

IAG COMPETITION SERIES AOS FOR 2015-16 WRX



Step 1/108

IAG-ENG-7282 Comp Series Air / Oil Separator (AOS) For 2015-16 WRX

Part# IAG-ENG-7282

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 2/108



Numbered annotations (12)

- 1 AOS Body Assembly
- 2 Coolant Hose 1 - 43" (Preinstalled to AOS)
- 3 AOS Drain and Lower Breather Hose Assembly
- 4 Wiring harness relocation bracket (2015-2016 Only)
- 5 Block Breather Hose 1/2" x 44" x 90 degree x 3" (For 2015-2016 Model Years ONLY)
- 6 Zip Ties
- 7 Vent Hose - 5/8" x 17" w/ 90 Degree Fitting (2017+ Model Years ONLY)
- 8 AOS Coolant Hose 2 - 15.5" with union fitting (Preinstalled to AOS)
- 9 AOS Breather Hose 1" x 59"
- 10 AOS Bracket
- 11 AOS Mounting Hardware

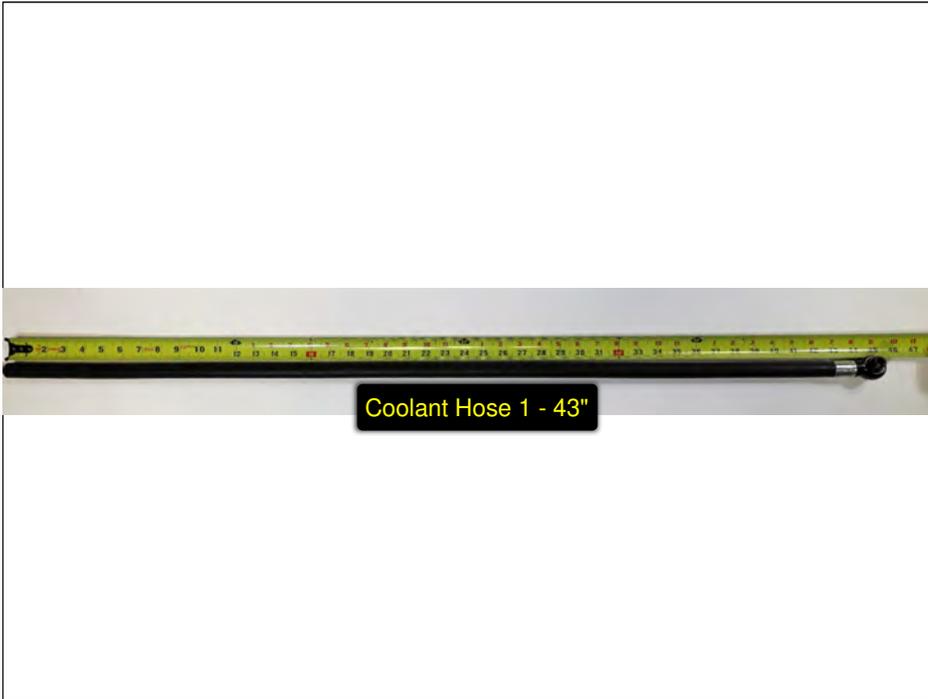
Step 3/108



Numbered annotations (6)

- 1 3/8" Nylon Insert Plug
- 2 Coolant Clamp
- 3 1/2" Band Clamp x 13
- 4 5/8" Band Clamp x 7
- 5 5/8" Vacuum Cap x 2
- 6 1/2" Vacuum Cap

Step 4/108



Step 5/108



Step 6/108



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

Step 7/108



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

Step 8/108



AOS Coolant Hose 2 - 15.5" with union fitting

Step 9/108



AOS Breather Hose 1" x 59"

Step 10/108

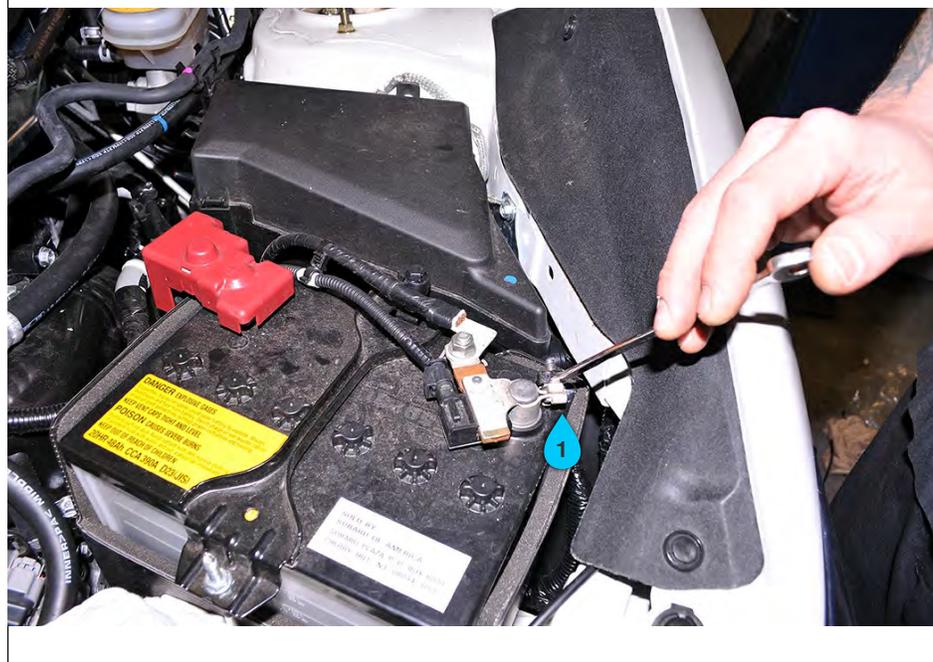
Numbered annotations (7)



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

Step 11/108

Numbered annotations (1)



- 1 Disconnect the negative battery cable.



Step 12/108

Numbered annotations (1)

- 2 Remove the clips securing the engine cover.



Step 13/108

Numbered annotations (1)

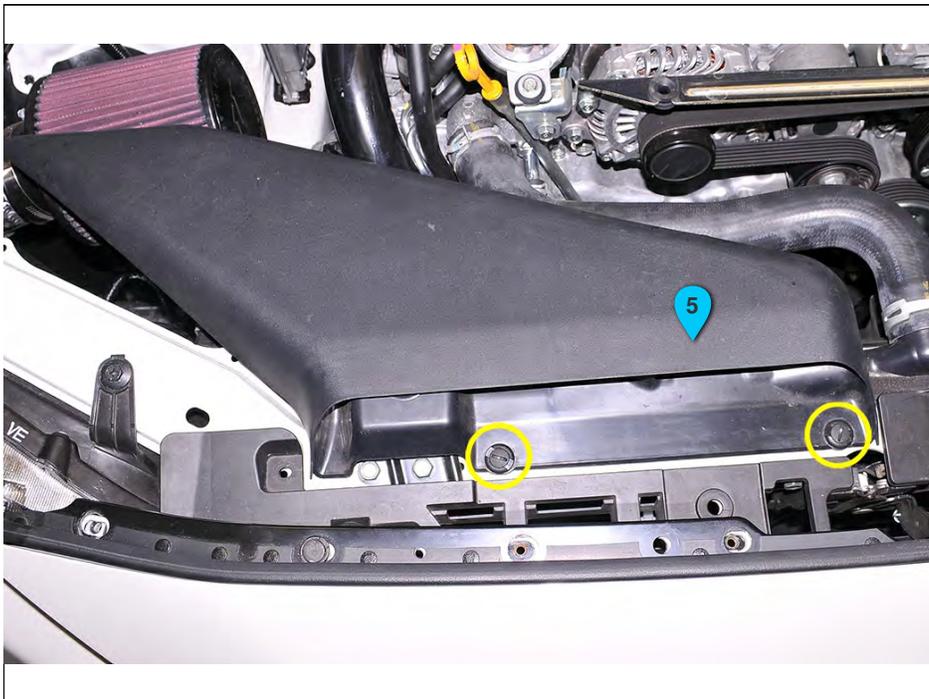
- 3 Pull up on the front of the cover to unclip it.



Step 14/108

Numbered annotations (1)

- 4 Remove engine cover.



Step 15/108

Numbered annotations (1)

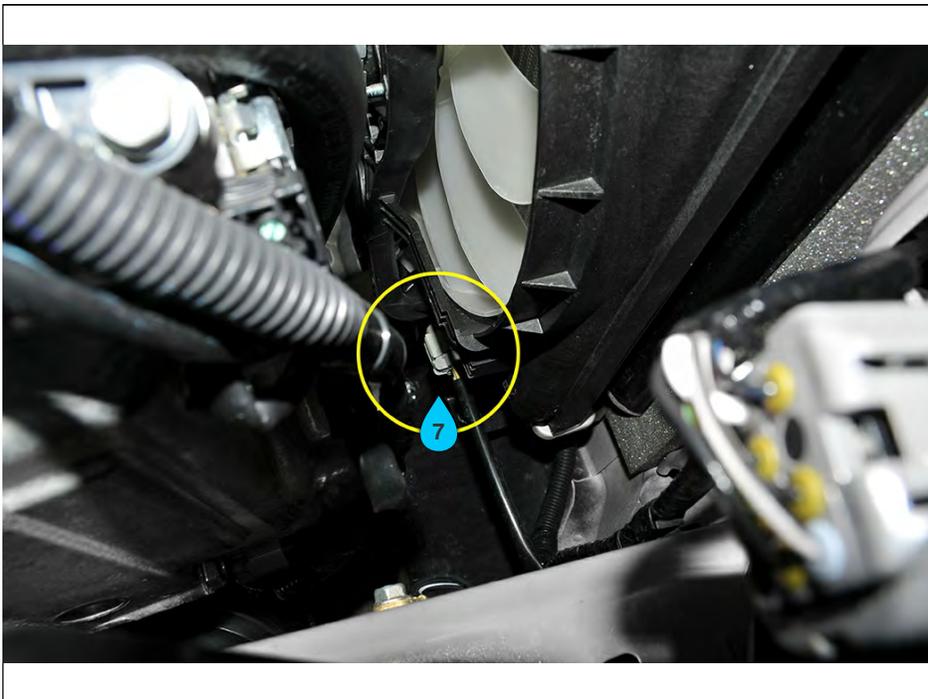
- 5 Remove hardware securing intake snorkel.



Step 16/108

Numbered annotations (1)

- 6 Remove intake snorkel.



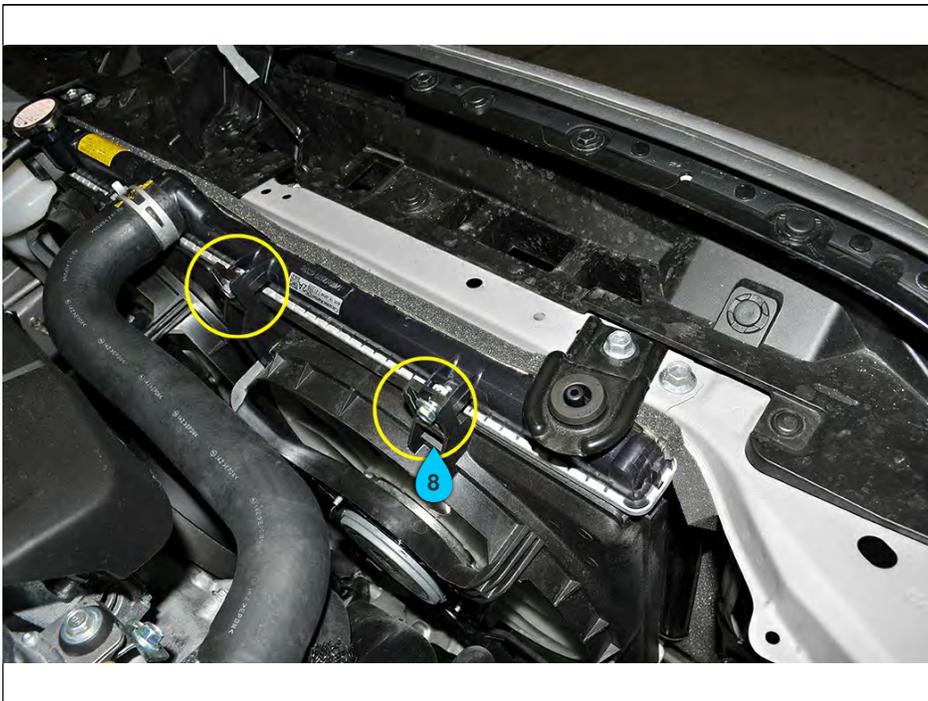
Step 17/108

Numbered annotations (1)

- 7 Disconnect passenger side radiator fan wiring harness.



Step 18/108



Step 19/108

Numbered annotations (1)

- 8 Remove hardware securing passenger side radiator fan.

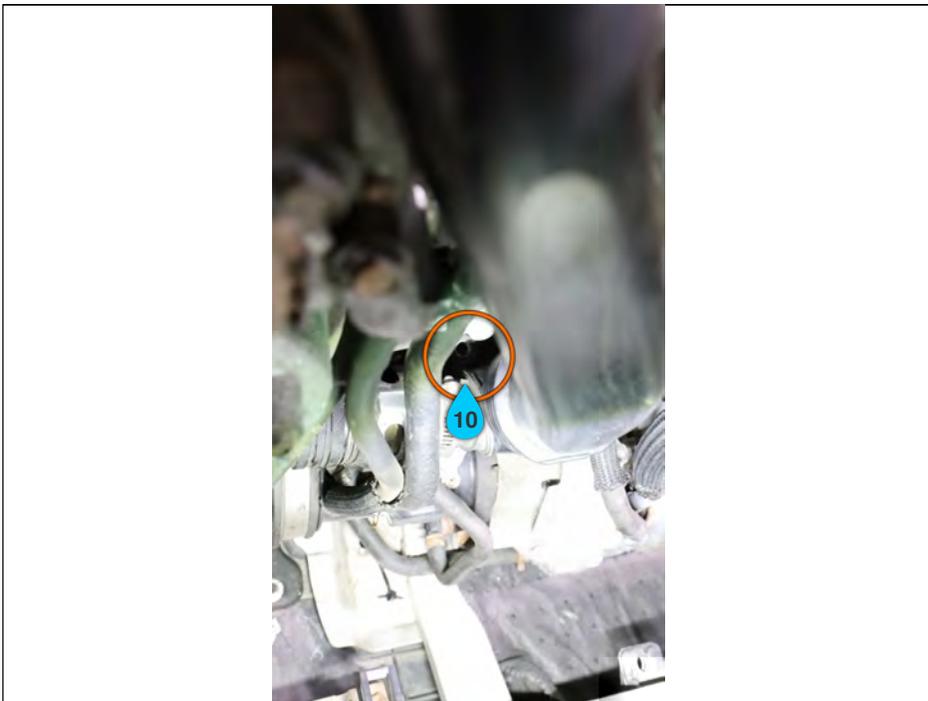
Step 20/108



Numbered annotations (1)

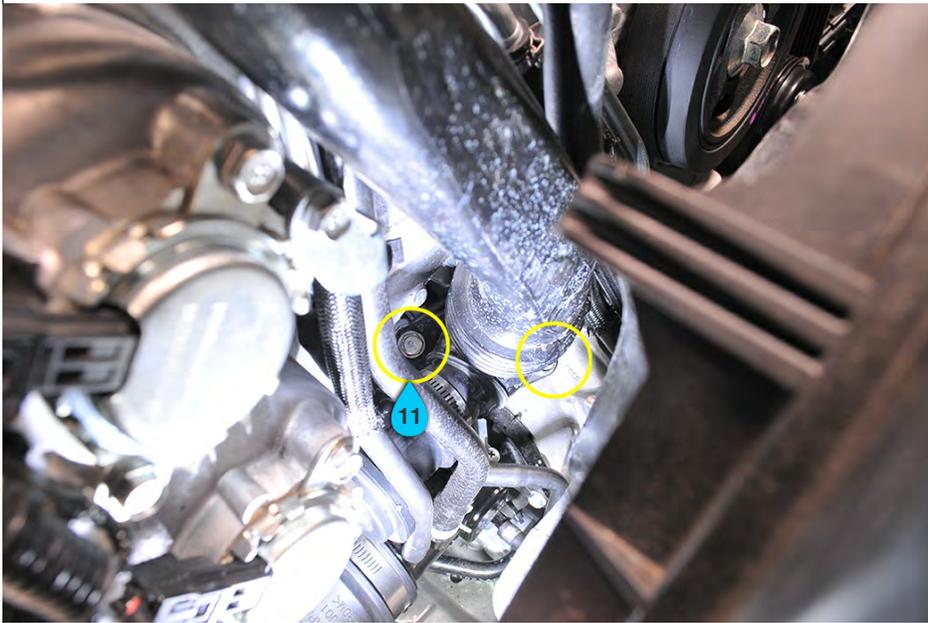
- 9 Remove passenger side radiator fan, being careful not to damage the radiator fins.

