

IAG STREET SERIES AOS FOR 2015-16 WRX



IAG-ENG-7182 Street Series Air / Oil Separator (AOS) For 2015-2016 WRX

Part# IAG-ENG-7182

Tools Required: Ratchet, extensions, needle nose pliers, hose cutter, snips/scissors, flat head screwdriver, hose clamping pliers

Sockets: 10mm, 12mm, 1/4" allen, 5mm allen

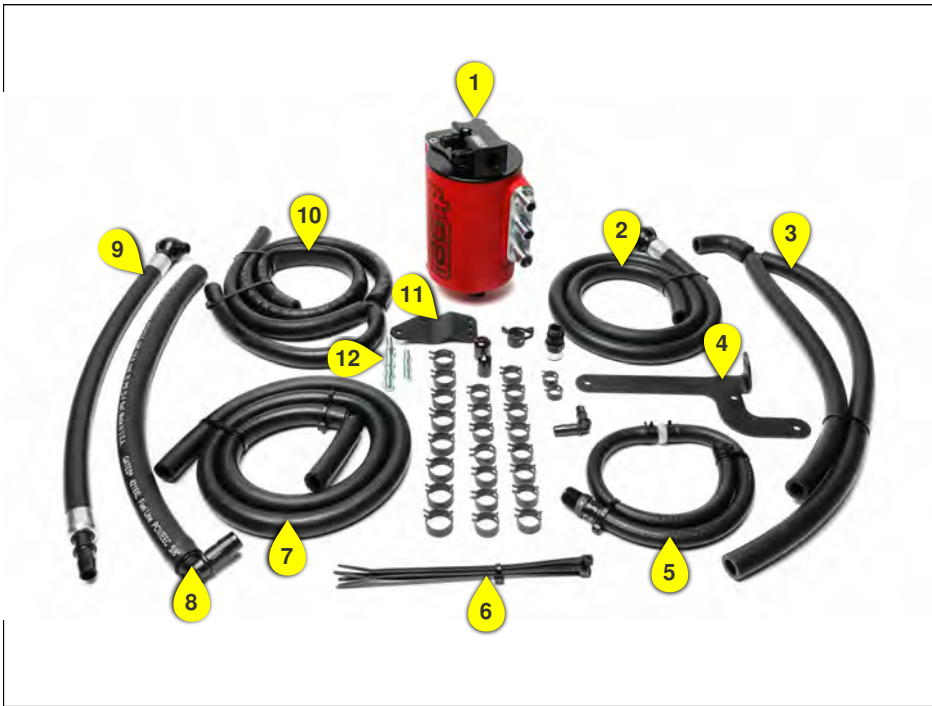
Wrenches: 7/8", 10mm, 12mm, 3mm allen, 5mm allen

Other: Electrical Tape

Congratulations on the purchase of your Air/Oil Separator (AOS) and thank you for choosing IAG Performance. This installation manual is intended to guide you through the modification of the factory PCV system and the installation of the IAG AOS. If you already have an aftermarket catch can or AOS installed, please consult the specific instructions for your hardware to aid in its removal. PLEASE ENSURE THE VEHICLE IS COMPLETELY COOL BEFORE STARTING THE INSTALLATION.

Step 1/117

Step 2/117



Numbered annotations (12)

- 1 AOS Body Assembly
- 2 Coolant Hose 1 - 43"
- 3 AOS Drain and Lower Breather Hose Assembly
- 4 Wiring harness relocation bracket (2015-2016 Only)
- 5 AOS PCV Hose 3/8" x 24"
- 6 Zip Ties
- 7 Block Breather Hose 1/2" x 44" x 90 degree x 3" (For 2015-2016 Model Years ONLY)
- 8 Vent Hose - 5/8" x 17" w/ 90 Degree Fitting (2017+ Model Years ONLY)
- 9 AOS Coolant Hose 2 - 15.5" with union fitting
- 10 AOS Breather Hose Assembly 5/8" x Y Fitting to 1/2" x 1/2" Hoses
- 11 AOS Bracket

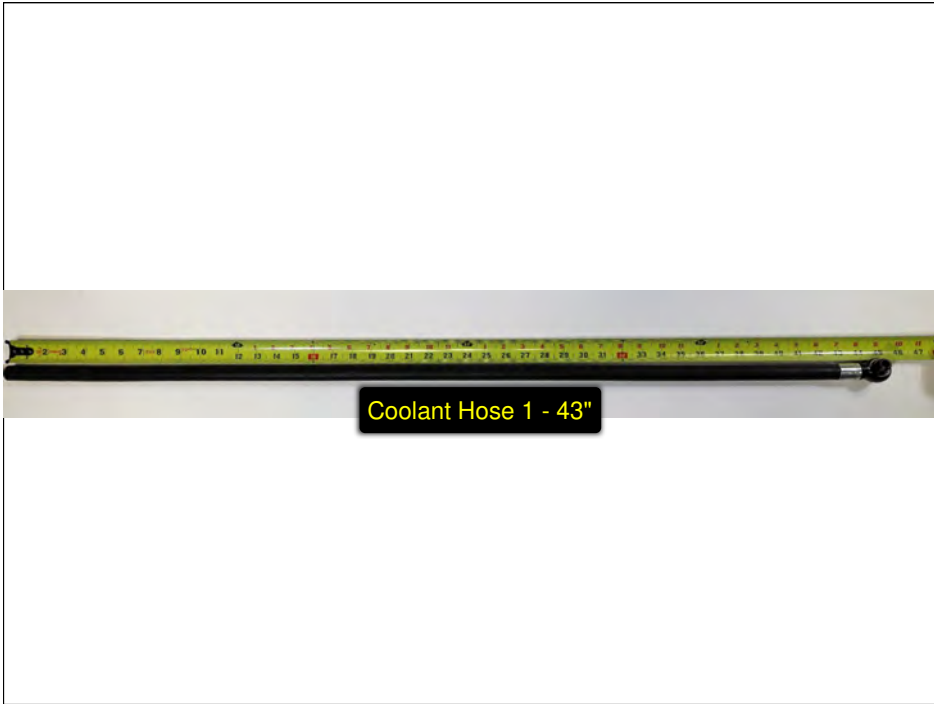
Step 3/117



Numbered annotations (8)

- 1 Coolant Clamp
- 2 AOS Block Fitting - 3/8" NPT to 5/8" Barb
- 3 3/8" Band Clamp x 2
- 4 3/8" 90 degree elbow
- 5 1/2" Band Clamp x 15
- 6 5/8" Band Clamp x 8
- 7 1/2" Vacuum Cap
- 8 5/8" Vacuum Cap

Step 4/117



Step 5/117



Step 6/117



Block Breather Hose 1/2" x 44" x 90 degree x 3" (For 2015-2016 Model Years ONLY)

Step 7/117



Vent Hose 5/8" x 17" w/ 90 Degree Fitting (2017+ Model Years ONLY)

Step 8/117



AOS Coolant Hose 2 - 15.5" with union fitting

Step 9/117



AOS Breather Hose Assembly 5/8" x Y Fitting to 1/2" x 1/2" Hoses

Step 10/117



Step 11/117



Step 12/117

Numbered annotations (8)



- 1 Connects to the AOS Breather Hose Assembly
- 2 Connects to the AOS Breather Hose Assembly
- 3 Connects to 1/2" x 44" PCV Vent Hose on 2015-2016 Vehicles. Capped with 1/2" vacuum cap on 2017+ Vehicles.
- 4 Connects to lower breather and drain hose assembly.
- 5 Connected to the Breather Hose 5/8" x 17" w/ 90 Degree Fitting on 2017+ Vehicles. (Capped with 5/8" Vacuum Cap on 2015-2016 Vehicles)
- 6 AOS Drain. Connects to lower breather and drain hose assembly.
- 7 Coolant Hose 1
- 8 Coolant Hose 2

Step 13/117

Numbered annotations (1)



- 1 Disconnect the negative battery cable.



Step 14/117

Numbered annotations (1)

- 2 Remove the clips securing the engine cover.



Step 15/117

Numbered annotations (1)

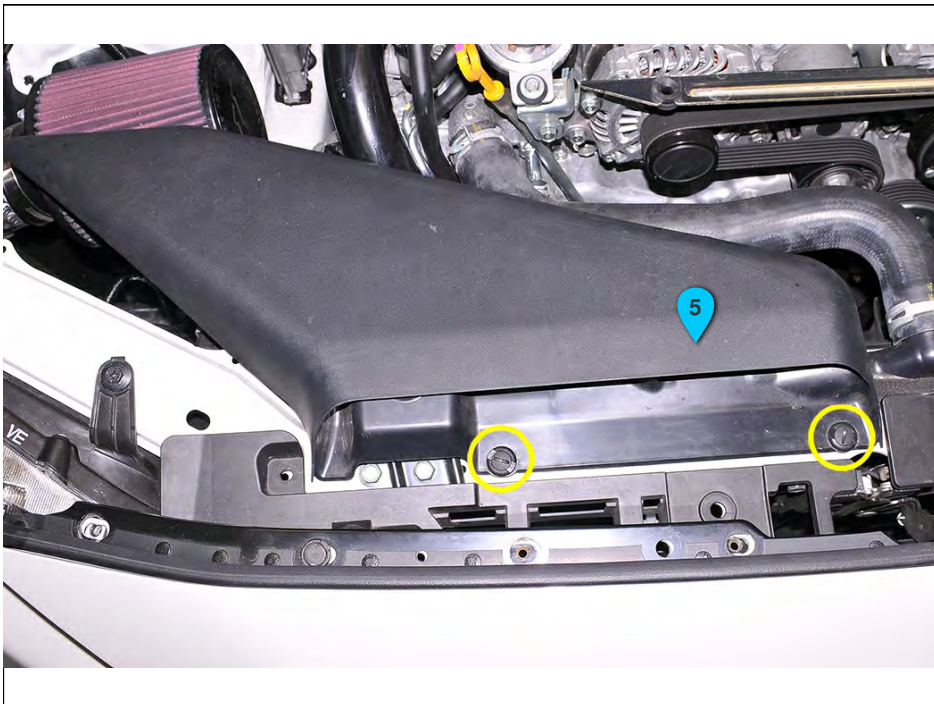
- 3 Pull up on the front of the cover to unclip it.



Step 16/117

Numbered annotations (1)

- 4 Remove engine cover.



Step 17/117

Numbered annotations (1)

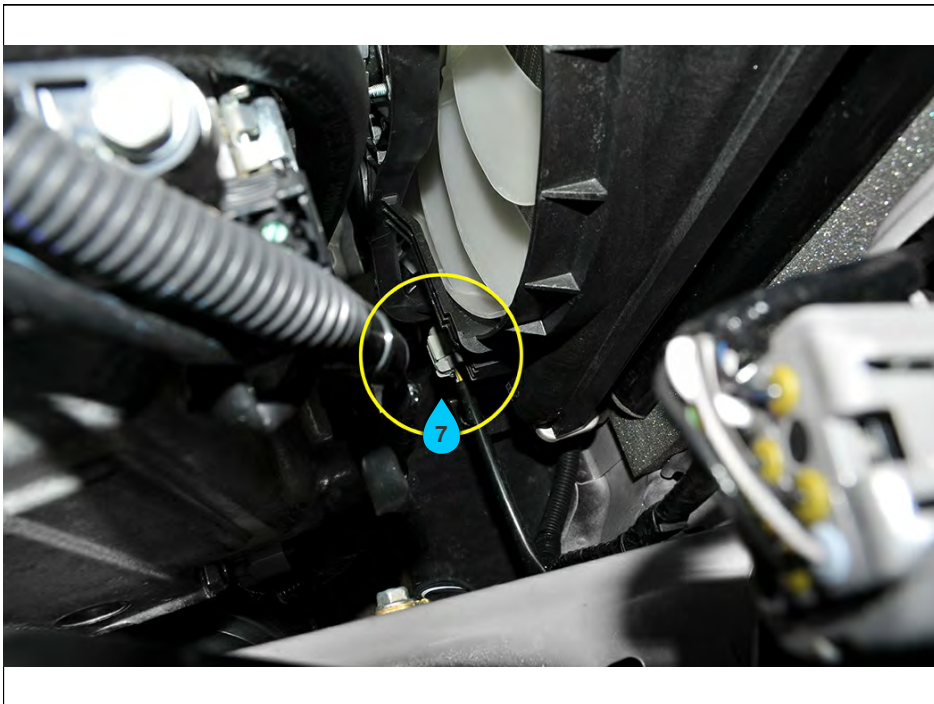
- 5 Remove hardware securing intake snorkel.



Step 18/117

Numbered annotations (1)

- 6 Remove intake snorkel.



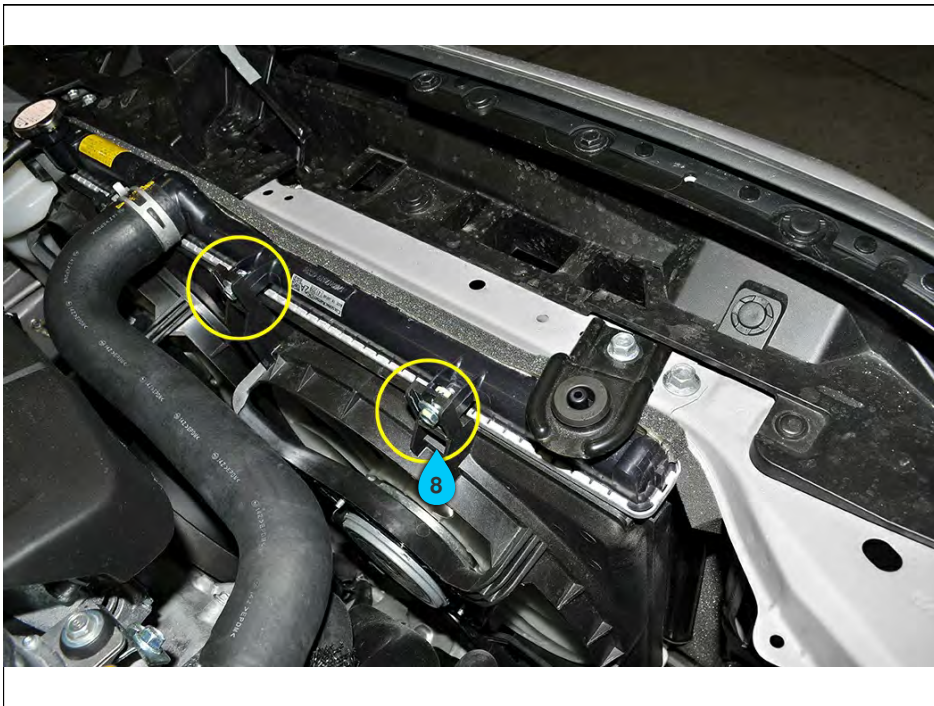
Step 19/117

Numbered annotations (1)

- 7 Disconnect passenger side radiator fan wiring harness.



Step 20/117



Step 21/117

Numbered annotations (1)

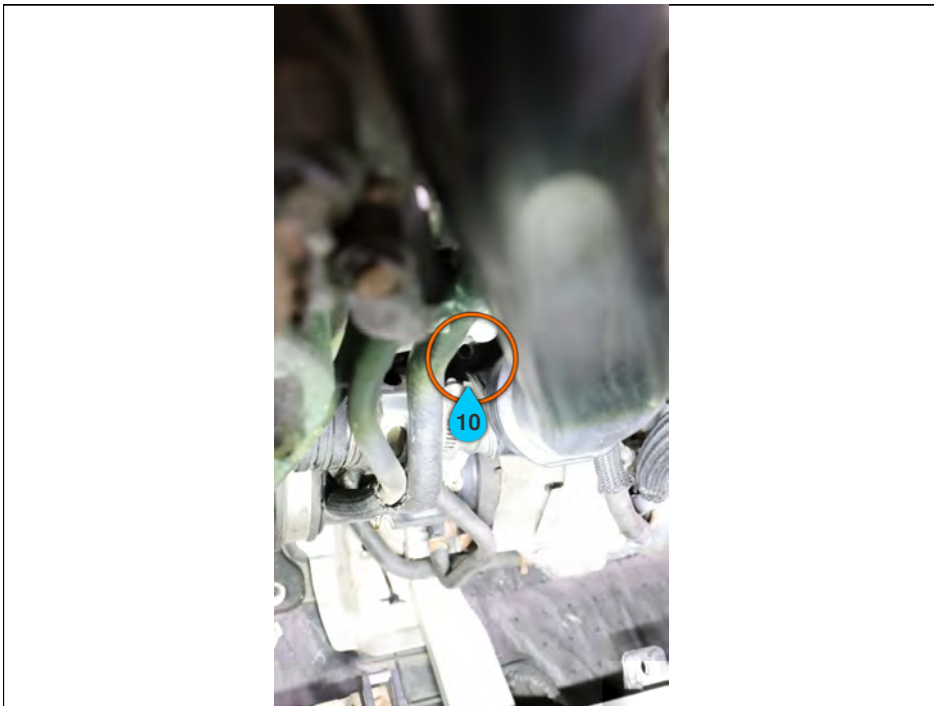
- 8 Remove hardware securing passenger side radiator fan.



