

IAG STREET SERIES AOS FOR 2008-14 STI



IAG-ENG-7181 Street Series Air / Oil Separator (AOS) For 08-14 STI

Part# IAG-ENG-7181

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

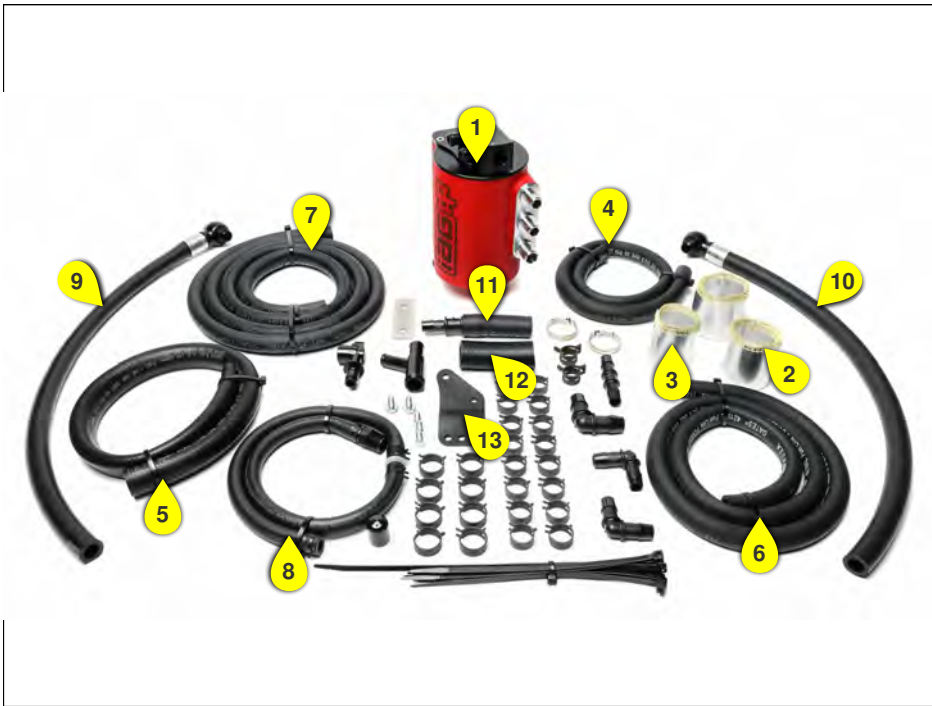
Other: Electrical Tape

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 1/121

Step 2/121

Numbered annotations (13)



- 1 AOS Body Assembly
- 2 Heat Sleeve 16" x 2
- 3 Heat Sleeve 12"
- 4 AOS Drain Hose - 1/2" x 26"
- 5 AOS Vent Hose - 5/8" x 25"
- 6 Breather Hose Assembly 1/2" x 44"
- 7 Valve Cover Breather Hose - 1/2" x 74"
- 8 PCV Hose Assembly 1/2" x 28"
- 9 Coolant Hose 1 - 20"
- 10 Coolant Hose 2 - 20"
- 11 PCV Vent Hose Extension
- 12 Block Breather Hose to Y fitting - 3/4" x 2"
- 13 AOS Mounting Bracket

Step 3/121

Numbered annotations (12)



- 1 Wiring Harness Relocation Bracket
- 2 Inlet fitting for PCV sensor
- 3 Y Fitting for Block Breather
- 4 1/2" Hose Clamp x 16
- 5 1/2" 90 Degree Elbow x 2
- 6 5/8" Hose Clamp x 8
- 7 5/8" 90 Degree Elbow
- 8 1/2" Nylon Union
- 9 3/4" Spring Clamp x 2
- 11 AOS Mounting Hardware (M6x12mm x 2, M6x10mm x 3)
- 12 5/8" Vacuum Cap
- 13 Zip Ties

Step 4/121



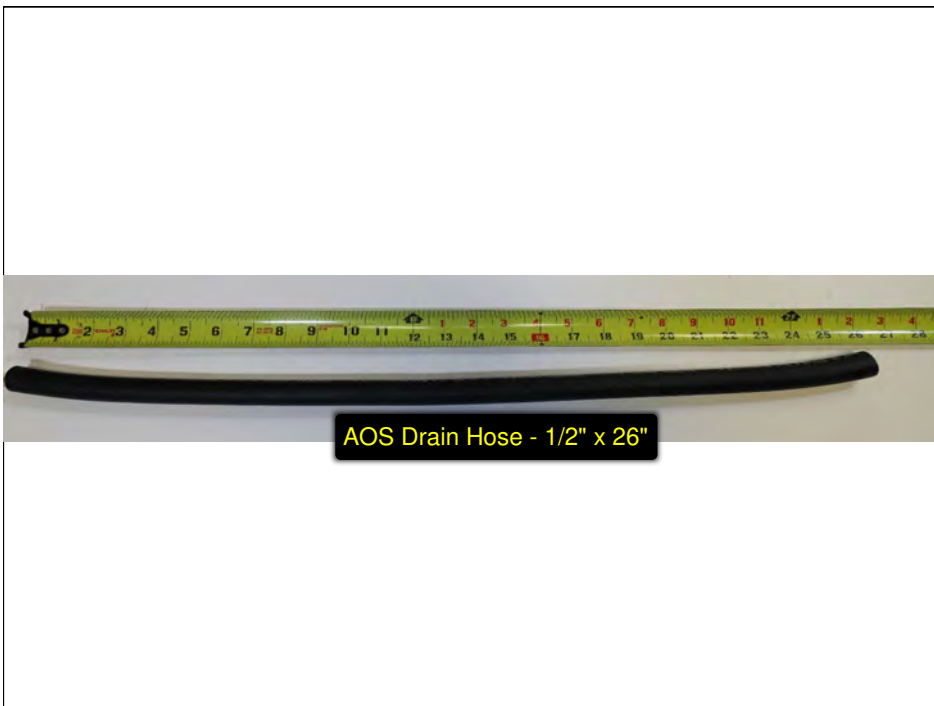
Step 5/121



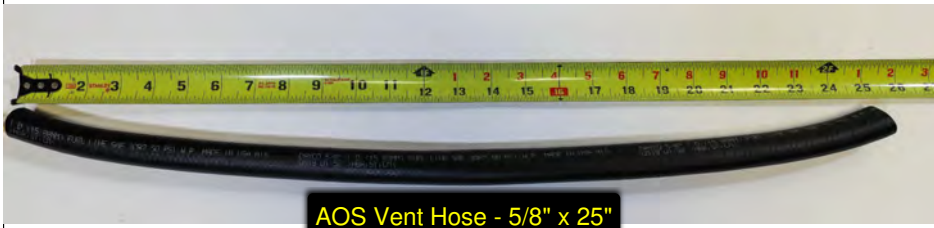
Step 6/121



Step 7/121



Step 8/121



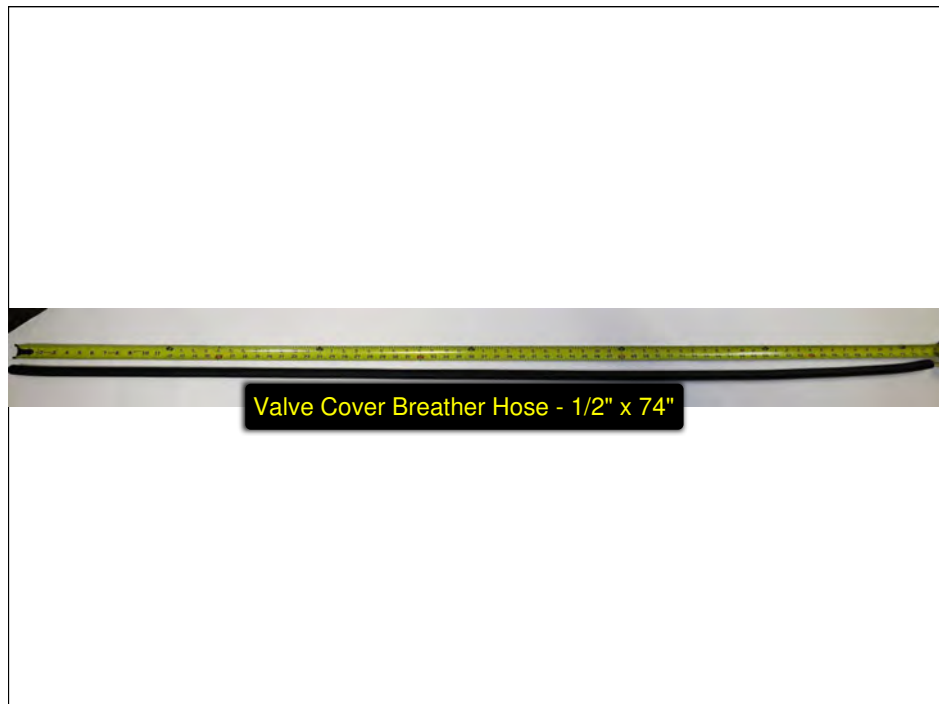
AOS Vent Hose - 5/8" x 25"

