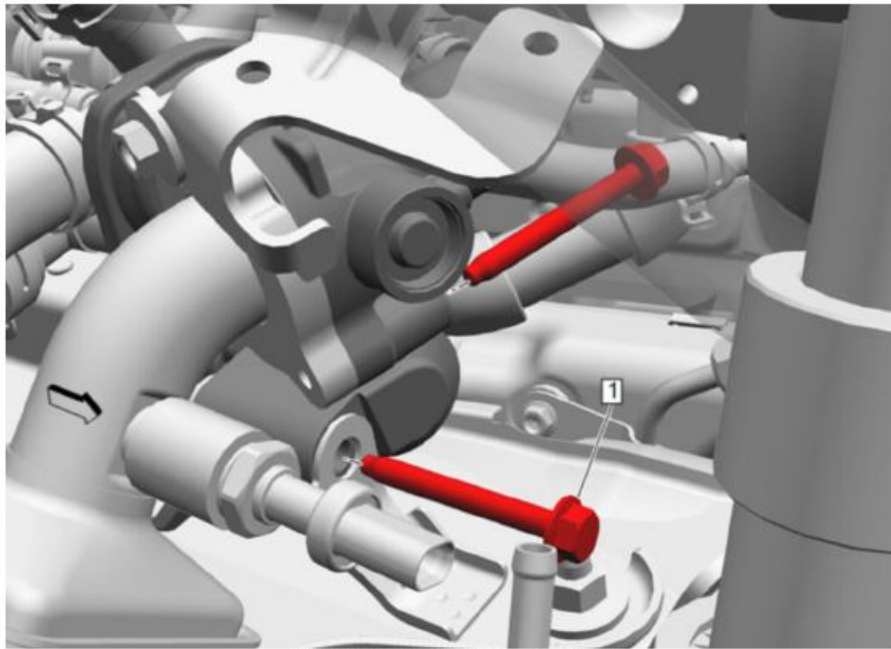
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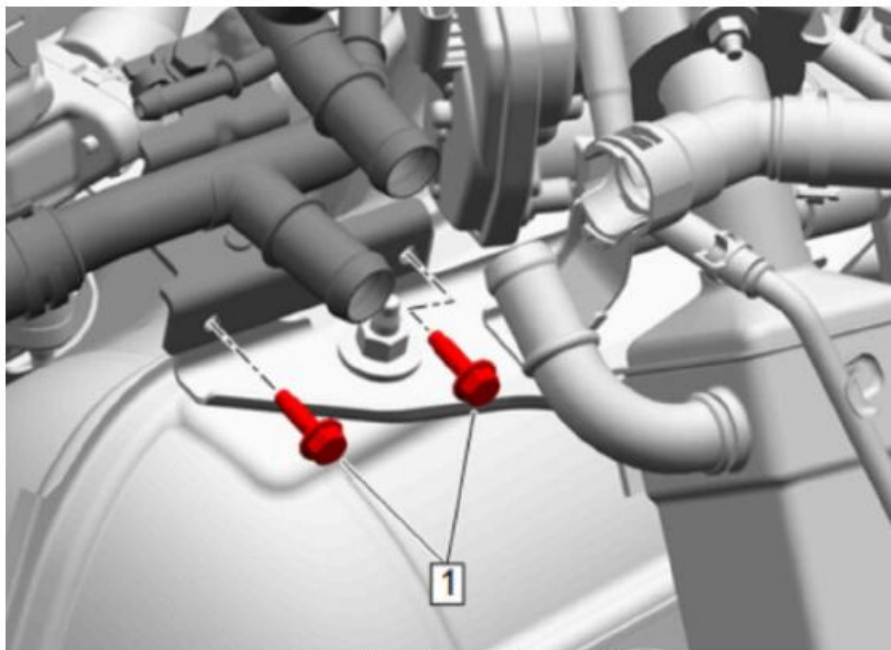
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Installation reference - page 10



Installation reference - page 10



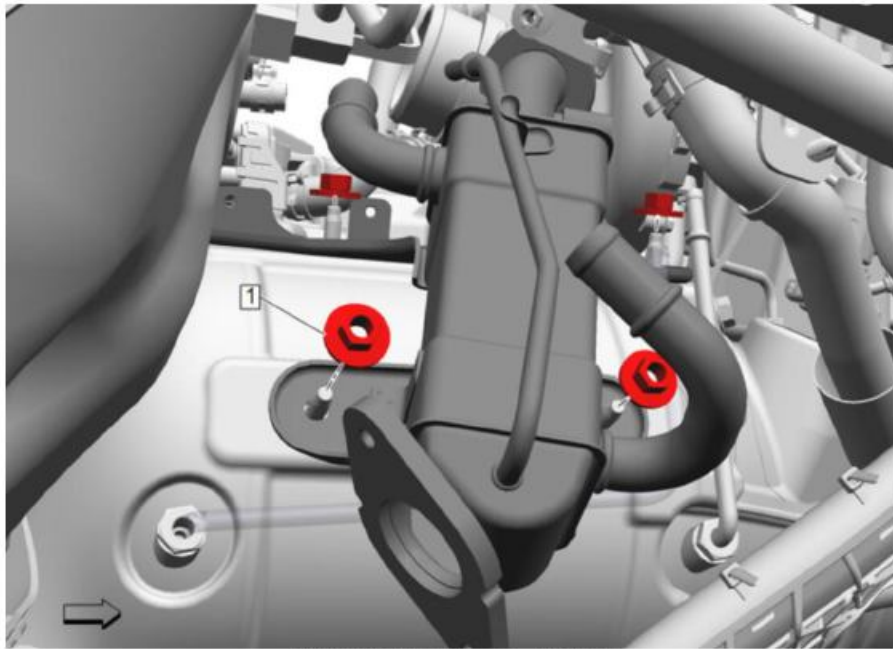
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STEP 17

Remove two bolts on top of catalytic converter.

STEP 17

- Remove mounting nuts (highlighted red) and disconnect.