Step 22/117

Numbered annotations (1)

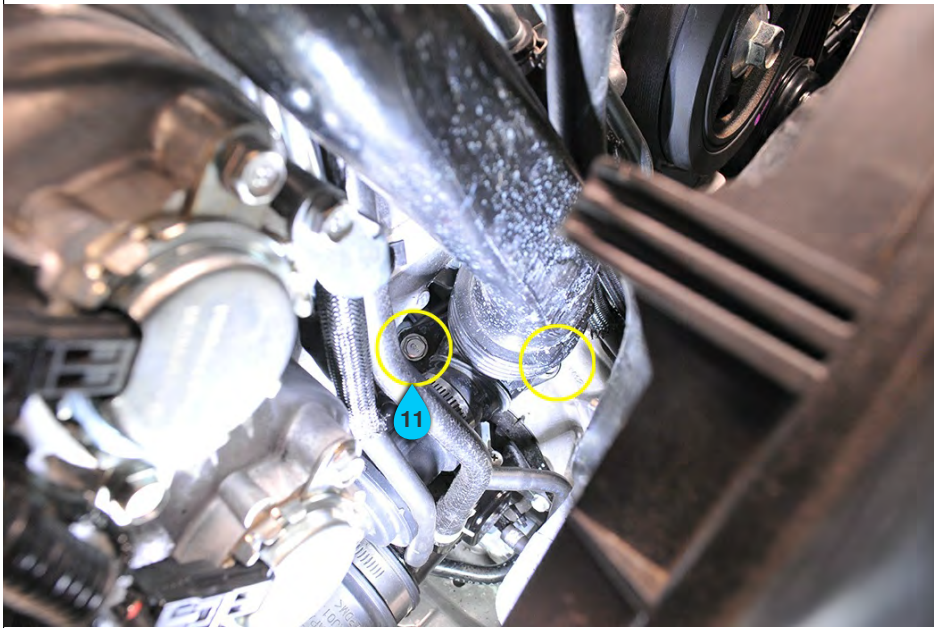
- 9 Remove passenger side radiator fan, being careful not to damage the radiator fins.



Step 23/117

Numbered annotations (1)

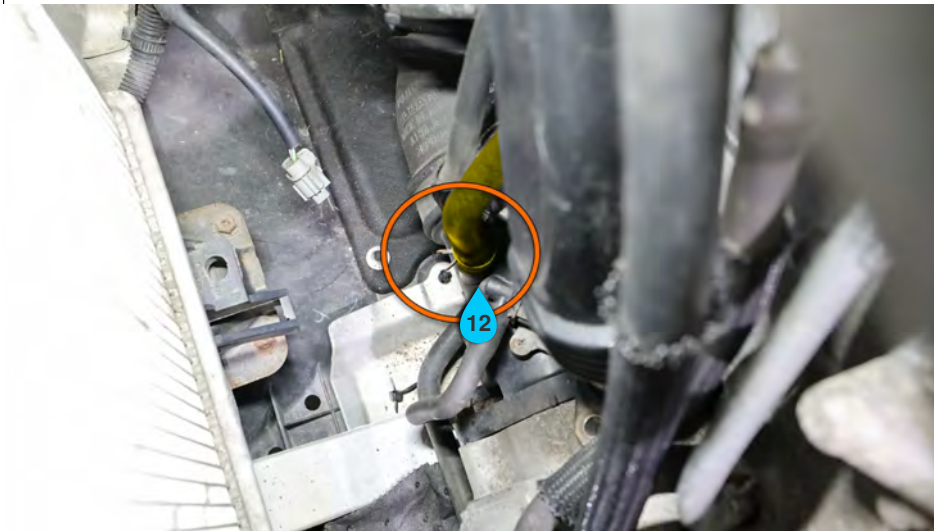
- 10 Loosen this clamp.



Step 24/117

Numbered annotations (1)

- 11 Remove hardware securing charge pipe.



Step 25/117

Numbered annotations (1)

- 12 Remove this hose.

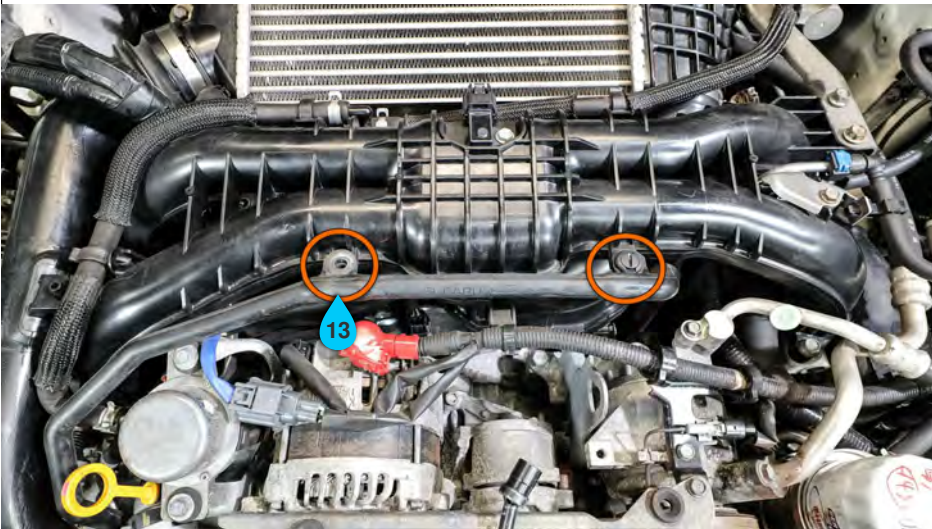
Step 26/117



Step 27/117

Numbered annotations (1)

- 13 Remove the two clips holding the PCV tube.



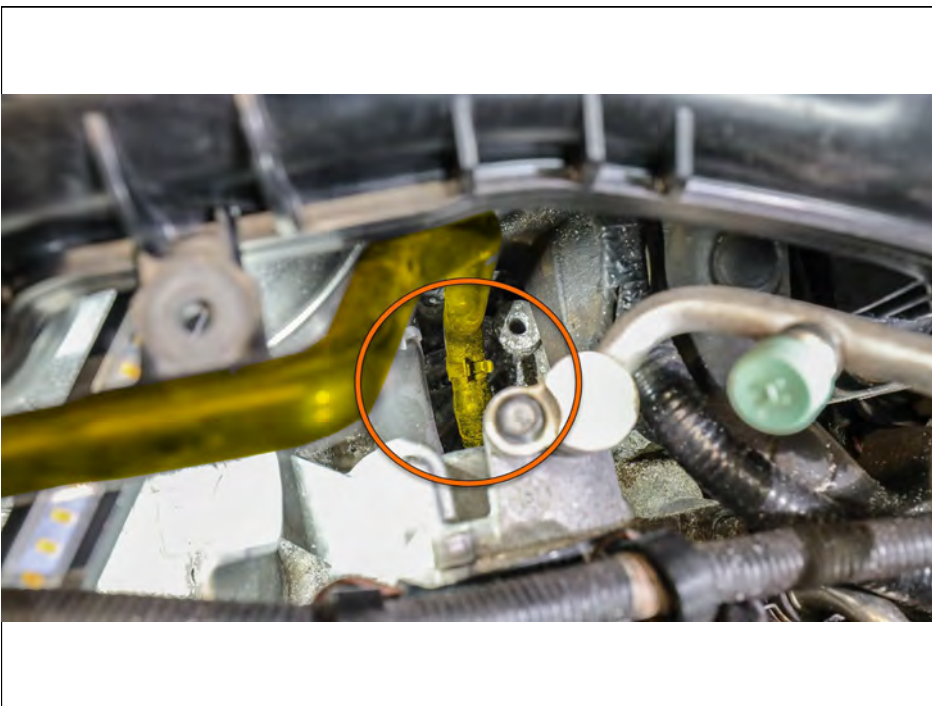
Step 28/117

Numbered annotations (1)

- 14 Loosen the clamp and disconnect the PCV hard tube.



Step 29/117



Step 30/117

Numbered annotations (1)

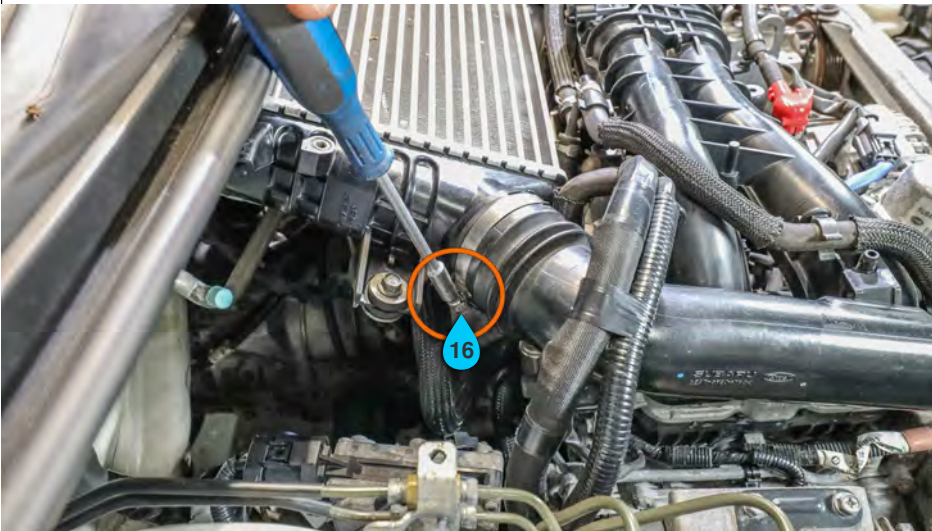
- 15 Remove the PCV hard tube.



Step 31/117

Numbered annotations (1)

- 16 Loosen this clamp.



Step 32/117

Numbered annotations (1)

- 17 Remove the charge pipe.



Step 33/117


Numbered annotations (1)

- 18 Ensure this part stays in the charge pipe.



Step 34/117


Numbered annotations (1)

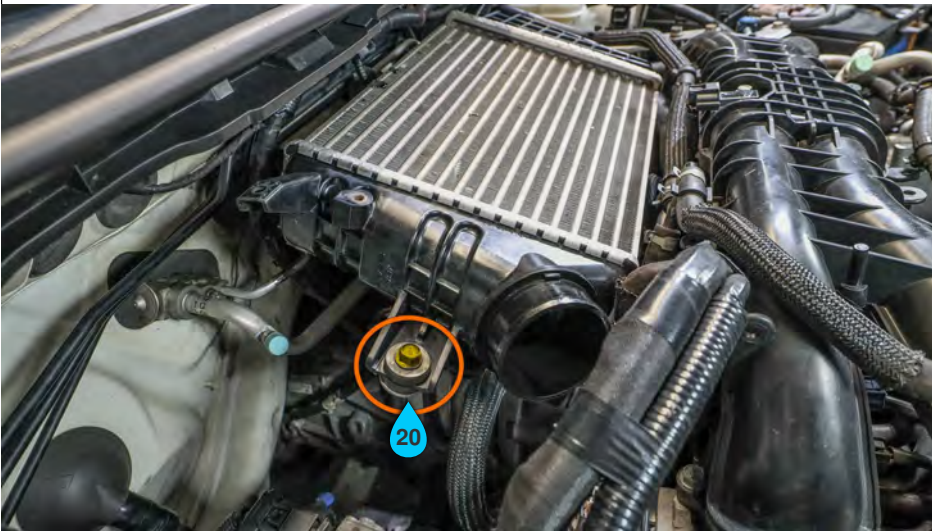
 The spacer fits here.



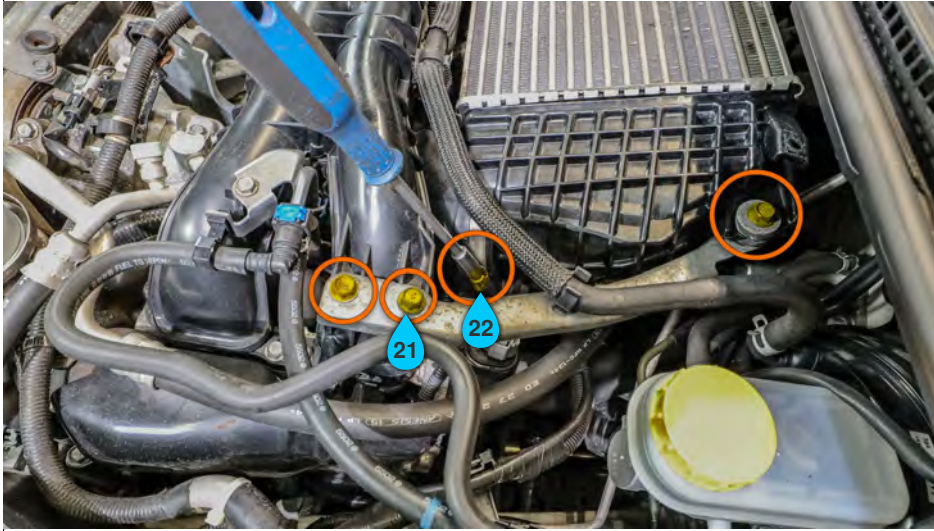
Step 35/117

Numbered annotations (1)

 Remove this bolt.



Step 36/117



Numbered annotations (2)

- 21 Remove the 3 bolts holding the intercooler and bracket.
- 22 Loosen this hose clamp.

Step 37/117



Numbered annotations (1)

- 23 Remove the intercooler bracket.

Step 38/117

Numbered annotations (1)

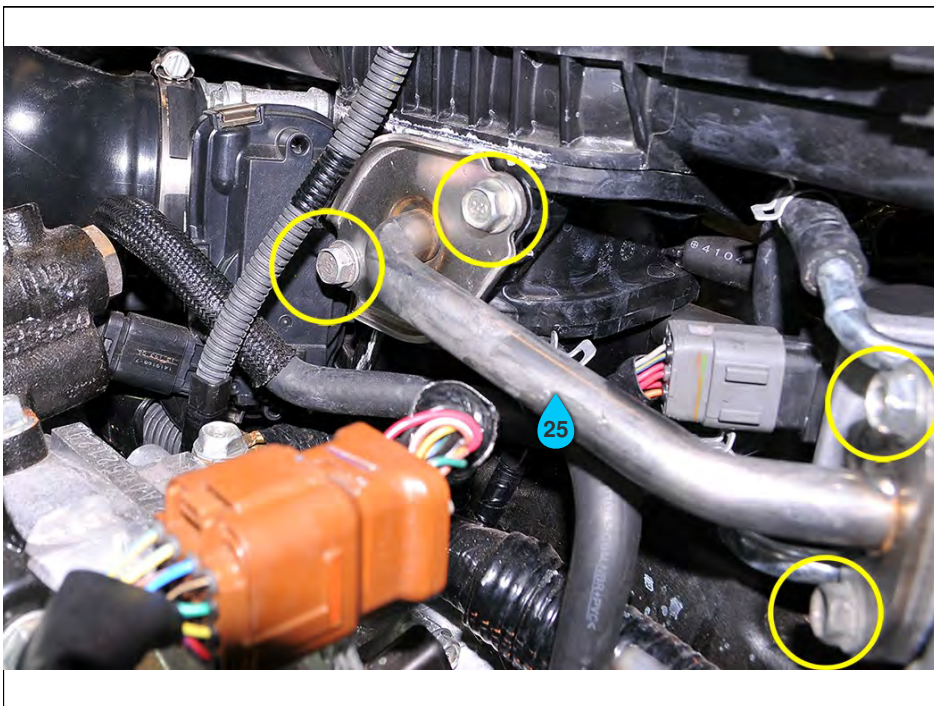
- 24 Remove the intercooler.



Step 39/117

Numbered annotations (1)

- 25 Remove the hardware securing this pipe behind the intake manifold.