Step 9/121



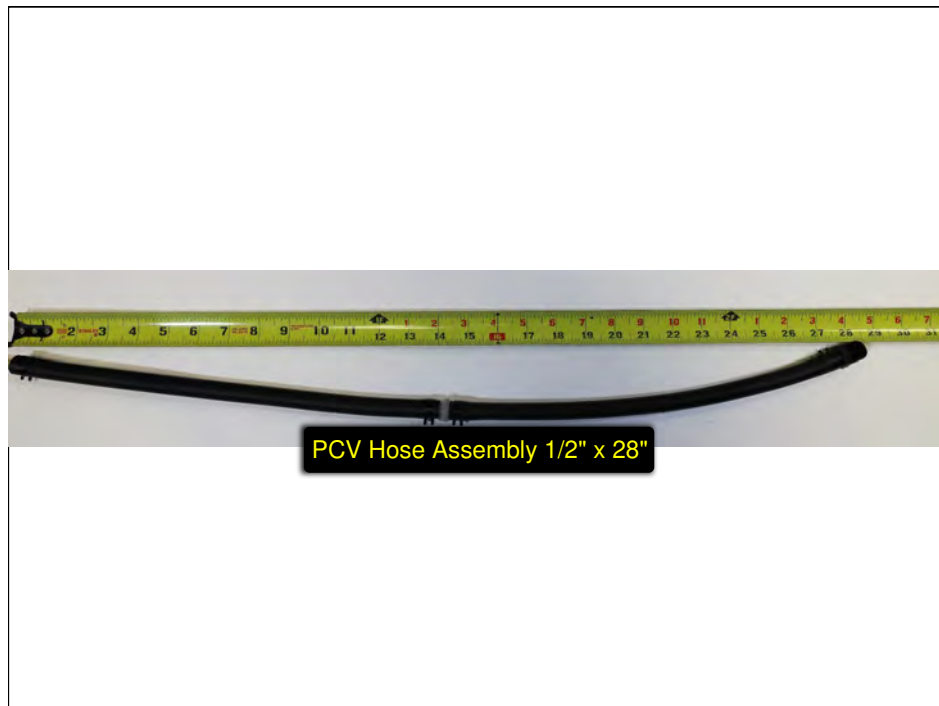
Breather Hose Assembly 1/2" x 44"

Step 10/121



Valve Cover Breather Hose - 1/2" x 74"

Step 11/121



PCV Hose Assembly 1/2" x 28"

Step 12/121



Coolant Hose 1 - 20"

Step 13/121



Numbered annotations (8)

- 1 AOS Vent Hose to turbo inlet (Both must be connected individually.)
- 2 AOS Vent Hose to turbo inlet (Both must be connected individually.)
- 3 Valve Cover Vent Hose (Driver Side)
- 4 Valve Cover Vent Hose (Passenger Side)
- 5 5/8" Block Vent Hose from Y fitting.
- 6 1/2" Drain hose to Y Fitting at top of block
- 7 Coolant Hose 1
- 8 Coolant Hose 2

Step 14/121

Numbered annotations (1)

- 1 Disconnect the negative battery terminal

**Step 15/121**

Numbered annotations (2)

- 2 Loosen the clamps on these hoses
- 3 Remove this intercooler mounting bolt.



Step 16/121

Numbered annotations (1)

- 4 Disconnect this hose.



Step 17/121

Numbered annotations (1)

- 5 Remove this hose.



Step 18/121

Numbered annotations (1)

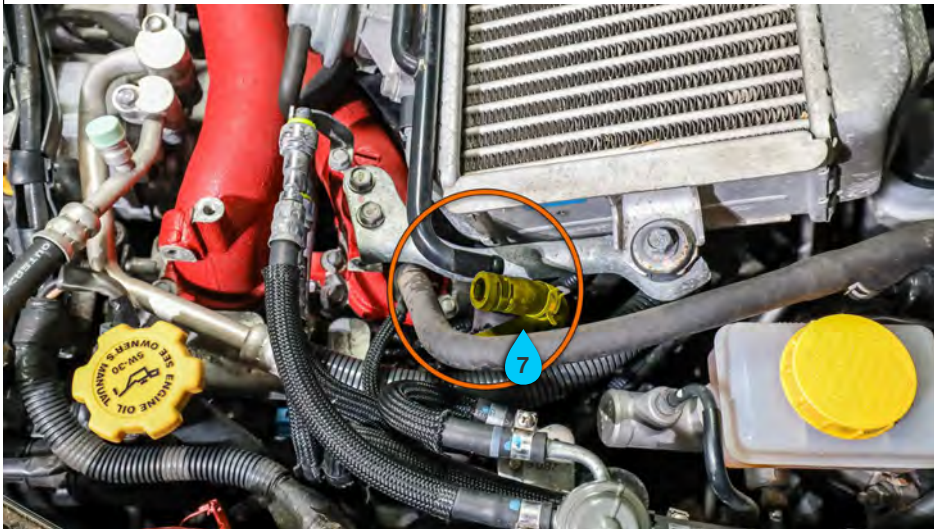
- 6 Disconnect this hose.



Step 19/121

Numbered annotations (1)

- 7 Loosen the clamp and disconnect this hose.



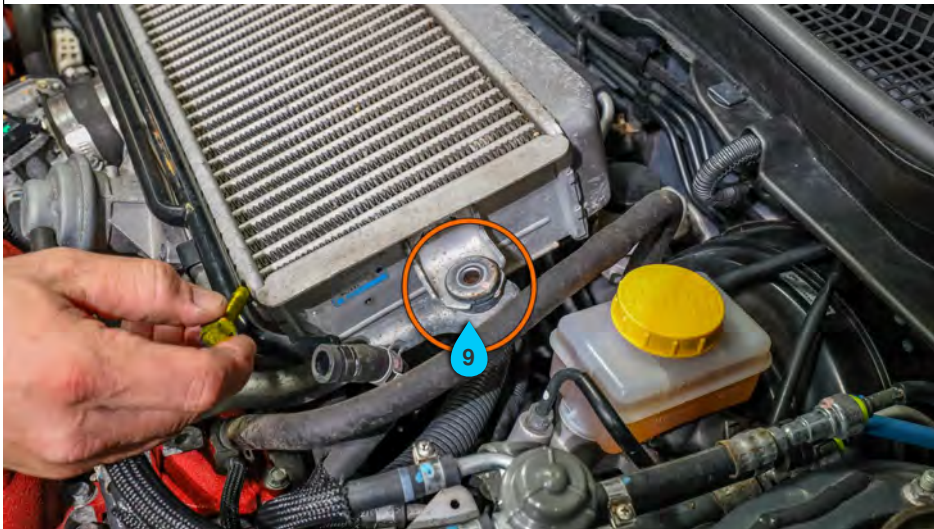
Step 20/121



Numbered annotations (1)

8 Remove these bolts.

Step 21/121



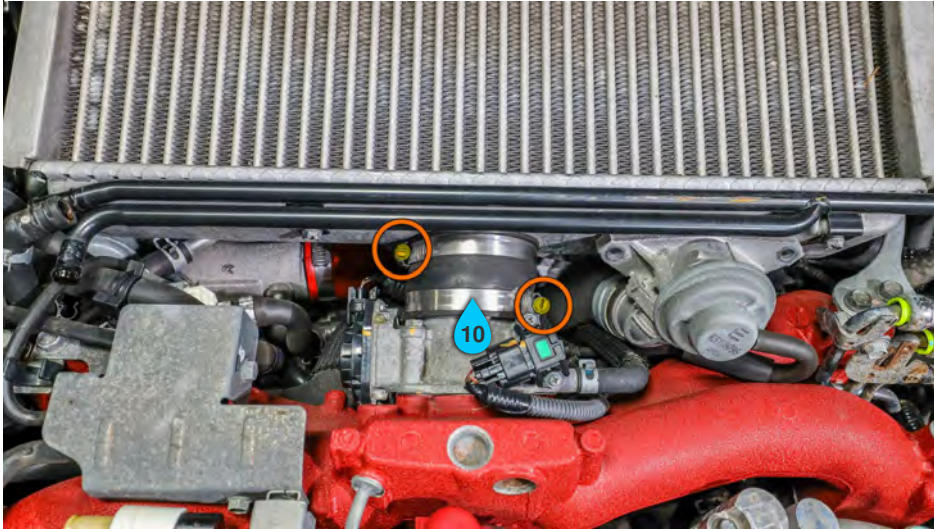
Numbered annotations (1)

9 Remove this intercooler mounting bolt.

Step 22/121

Numbered annotations (1)

10 Loosen these clamps.



Step 23/121

Numbered annotations (1)

11 Loosen this clamp.



Step 24/121

Numbered annotations (1)

12 Remove these bolts.



Step 25/121

Numbered annotations (1)

13 Remove this bracket.



Step 26/121

Numbered annotations (1)

- 14 Remove the intercooler.



Step 27/121

Numbered annotations (1)

- 15 Remove these bolts.



Step 28/121

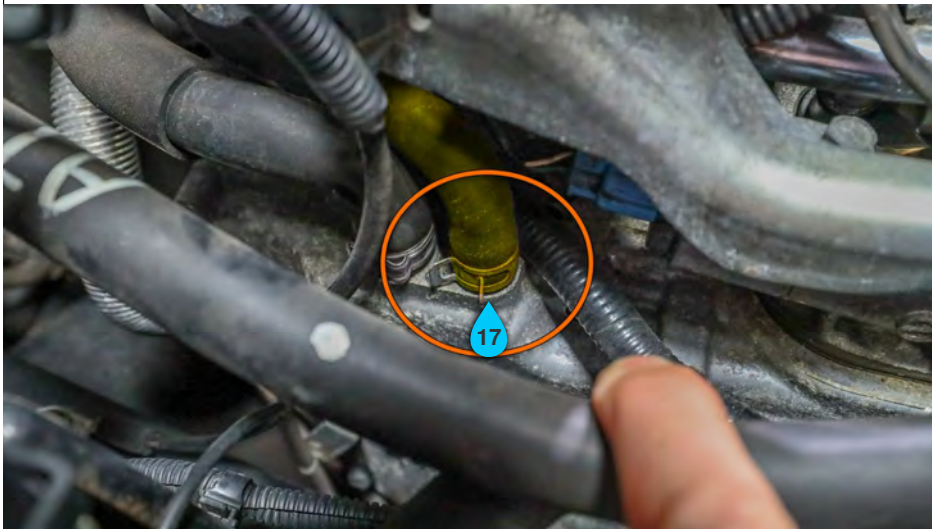
Numbered annotations (1)

- 16 Remove the PCV crossover tube from the intercooler.