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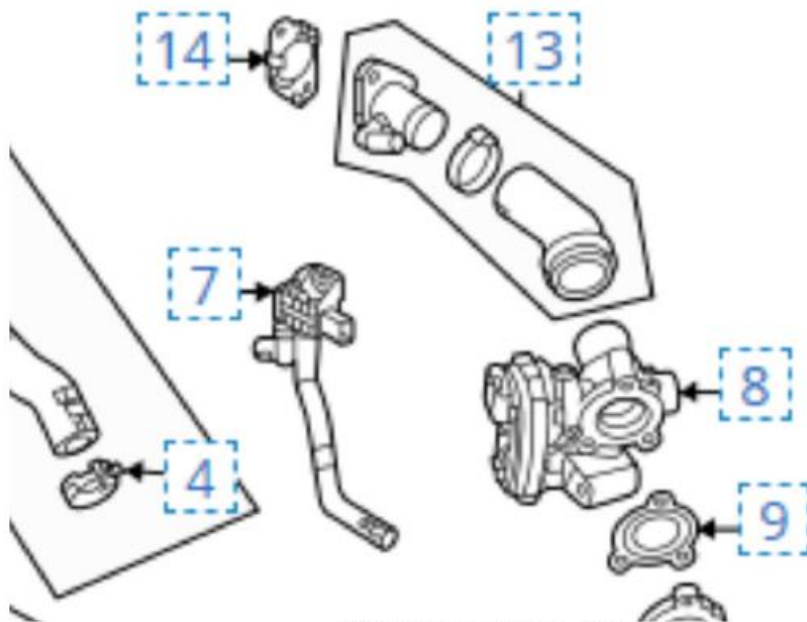
- Disconnect two larger coolant hoses (circled green) and smaller pressure sensor hose (circled blue)
- Remove EGR Cooler



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STEP 18

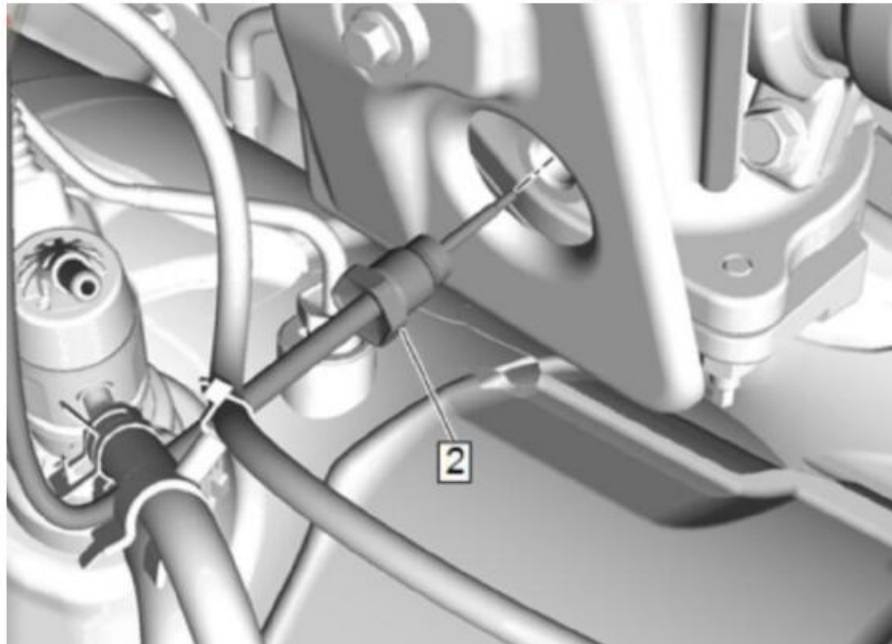
Undo EGR pressure sensor hose clamp.



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STEP 19

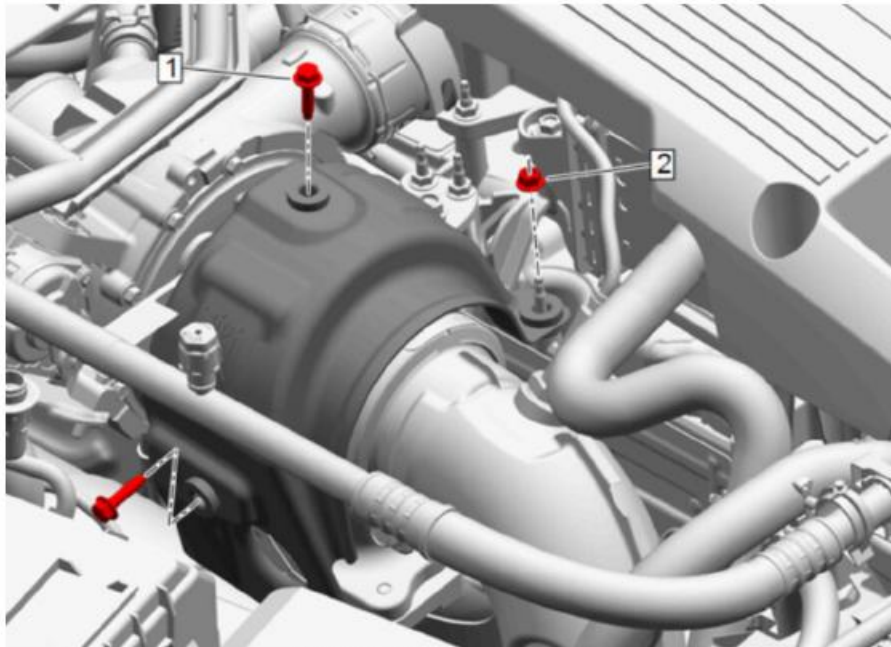
Remove EGR Cooler valve assembly (numbers 8 & 13).



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STEP 20

Remove EGT Sensor from turbo and move it out of the way, this sensor will be reinstalled when finished.

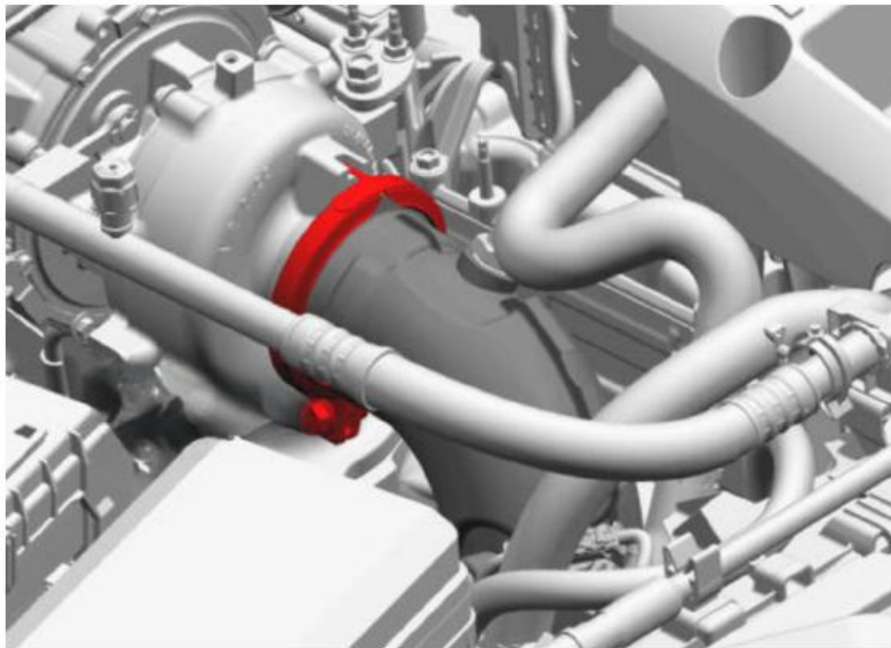


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STEP 20

Undo fasteners and remove turbocharger heat shield.