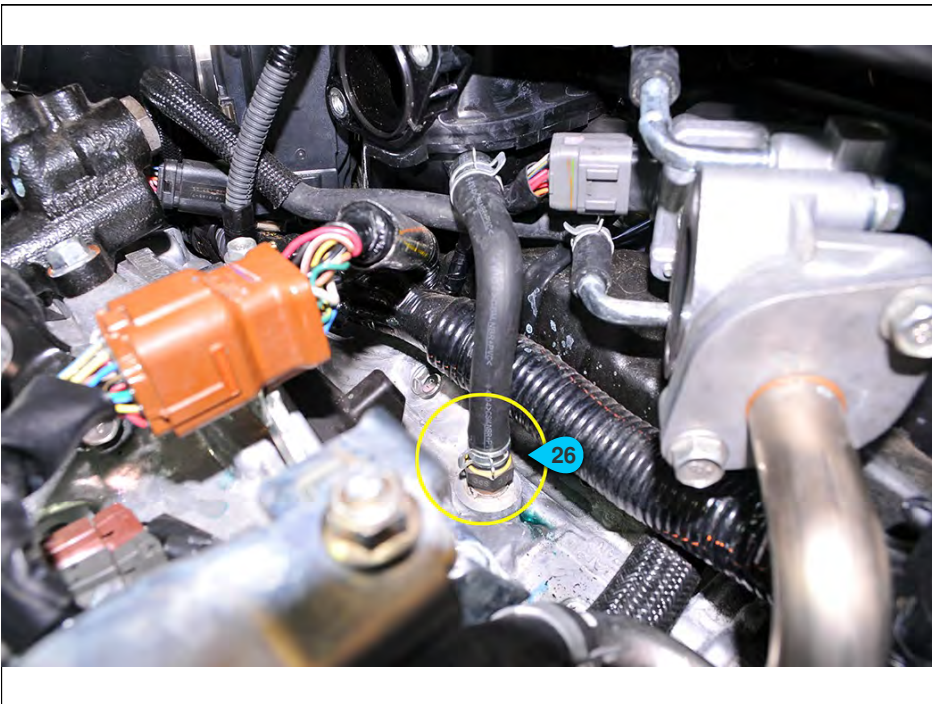
Step 40/117



Step 41/117

Numbered annotations (1)

- 26 Loosen this clamp and disconnect this hose.





Step 42/117



Step 43/117

Numbered annotations (1)

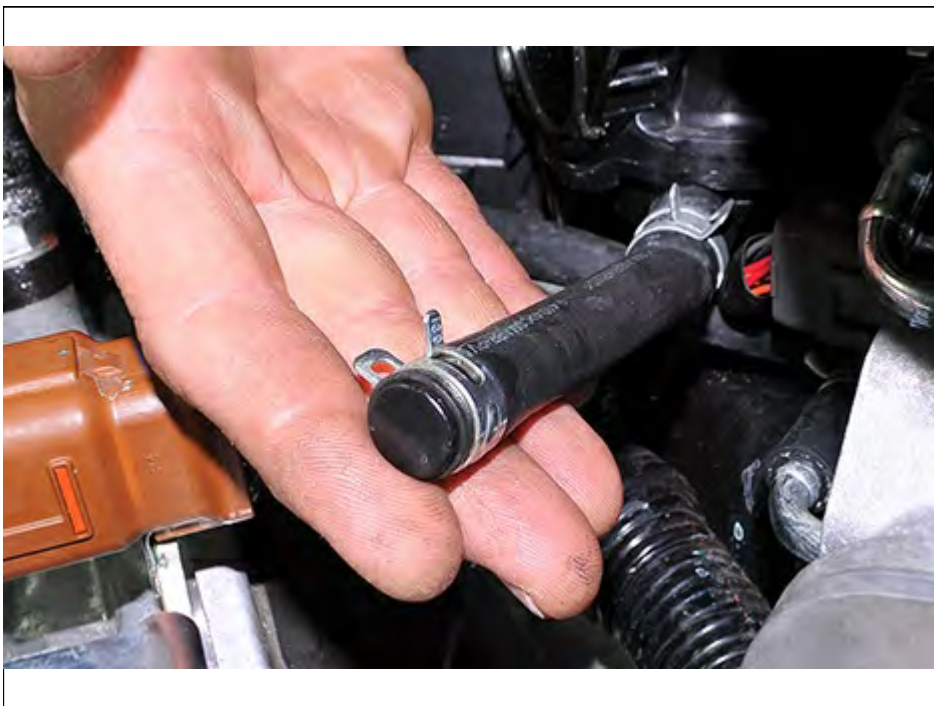
- 27** Locate the supplied vacuum cap.



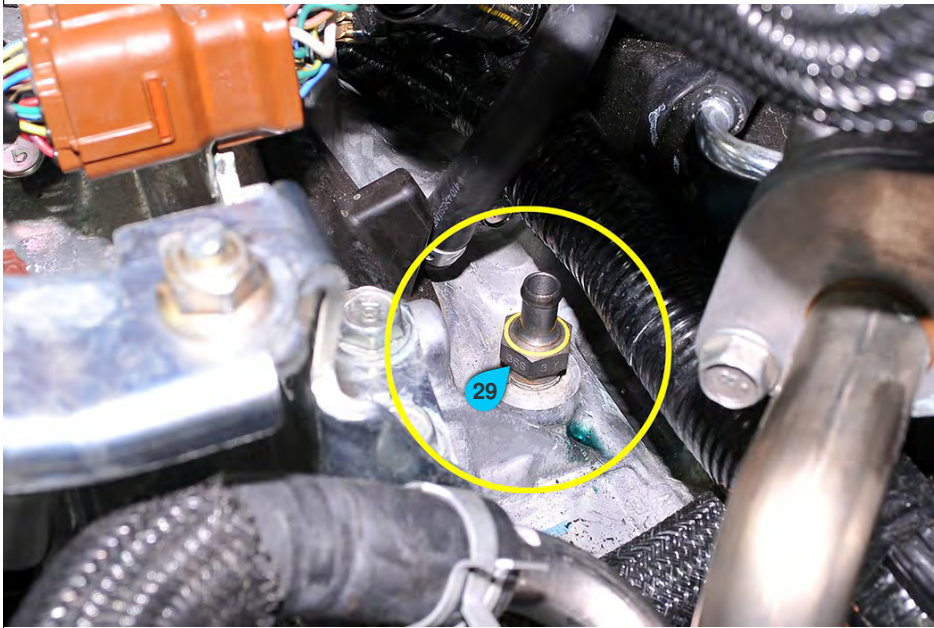
Step 44/117

Numbered annotations (1)

- 28 Install the supplied vacuum cap in this hose, secured with the OEM clamp.



Step 45/117



Step 46/117

Numbered annotations (1)

- 29 Remove this fitting.



Step 47/117

Step 48/117

Numbered annotations (1)

- 30 Locate the supplied block breather fitting.

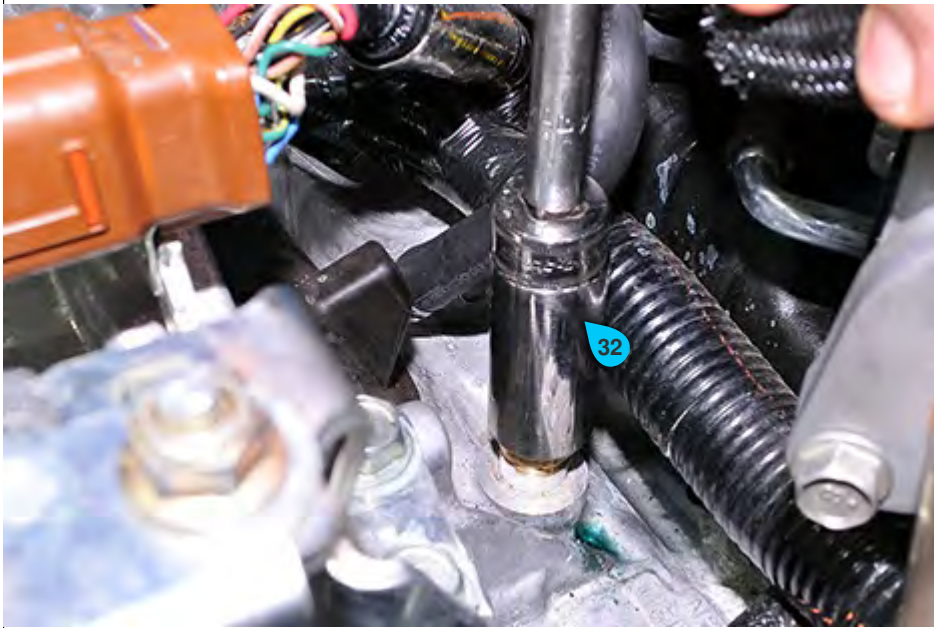


Step 49/117

Numbered annotations (1)

- 31 Thread the block fitting into the block.

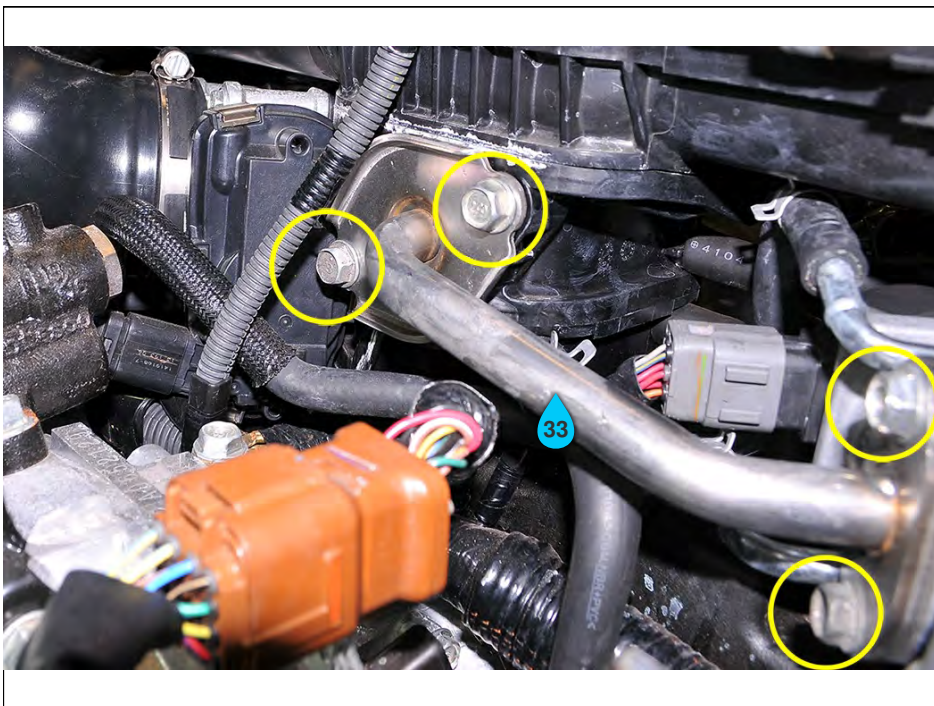




Step 50/117

Numbered annotations (1)

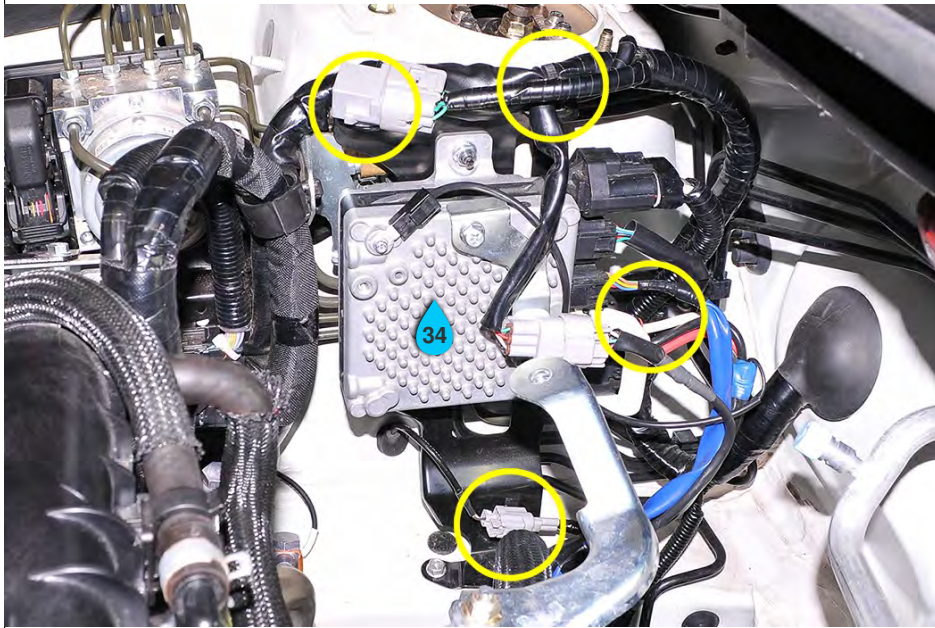
- 32 Torque the fitting to 15 ft/lbs.



Step 51/117

Numbered annotations (1)

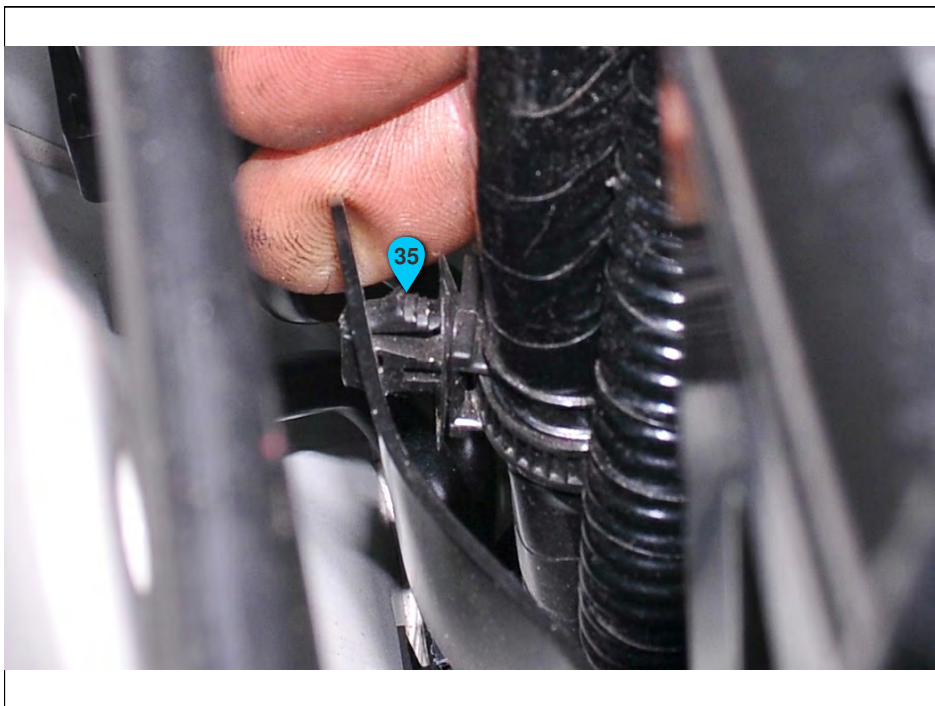
- 33 Reinstall the EGR pipe, reusing the OEM gaskets and hardware.



Step 52/117

Numbered annotations (1)

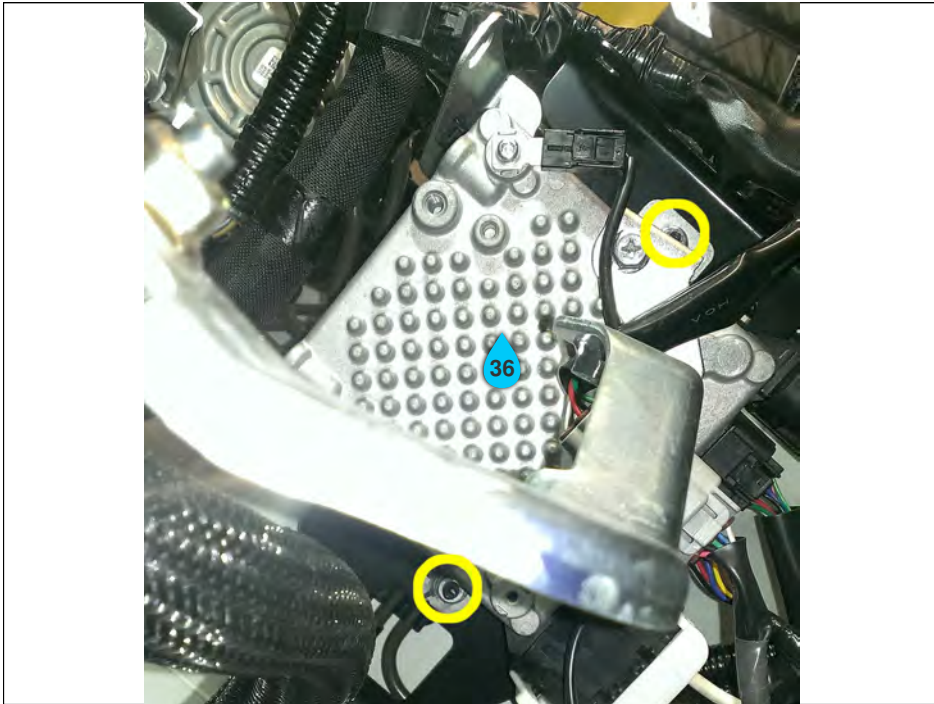
- 34 Remove the 4 wiring harness retaining clips from the ECU mounting bracket.