**Step 29/121**

Numbered annotations (1)

- 17 Loosen the clamp and remove this hose from the passenger side valve cover.



Step 30/121

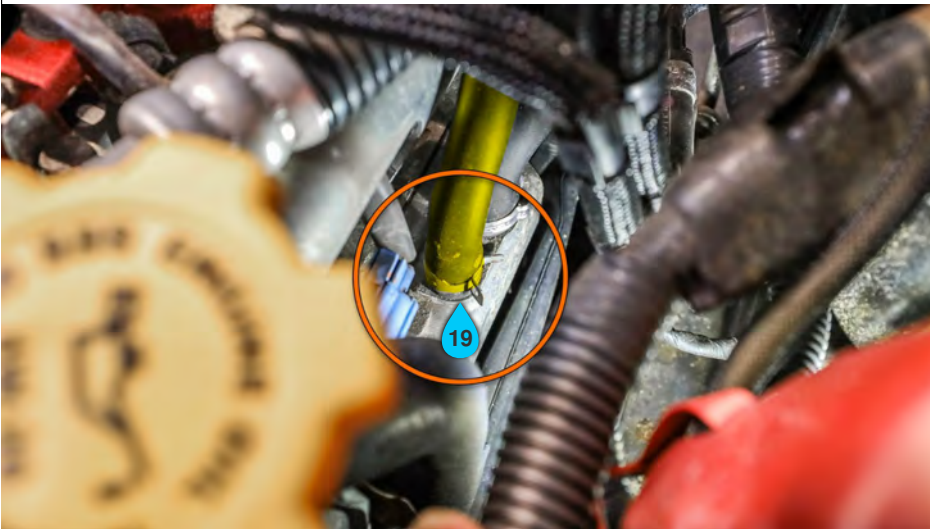
Numbered annotations (1)

- 18 Remove the breather hose.

**Step 31/121**

Numbered annotations (1)

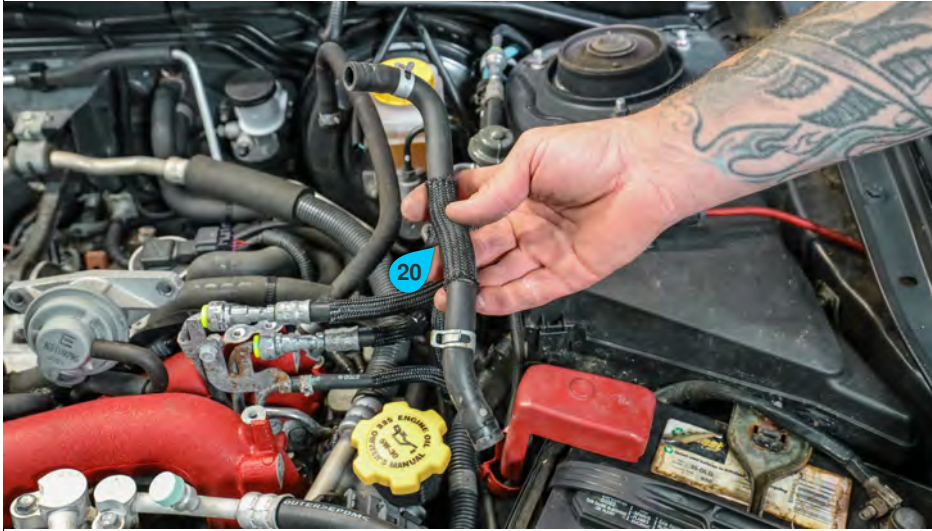
- 19 Loosen the clamp and disconnect this hose on the driver side valve cover.



Step 32/121

Numbered annotations (1)

- 20 Remove the breather hose.



Step 33/121

Numbered annotations (1)

- 21 Use a pick tool to release this spring clamp.



Step 34/121



Numbered annotations (1)

- 22 Disconnect the hose.

Step 35/121



Numbered annotations (1)

- 23 Remove the throttle body.

Step 36/121

Numbered annotations (1)

- 24 Move the throttle body out of the way.



Step 37/121

Numbered annotations (1)

- 25 Loosen this clamp on the PCV vacuum hose nipple.



Step 38/121

Numbered annotations (1)

- 26 Remove the hose.

**Step 39/121**

Numbered annotations (1)

- 27 Use a pick tool to remove the lower spring clamp and remove the PCV hose assembly from the block vent.



Step 40/121



Step 41/121



Numbered annotations (1)

- 28 Attach the block breather hose to the supplied Y fitting and tighten both clamps.

Step 42/121

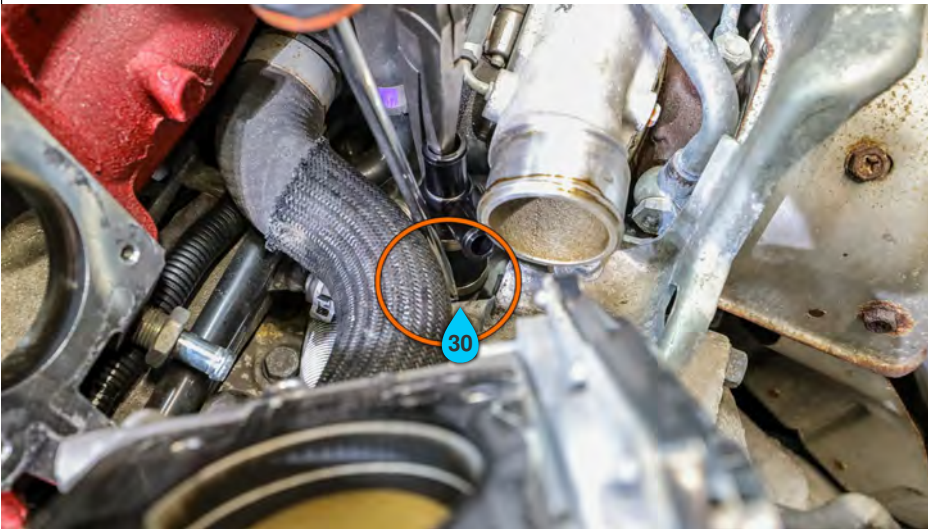
Numbered annotations (1)

- 29 Lubricate the inside of this hose with petroleum jelly or silicone lube.

**Step 43/121**

Numbered annotations (1)

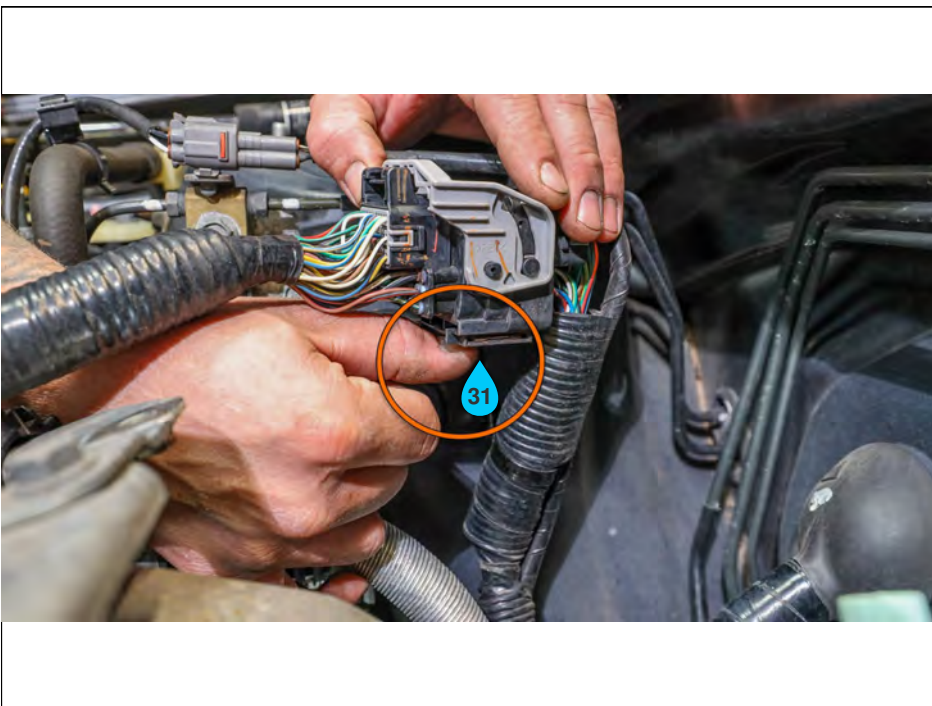
- 30 Push the assembly over the barb on the block vent. It's useful to use pliers and a screwdriver to help push the assembly over the barb.



Step 44/121



Step 45/121



Numbered annotations (1)

- 31 Release the wiring harness retaining tab.

Step 46/121

Numbered annotations (1)

- 32 Use pliers to remove this zip tie from the bracket.



Step 47/121



Step 48/121

Numbered annotations (1)

- 33 Remove these bolts.