Step 21/108



Numbered annotations (1)

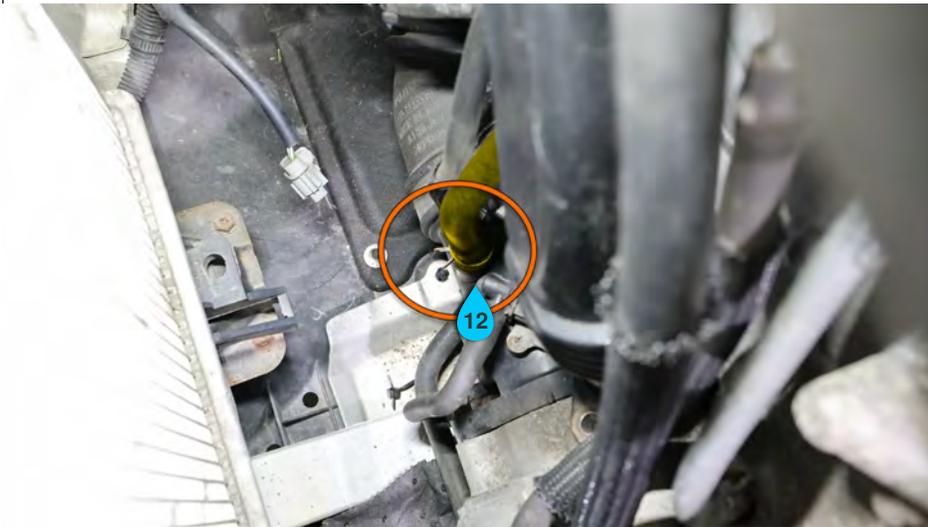
- 10 Loosen this clamp.



Step 22/108

Numbered annotations (1)

- 11 Remove hardware securing charge pipe.



Step 23/108

Numbered annotations (1)

- 12 Remove this hose.

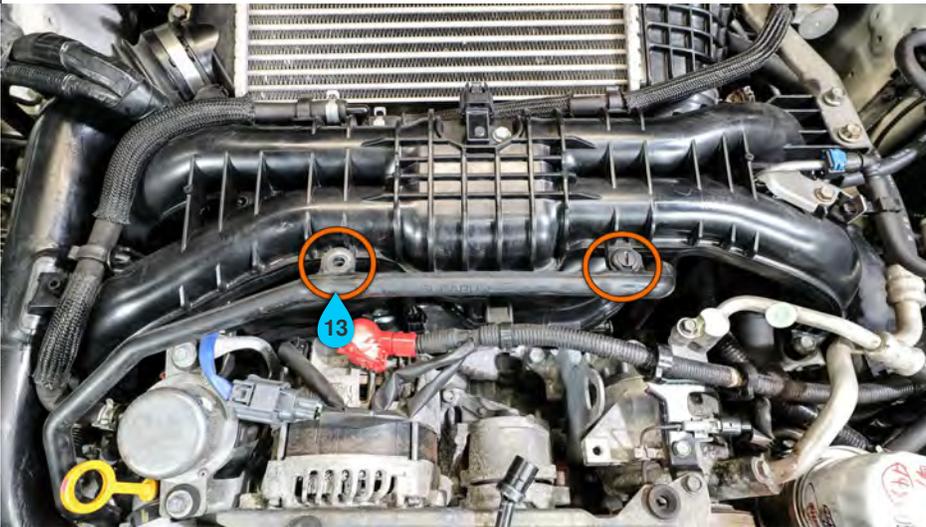
Step 24/108



Step 25/108

Numbered annotations (1)

- 13 Remove the two clips holding the PCV tube.



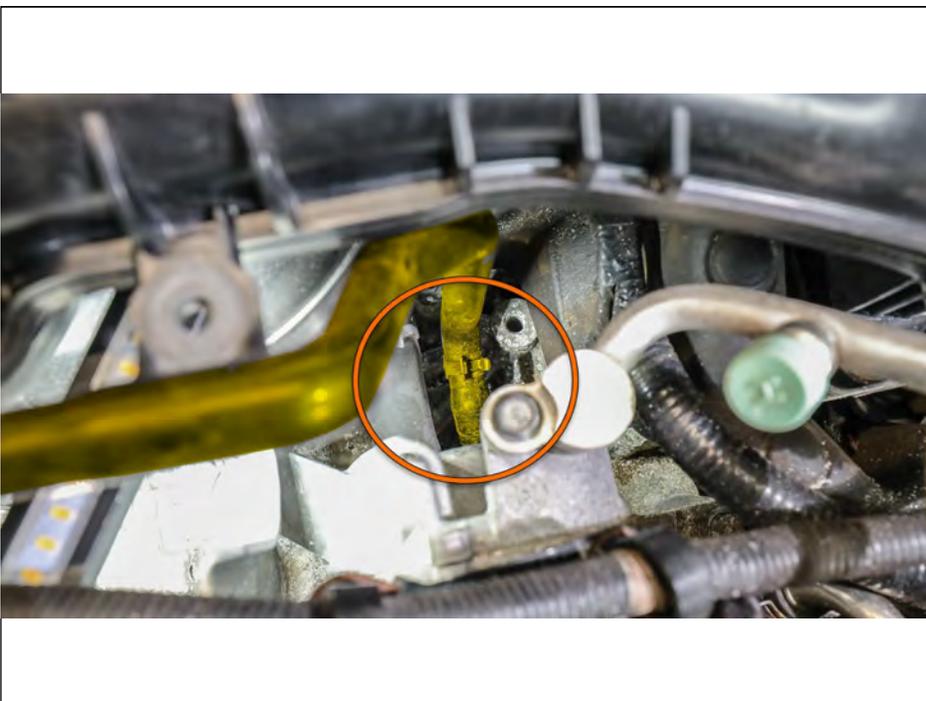
Step 26/108

Numbered annotations (1)

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



Step 27/108



Step 28/108

Numbered annotations (1)

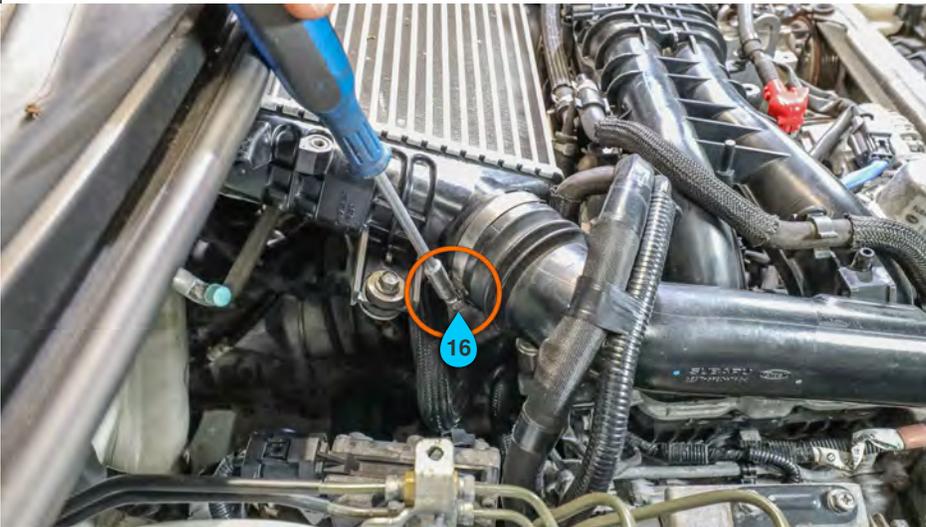
- 15 Remove the PCV hard tube.



Step 29/108

Numbered annotations (1)

- 16 Loosen this clamp.



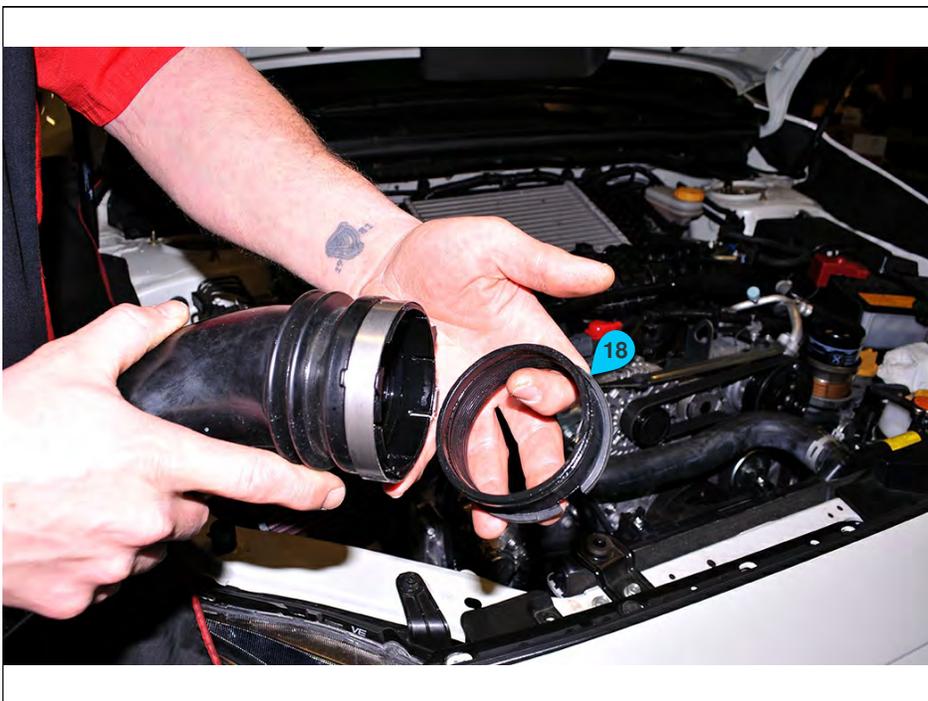
Step 30/108



Numbered annotations (1)

- 17 Remove the charge pipe.

Step 31/108



Numbered annotations (1)

- 18 Ensure this part stays in the charge pipe.

Step 32/108

Numbered annotations (1)

 19 The spacer fits here.



Step 33/108

Numbered annotations (1)

 20 Remove this bolt.



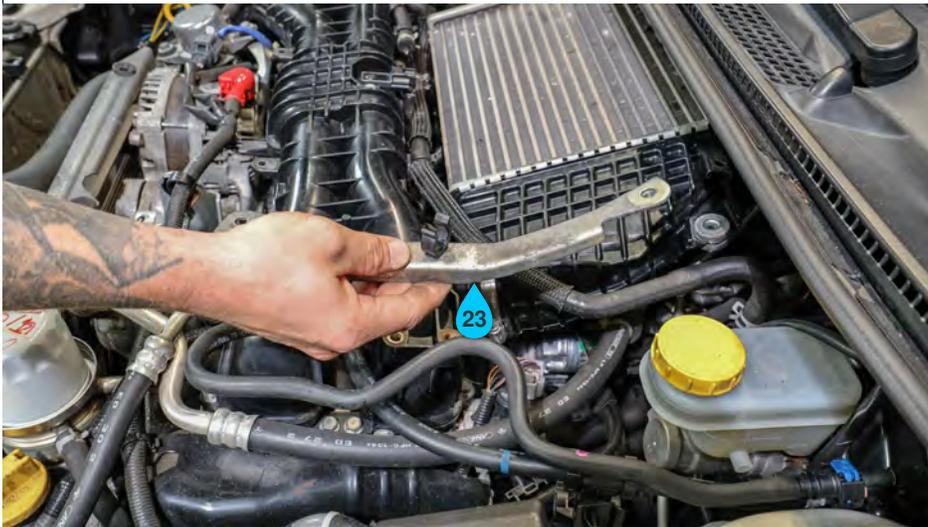
Step 34/108



Numbered annotations (2)

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

Step 35/108



Numbered annotations (1)

- 23 Remove the intercooler bracket.

Step 36/108

Numbered annotations (1)

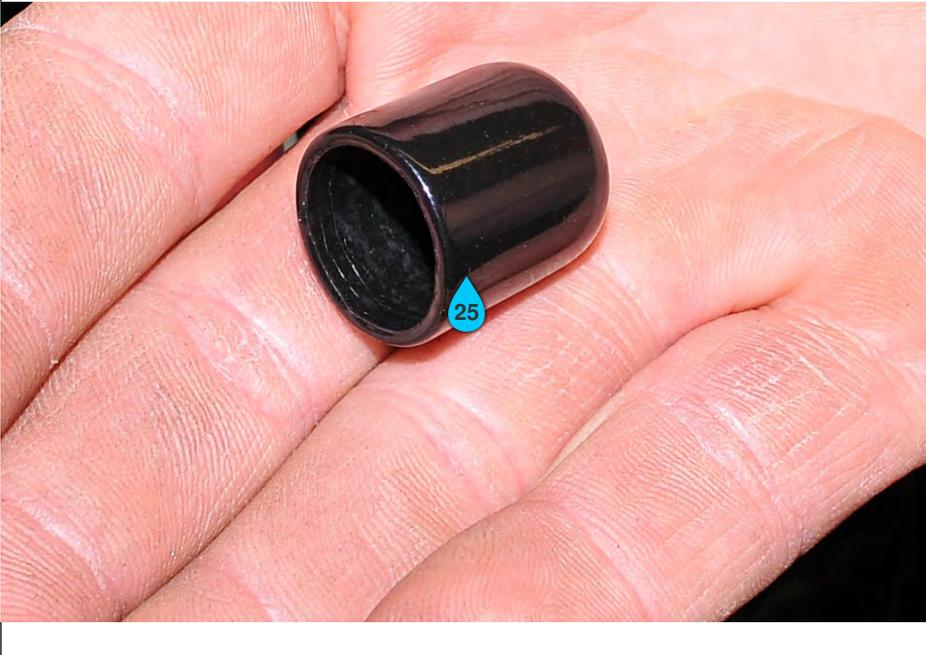
- 24 Remove the intercooler.