Step 53/117

Numbered annotations (1)

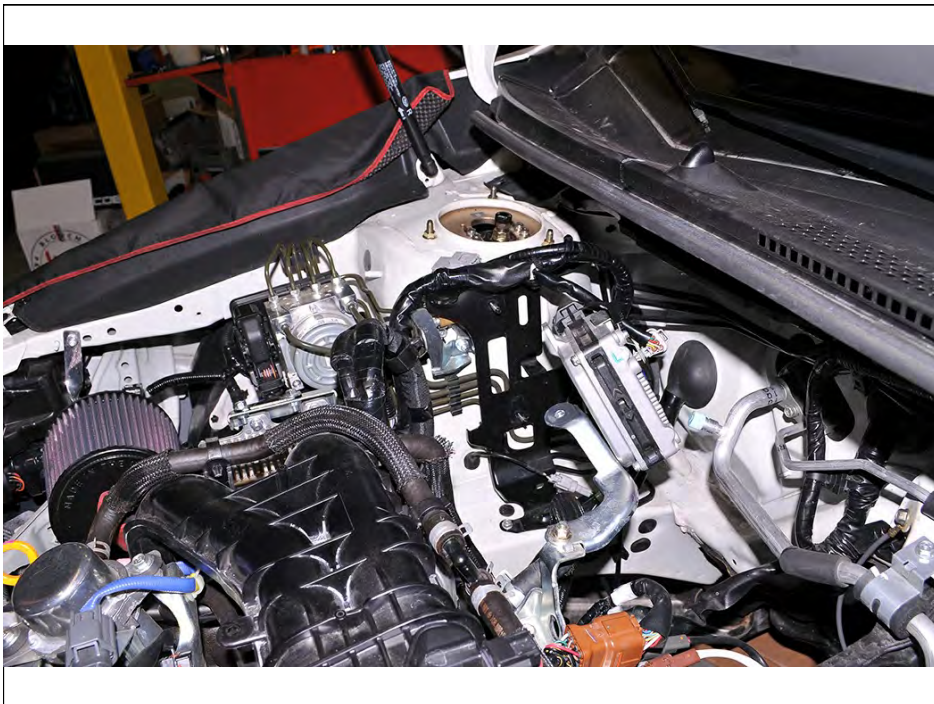
- 35 Use pliers to squeeze these zip ties then push them through the hole to remove.



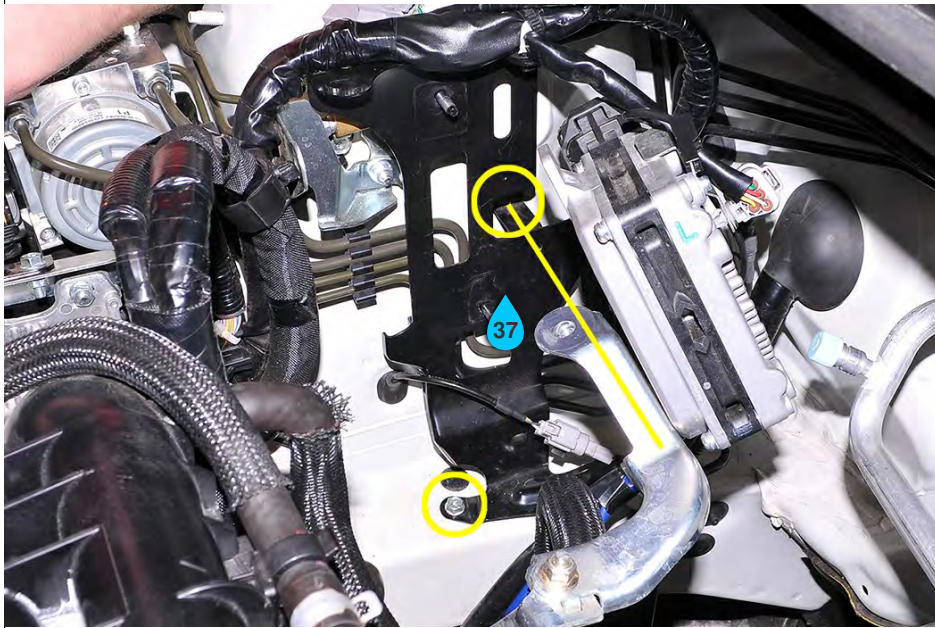
Step 54/117

Numbered annotations (1)

- 36 Remove the two 10mm nuts which hold the ECU to the bracket. Pull the ecu free from the bracket and place it aside in the engine bay.



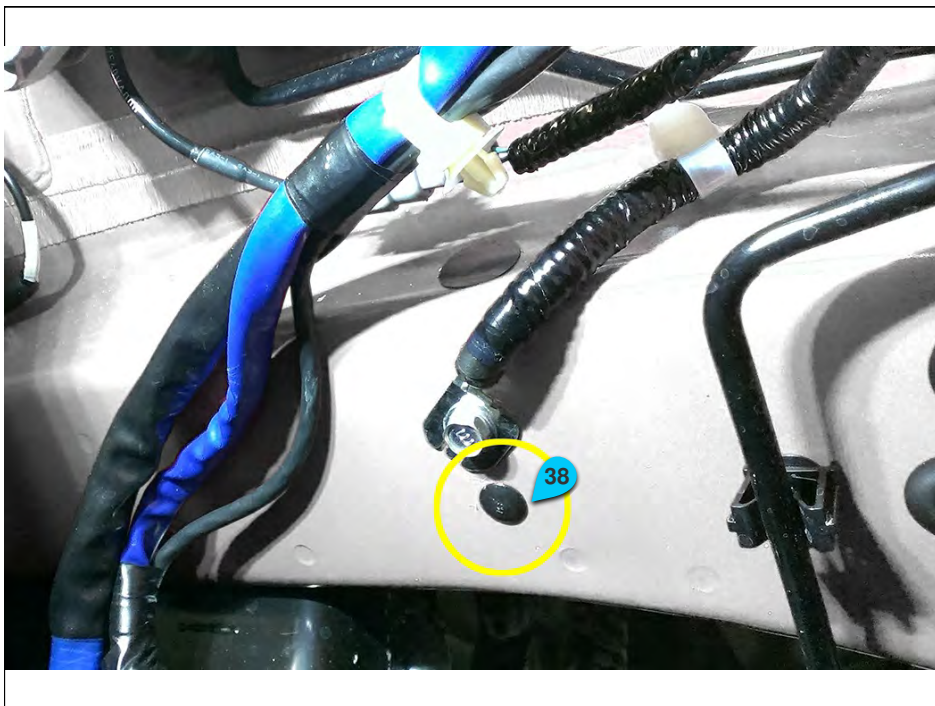
Step 55/117



Step 56/117

Numbered annotations (1)

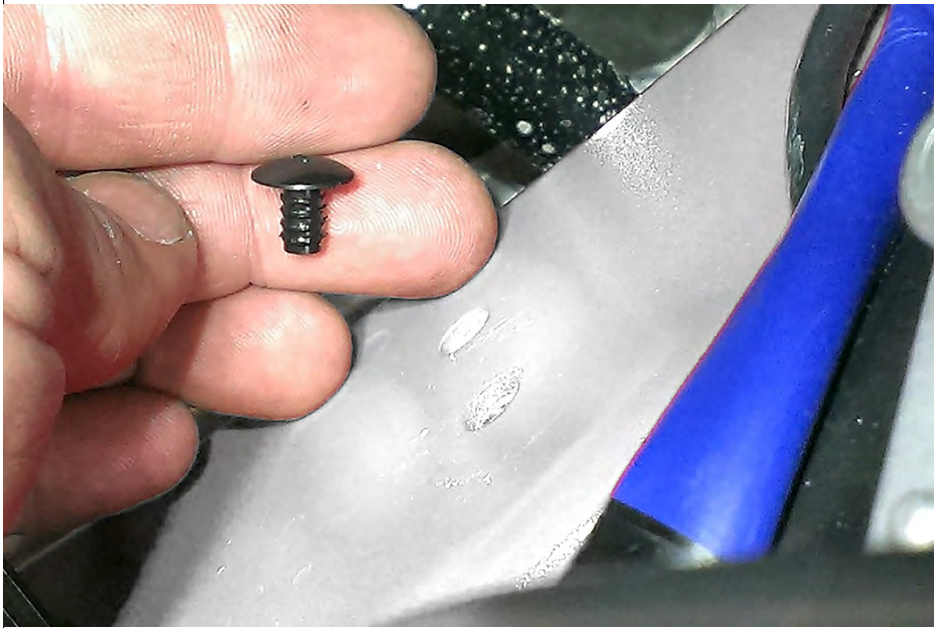
- 37 Remove the two 10mm bolts which secure the ECU bracket to the strut tower. Remove the bracket.



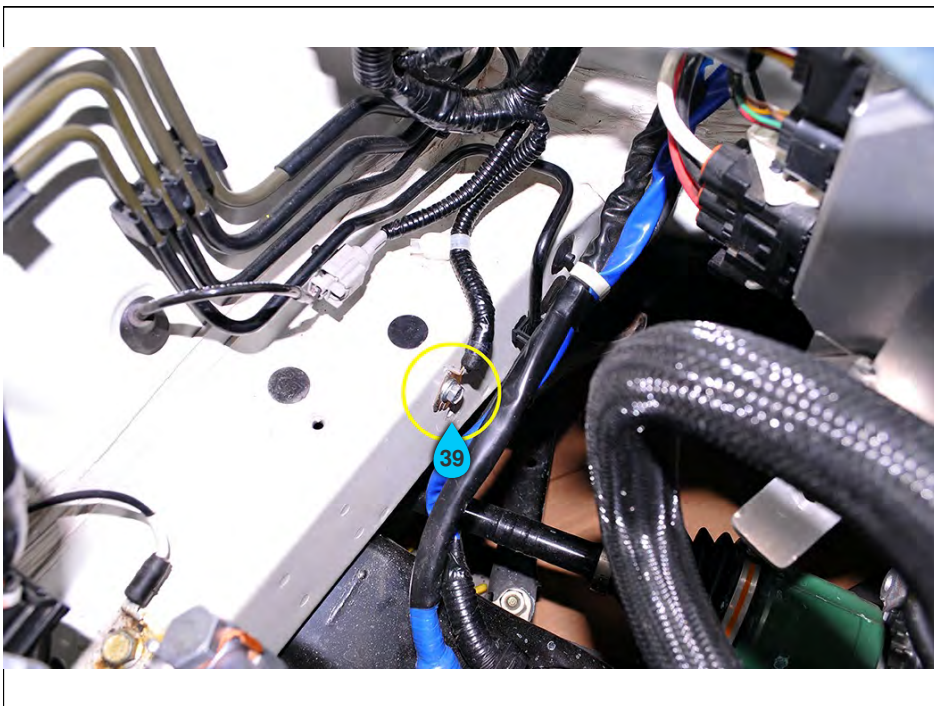
Step 57/117

Numbered annotations (1)

- 38 Remove this plug.



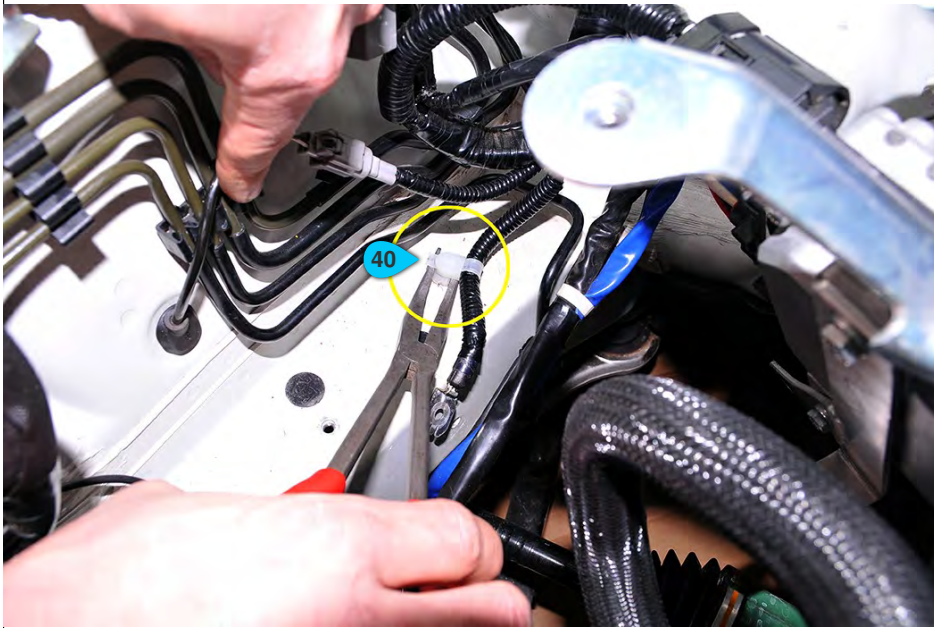
Step 58/117



Step 59/117

Numbered annotations (1)

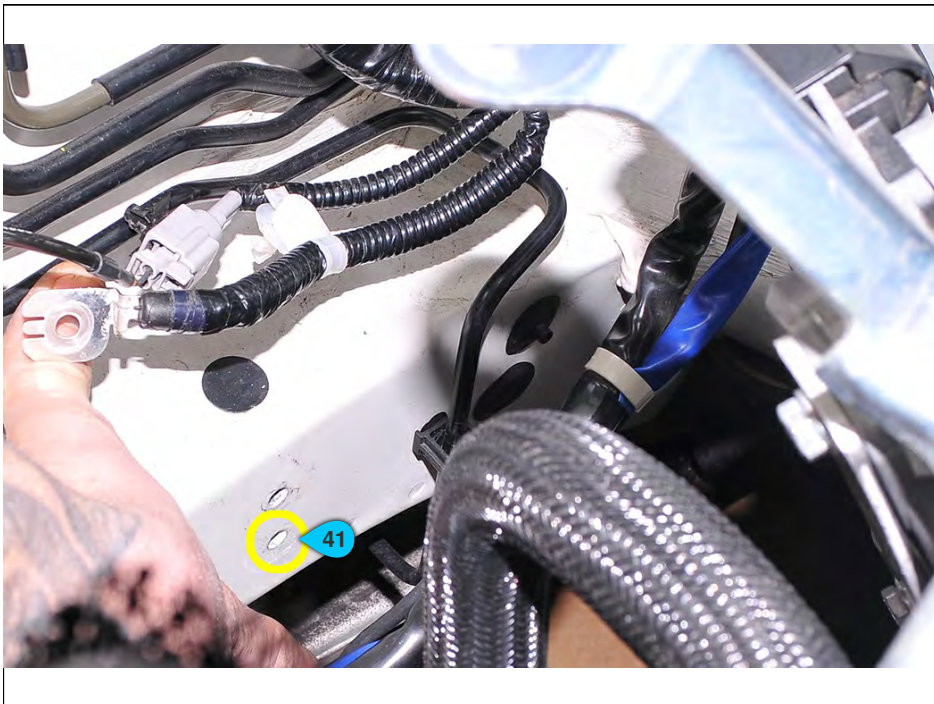
- 39 Remove this 10mm bolt.