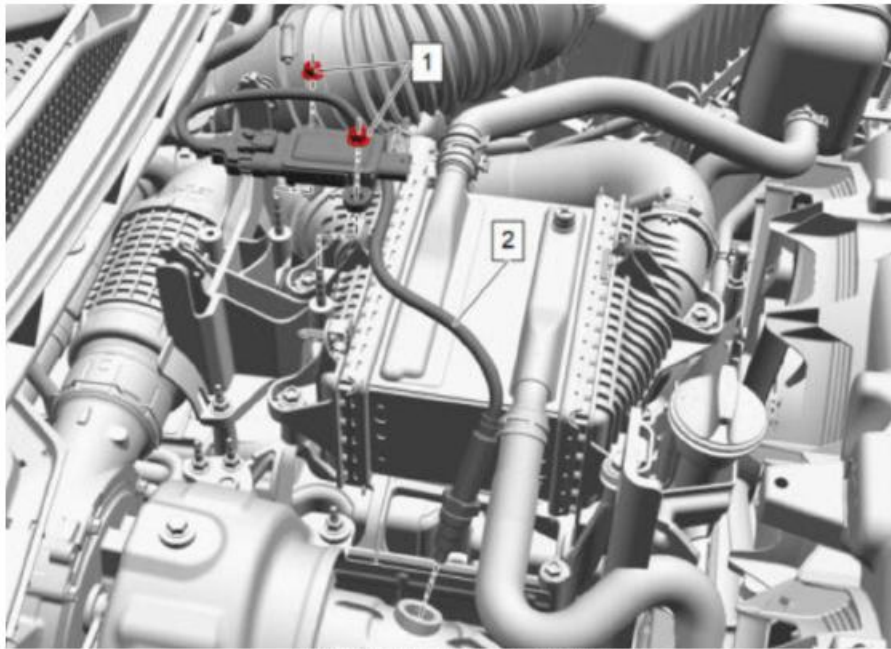
STEP 21



Installation reference - page 13

Loosen DPF clamp. This clamp will be reused.

STEP 22



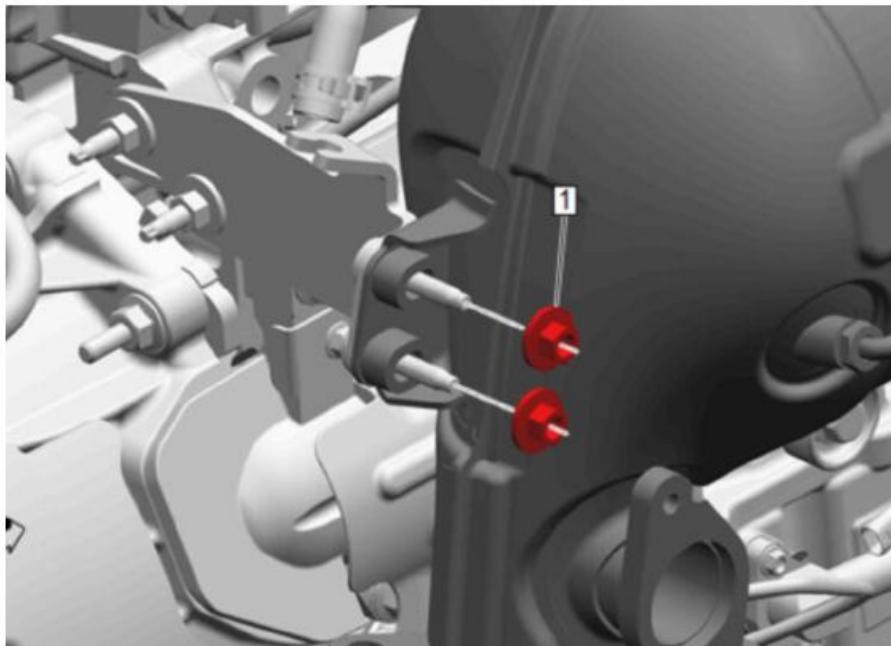
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Remove 2 nuts (highlighted red) and nitrogen oxide sensor (circled green), leave plugged in. Set sensor out of the way.

STEP 23

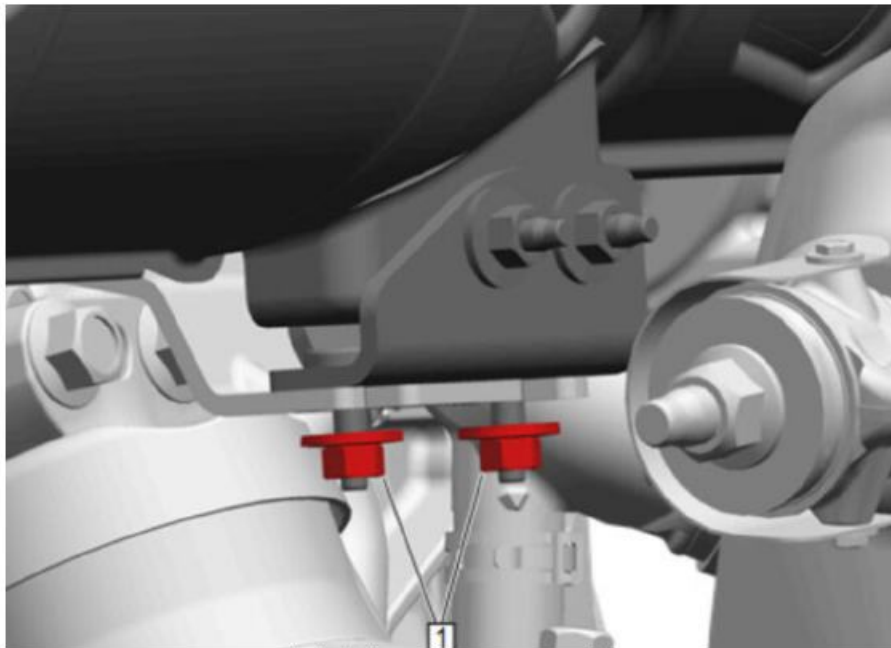
Remove remaining sensors that are attached to DPF, and DEF injector.