Step 37/108

Numbered annotations (1)

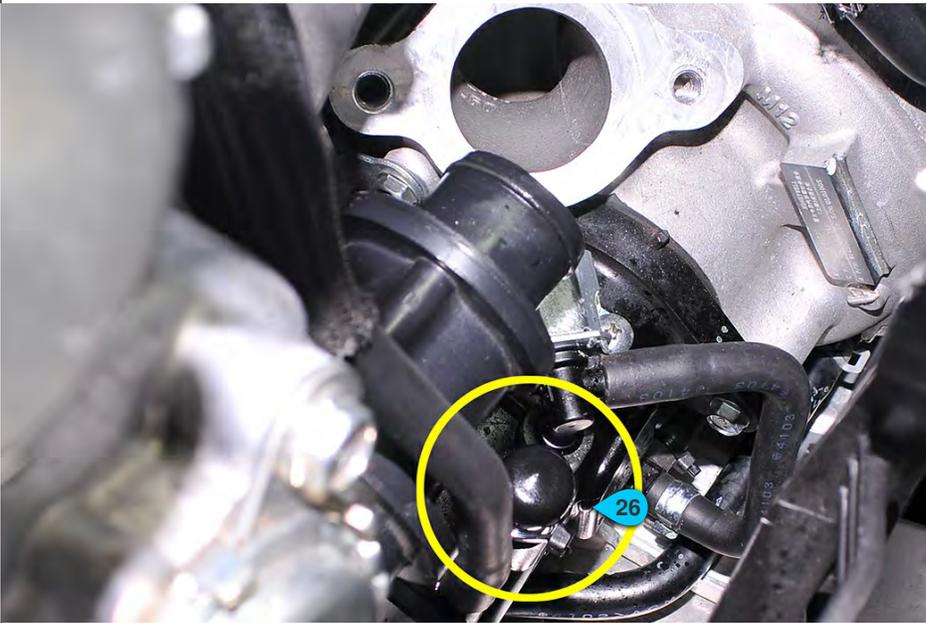
- 25 Locate the supplied 5/8" vacuum cap and clamp.



Step 38/108

Numbered annotations (1)

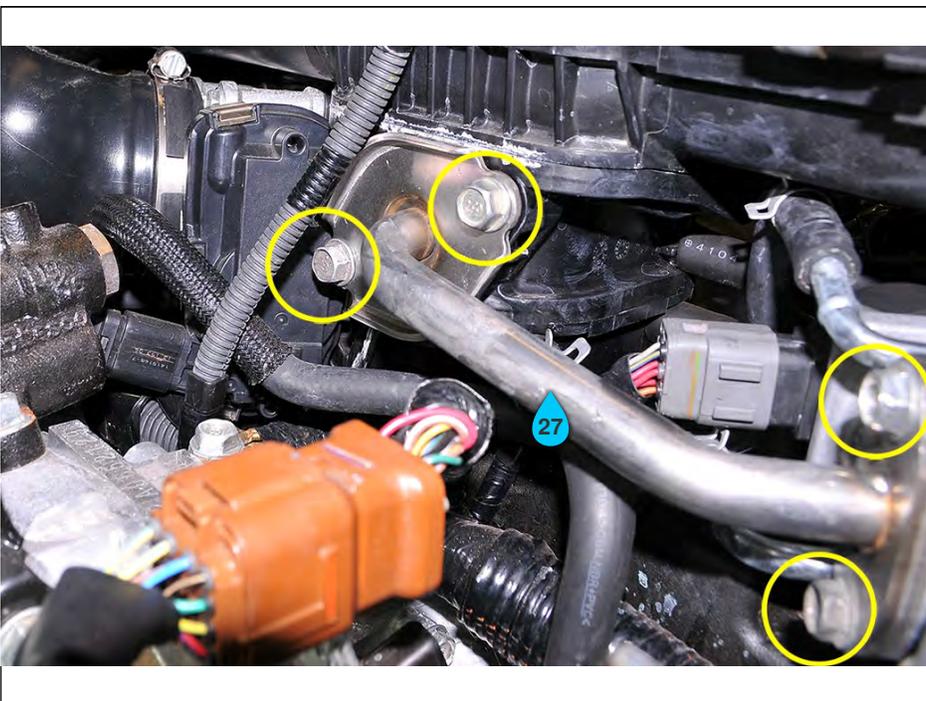
- 26 Install the supplied vacuum cap here using the supplied clamp.



Step 39/108

Numbered annotations (1)

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



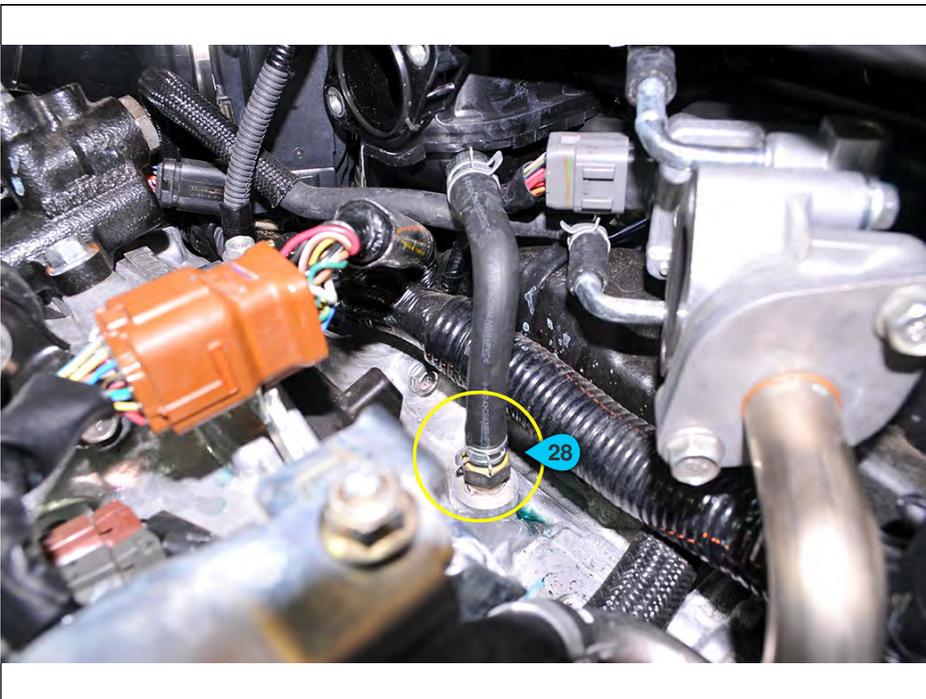
Step 40/108



Step 41/108

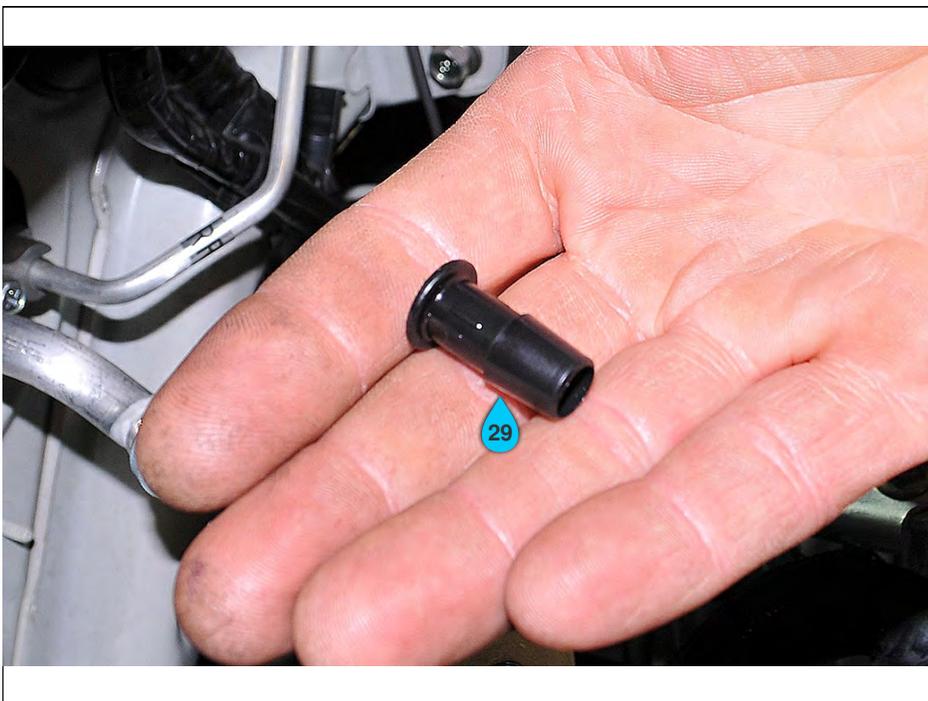
Numbered annotations (1)

- 28 Loosen this clamp and disconnect this hose.





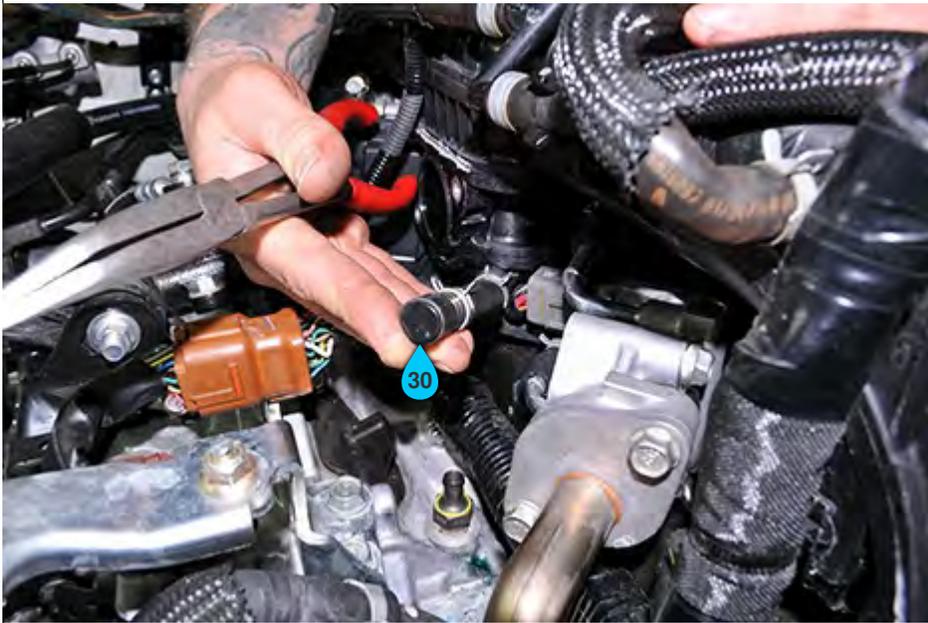
Step 42/108



Step 43/108

Numbered annotations (1)

- 29** Locate the supplied vacuum cap.



Step 44/108

Numbered annotations (1)

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



Step 45/108



Step 46/108

Numbered annotations (1)

- 31 Remove this fitting.



Step 47/108

Step 48/108

Numbered annotations (1)

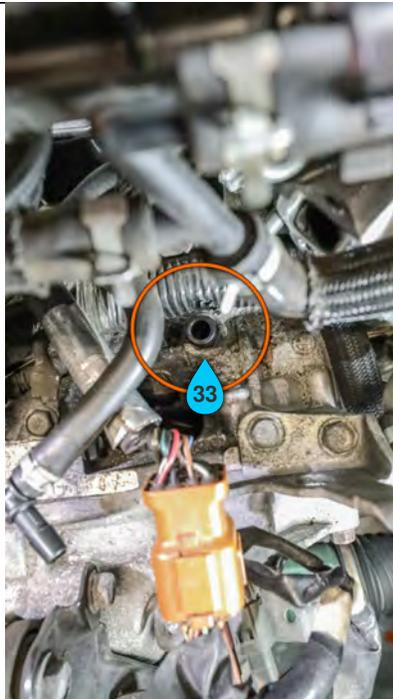
- 32 Locate the supplied block breather fitting.

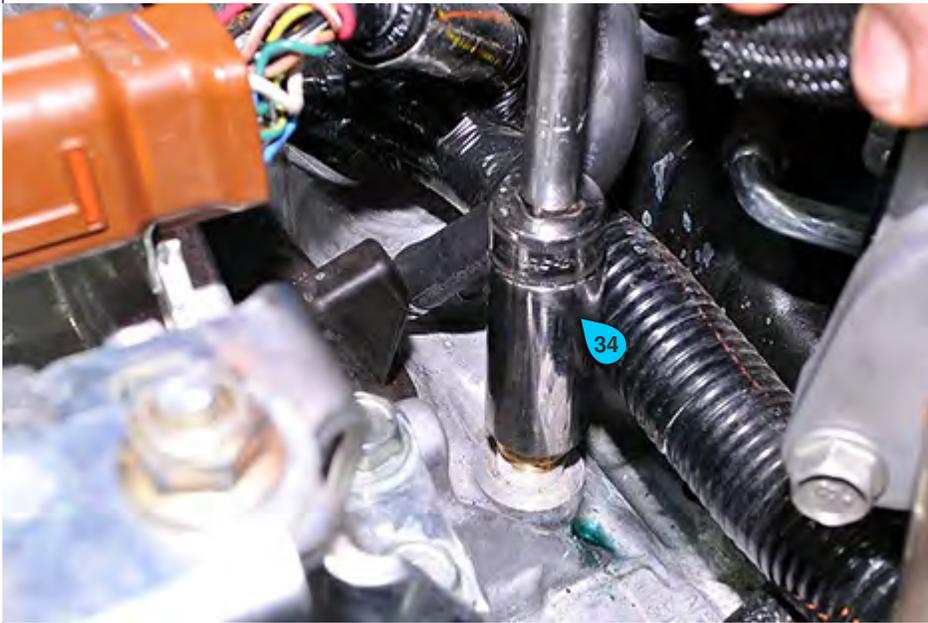


Step 49/108

Numbered annotations (1)

- 33 Thread the block fitting into the block.