Step 60/117

Numbered annotations (1)

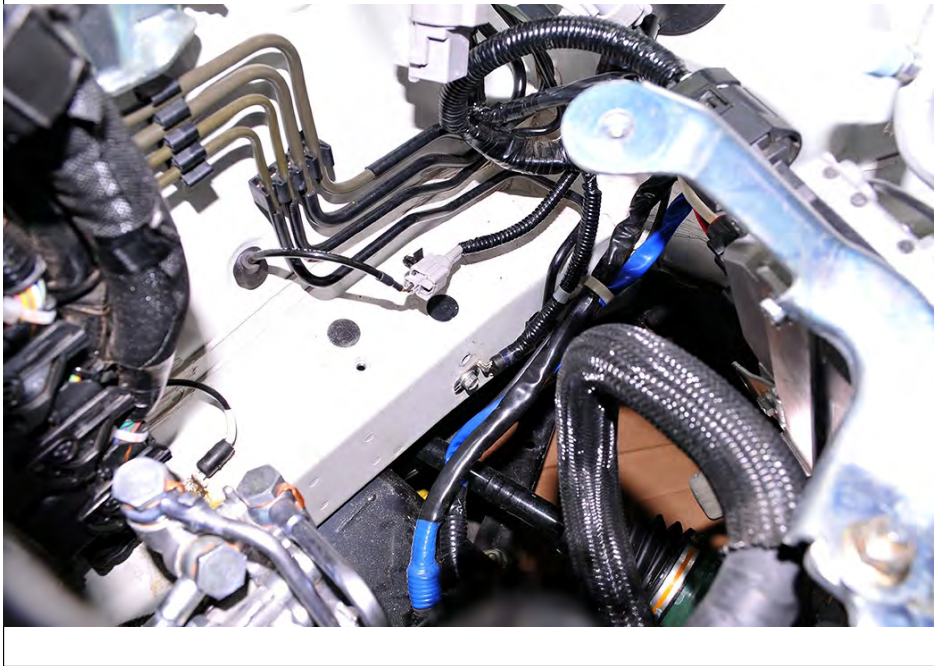
- 40 Use pliers to remove this mounting tie from the frame rail.



Step 61/117

Numbered annotations (1)

- 41 Reinstall the ground to this hole using the OEM 10mm bolt.



Step 62/117



Step 63/117

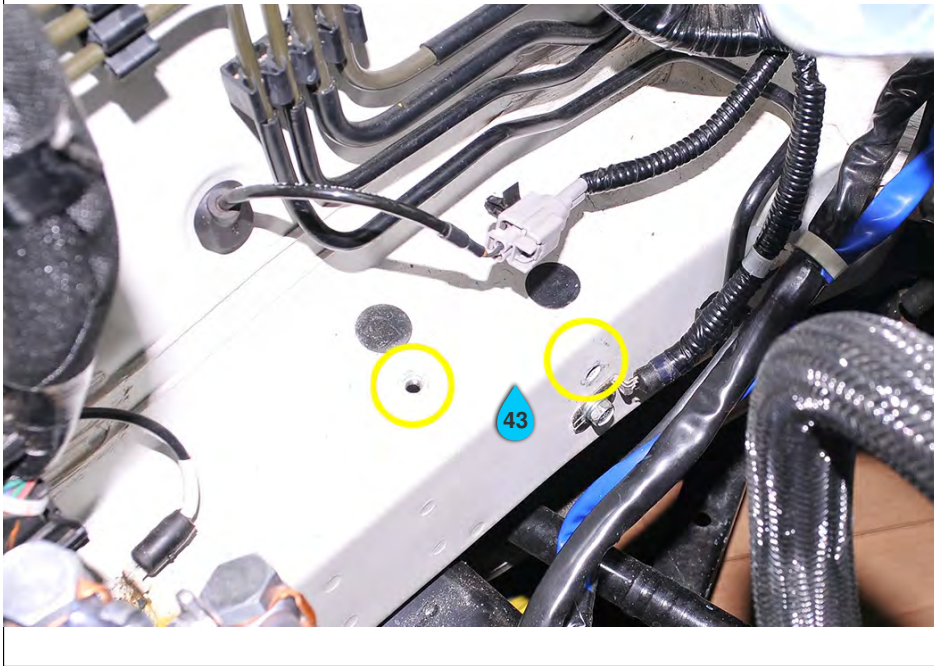
Numbered annotations (1)

42 Locate the ECU relocation bracket.

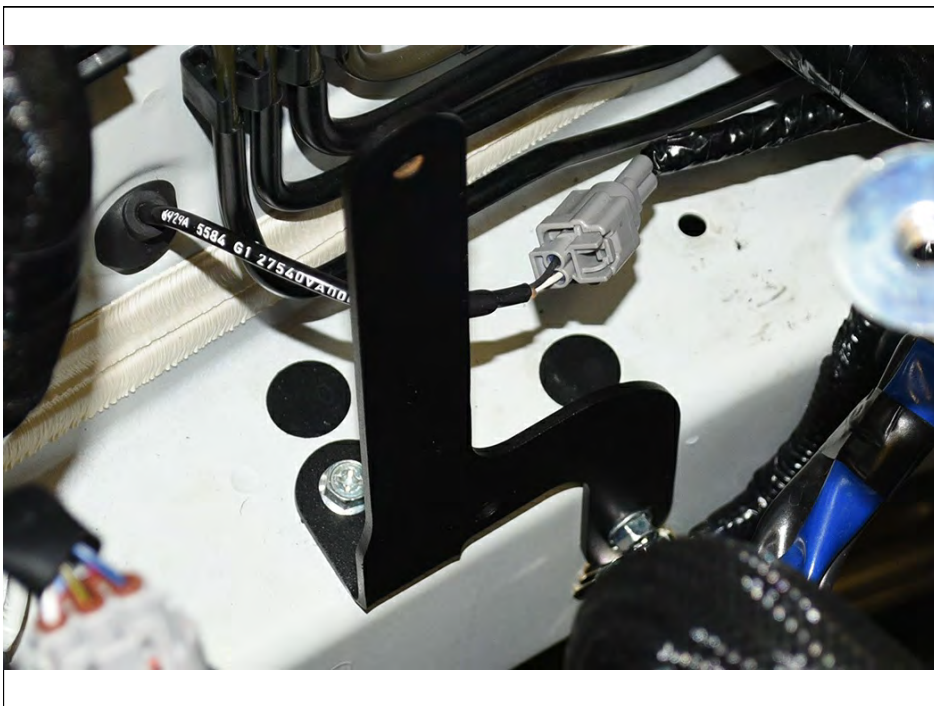
Step 64/117

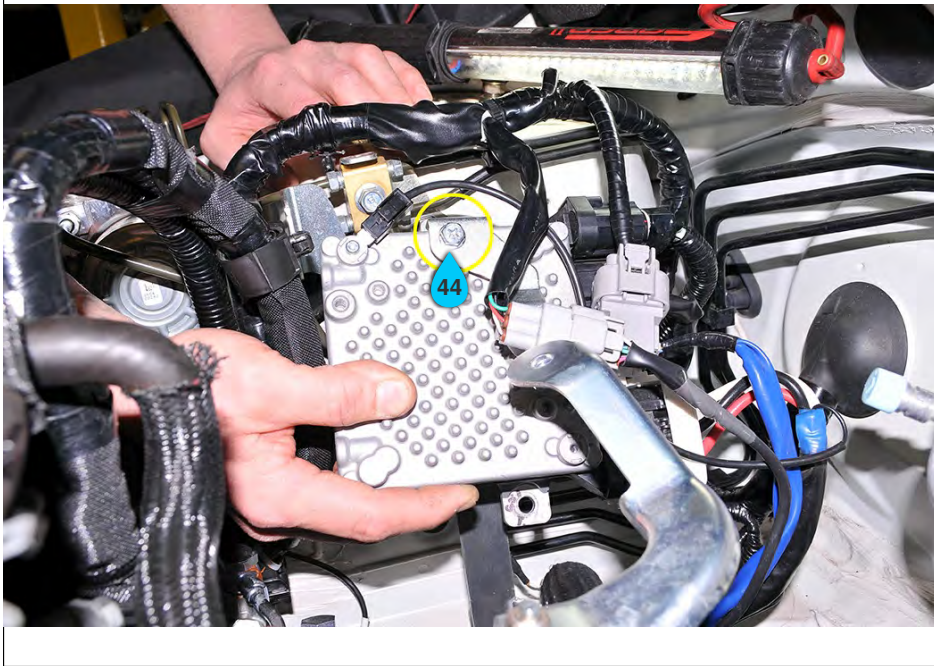
Numbered annotations (1)

- 43 Attach the ECU relocation bracket here using the OEM ecu bracket 10mm hardware.



Step 65/117

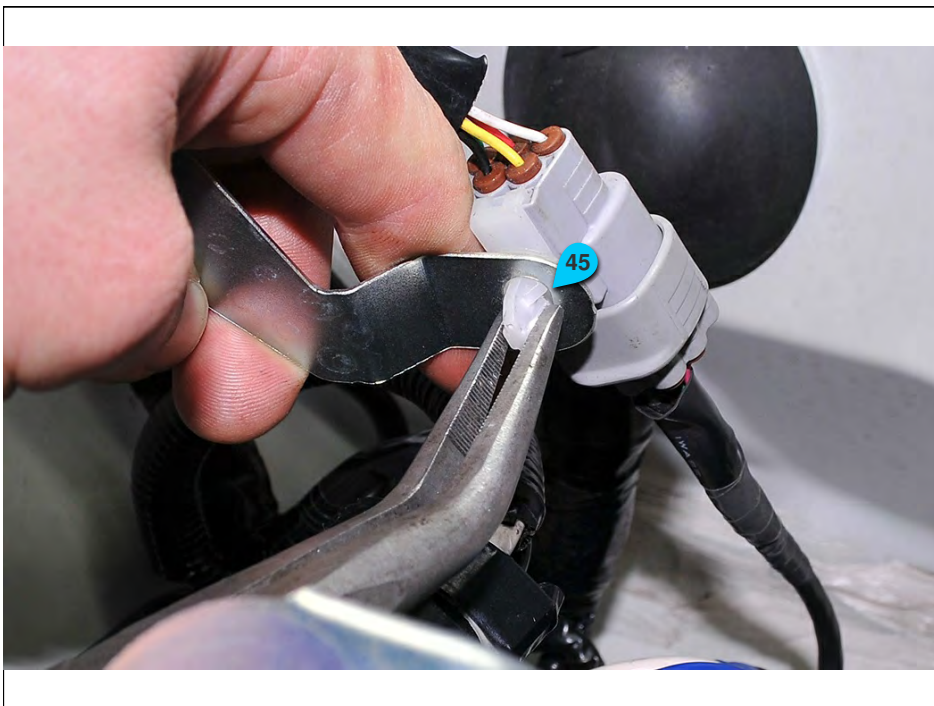




Step 66/117

Numbered annotations (1)

- 44 Remove the 10mm bolt securing the wiring harness to the ecu,



Step 67/117

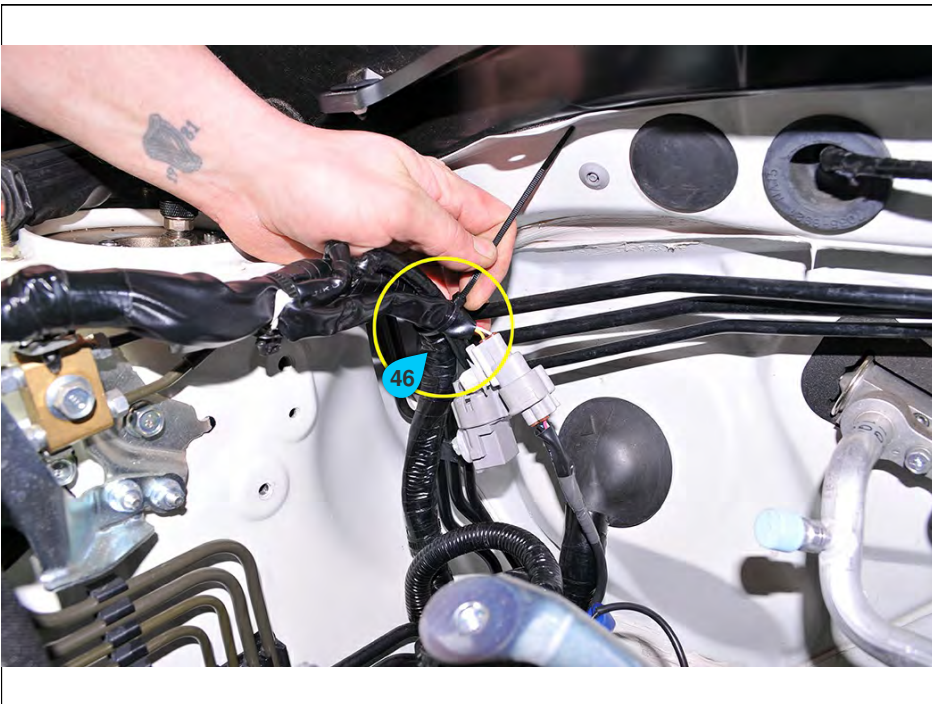
Numbered annotations (1)

- 45 Using pliers, remove the harness retaining clip from the bracket.

Step 68/117



Step 69/117



Numbered annotations (1)

46 Zip tie the harness here.

Step 70/117

Numbered annotations (1)

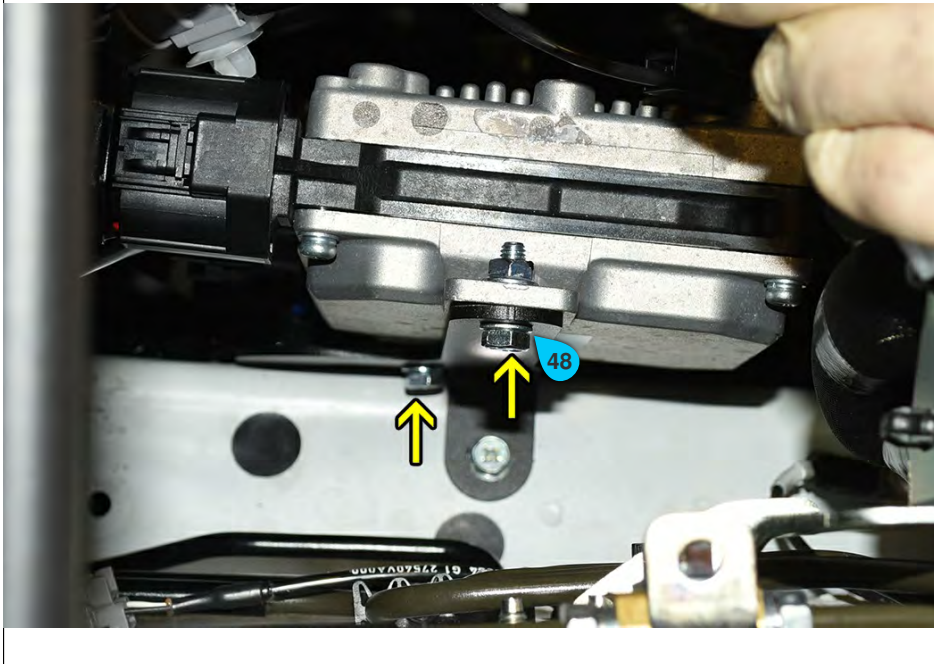
- 47 Locate the supplied 6mmx15mm bolts, 6mm flat washers, and OEM ecu bracket nuts.



Step 71/117

Numbered annotations (1)

- 48 Attach the ECU to the bracket using the supplied 6mmx15mm bolts, 6mm flat washers, and the OEM nuts the secured the ecu to the OEM ECU bracket. (Make sure the bolt heads are on the bracket side.)