STEP 24

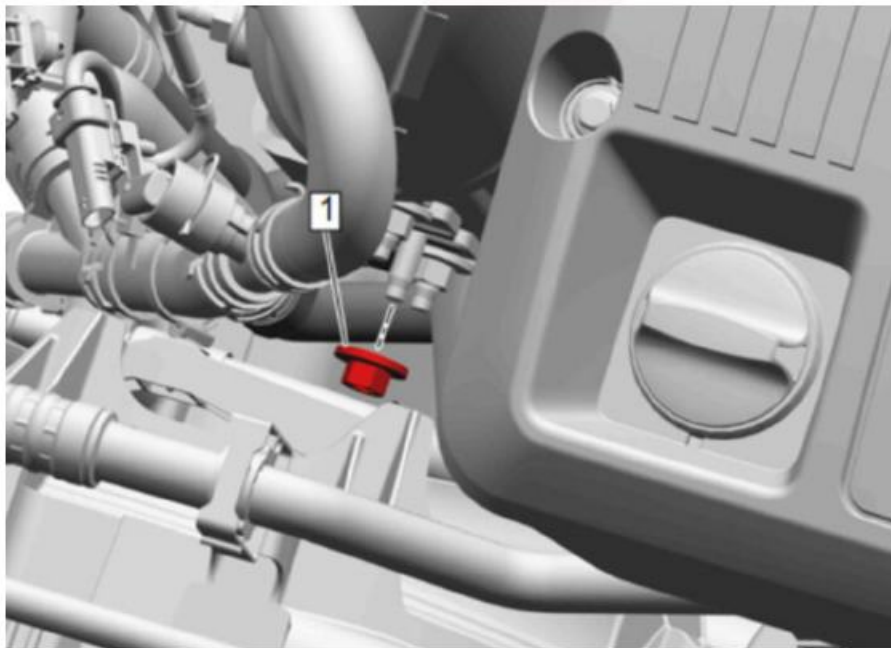


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Remove all hardware (highlighted red) that fastens the DPF down. Remove DPF. After DPF removal, reinstall nut from figure A for coolant hose support bracket.

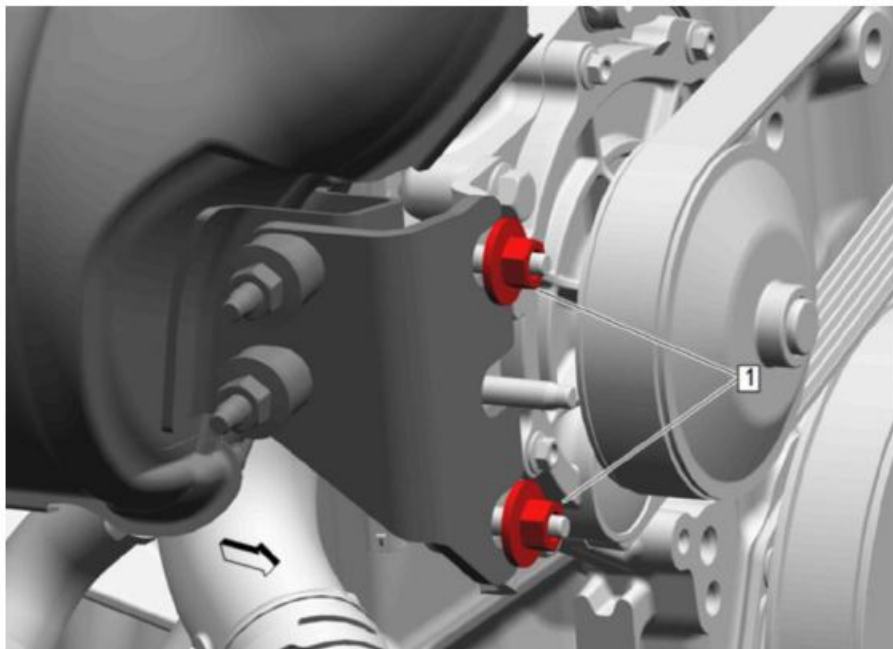


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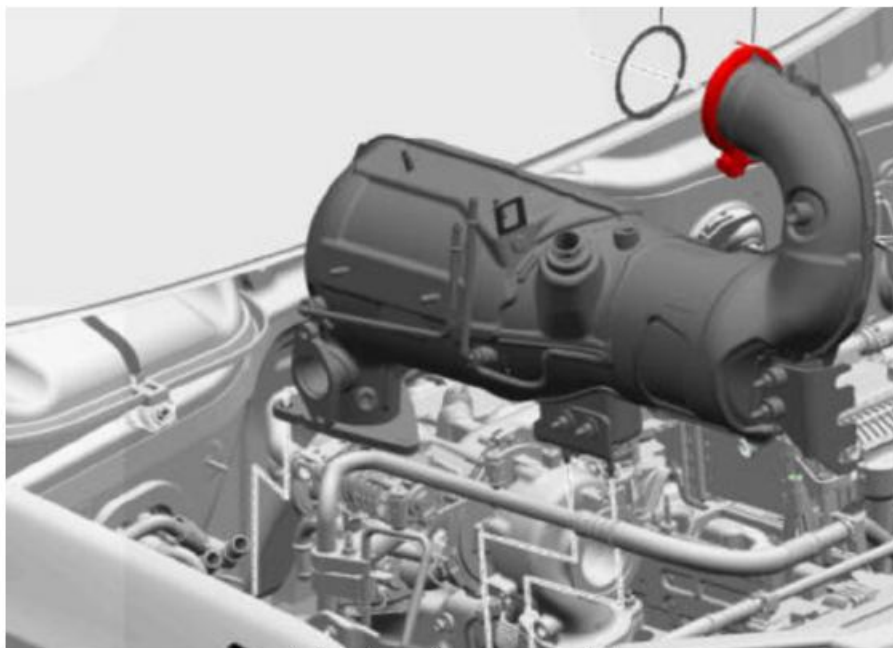


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a

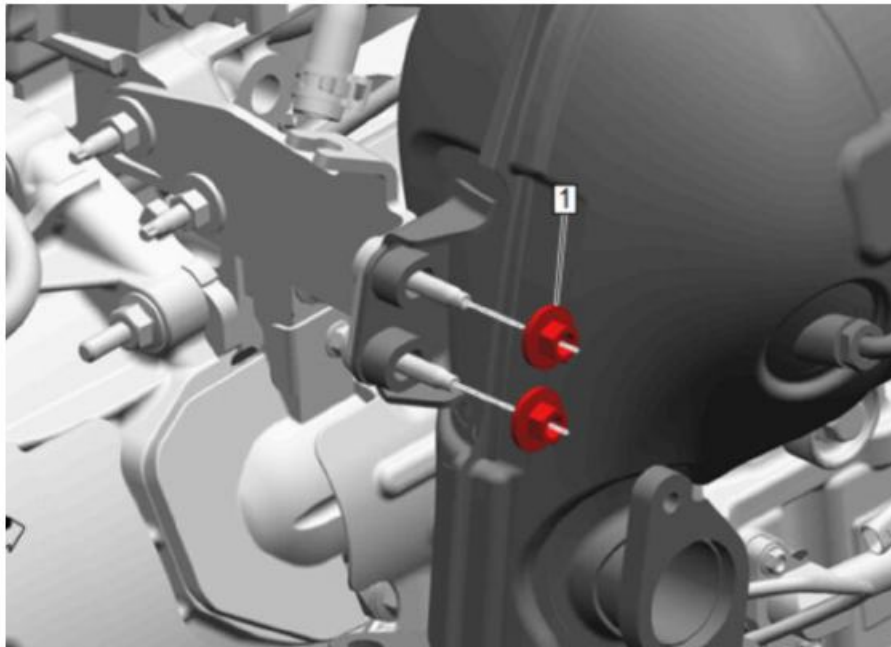


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Installation reference - page 14