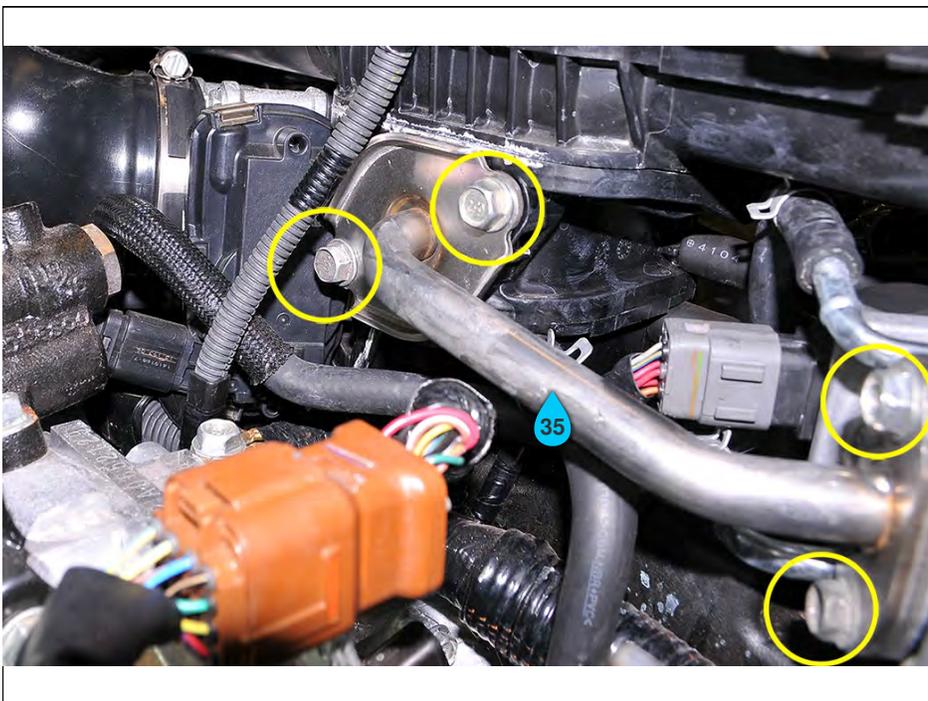




Step 50/108

Numbered annotations (1)

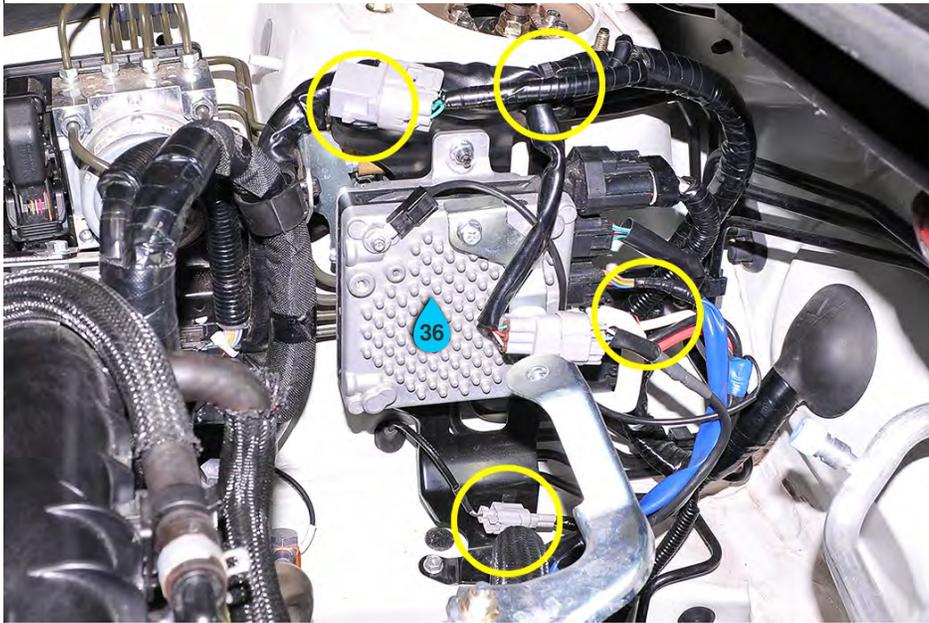
- 34 Torque the fitting to 15 ft/lbs.



Step 51/108

Numbered annotations (1)

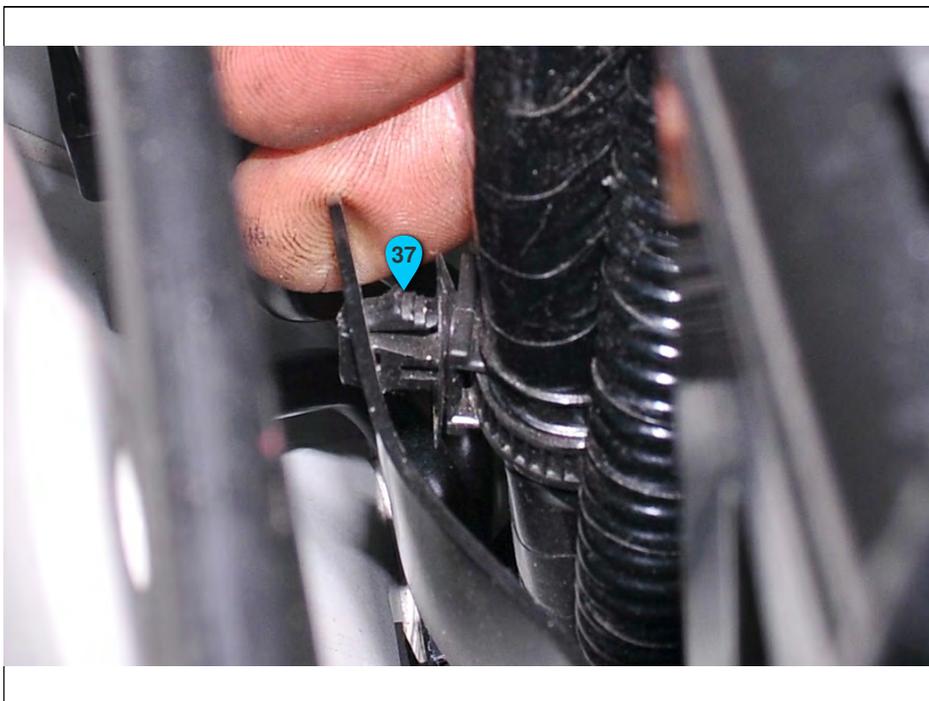
- 35 Reinstall the EGR pipe, reusing the OEM gaskets and hardware.



Step 52/108

Numbered annotations (1)

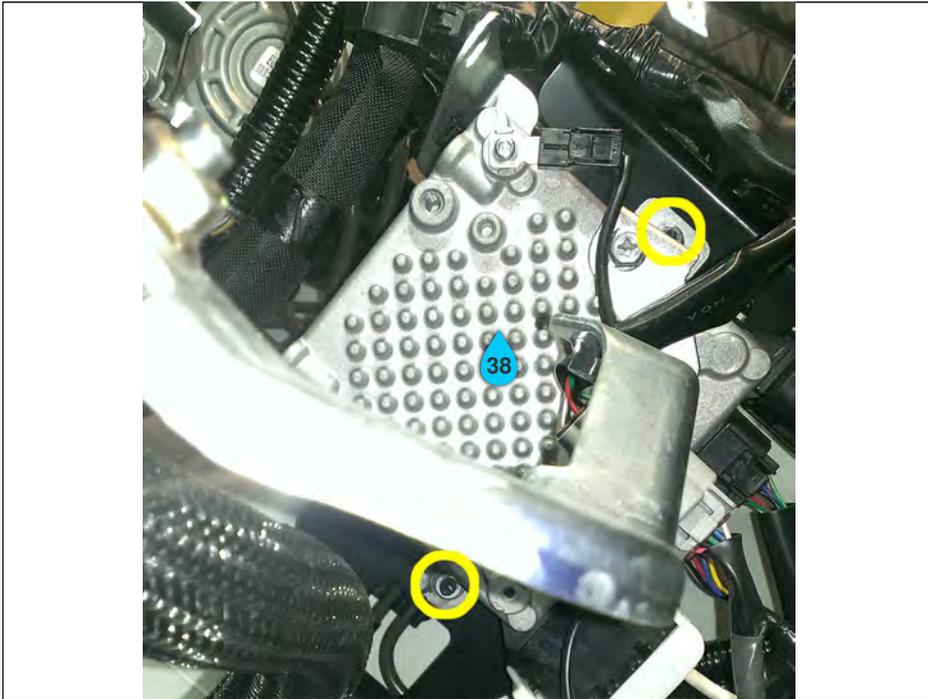
- 36 Remove the 4 wiring harness retaining clips from the ECU mounting bracket.



Step 53/108

Numbered annotations (1)

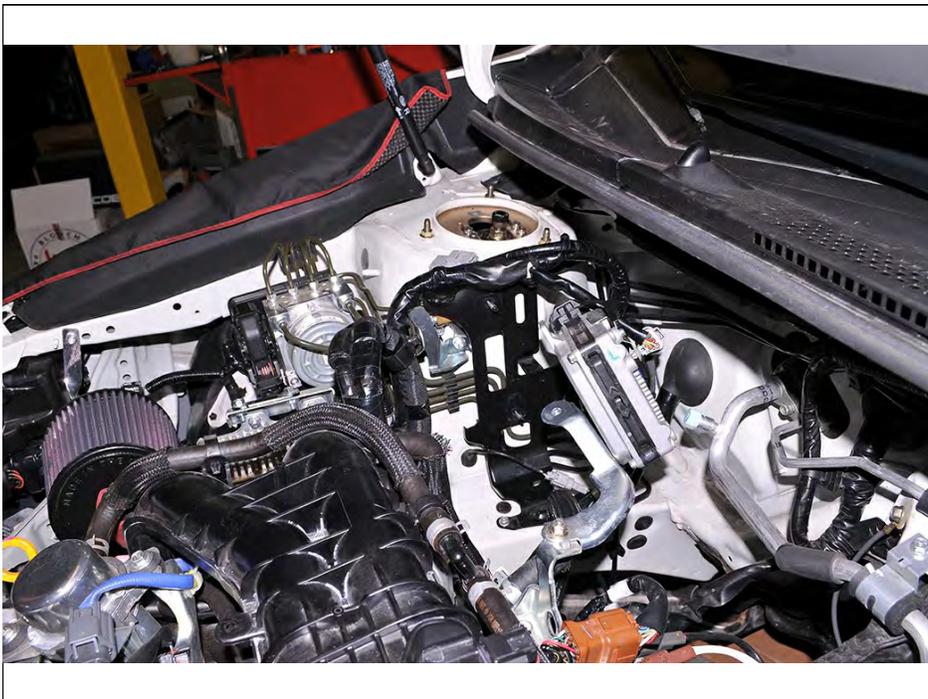
- 37 Use pliers to squeeze these zip ties then push them through the hole to remove.



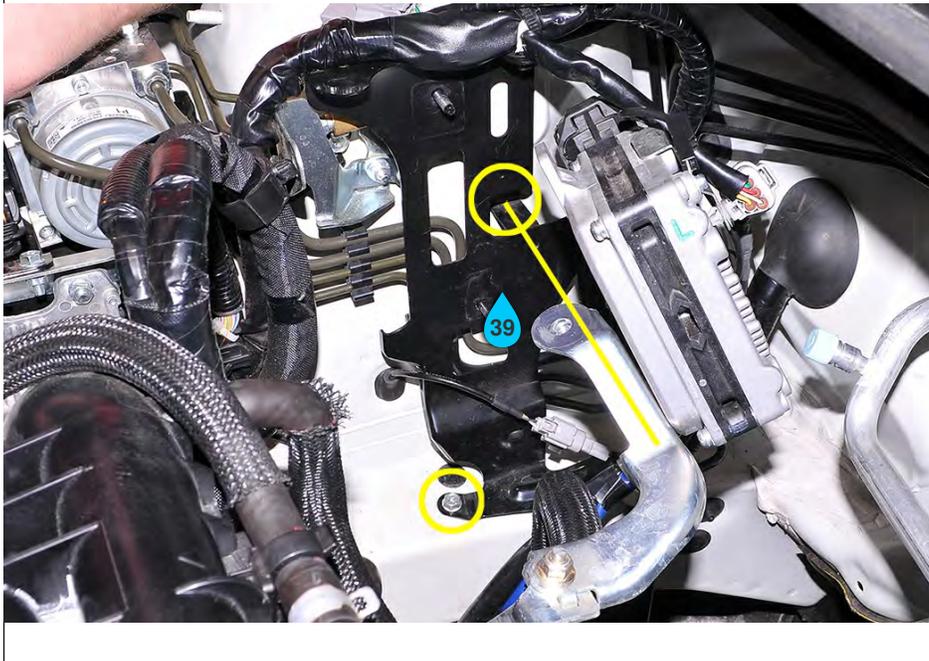
Step 54/108

Numbered annotations (1)

- 38 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.



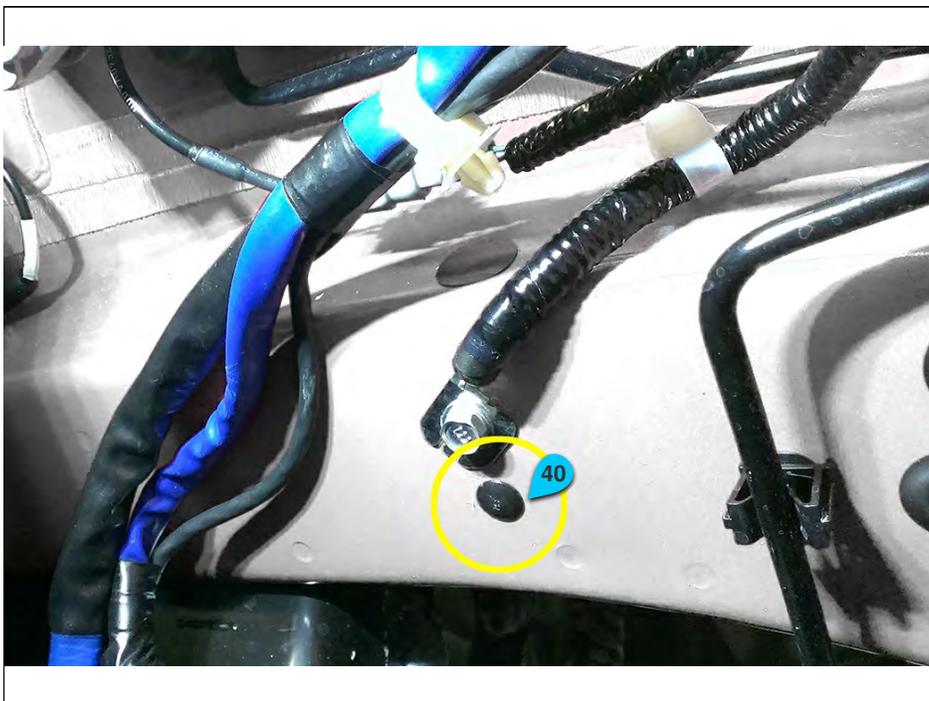
Step 55/108



Step 56/108

Numbered annotations (1)

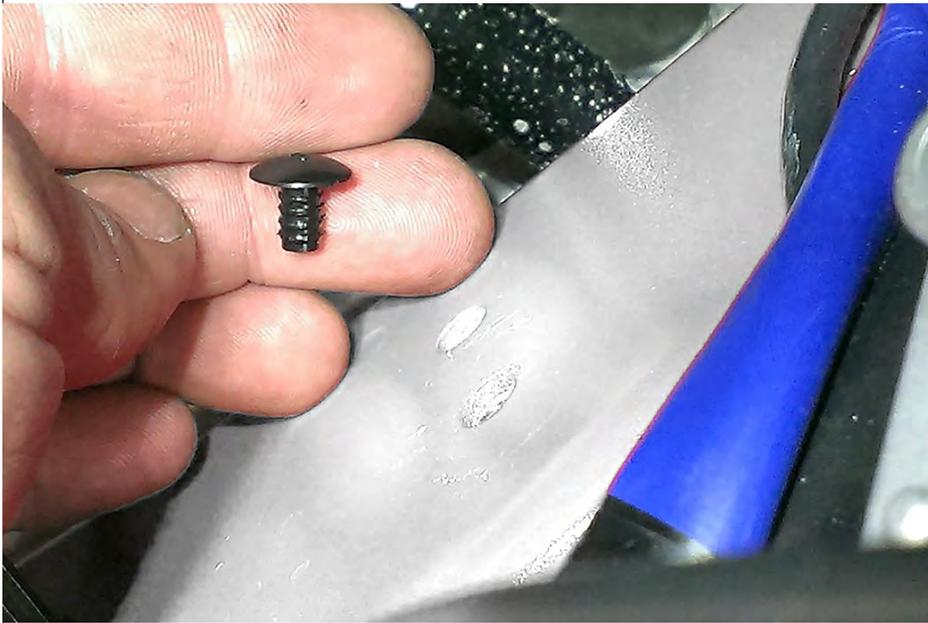
- 39 Remove the two 10mm bolts which secure the ECU bracket to the strut tower. Remove the bracket.