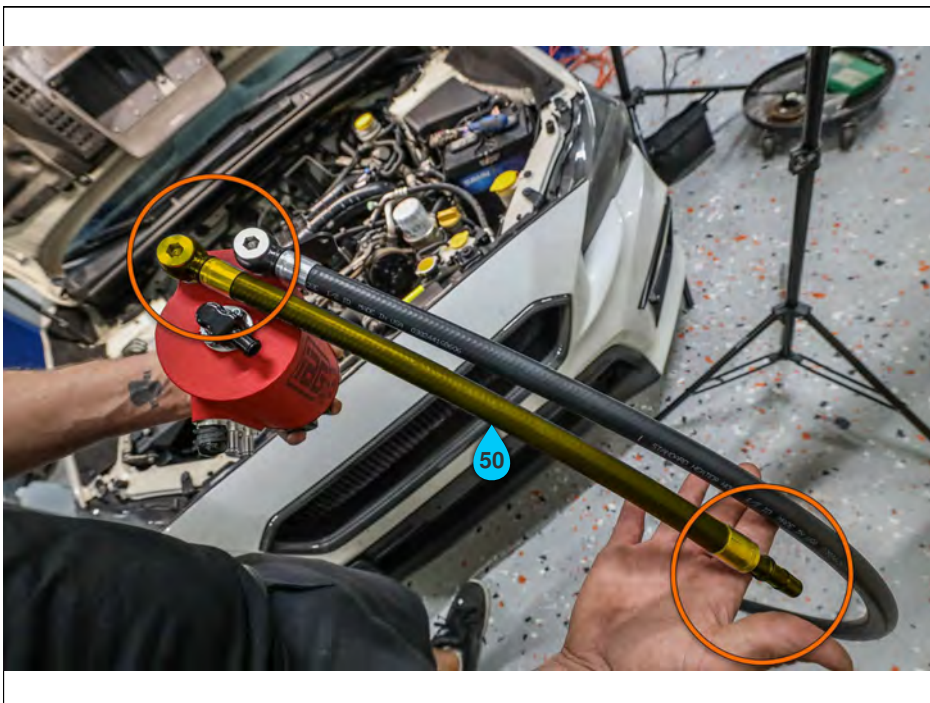
Step 72/117



Numbered annotations (1)

- 49 Locate the AOS body assembly and coolant lines with fittings. Loosely install both hoses using the supplied fittings.

Step 73/117



Numbered annotations (1)

- 50 Make sure the shorter line is installed in this position.



Step 74/117

Numbered annotations (1)

- 51 Tighten these fittings to 7 Ft/lbs. DO NOT OVER TIGHTEN!



Step 75/117

Numbered annotations (1)

- 52 Locate the supplied bracket and hardware. Install the bracket as shown. Tighten to 7 Ft/lbs.

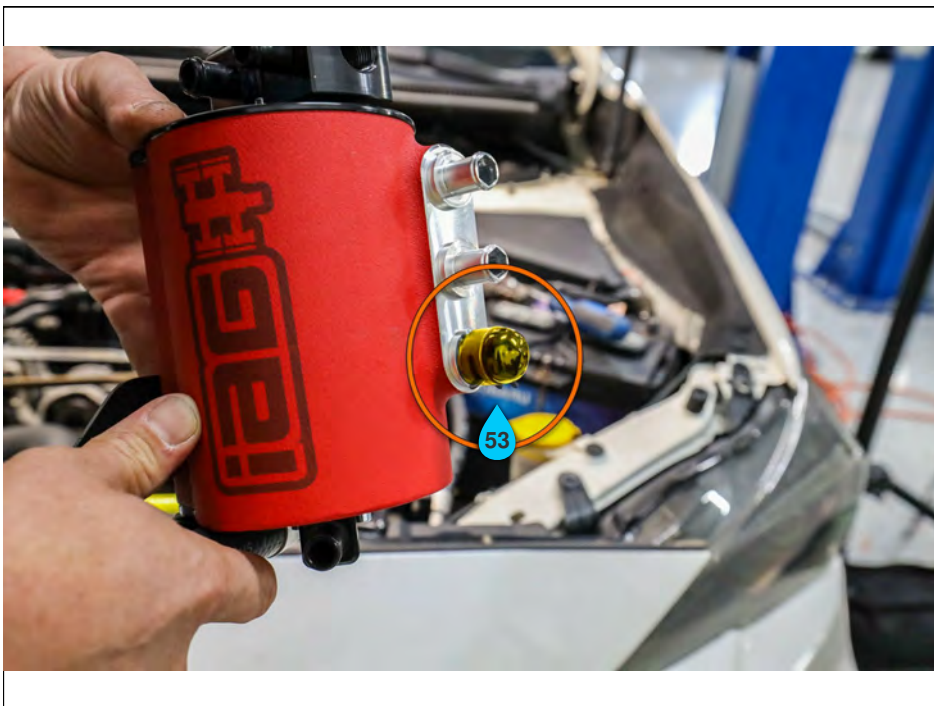
Step 76/117



Step 77/117

Numbered annotations (1)

- 53 Install the supplied 5/8" vacuum cap on this port and secure with the supplied clamp.



Step 78/117

Numbered annotations (1)

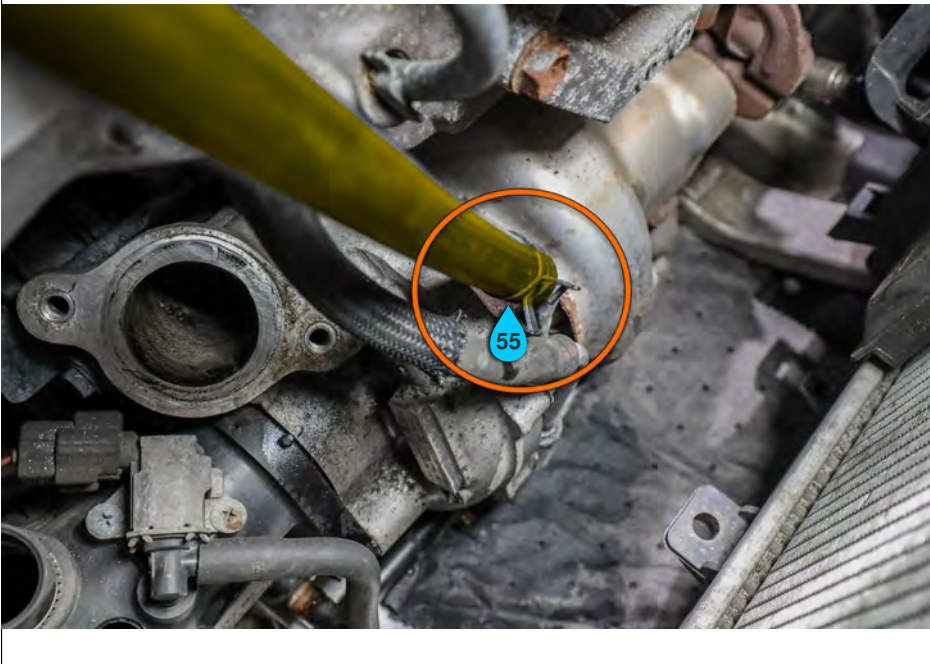
- 54 Mount the AOS here using the supplied bolts.

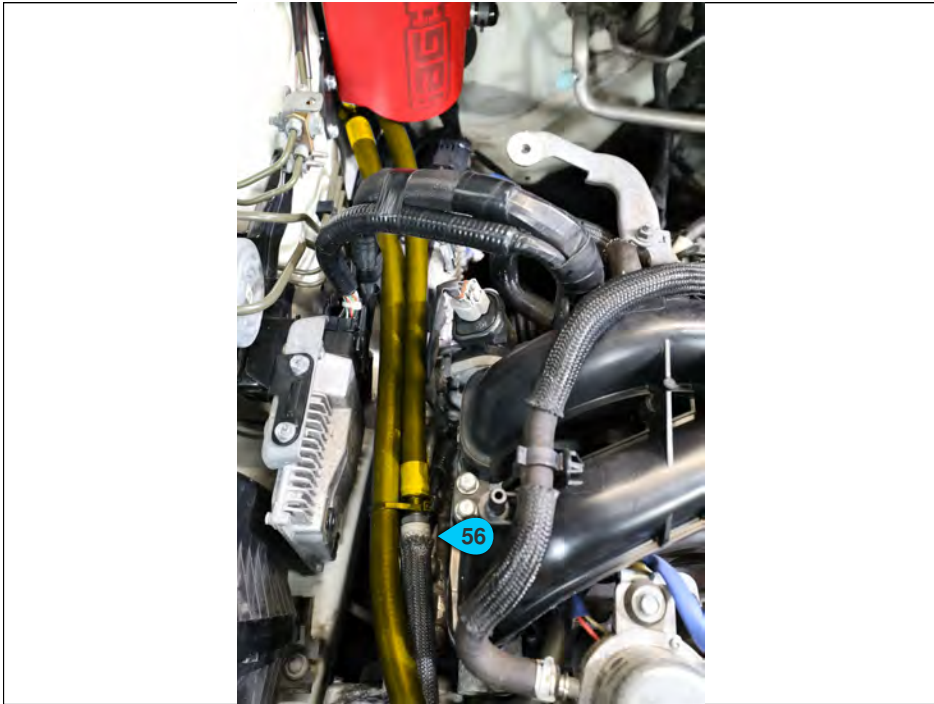


Step 79/117

Numbered annotations (1)

- 55 Attach the longer coolant hose here using the supplied clamp.

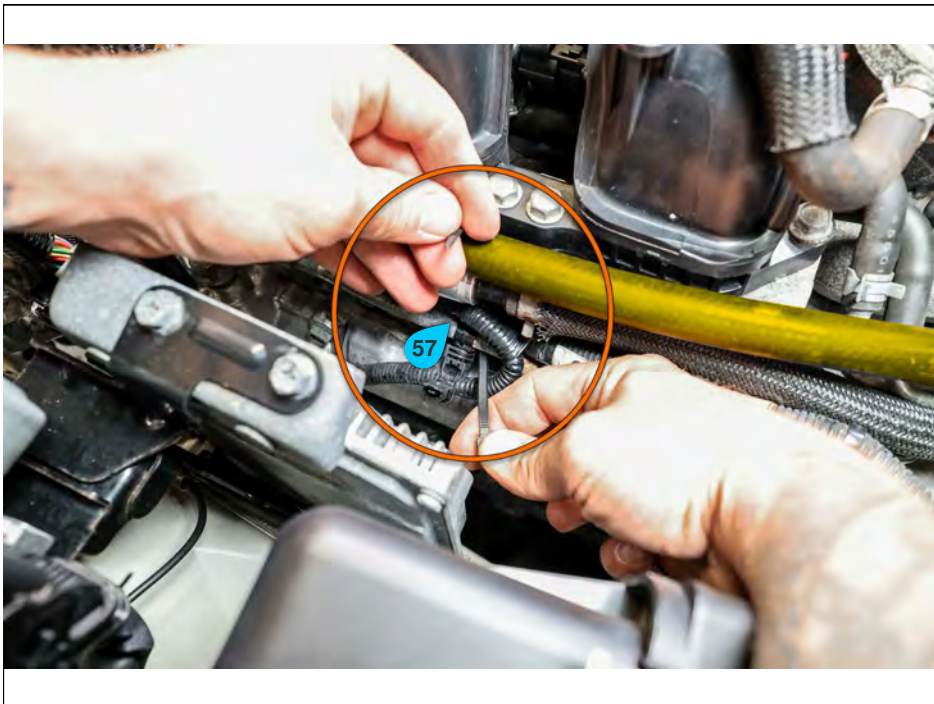




Step 80/117

Numbered annotations (1)

- 56 Attach the shorter coolant line with the union fitting here. Secure with the OEM clamp.

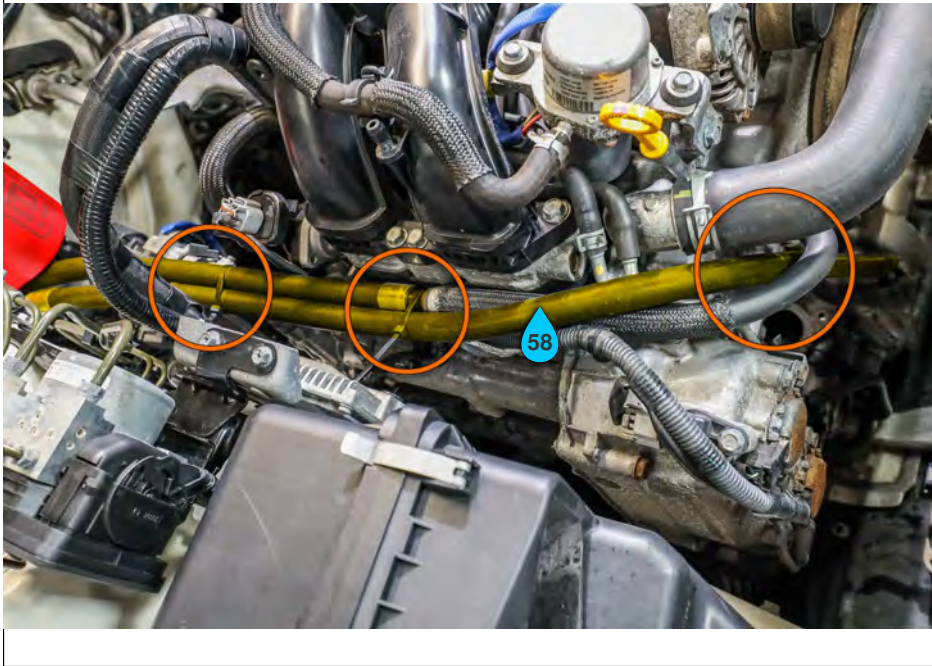


Step 81/117

Numbered annotations (1)

- 57 Secure the coolant lines together with a zip tie.

Step 82/117



Numbered annotations (1)

- 58 Use additional zip ties to keep the coolant hoses routed and secure.

Step 83/117



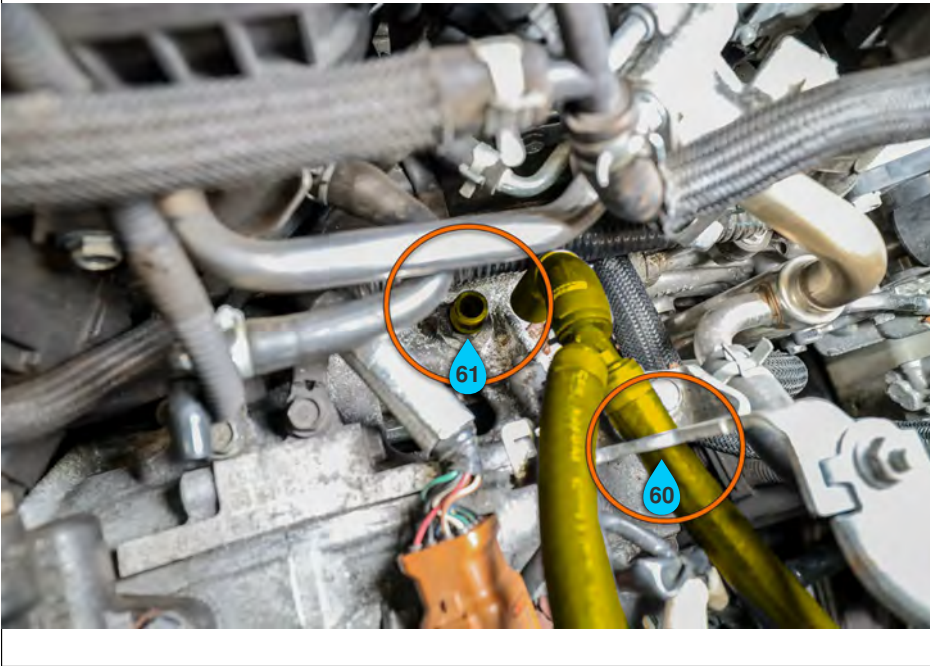
Numbered annotations (1)

- 59 Locate the Y shaped breather hose assembly.

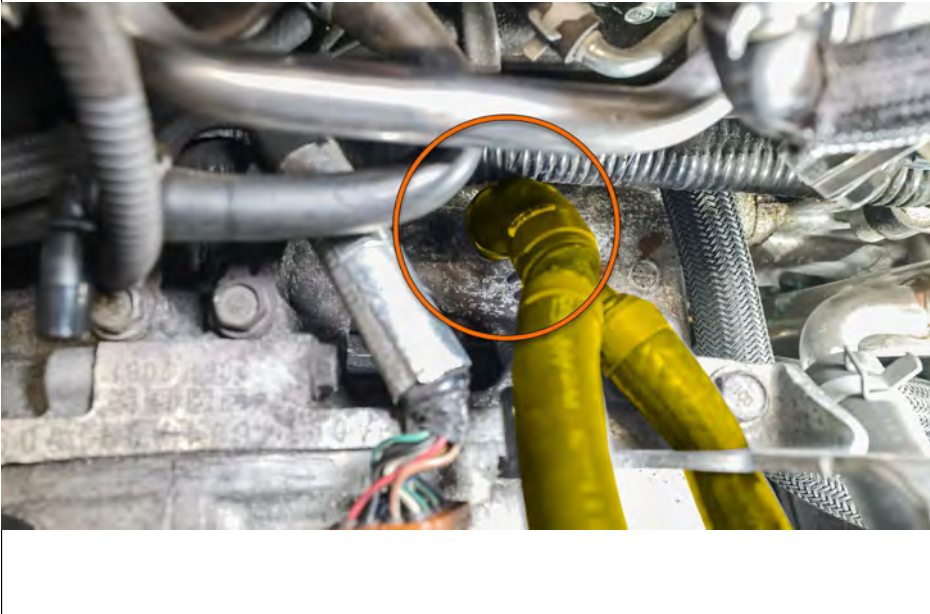
Step 84/117

Numbered annotations (2)

- 60 Pass one hose through the bracket.
- 61 Attach 90 degree hose here using the supplied clamp.