STEP 25



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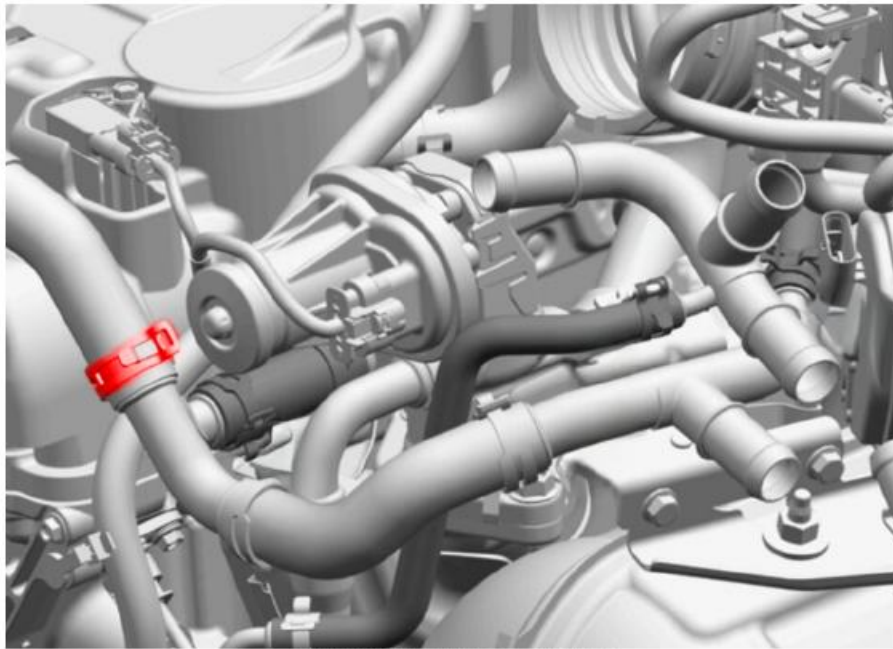
Remove all hardware (highlighted red) that fastens the DPF down. Remove DPF. After DPF removal, reinstall nut from figure A for coolant hose support bracket.

STEP 26

- Disconnect heater core line (circled green), turbo coolant line (circled blue) and coolant crossover (circled orange).
- Undo clamp (highlighted red).
- Remove coolant contraption.

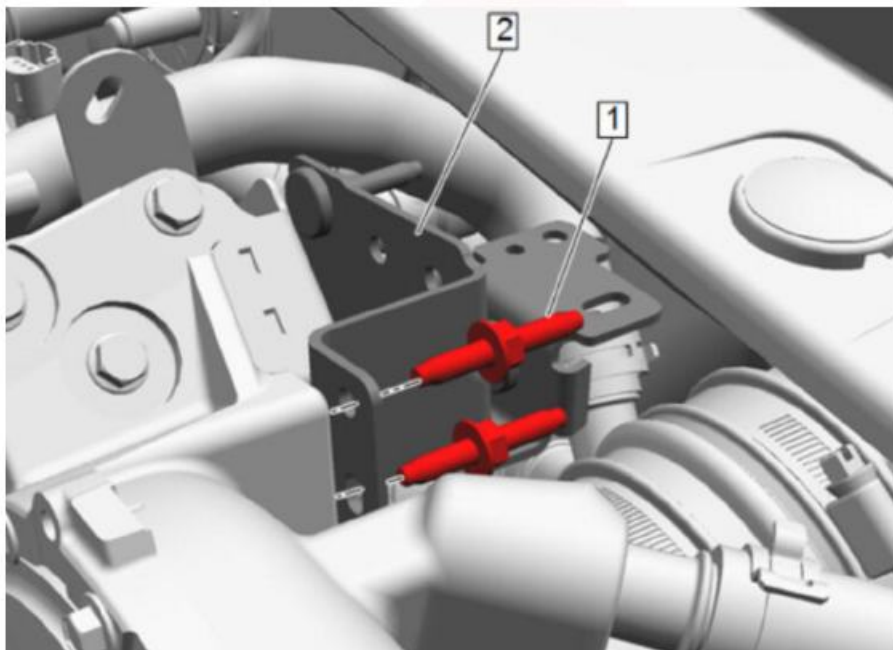


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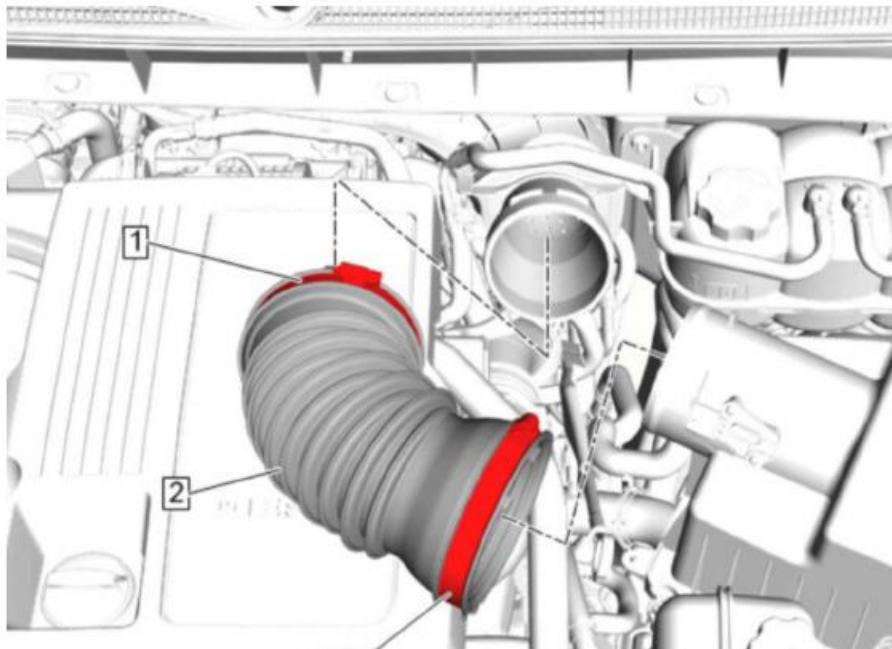
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STEP 27