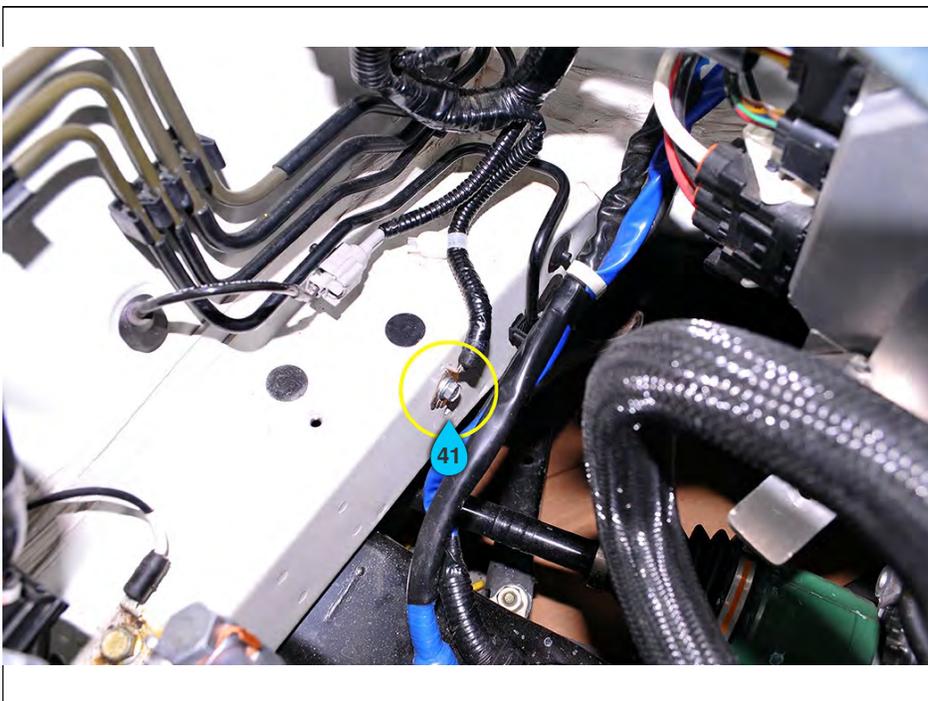
Step 57/108

Numbered annotations (1)

- 40 Remove this plug.



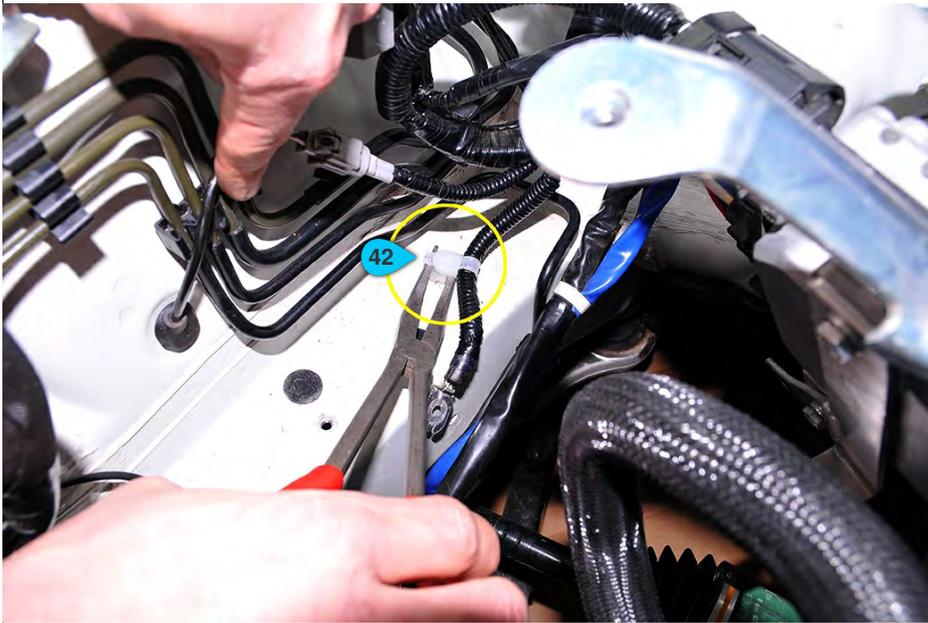
Step 58/108



Step 59/108

Numbered annotations (1)

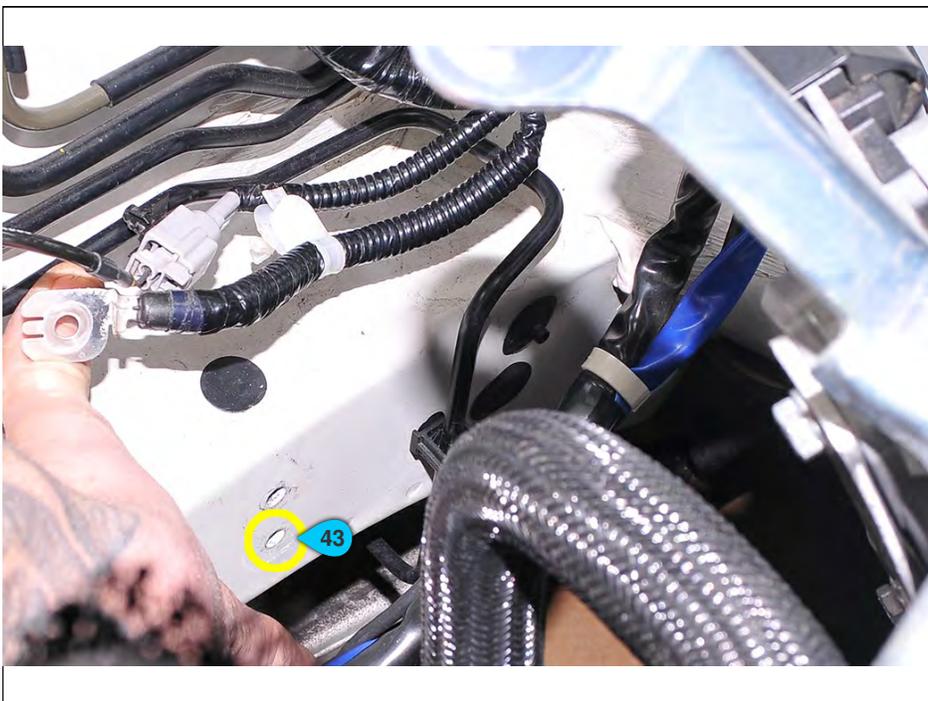
- 41 Remove this 10mm bolt.



Step 60/108

Numbered annotations (1)

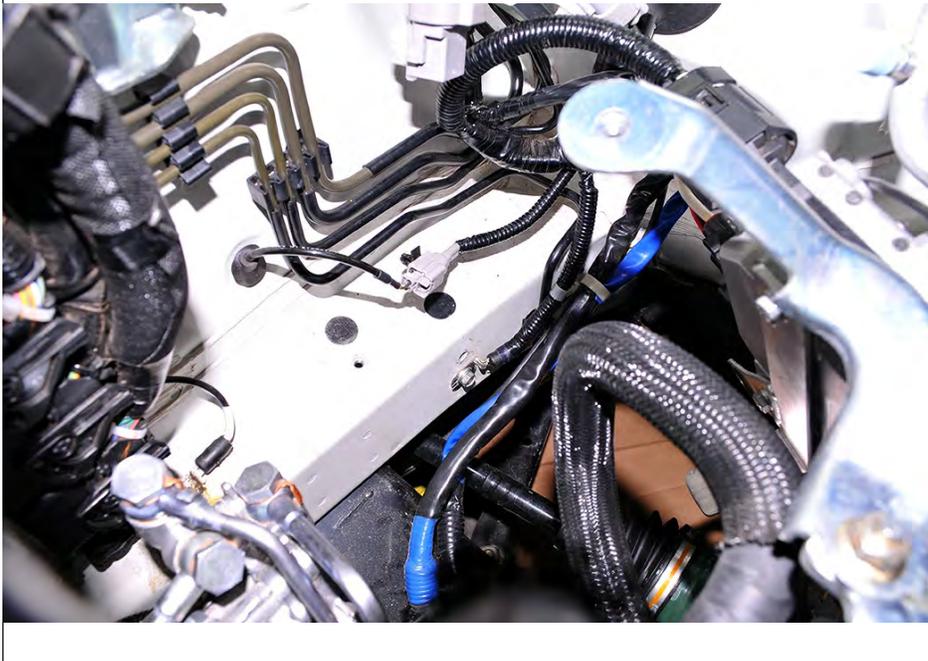
- 42 Use pliers to remove this mounting tie from the frame rail.



Step 61/108

Numbered annotations (1)

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



Step 62/108



Step 63/108

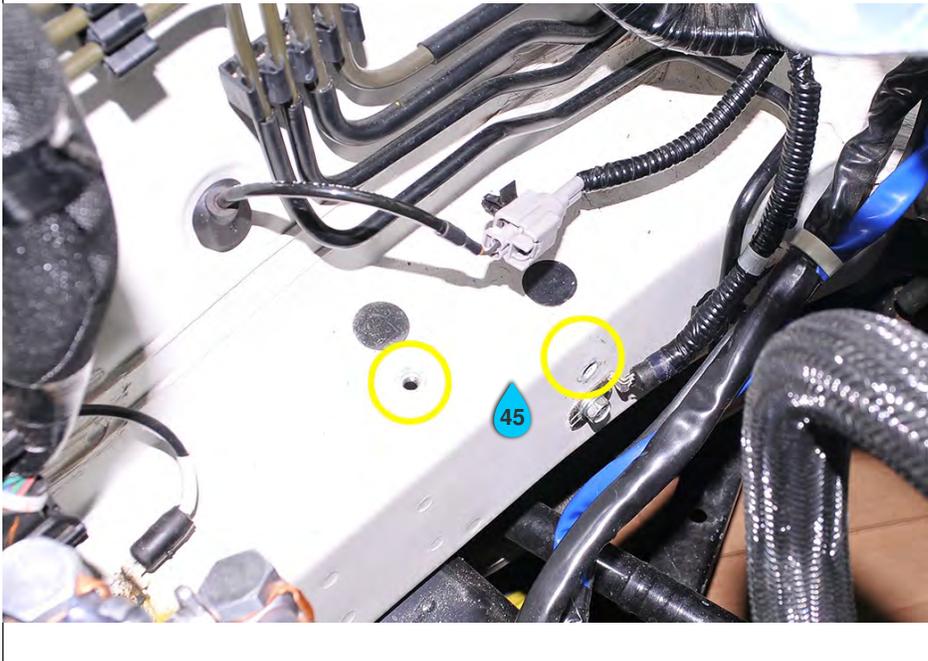
Numbered annotations (1)

44 Locate the ECU relocation bracket.

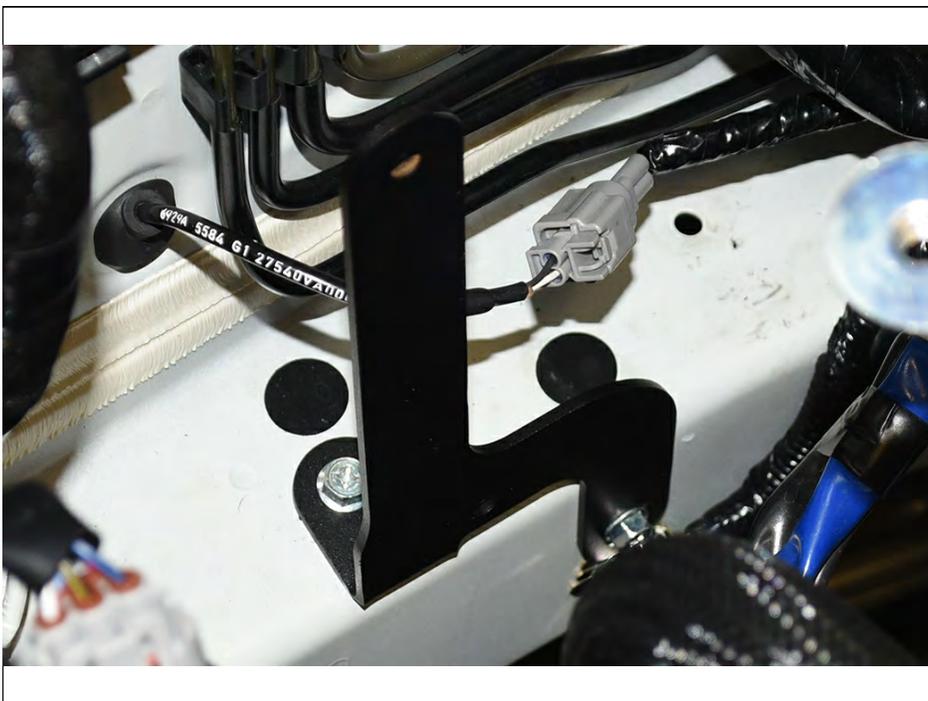
Step 64/108

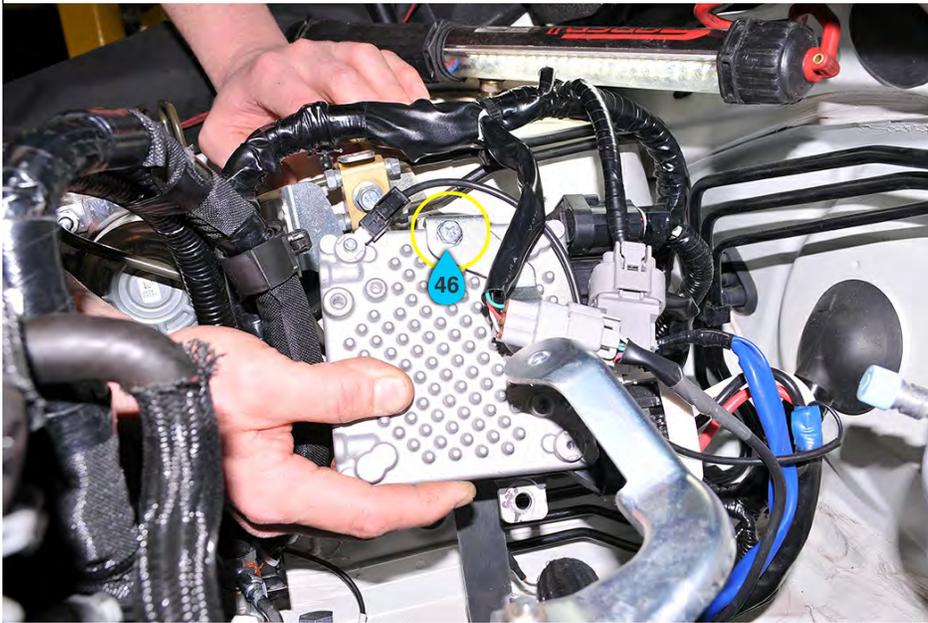
Numbered annotations (1)