Step 49/121

Numbered annotations (1)

- 34 Remove the wiring harness bracket.



Step 50/121

Numbered annotations (1)

- 35 Use pliers to release the clip for the oxygen sensor connector.



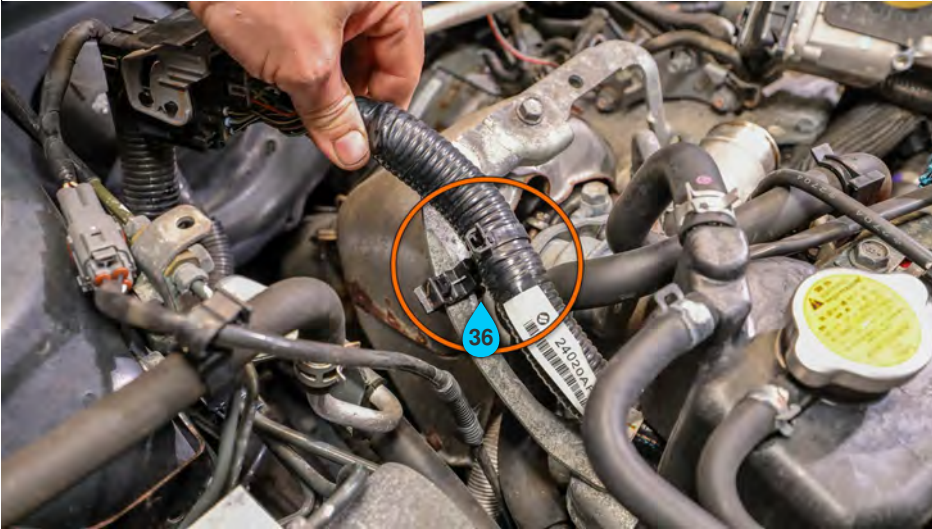
Step 51/121



Step 52/121

Numbered annotations (1)

36 Disconnect this zip tie.



Step 53/121



**Step 54/121**

Numbered annotations (1)

- 37 Remove the harness retaining zip tie.

**Step 55/121**

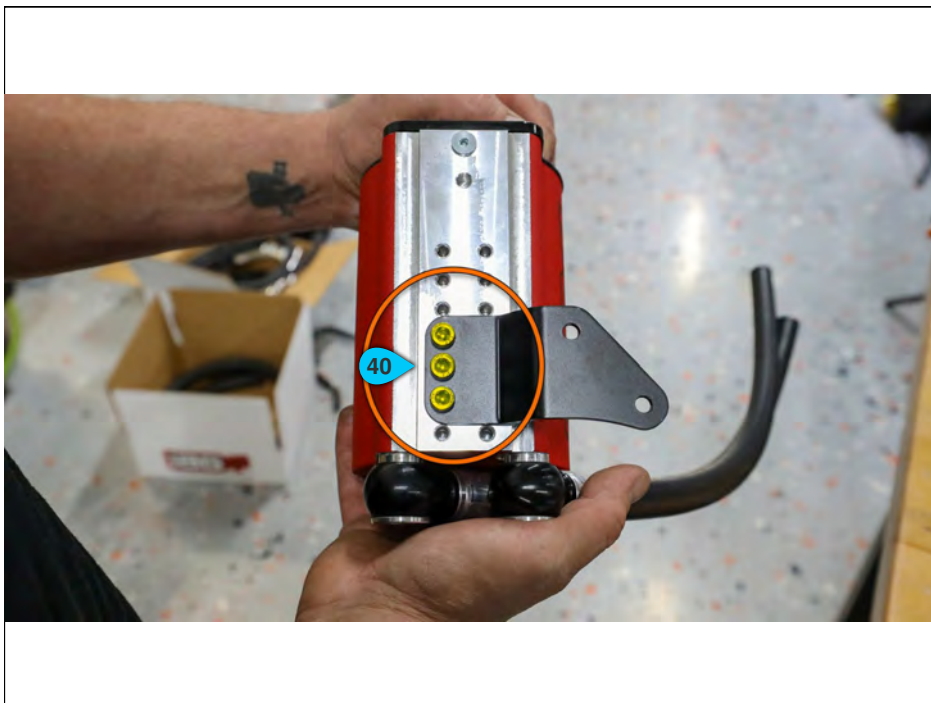
Numbered annotations (1)

- 38 Lubricate the coolant fitting o-rings.

**Step 56/121**

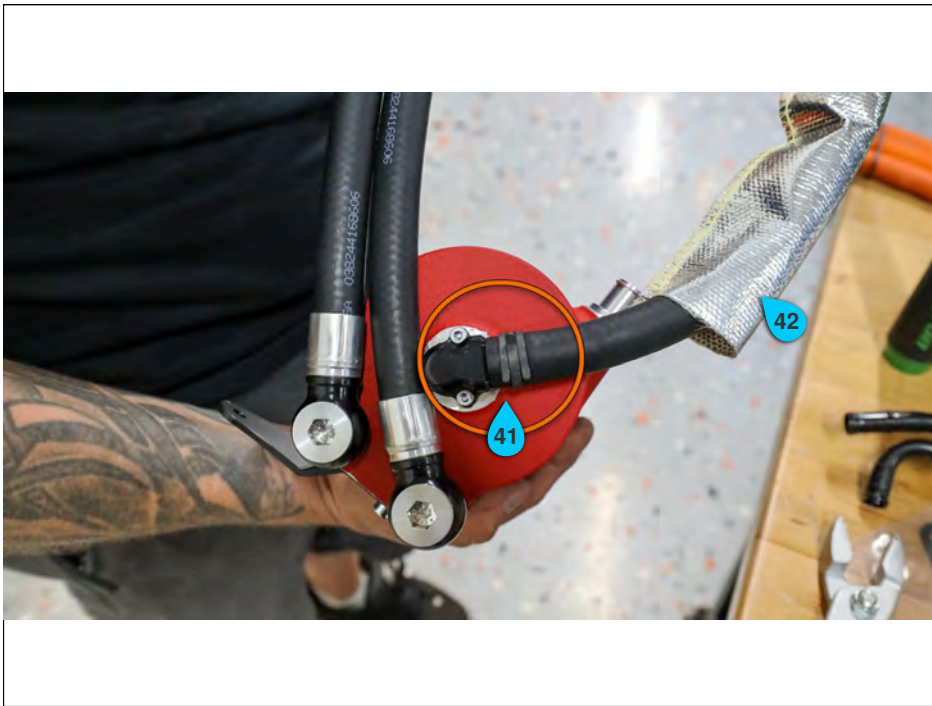
Numbered annotations (1)

- 39 Torque the fittings to 7 ft lbs.

**Step 57/121**

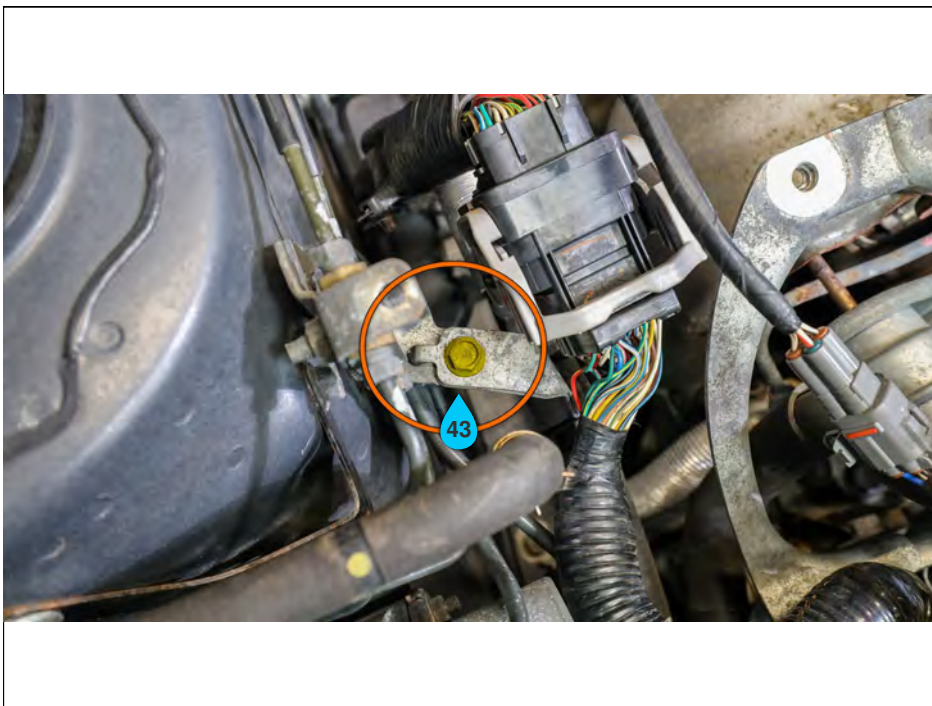
Numbered annotations (1)

- 40 Attach the AOS bracket using the supplied hardware. Torque the bolts to 7 ft/lbs.

**Step 58/121**

Numbered annotations (2)

- 41 Attach the AOS drain hose using the supplied clamp.
- 42 Slide a 16" section of heat sleeve over the drain hose.