Installation reference - page 16

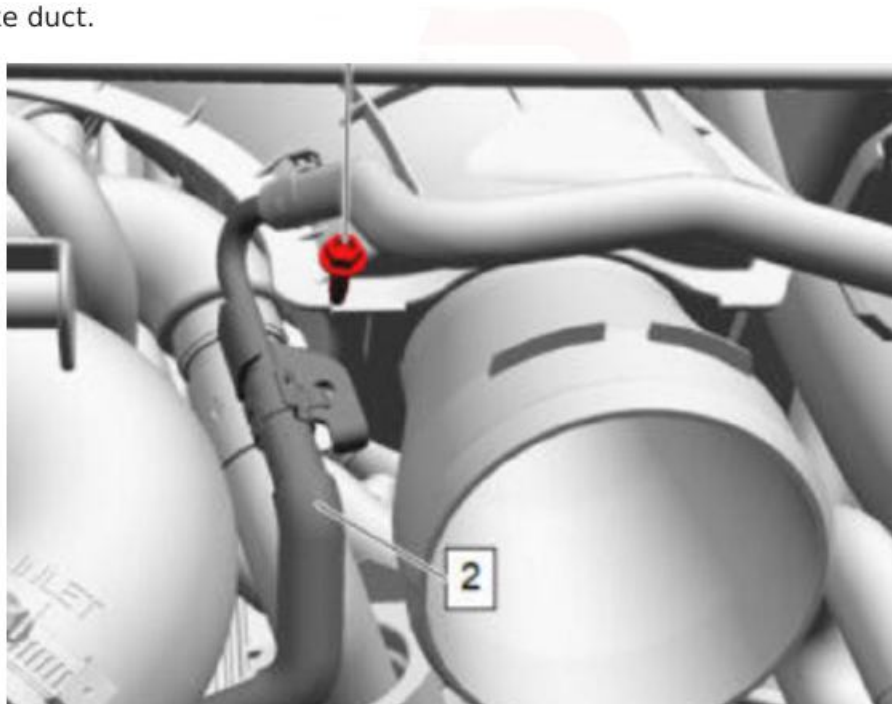
- Remove 2 studs (highlighted red) and necessary electrical connectors to exhaust back pressure sensor.
- Remove sensor assembly



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STEP 28

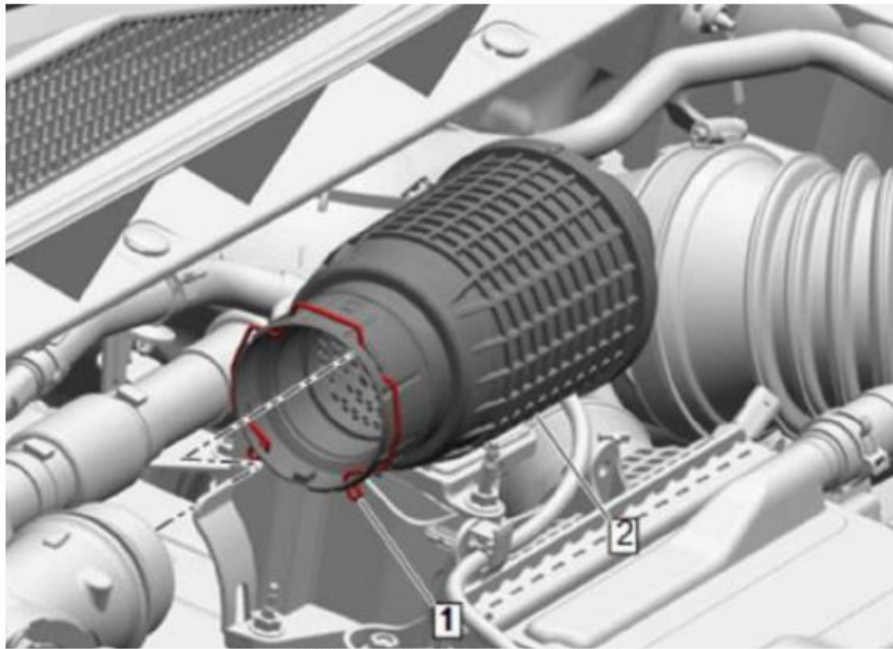
Remove air intake duct.



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STEP 29

Remove bolt from coolant line support bracket.



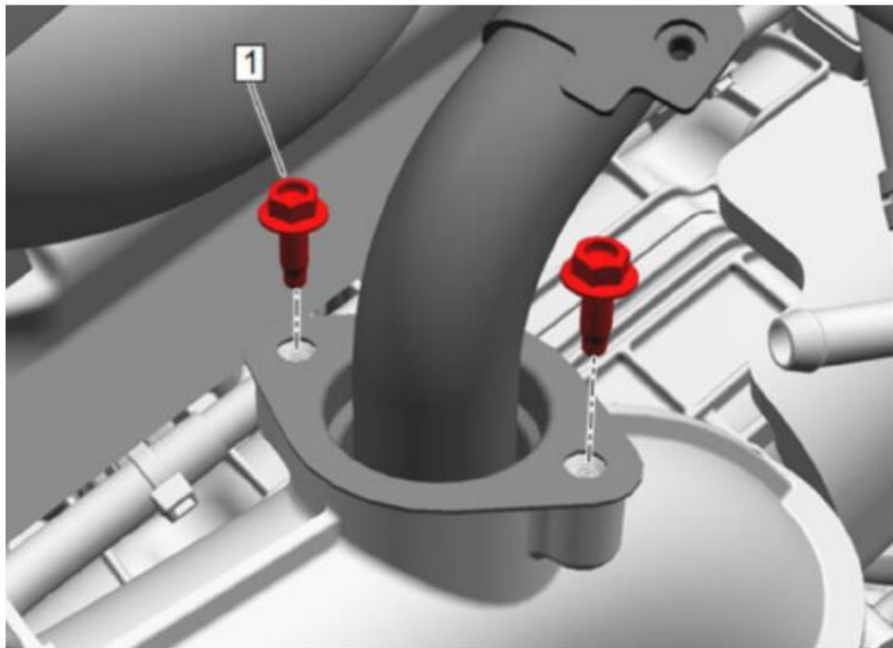
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STEP 30

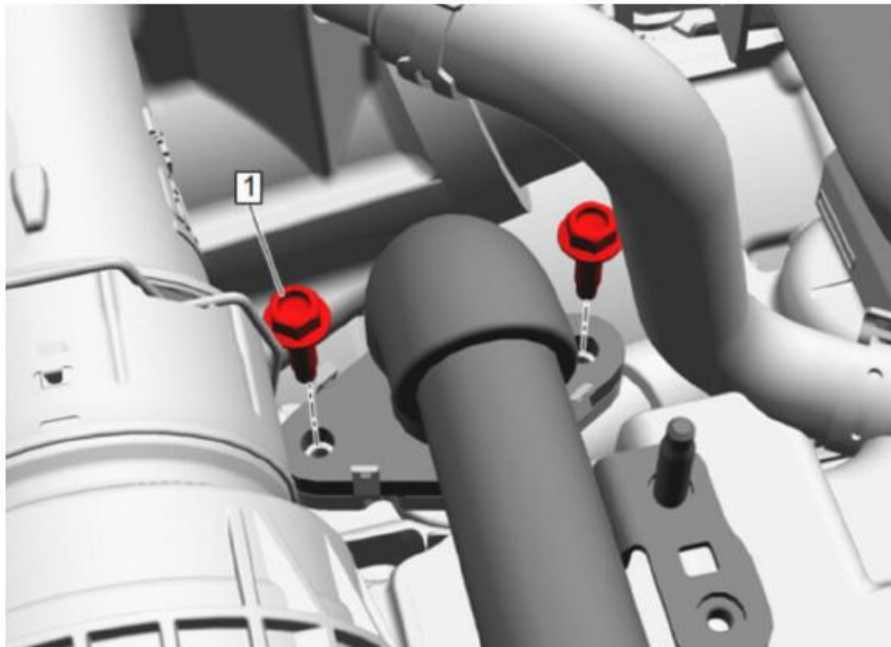
Remove intake silencer from turbo to charge air cooler.