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



Step 65/108

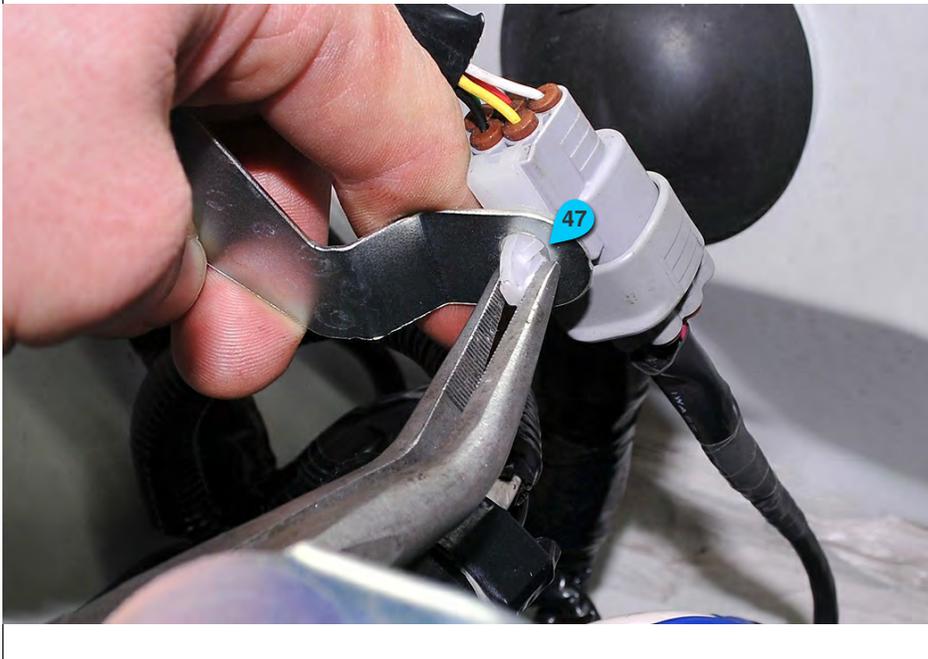




Step 66/108

Numbered annotations (1)

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



Step 67/108

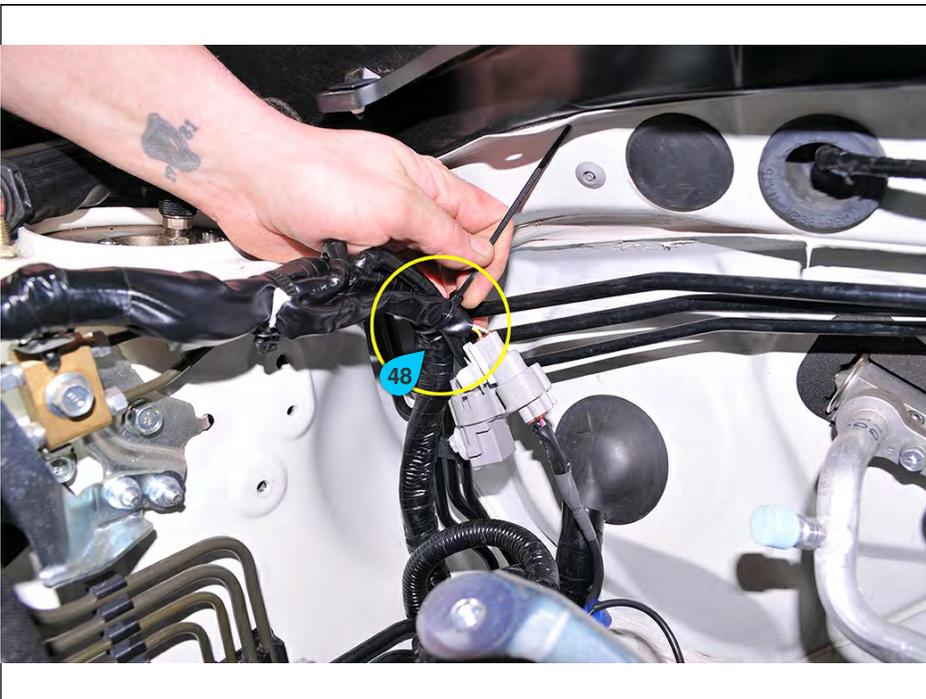
Numbered annotations (1)

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

Step 68/108



Step 69/108



Numbered annotations (1)

48 Zip tie the harness here.

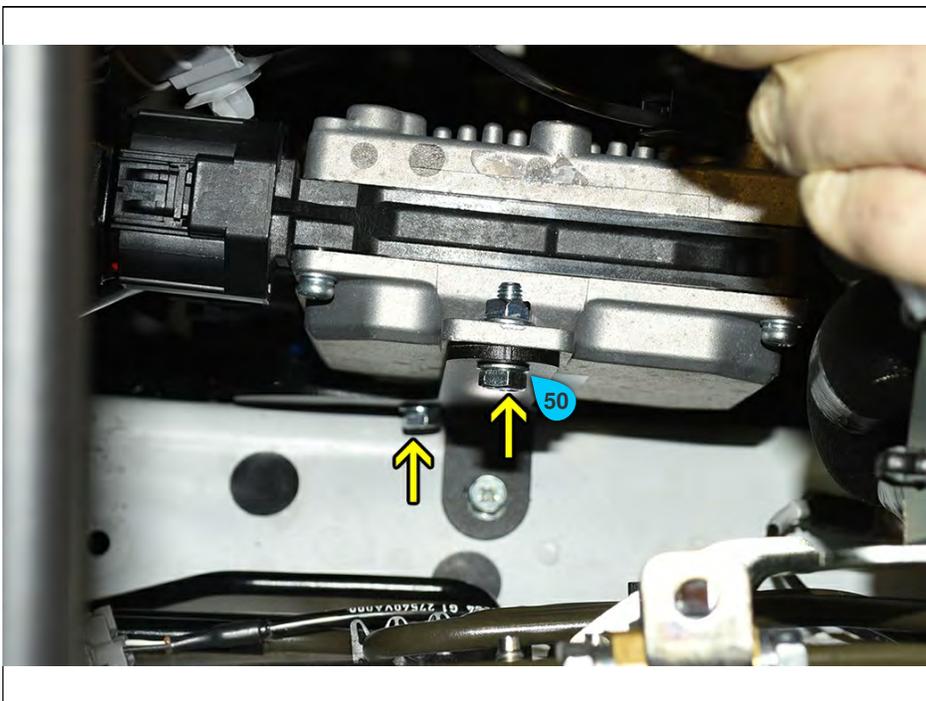
Step 70/108



Numbered annotations (1)

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

Step 71/108



Numbered annotations (1)

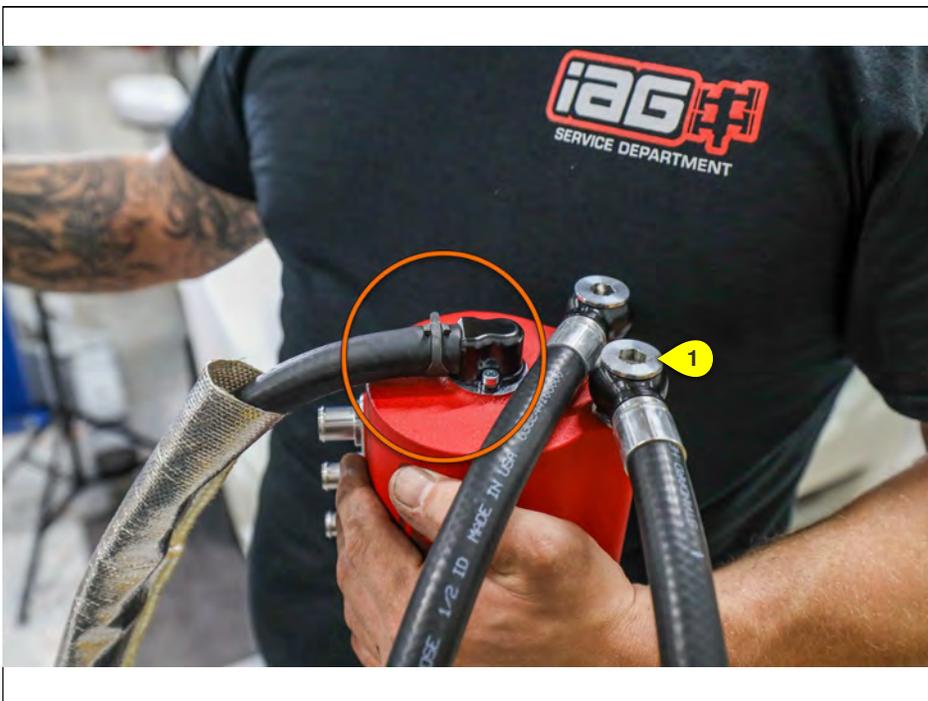
- 50 Attach the ECU to the bracket using the supplied 6mmx15mm bolts, 6mm flat washers, and the OEM nuts the secured the ecu to the OEM ECU bracket. (Make sure the bolt heads are on the bracket side.)



Step 72/108

Numbered annotations (1)

- 51 Attach the drain hose using the supplied clamp.



Step 73/108

Numbered annotations (1)

- 1 These fittings are preinstalled and torqued. The fitting is designed to swivel around the bolt. Do not remove or tighten further.

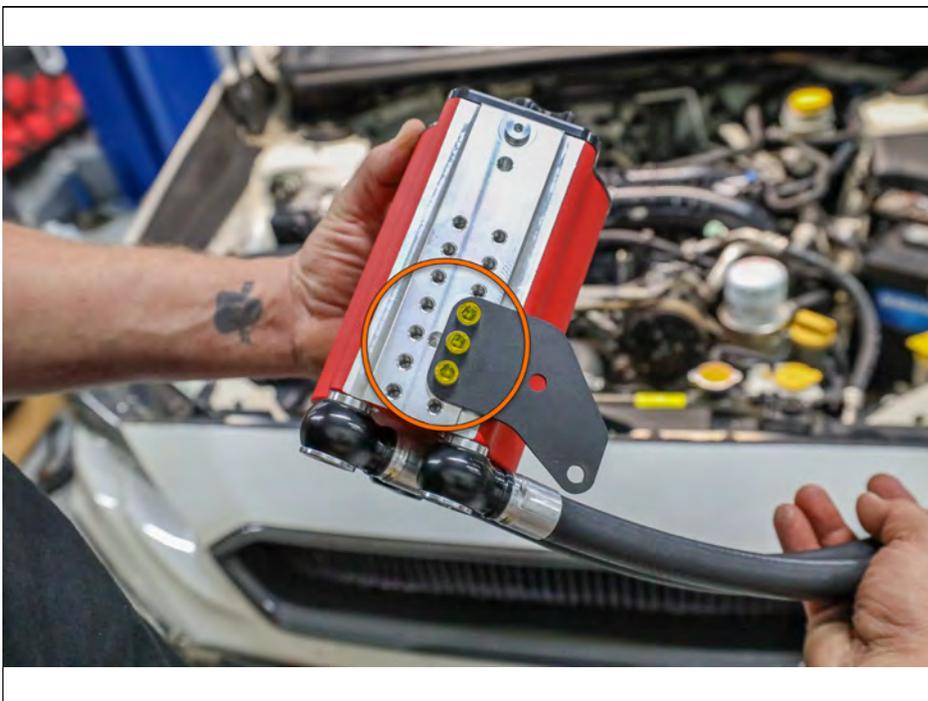
Step 74/108

Numbered annotations (1)

- 52 Locate the AOS bracket and supplied hardware and install the bracket as shown. Torque the bolts to 7 ft lbs.



Step 75/108

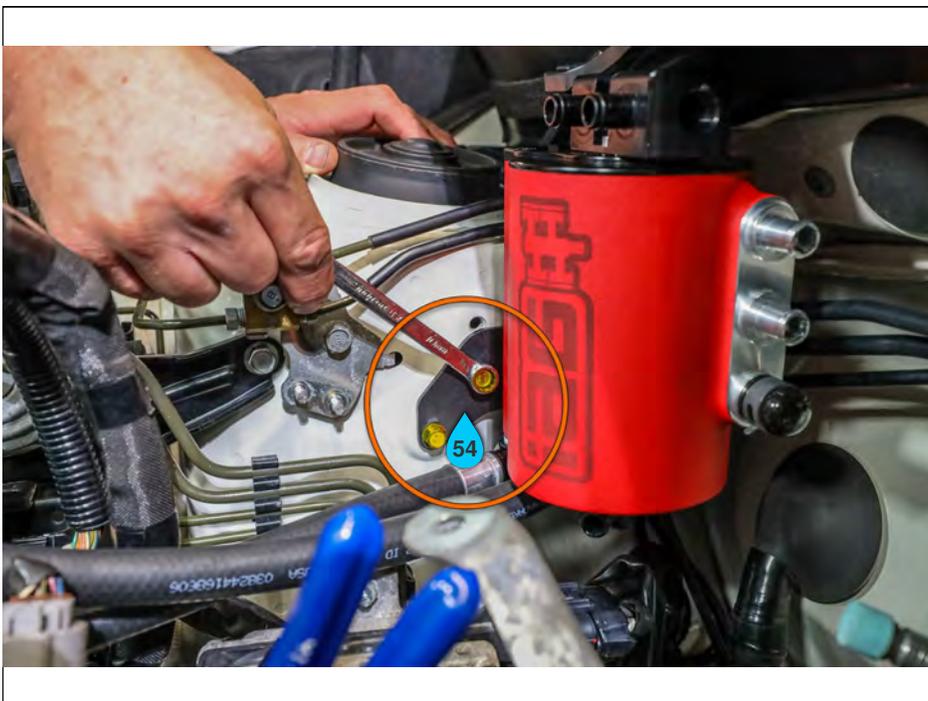




Step 76/108

Numbered annotations (1)

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



Step 77/108

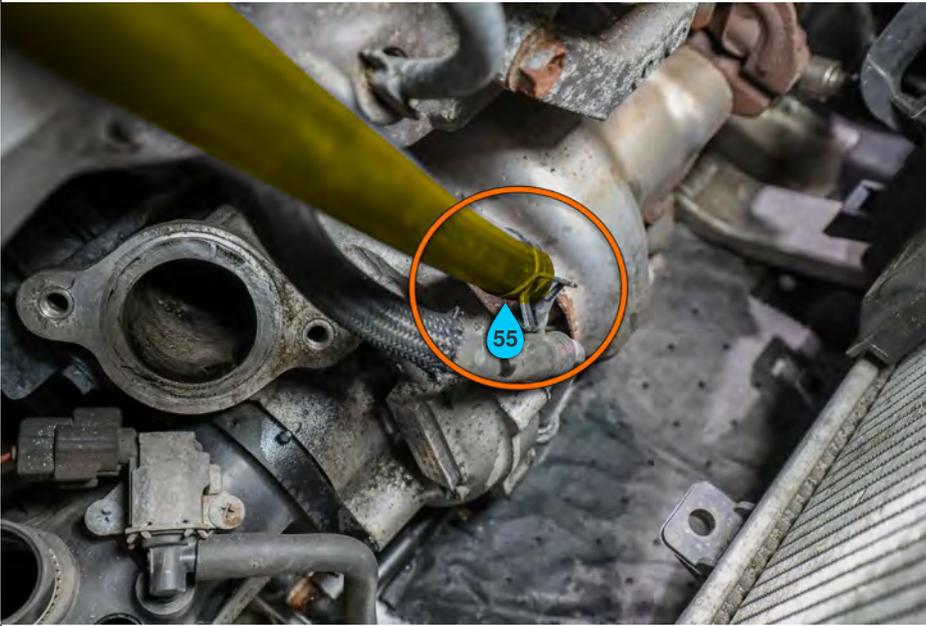
Numbered annotations (1)

- 54 Mount the AOS here using the supplied bolts.