Step 85/117



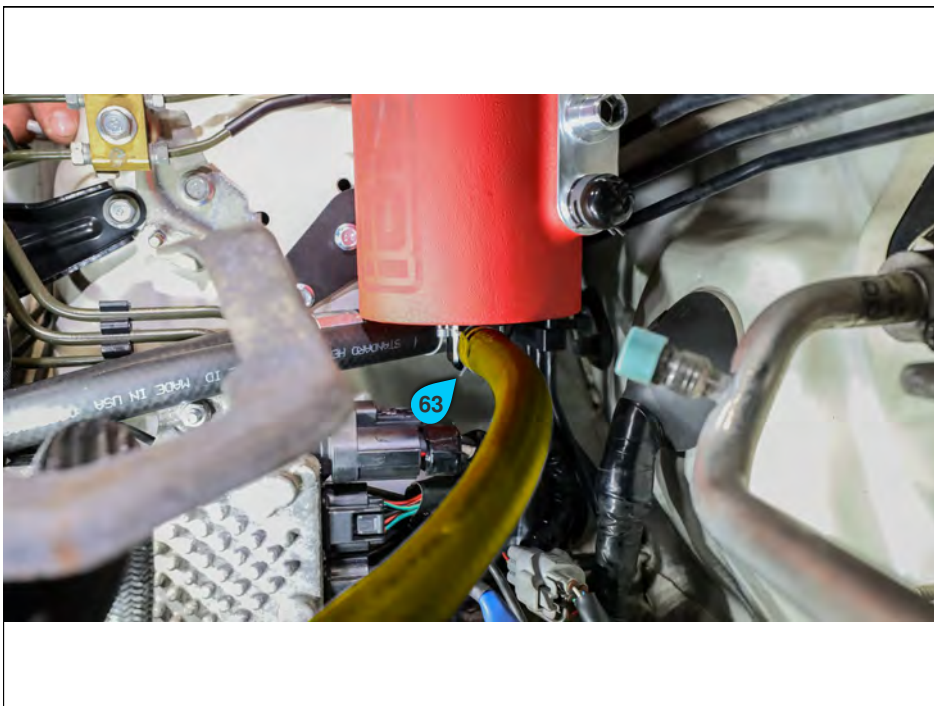
Step 86/117



Numbered annotations (1)

- 62 Ensure the drain hose is routed through this bracket. Measure and trim to length to attach the drain hose to the bottom of the AOS

Step 87/117



Numbered annotations (1)

- 63 Attach the drain hose here using the supplied clamp.

Step 88/117



Numbered annotations (2)

- 64 Secure the vent hose assembly here with a zip tie.
- 65 Attach the vent hose to the middle port on the side of the AOS using the supplied clamp.

Step 89/117



Numbered annotations (1)

- 66 Locate the 3/8" AOS PCV hose assembly. (This hose has a white PCV valve in the middle.) Screw the NPT fitting into the AOS, being careful not to over tighten the tapered fitting.

Step 90/117

Numbered annotations (1)

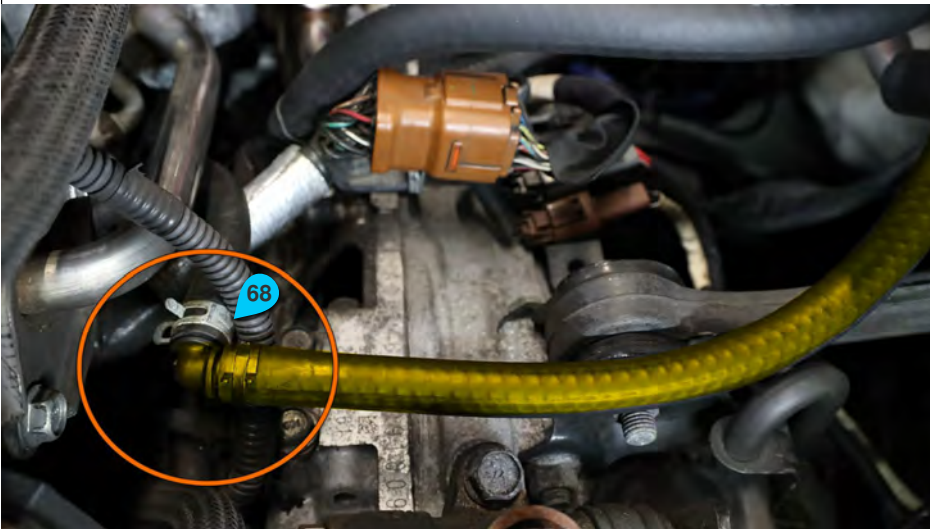
- 67 Route the AOS PCV hose as shown.



Step 91/117

Numbered annotations (1)

- 68 Attach this hose to to the hose coming from the intake manifold using the supplied 3/8" 90 degree fitting, the supplied clamp on one side and the OEM clamp on the other side.

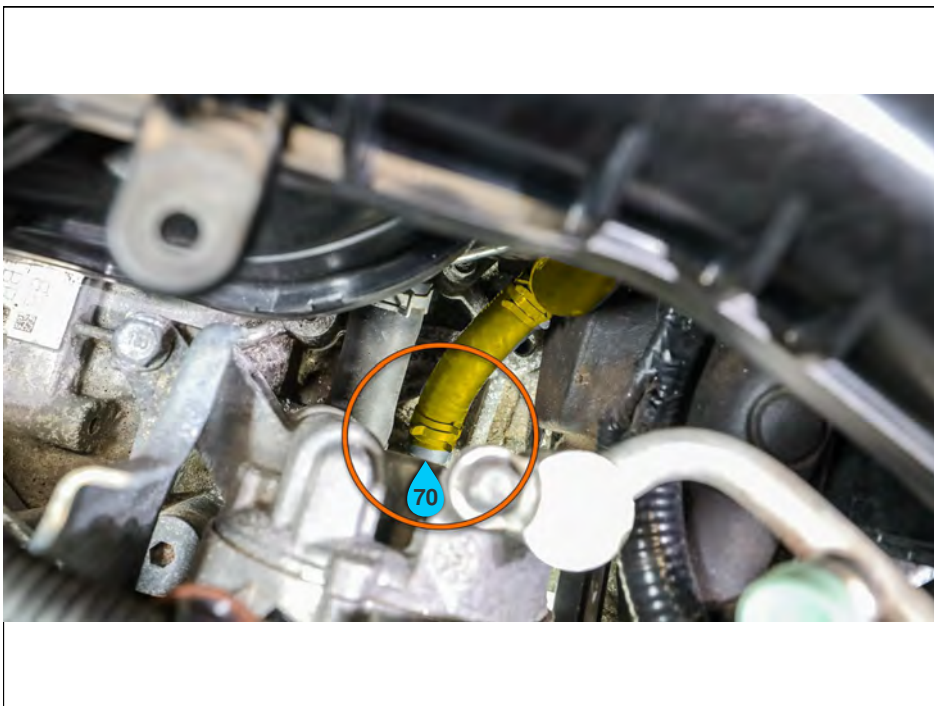




Step 92/117

Numbered annotations (1)

- 69 Locate the 1/2" breather hose with the 90 degree fitting.



Step 93/117

Numbered annotations (1)

- 70 Attach the breather hose assembly here using the supplied clamp.

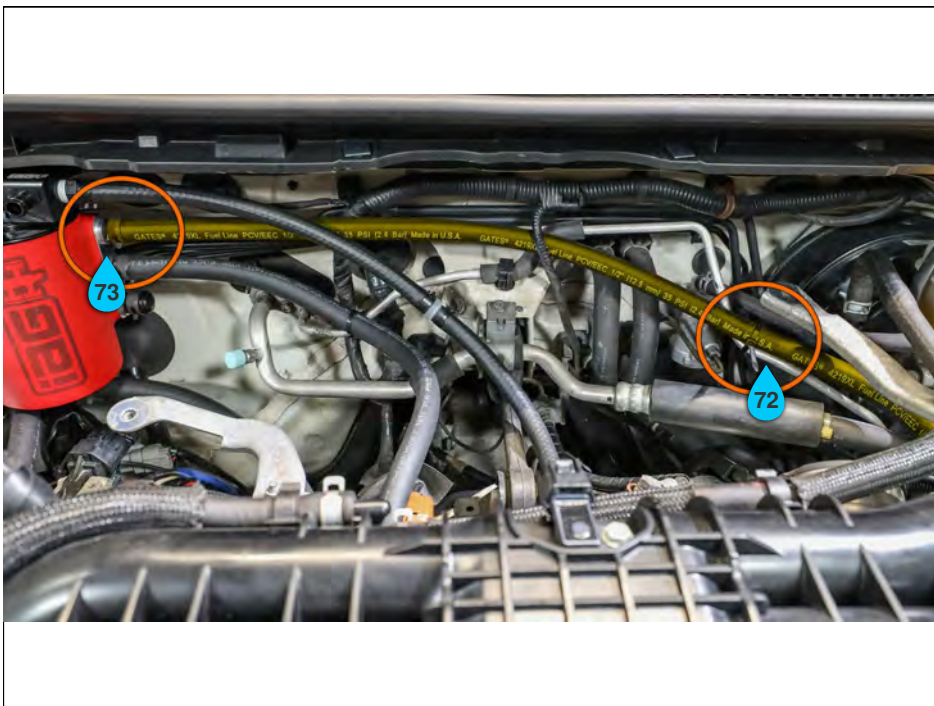
Step 94/117



Numbered annotations (1)

- 71 Route the longer end of the 1/2" vent hose under the intake manifold.

Step 95/117



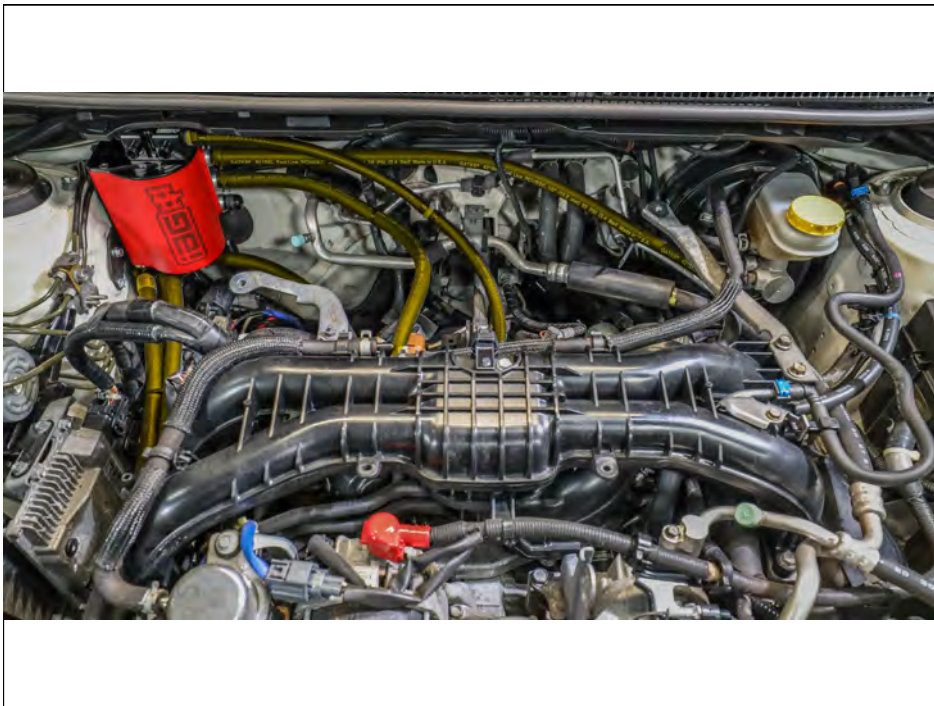
Numbered annotations (2)

- 72 Secure the vent hose to the A/C hard line with a zip tie.
- 73 Attach the breather hose to the top port on the side of the AOS.

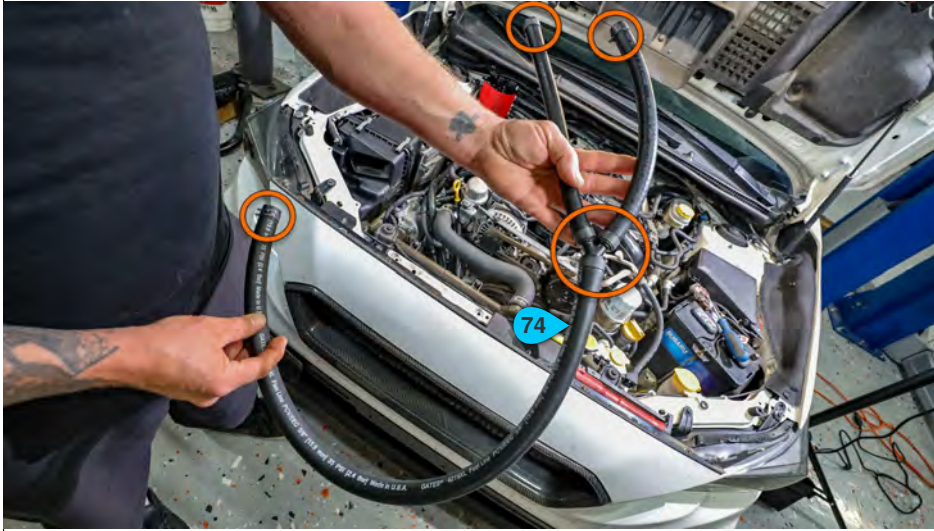
Step 96/117



Step 97/117



Step 98/117



Numbered annotations (1)

- 74 Locate the Y shaped AOS vent hose. Install the supplied clamps at all of the indicated positions.

Step 99/117



Step 100/117

Numbered annotations (1)

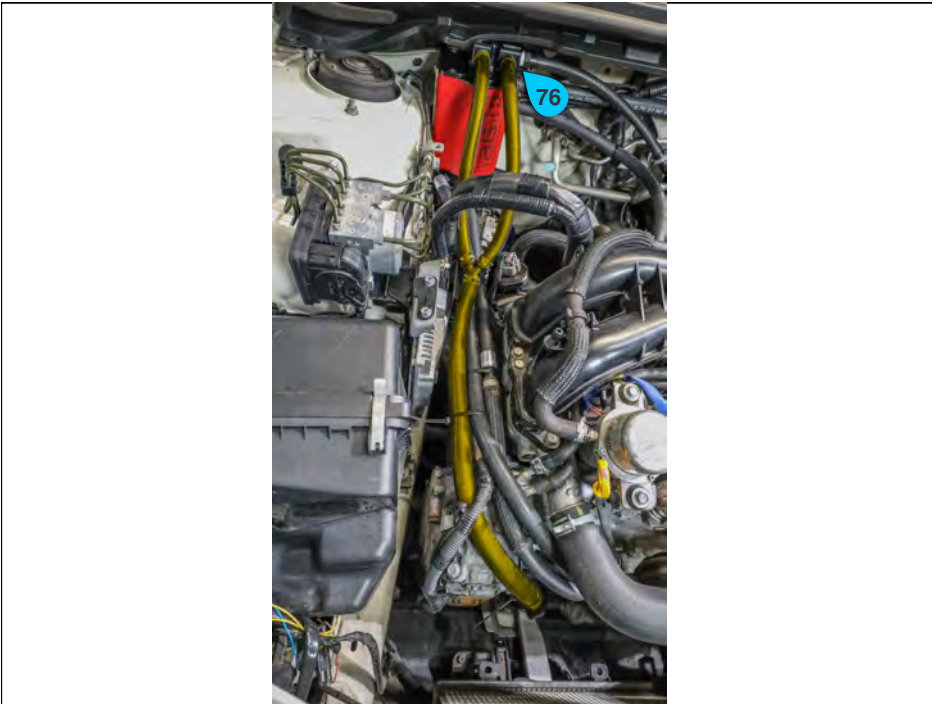
- 75 Route the AOS Vent hoses as shown.