STEP 31

Remove bolts (highlighted red) from EGR crossover pipe.



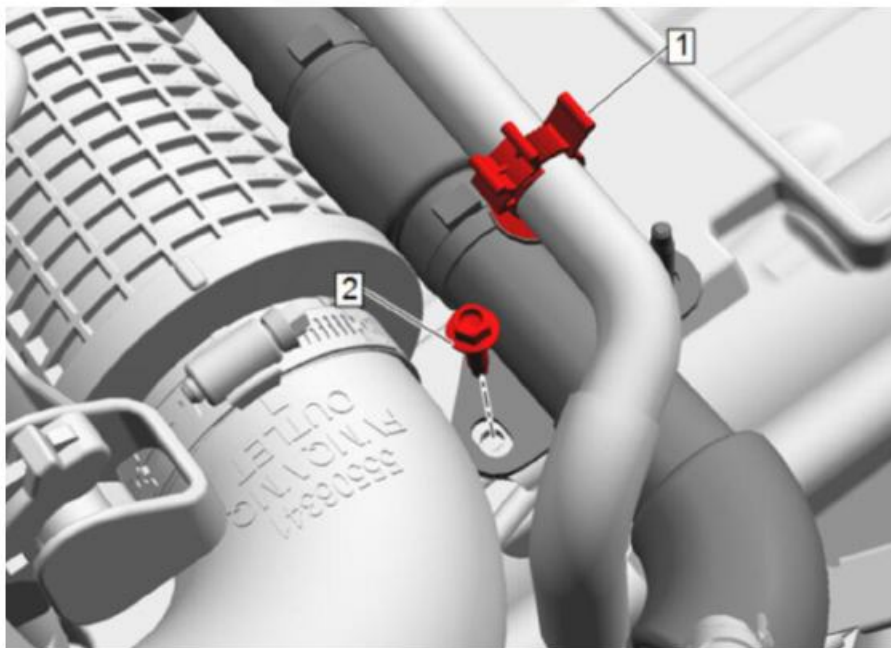
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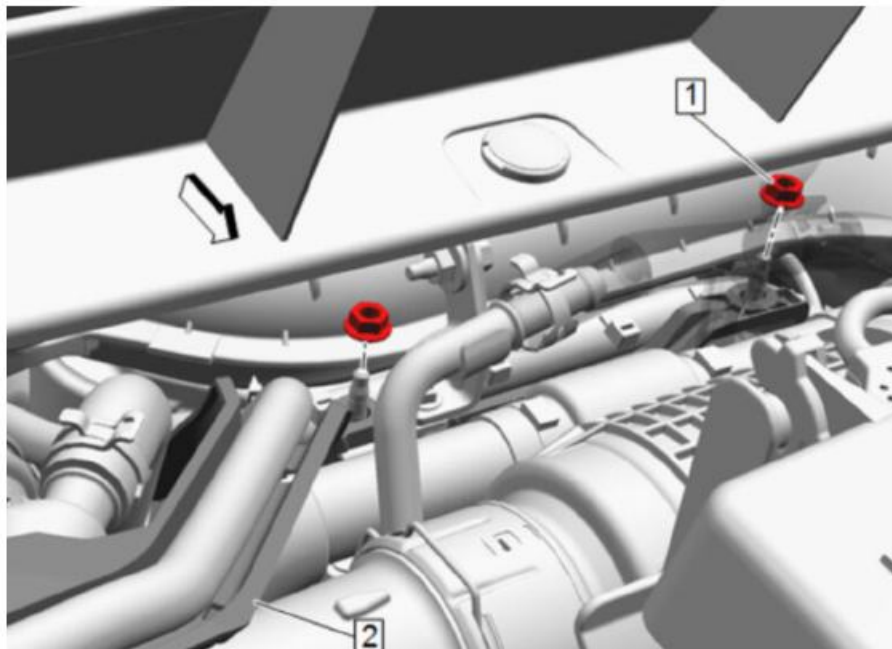
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STEP 32

- Remove coolant hose clip and remove bolt from EGR crossover pipe.
- Remove 2 remaining harness retainer nuts. Reposition harness.

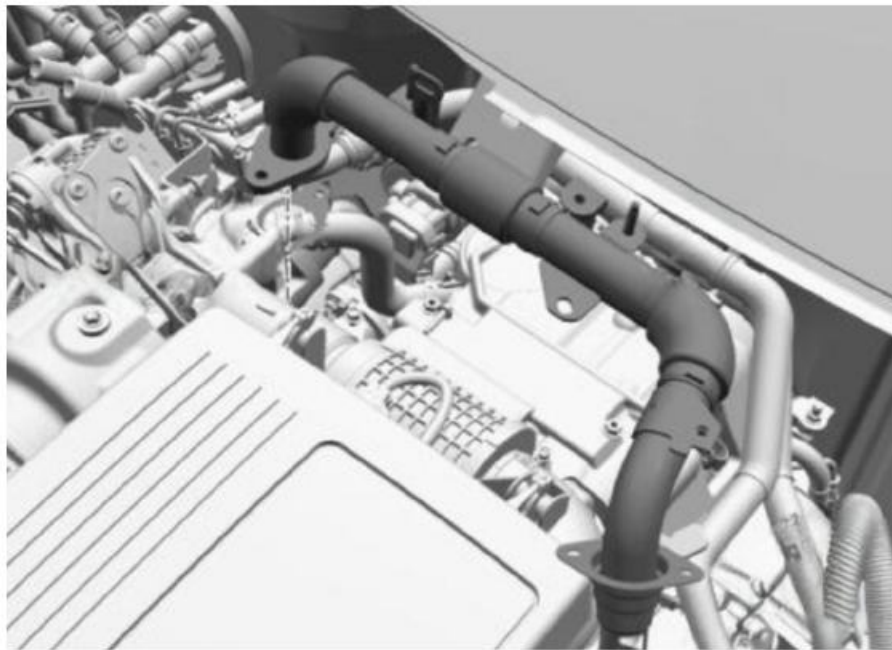


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Installation reference - page 18