Step 78/108

Numbered annotations (1)

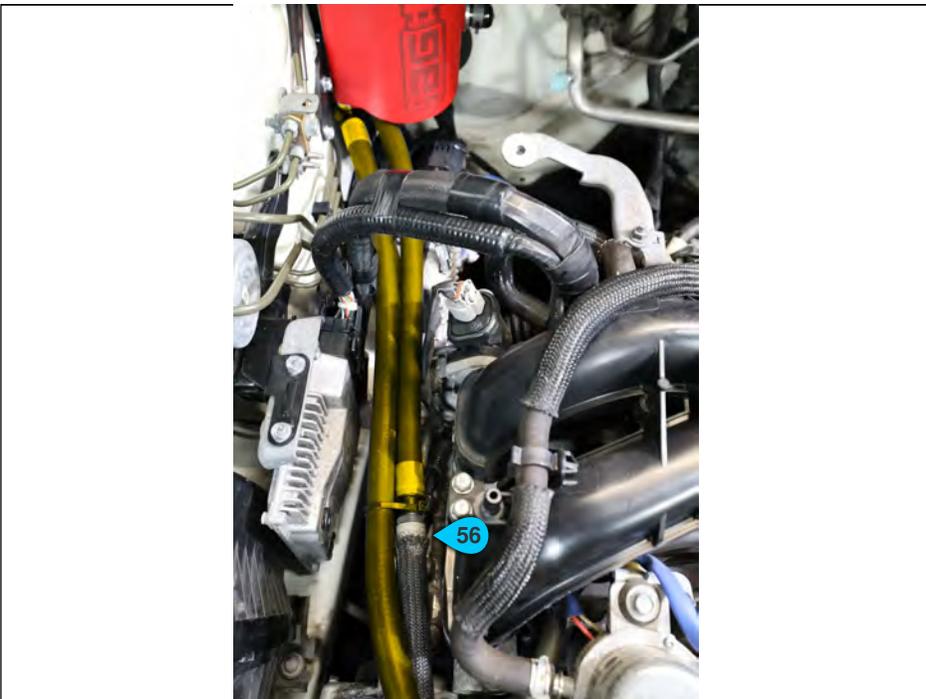
- 55 Attach the longer coolant hose here using the supplied clamp.

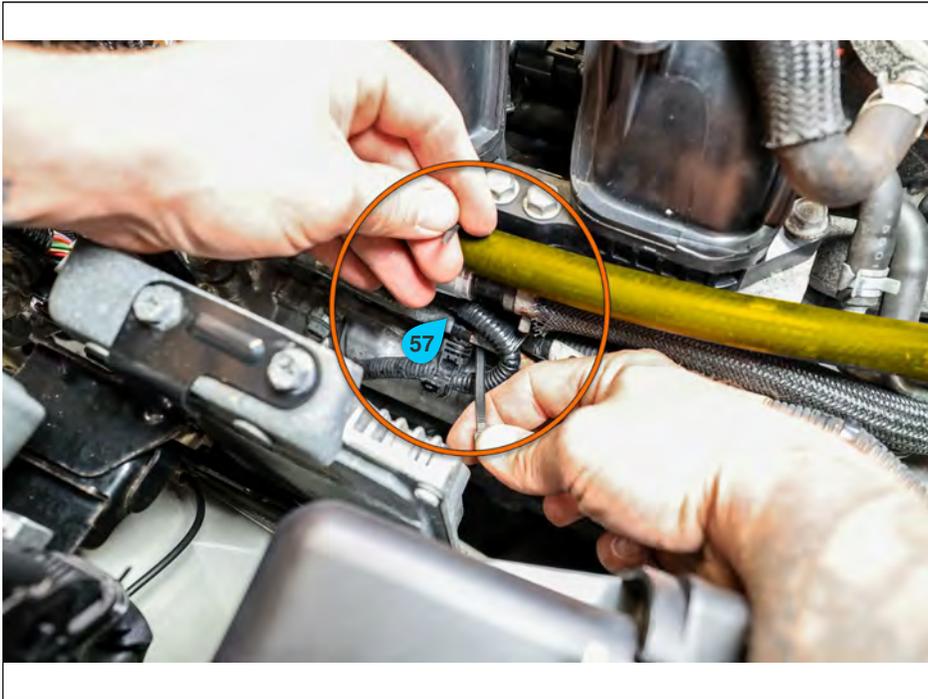


Step 79/108

Numbered annotations (1)

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

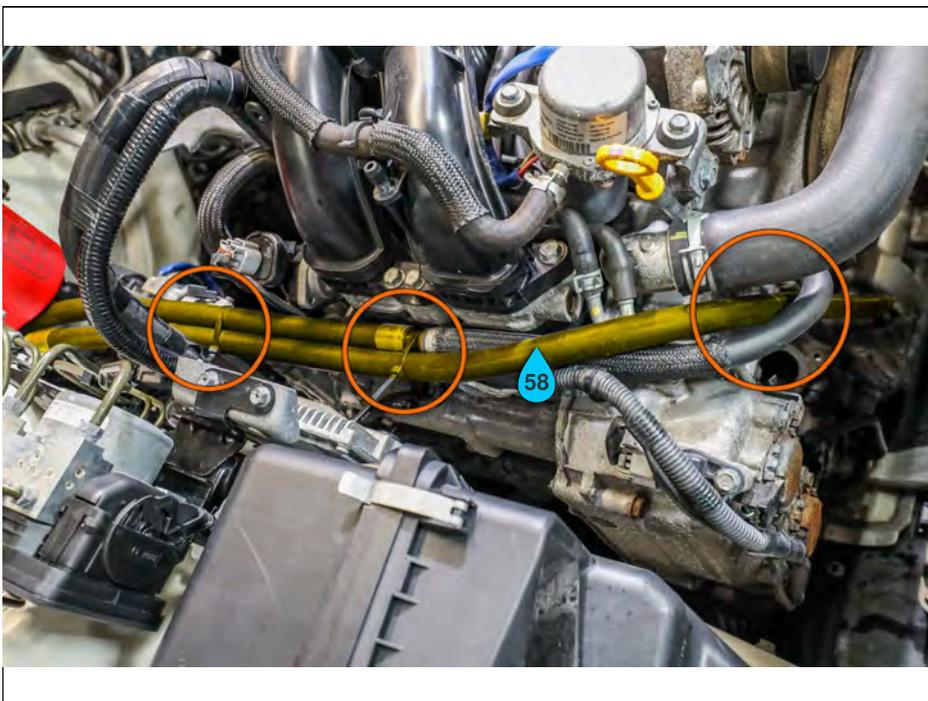




Step 80/108

Numbered annotations (1)

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



Step 81/108

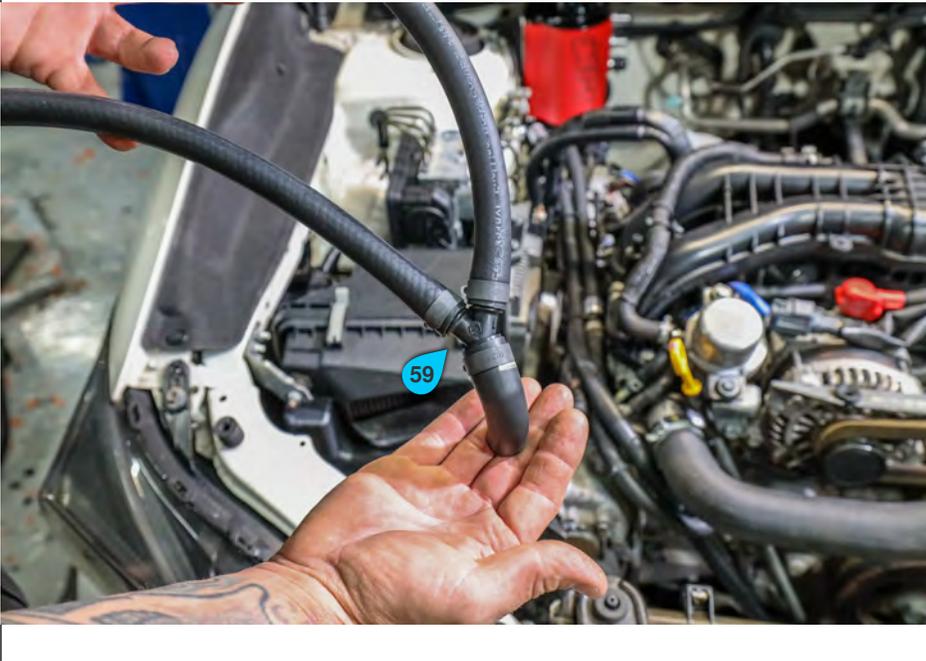
Numbered annotations (1)

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

Step 82/108

Numbered annotations (1)

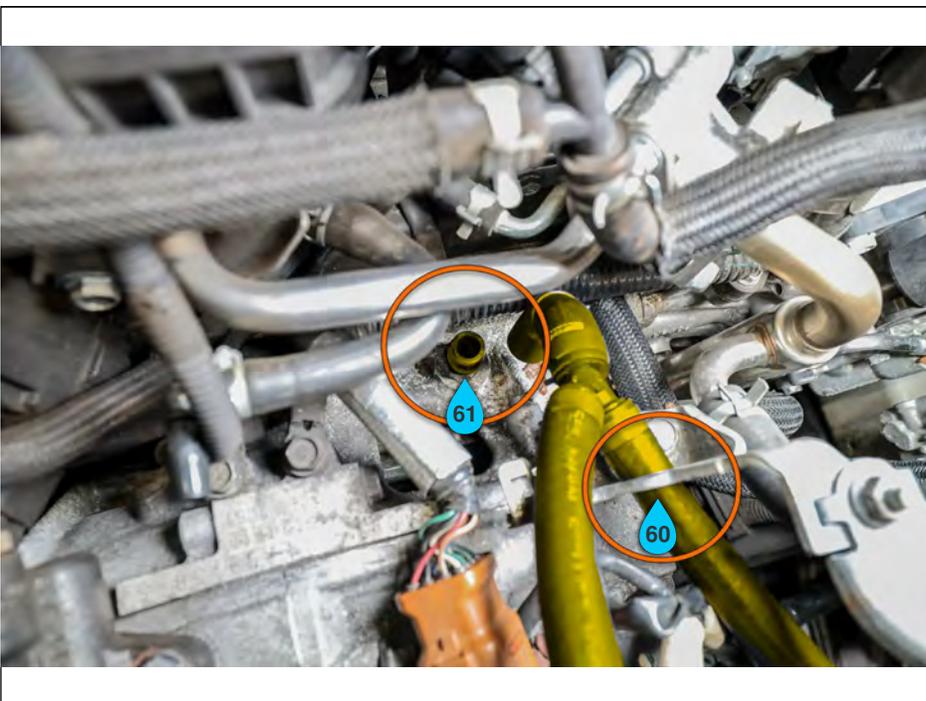
- 59 Locate the Y shaped breather hose assembly.



Step 83/108

Numbered annotations (2)

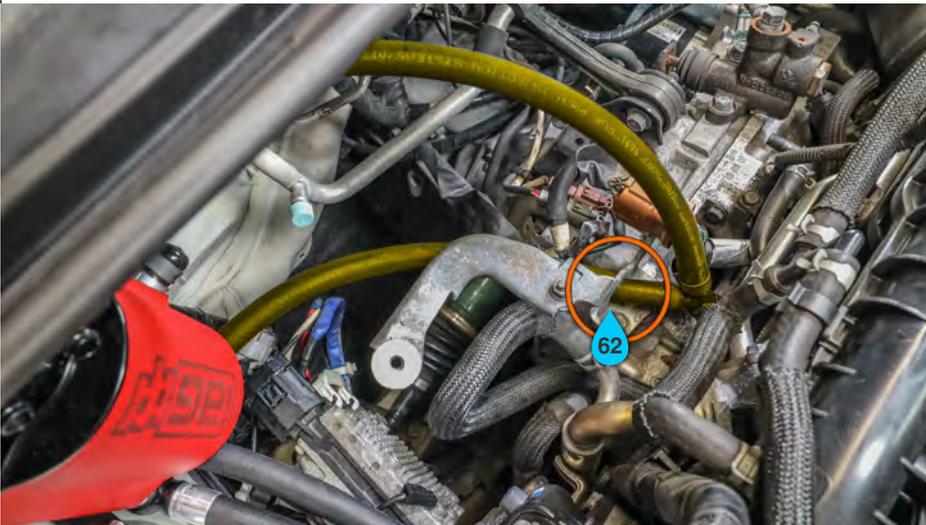
- 60 Pass one hose through the bracket.
- 61 Attach 90 degree hose here using the supplied clamp.



Step 84/108



Step 85/108



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 86/108



Numbered annotations (1)

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

Step 87/108



Numbered annotations (2)

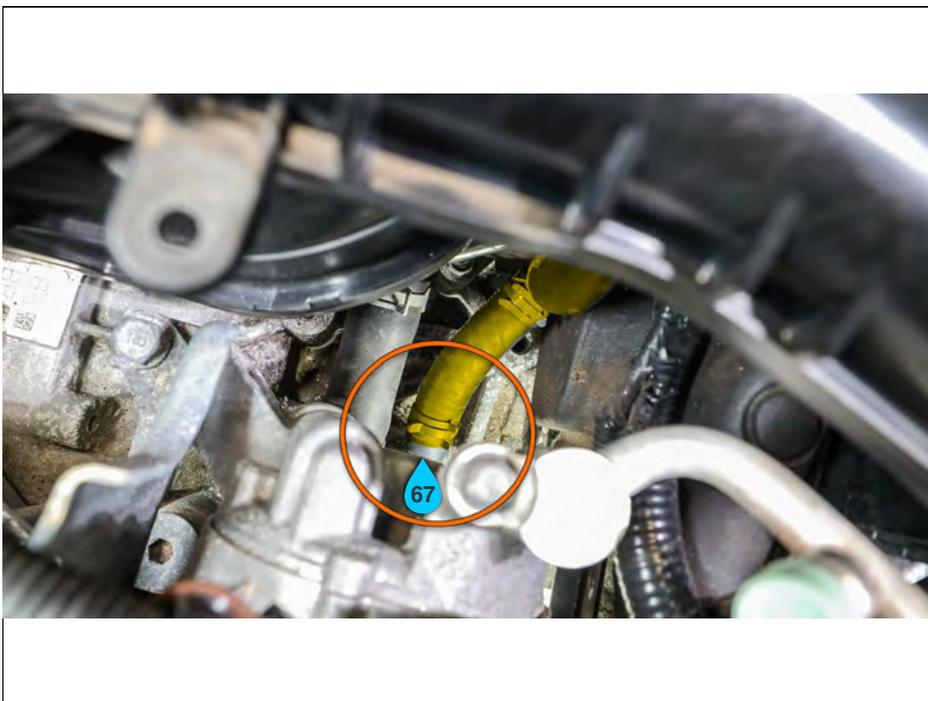
- 64 Secure the vent hose assembly here with a zip tie.
- 65 Attach the vent hose to the middle port on the side of the AOS using the supplied clamp.