**Step 59/121**

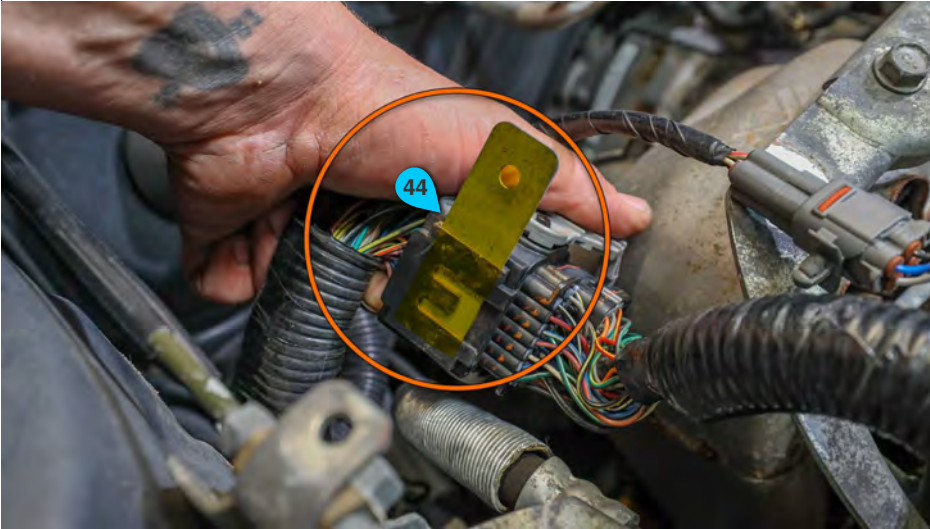
Numbered annotations (1)

- 43 Remove this bolt.

Step 60/121

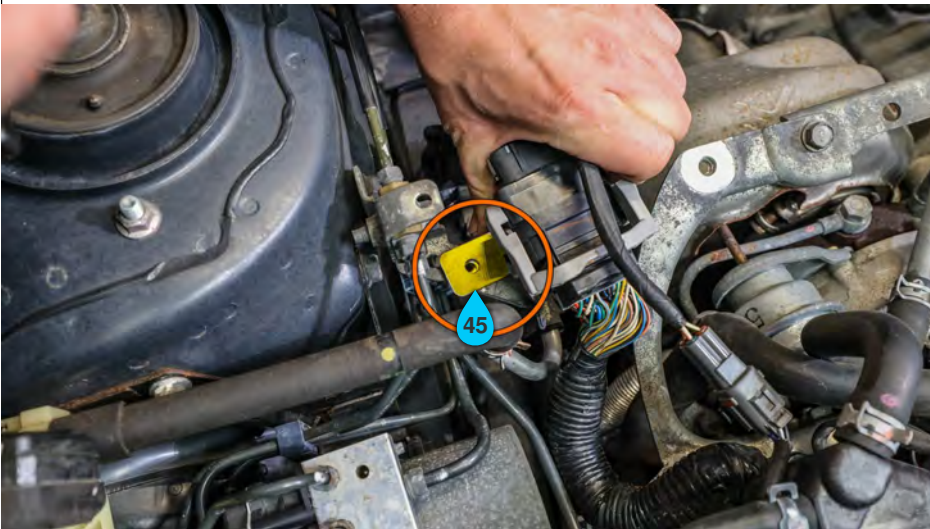
Numbered annotations (1)

- 44 Insert the supplied harness relocation bracket as shown.

**Step 61/121**

Numbered annotations (1)

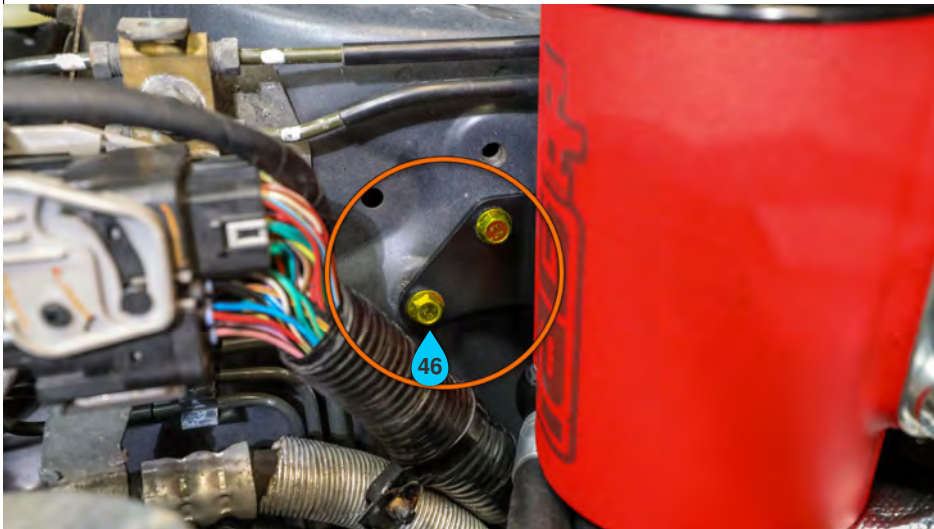
- 45 Attach the harness using the OEM bolt.



Step 62/121



Step 63/121



Numbered annotations (1)

- 46 Bolt the AOS bracket here using the supplied hardware.

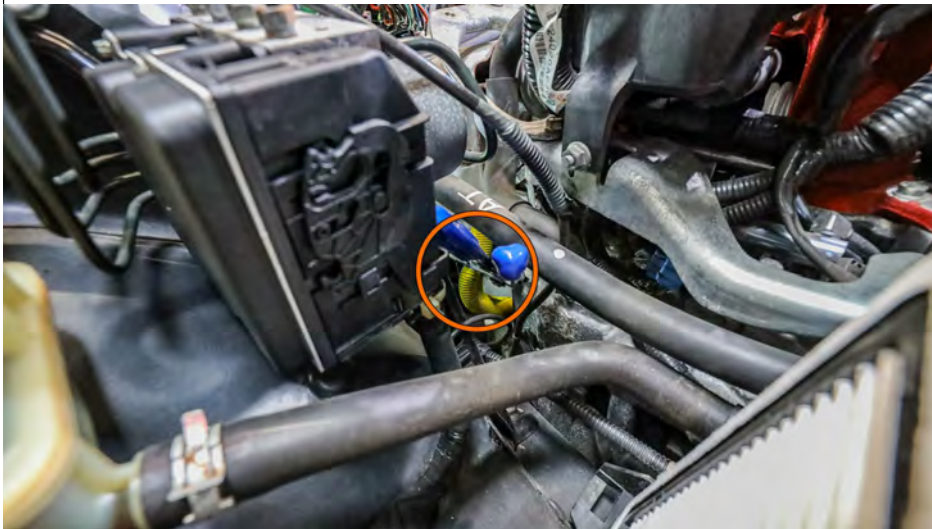
Step 64/121



Numbered annotations (1)

- 47 Locate the lower turbocharger coolant hose and pinch it off with hose clamping pliers to prevent coolant loss.

Step 65/121



Step 66/121

Numbered annotations (1)

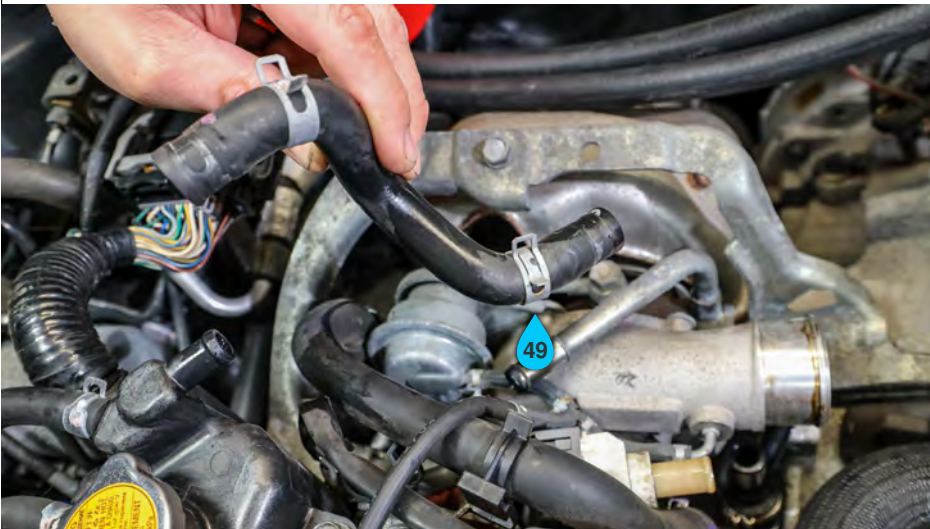
48 Loosen this clamp.



Step 67/121

Numbered annotations (1)

49 Loosen this clamp and remove the hose.



Step 68/121



Numbered annotations (1)

50 Zip tie the harness here.

Step 69/121



Numbered annotations (1)

51 Route the AOS coolant hose as shown and measure to length.

Step 70/121

Numbered annotations (1)

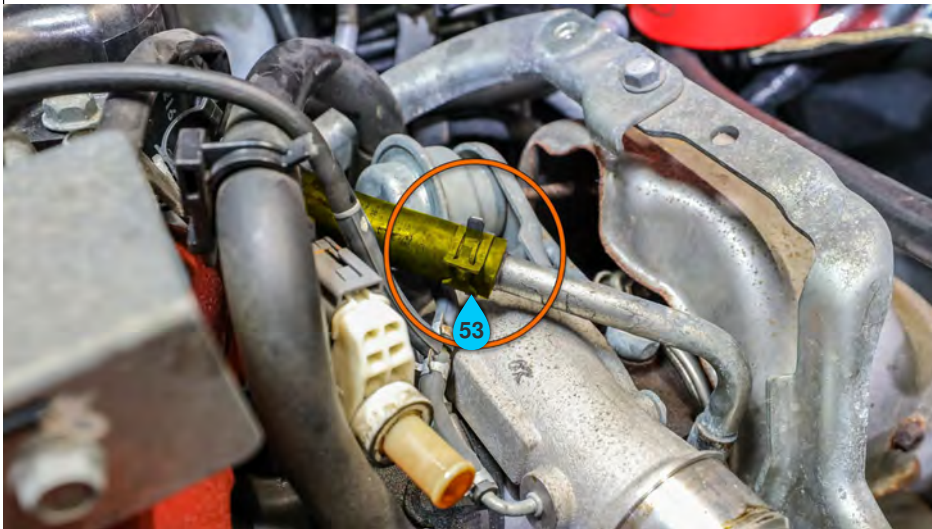
- 52 Trim excess coolant hose.