Step 101/117

Numbered annotations (1)

- 76 Attach the vent hoses using the supplied clamps.

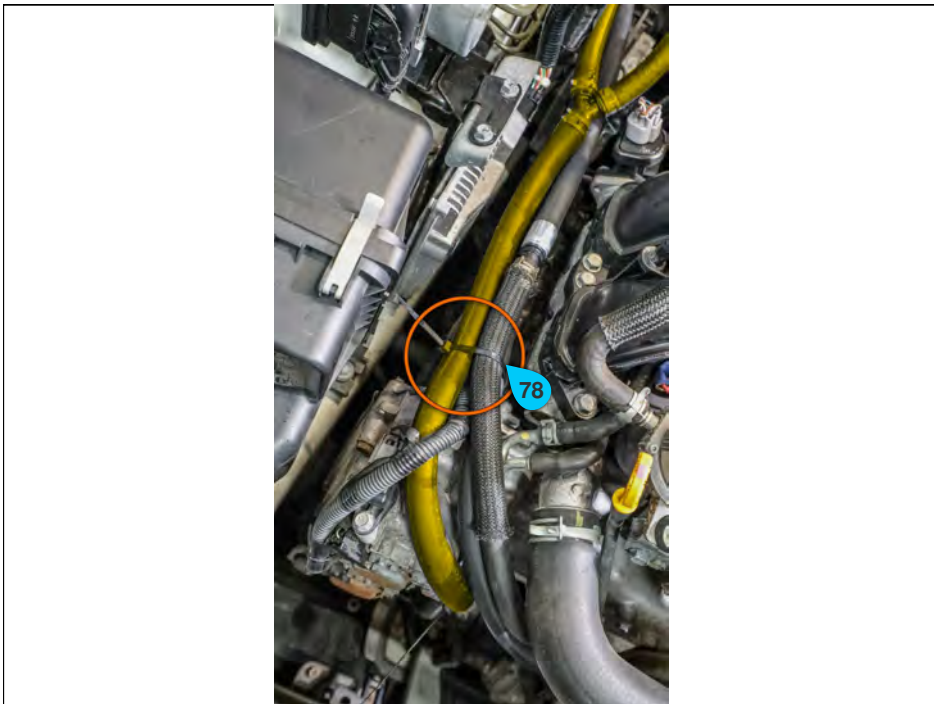




Step 102/117

Numbered annotations (1)

- 77 Attach the AOS vent hose to the open port on the turbo inlet pipe.



Step 103/117

Numbered annotations (1)

- 78 Secure the vent hose to the coolant hose with a zip tie.

Step 104/117

Numbered annotations (1)

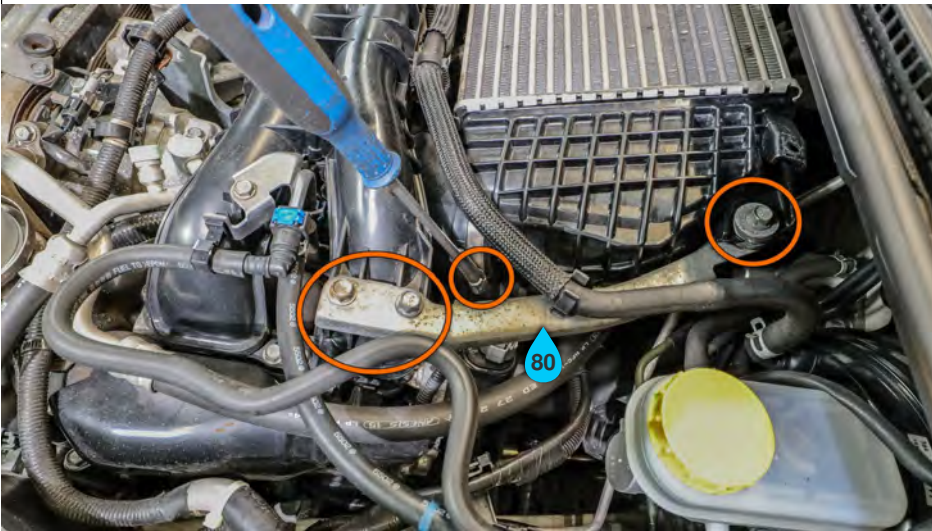
- 79 Secure the AOS vent hose with another zip tie here.



Step 105/117

Numbered annotations (1)

- 80 Reinstall the intercooler and bracket.



Step 106/117

Numbered annotations (1)

- 81 Reinstall this bolt.



Step 107/117

Numbered annotations (1)

- 82 Reinstall the intercooler charge pipe.



Step 108/117

Numbered annotations (1)

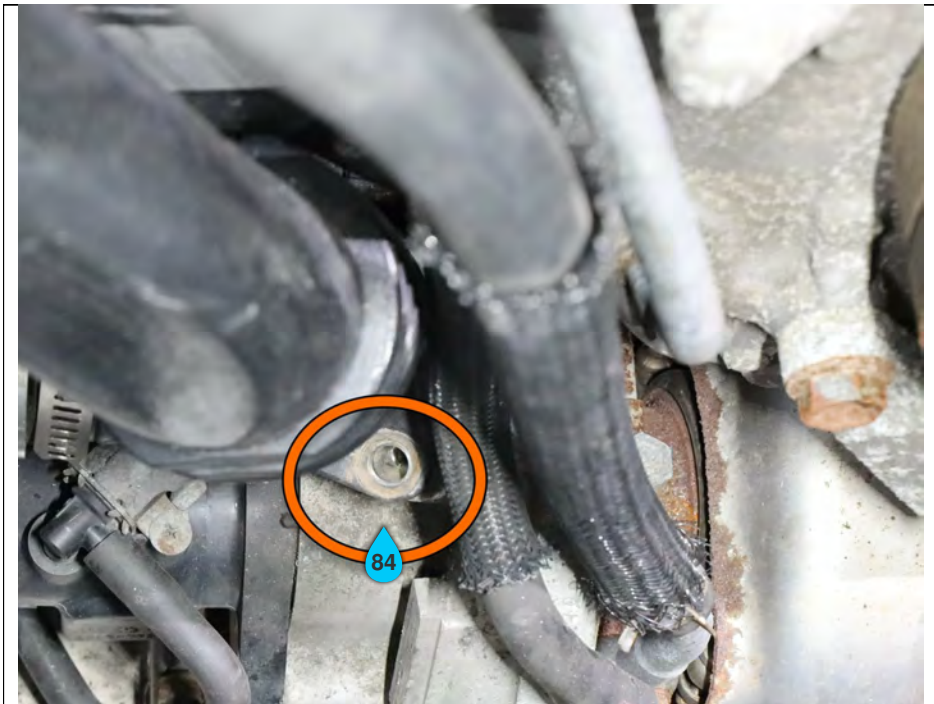
- 83 Attach the charge pipe to the intercooler and tighten this clamp.

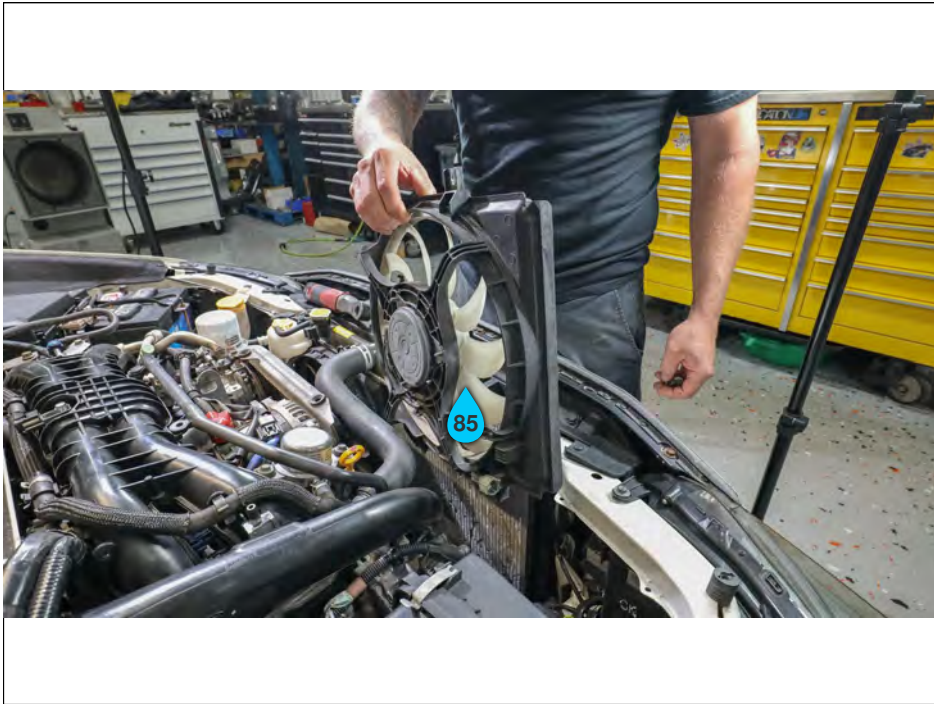


Step 109/117

Numbered annotations (1)

- 84 Reinstall both bolts for the charge pipe to the turbocharger.

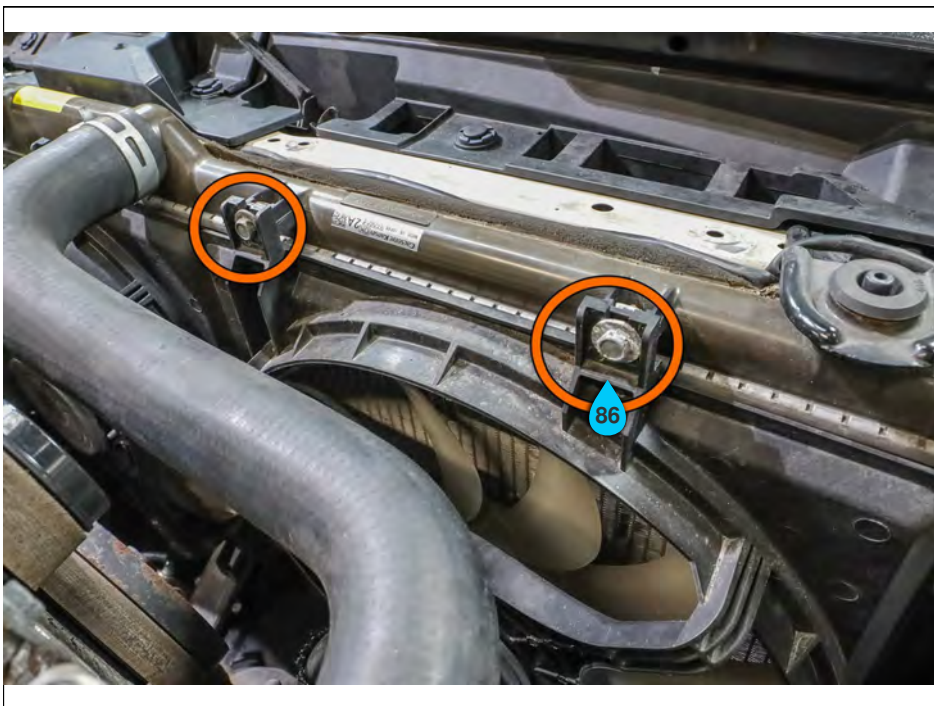




Step 110/117

Numbered annotations (1)

- 85 Reinstal the passenger side radiator fan.



Step 111/117

Numbered annotations (1)

- 86 Secure the fan with the OEM bolts.

Step 112/117

Numbered annotations (1)

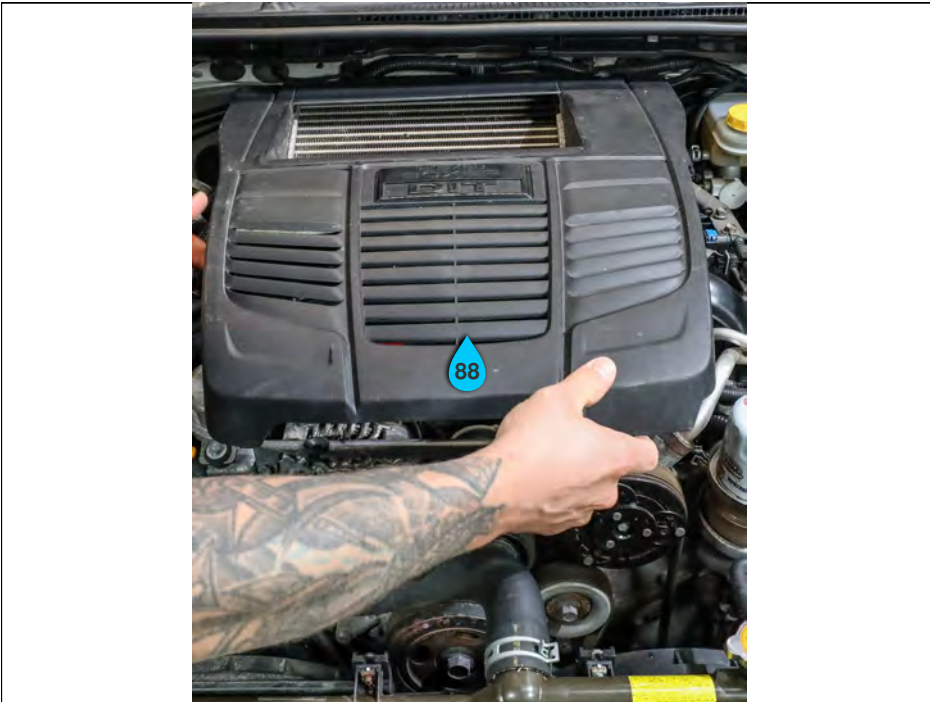
- 87 Plug the passenger fan electrical connector back in.



Step 113/117

Numbered annotations (1)

- 88 Reinstall the engine cover.





Step 114/117

Numbered annotations (1)

- 89 Reinstall the intake snorkel.



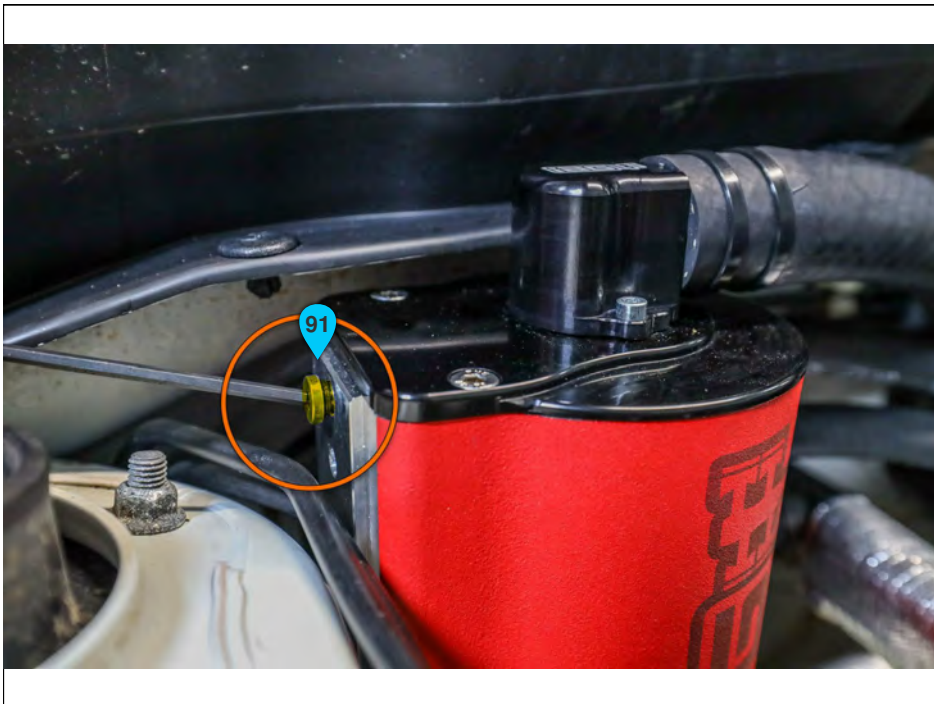
Step 115/117

Numbered annotations (1)

- 90 Secure the snorkel with the OEM hardware.



Step 116/117



Step 117/117

Numbered annotations (1)

- 91 Loosen the AOS coolant breather fitting. Top off any coolant lost during installation. Start the vehicle and let it come to operating temperature. Some coolant will begin to weep from this hole. Once the air has been released tighten the bleeder fitting.