Step 88/108

Numbered annotations (1)

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



Step 89/108

Numbered annotations (1)

- 67 Attach the AOS vent hose assembly here using the supplied clamp.

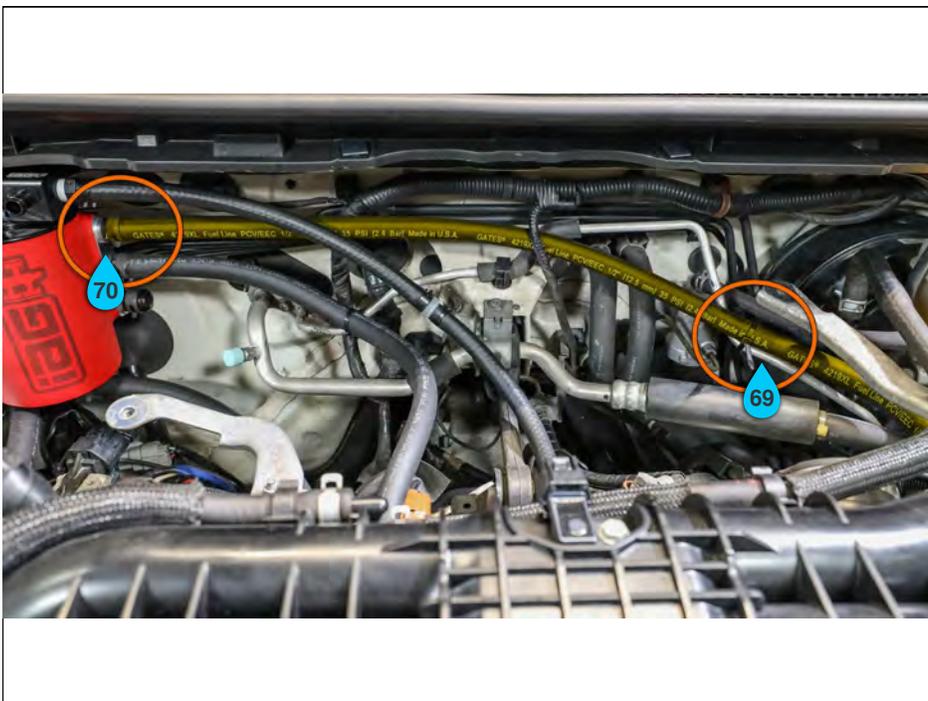
Step 90/108



Numbered annotations (1)

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

Step 91/108



Numbered annotations (2)

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

Step 92/108



Numbered annotations (1)

- 71 Route the 1" breather hose as shown and secure to the AOS with two zip ties.

Step 93/108



Numbered annotations (1)

- 72 Route the breather hose under the vehicle, along the transmission tunnel. Thread a zip tie through here.

Step 94/108



Numbered annotations (1)

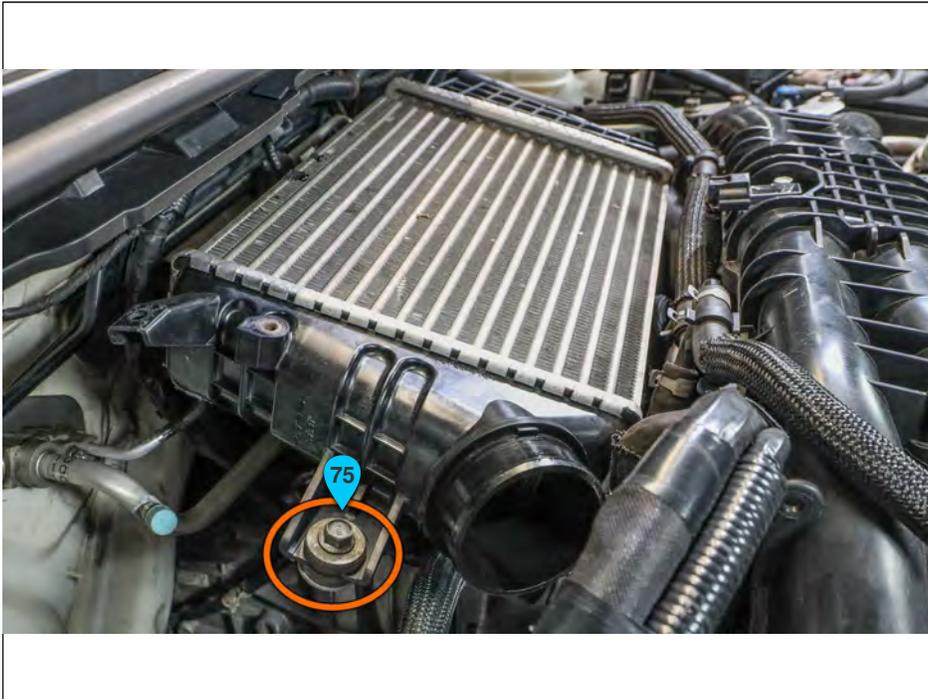
- 73 Pass the end of the breather hose through the zip tie and secure to the bottom of the vehicle.

Step 95/108



Numbered annotations (1)

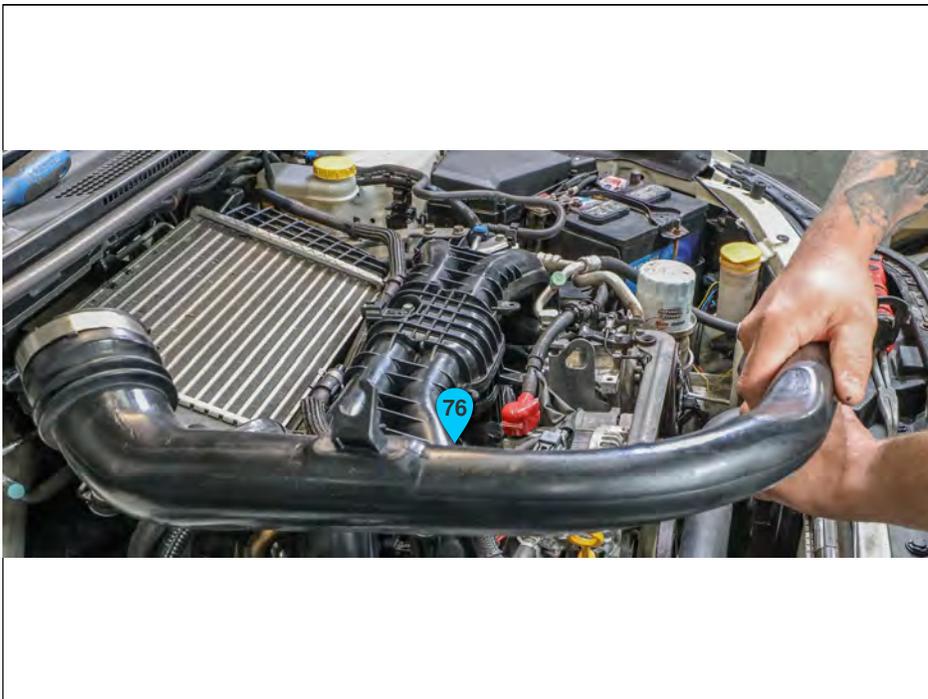
- 74 Reinstall the intercooler and bracket.



Step 96/108

Numbered annotations (1)

- 75 Reinstall this bolt.

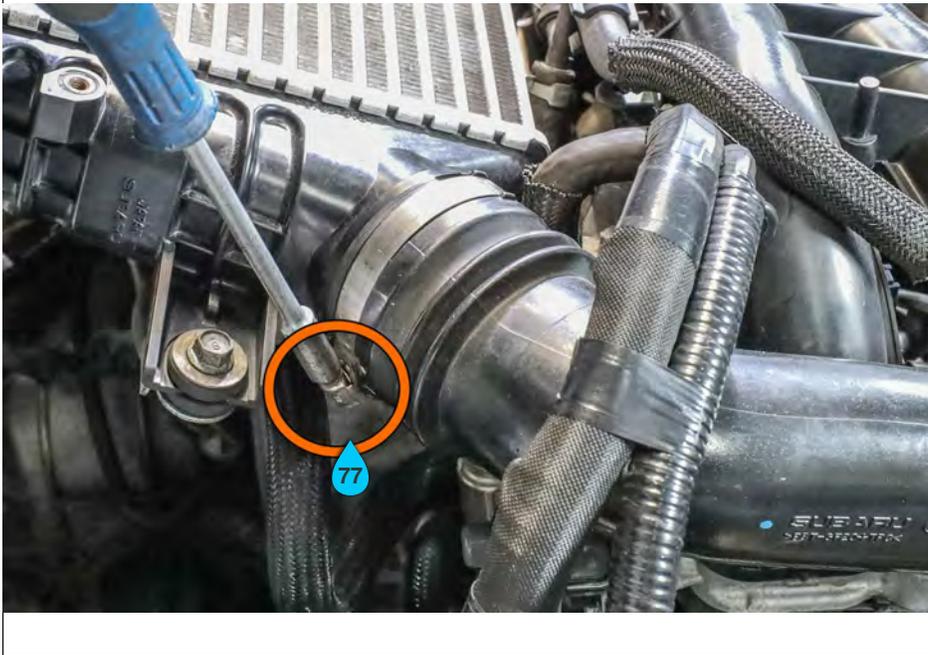


Step 97/108

Numbered annotations (1)

- 76 Reinstall the intercooler charge pipe.

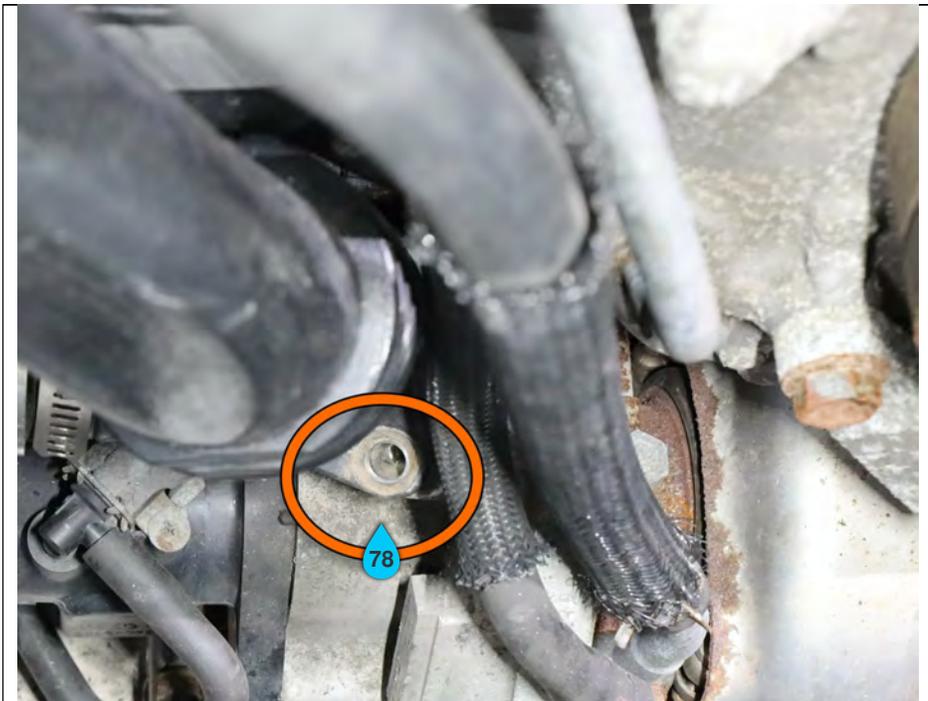
Step 98/108



Numbered annotations (1)

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

Step 99/108



Numbered annotations (1)

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

Step 100/108

Numbered annotations (1)

- 79 Reinstal the passenger side radiator fan.



Step 101/108

Numbered annotations (1)

- 80 Secure the fan with the OEM bolts.



Step 102/108

Numbered annotations (1)

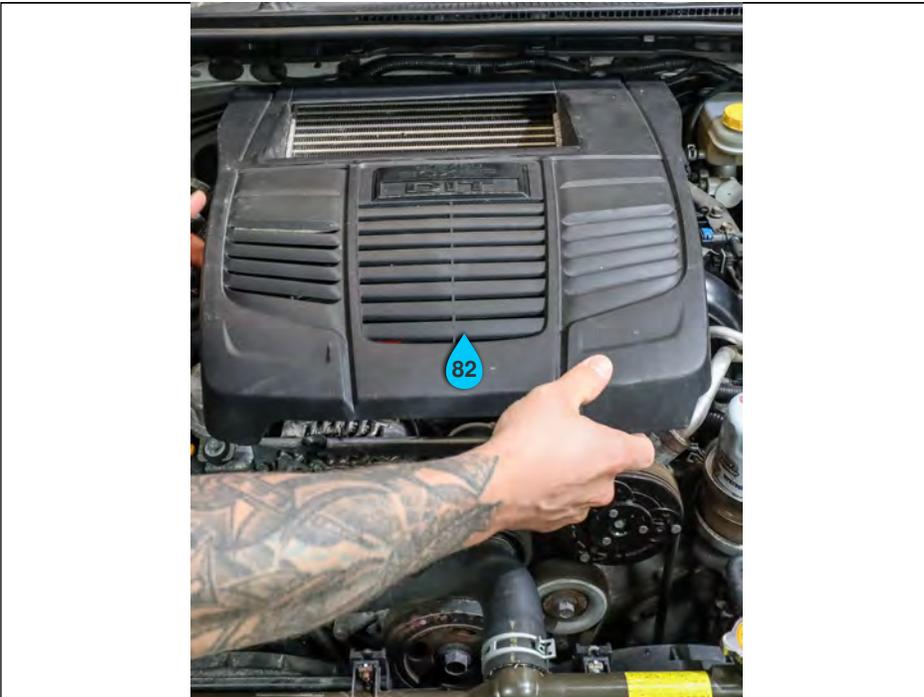
- 81 Plug the passenger fan electrical connector back in.



Step 103/108

Numbered annotations (1)

- 82 Reinstall the engine cover.





Step 104/108

Numbered annotations (1)

- 83 Reinstall the intake snorkel.



Step 105/108

Numbered annotations (1)

- 84 Secure the snorkel with the OEM hardware.



Step 106/108



Step 107/108

Numbered annotations (1)

- 85 Reconnect the negative battery cable.

Step 108/108

Numbered annotations (1)

- 86 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.