Step 71/121

Numbered annotations (1)

- 53 Attach AOS coolant hose here with the supplied clamp.



Step 72/121

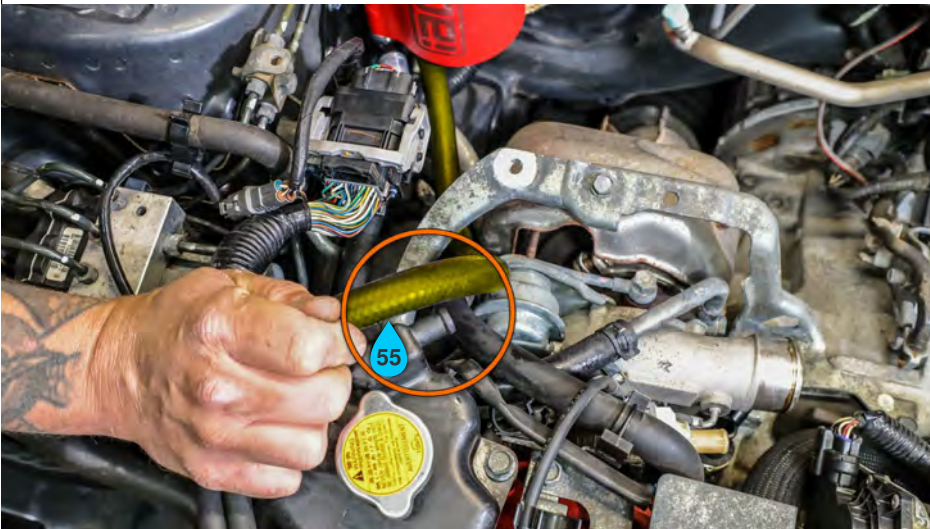
Numbered annotations (1)

- 54 Secure the coolant hose here with a zip tie.

**Step 73/121**

Numbered annotations (1)

- 55 Route the other AOS coolant hose as shown and measure to length.



Step 74/121

Numbered annotations (1)

- 56 Trim the excess AOS coolant hose.

**Step 75/121**

Numbered annotations (1)

- 57 Using a razor blade, split the trimmed section of hose lengthwise.



Step 76/121



Step 77/121

Numbered annotations (1)

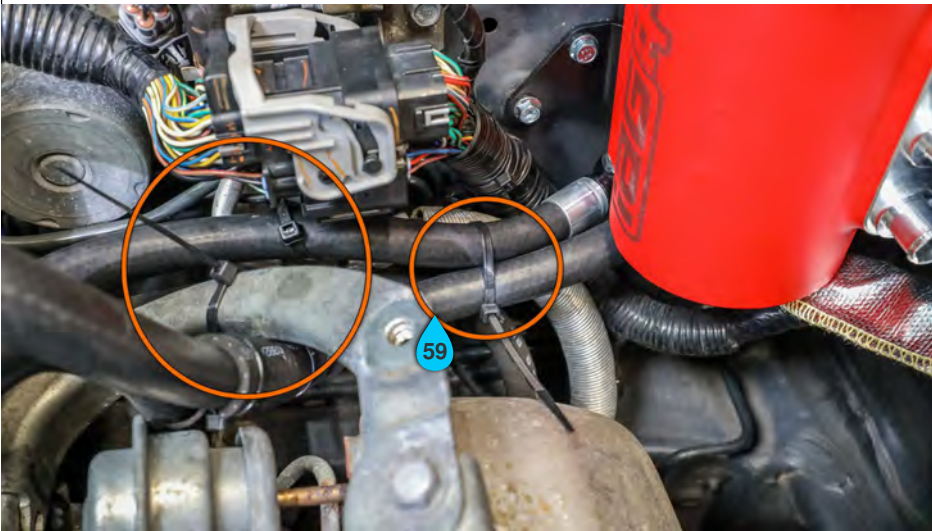


58 Zip tie the cut section of hose here to prevent rubbing.

Step 78/121

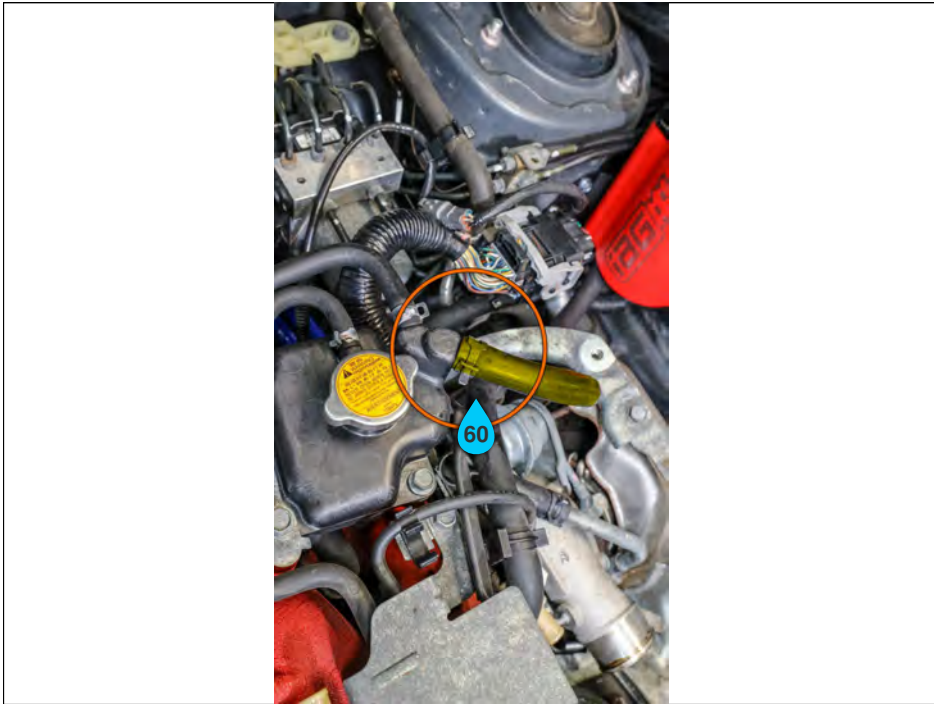


Step 79/121



Numbered annotations (1)

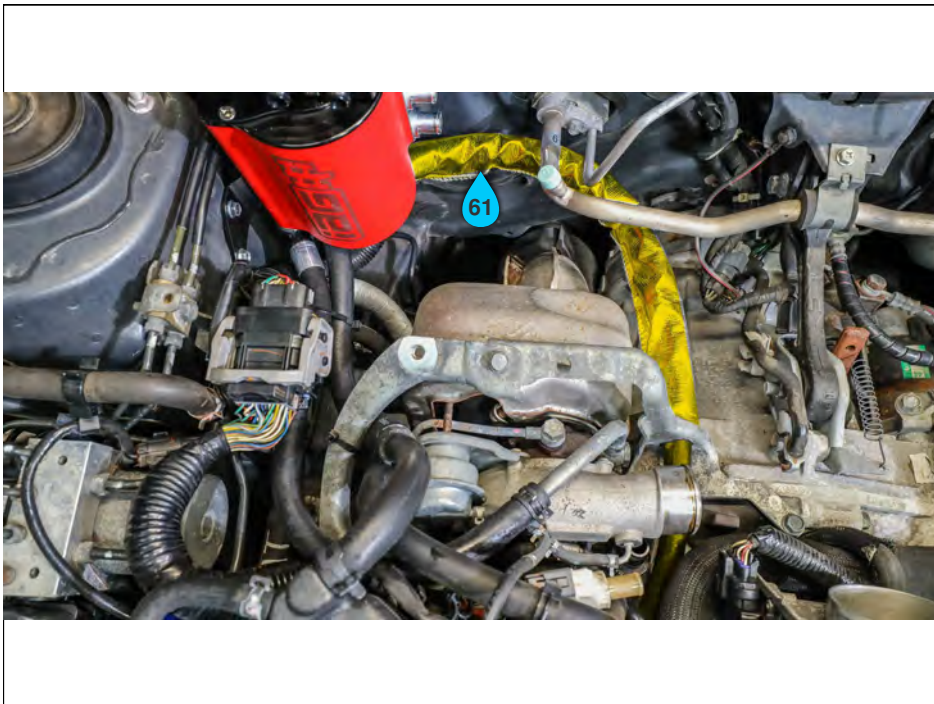
- 59 Route the AOS coolant hose as shown, secured with zip ties.



Step 80/121

Numbered annotations (1)

- 60 Attach the AOS coolant hose here using the supplied clamp.



Step 81/121

Numbered annotations (1)

- 61 Route the AOS drain hose as shown.

Step 82/121

Numbered annotations (2)

- 62 Pass the AOS drain hose through the hole in this bracket.
- 63 Measure and mark the length of the drain hose to the Y fitting.