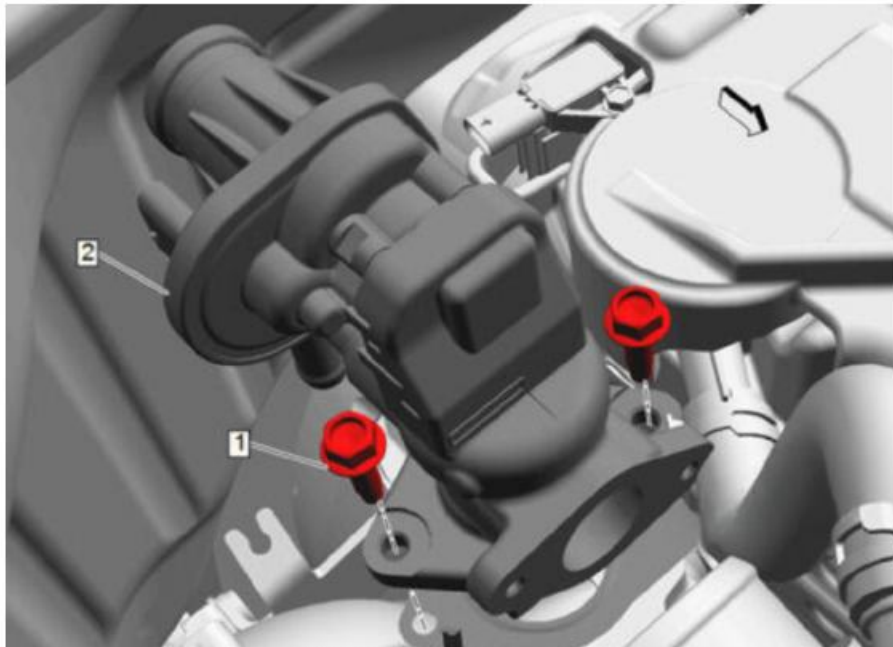
STEP 33



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Remove EGR crossover pipe by lifting up the driver side first, do not let the O-ring fall inside the intake as it will be reused for supplied block off plate with Polar Diesel logo in a later step. Rotate as necessary for removal. Reinstall intake silencer that was previously removed.

STEP 34



Installation reference - page 19

Remove 2 bolts (highlighted red), then remove secondary EGR valve and crossover tube elbow. Be careful not to drop the engine side bolt into the exhaust manifold.



Installation reference - page 19

STEP 35

Install supplied stainless steel plate to exhaust manifold, reuse factory hardware & gasket.



Installation reference - page 19

STEP 36

Install black turbo block off plate, reusing factory hardware and gasket.

STEP 37

Install supplied black intake manifold block off plate, reusing factory O-ring and bolts.

A

HAND TIGHTEN ONLY.

STEP 38

Connect heater core hose that you previously disconnected to upper crossover hose using supplied 5/8" double barb and supplied hose clamps (A).

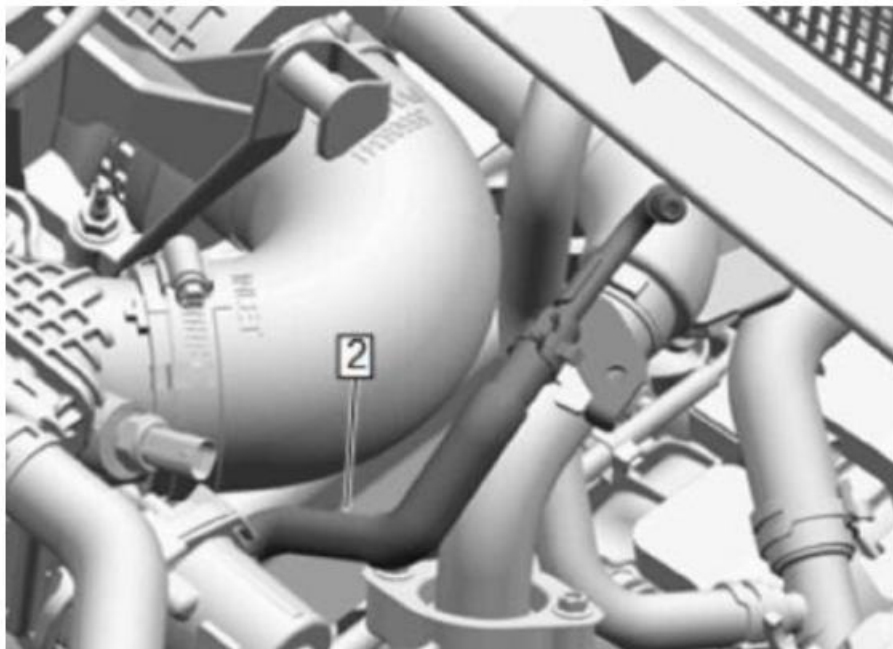
B

Connect one end of supplied hose to lower crossover coolant hose with supplied barbed reducer and hose clamps (B), remove factory hose from turbo coolant line and connect other end of supplied hose (C).

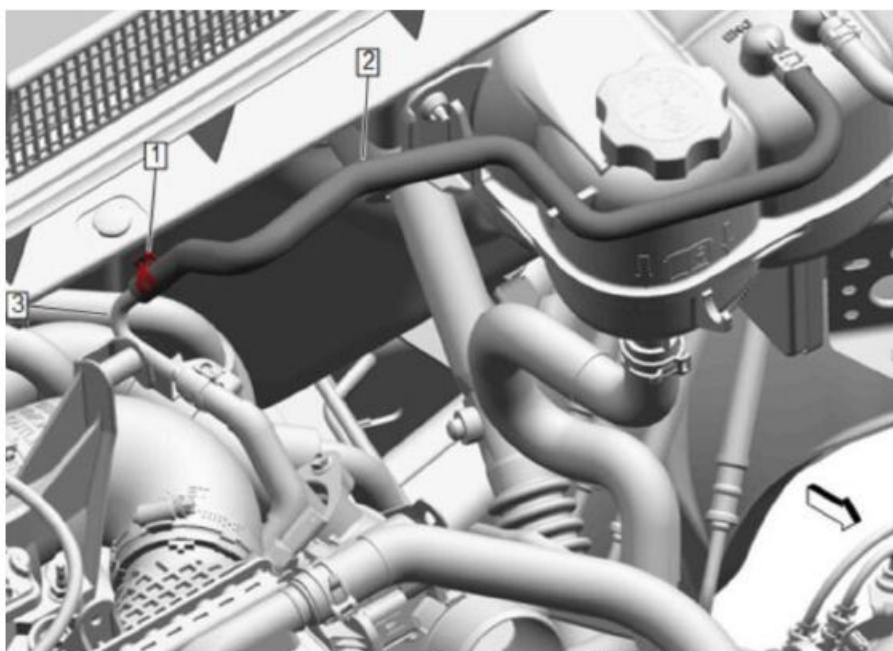
C

STEP 39

Coolant line that was previously bolted to the EGR crossover pipe can be re-routed under the intake using supplied small double barb fitting. Disconnect and remove coolant hose clamp (highlighted red).



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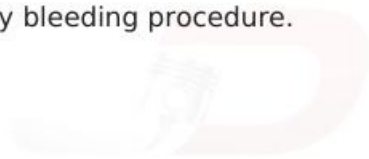
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Installation reference - page 21

STEP 40

Refill coolant system & follow factory bleeding procedure.



DIESELS