**Step 83/121**

Numbered annotations (1)

- 64 Trim the excess drain hose.



Step 84/121

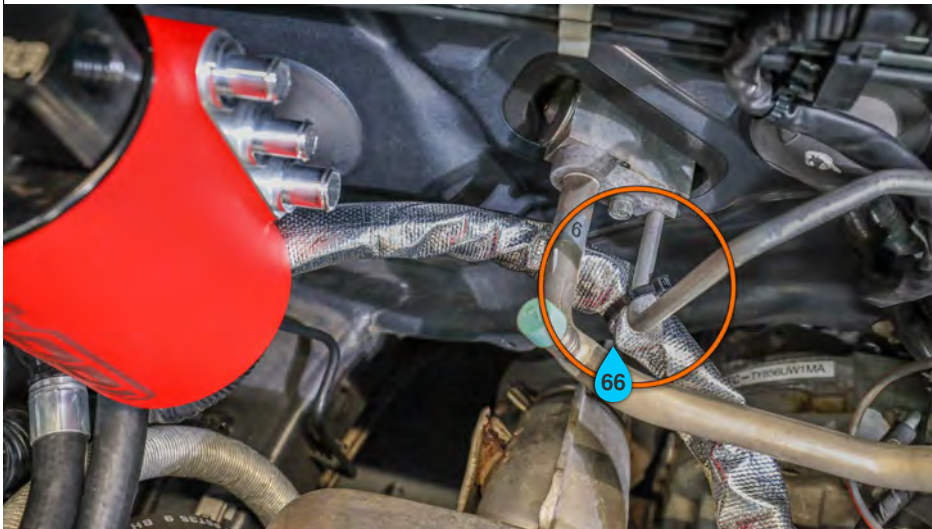
Numbered annotations (1)

- 65 Attach the AOS drain hose here using the supplied clamp.

**Step 85/121**

Numbered annotations (1)

- 66 Secure the drain hose here with a zip tie.





Step 86/121

Numbered annotations (1)

- 67 Measure and cut 3" from the end of the 5/8" AOS vent tube.



Step 87/121

Numbered annotations (1)

- 68 Assemble the hose as shown with the supplied 5/8" 90 degree elbow and the supplied clamps.

Step 88/121

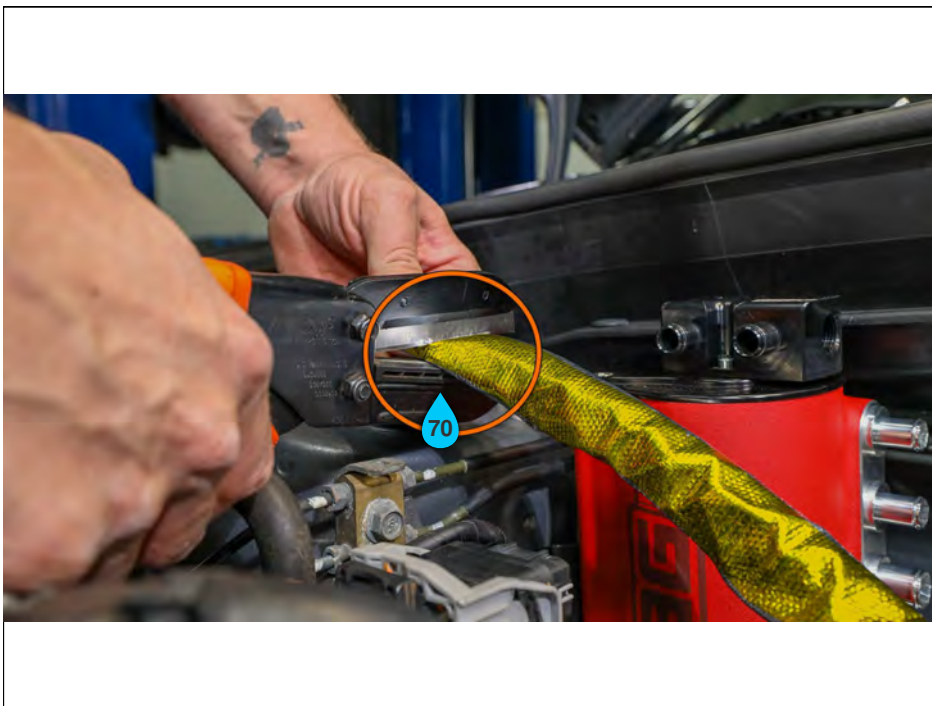
Numbered annotations (1)



- 69 Slide the 16" section of heat sleeve over the 5/8" vent hose and attach the AOS vent hose to the top of the Y fitting with the supplied clamps.

Step 89/121

Numbered annotations (1)



- 70 Measure and trim the AOS vent hose to length.

Step 90/121

Numbered annotations (1)

- 71 Attach the AOS vent hose here using the supplied clamp.

**Step 91/121**

Numbered annotations (1)

- 72 Locate the AOS PCV hose (This hose has a white PCV valve in the middle and an NPT fitting on one end.) Screw the NPT fitting into the AOS here. NPT threads are tapered. Do not over tighten.



Step 92/121

Numbered annotations (1)

- 73 Routing of the AOS PCV hose.

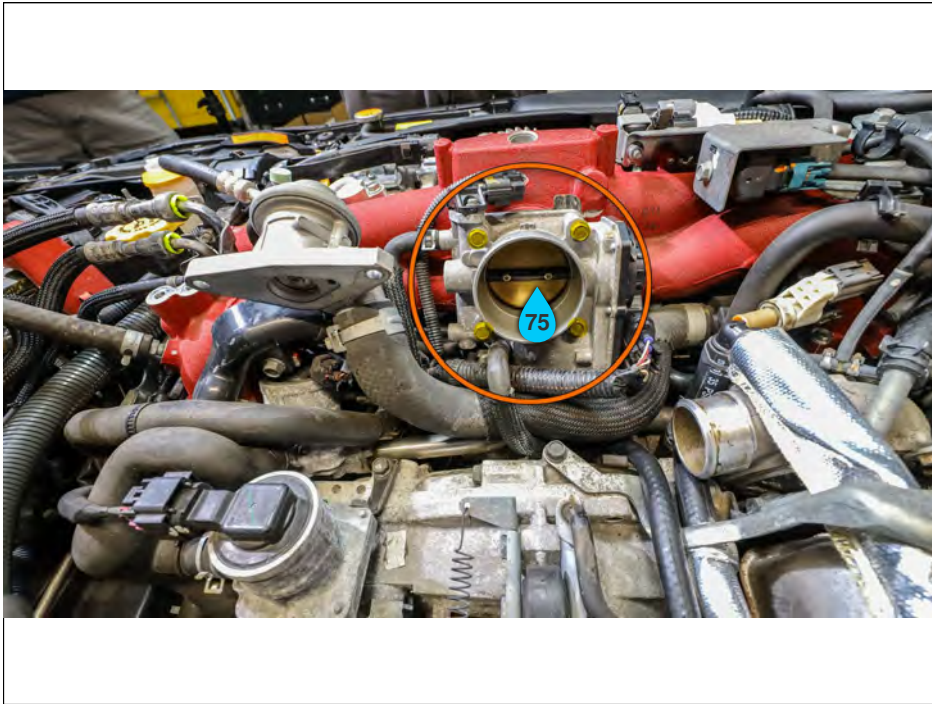


Step 93/121

Numbered annotations (1)

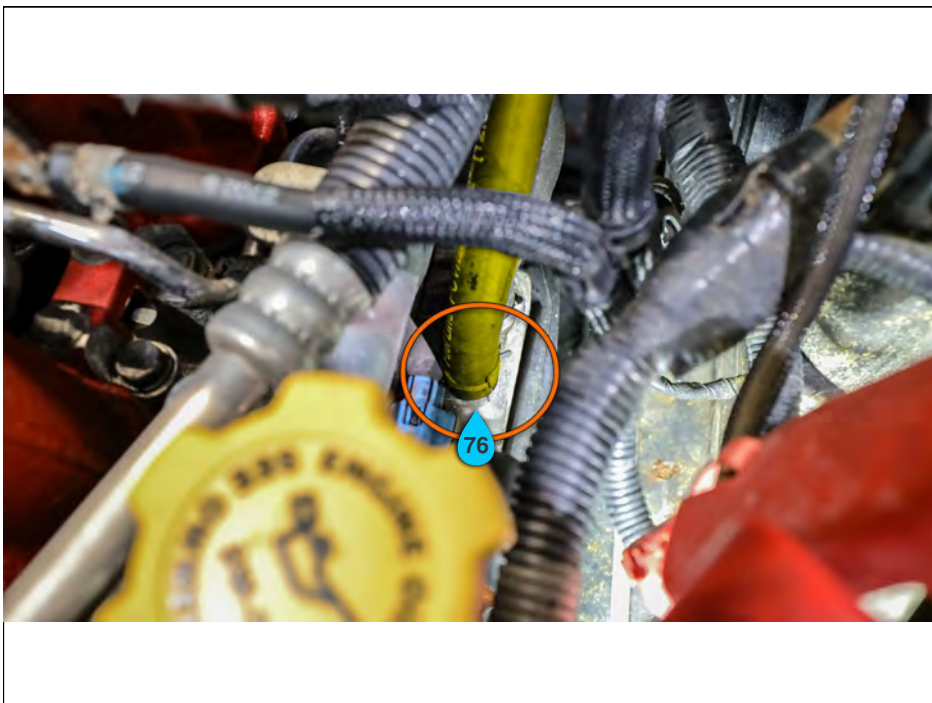
- 74 Attach the other end of the AOS PCV hose here using the supplied clamp.



**Step 94/121**

Numbered annotations (1)

- 75 Reinstall the throttle body.

**Step 95/121**

Numbered annotations (1)

- 76 Attach the 74" long 1/2" AOS valve cover vent hose to the driver side valve cover using the supplied clamp.

Step 96/121

Numbered annotations (1)

- 77** Route the AOS valve cover vent hose as shown, measure to length.

**Step 97/121**

Numbered annotations (1)

- 78** Trim excess valve cover vent hose. Reserve the excess hose.



Step 98/121

Numbered annotations (1)

- 79 Attach the AOS vent hose here using the supplied clamp.

**Step 99/121**

Numbered annotations (1)

- 80 Attach the reserved 1/2" AOS valve cover vent hose to the passenger side valve cover using the supplied clamp.



Step 100/121



Step 101/121



Numbered annotations (1)

- 81 Slide the 12" section of heat sleeve over the valve cover vent hose. Route the vent hose as shown and measure for length.

Step 102/121

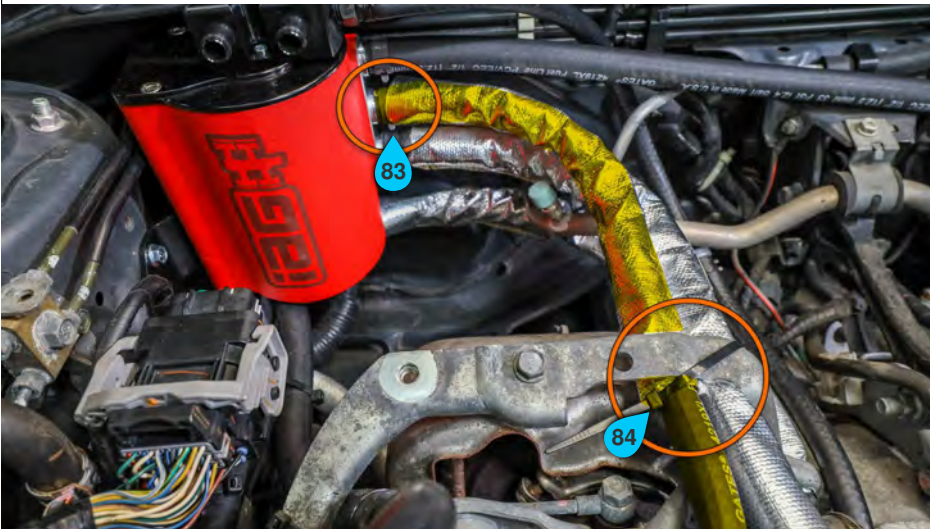
Numbered annotations (1)

- 82 Trim the excess valve cover vent hose.

**Step 103/121**

Numbered annotations (2)

- 83 Attach the vent hose here using the supplied clamp.
- 84 Secure the vent hose here using a zip tie.



Step 104/121

Numbered annotations (1)

- 85** Measure and cut 2" from the end of the 44" AOS breather hose.

**Step 105/121**

Numbered annotations (1)

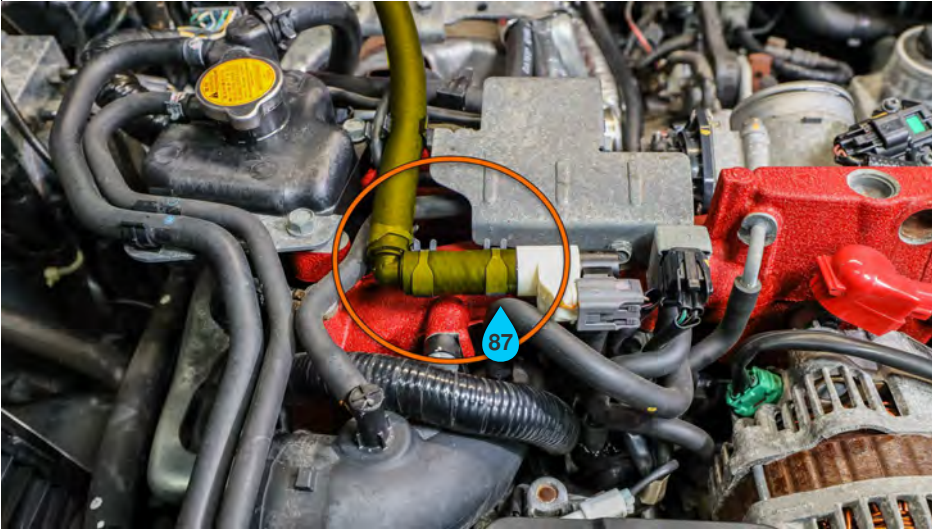
- 86** Assemble the 1/2" AOS breather hose as shown using the supplied 90 degree elbow and clamps.



Step 106/121

Numbered annotations (1)

- 87 Attach the breather hose here using the supplied clamp.

**Step 107/121**

Numbered annotations (1)

- 88 Route the AOS breather hose as shown.



Step 108/121

Numbered annotations (1)

- 89** Measure and trim the excess breather hose. Reserve the excess hose.

**Step 109/121**

Numbered annotations (1)

- 90** Measure and trim 2" from the reserved AOS breather hose.



Step 110/121

Numbered annotations (1)

- 91 Assemble the breather hose as shown using the supplied 90 degree fitting and clamps.

**Step 111/121**

Numbered annotations (1)

- 92 Attach the AOS breather hose here using the supplied clamp.



Step 112/121

Numbered annotations (1)

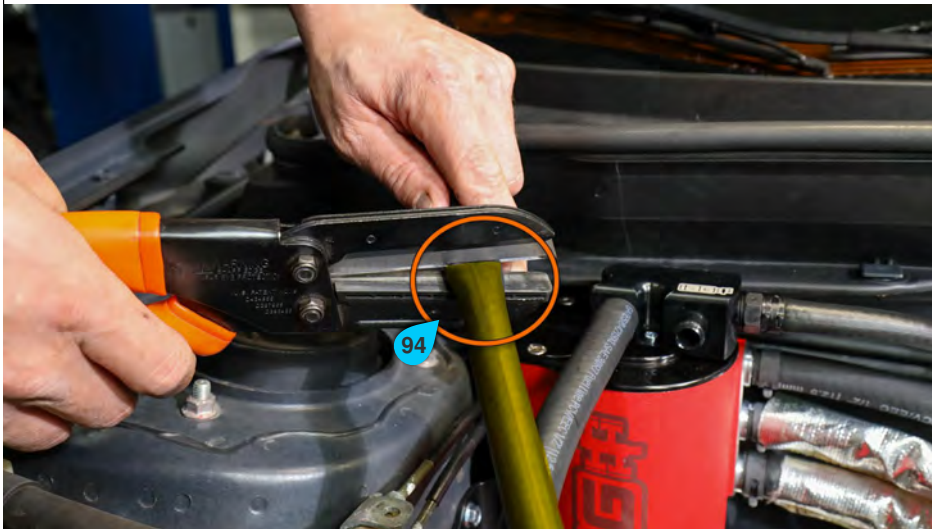
- 93 Measure the AOS breather hose to length.



Step 113/121

Numbered annotations (1)

- 94 Trim excess AOS breather hose.



Step 114/121

Numbered annotations (1)

- 95 Attach both AOS breather hoses here using the supplied clamps.



Step 115/121

Numbered annotations (1)

- 96 Routing of AOS vent hoses.



Step 116/121

Numbered annotations (1)

- 97 Reinstall the intercooler.



Step 117/121

Numbered annotations (1)

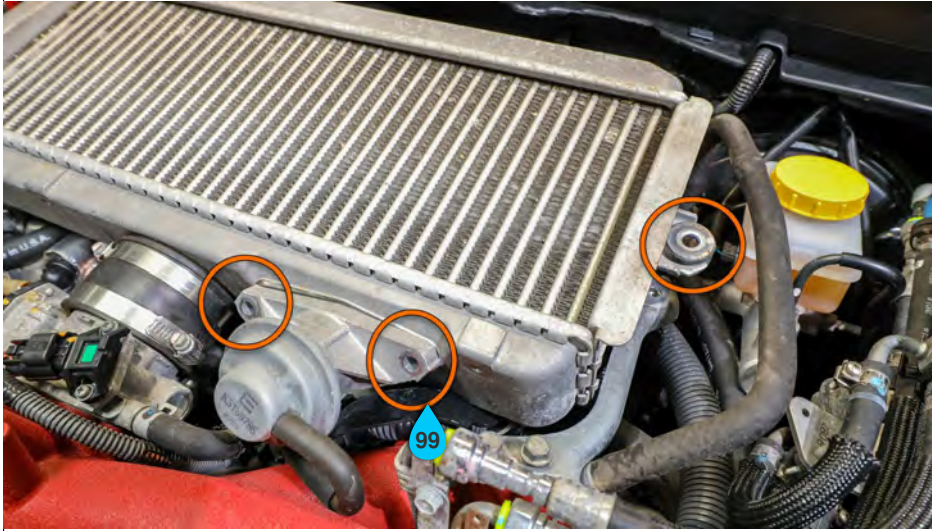
- 98 Install this bolt.



Step 118/121

Numbered annotations (1)

99 Reinstall these bolts.



Step 119/121

Numbered annotations (1)

100 Tighten the intercooler clamps.



**Step 120/121****Step 121/121**

Numbered annotations (1)

- 101** 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.