

LAG Air / Oil Separator (AOS)



INSTRUCTIONS FOR 2015-2017 SUBARU WRX STI



IAG-ENG-7186 IAG Air / Oil Separator (AOS)

Fitment:

2015-2017 Subaru Impreza WRX STI EJ 2.5L TC

Part # IAG-ENG-7186BK, IAG-ENG-7186RD, IAG-ENG-7186NY, IAG-ENG-7186GT, IAG-ENG-7186WRB, IAG-ENG-7186HP

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 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.



These instructions are specific to IAG-ENG-7186 for installation on 2015-2017 WRX STI models. Please read through the entire instruction manual before beginning work on your vehicle. You may not use all parts in this kit depending on the application. If you encounter any problems or have questions please stop and contact our support team at 410-840-3555 or email us at support@iagperformance.com for help.



- 1** AOS Body Assembly
- 2** PCV Hose Assembly
- 3** 38" Valve Cover Vent Hose (Drivers Side)
- 4** 28" Valve Cover Vent Hose (Pass Side)
- 5** 27" Drain Hose
- 6** x2 19" Coolant Hoses
- 7** 16.5" Breather Hose
- 8** 18" Breather Hose
- 9** 12" Heat Sleeve



- 10** 16" Heat Sleeve
- 11** Inlet Fitting for PCV Sensor
- 12** Block Off Cap
- 13** 1/2" Nylon Union
- 14** PCV Vent Hose Extension
- 15** Y Fitting for Block Breather
- 16** Yellow 28mm Clamp
Purple 29mm Clamp
- 17** Wiring Harness
Relocation Bracket
- 18** AOS Mounting Bracket



19 x2 12mm Bolts

20 x3 10mm Bolts

21 Hose Clamps

22 Zip Ties

23 Block Vent Hose

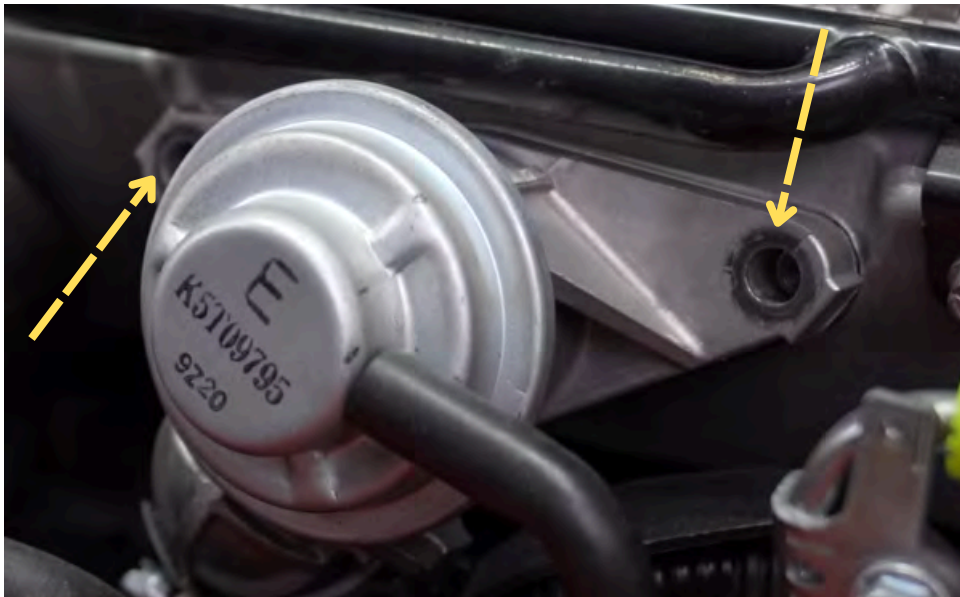
24 Block Drain Hose

Tools needed: 10mm wrench, 12mm socket, 8mm nut driver, socket, razor, all purpose lube, needle nose pliers, pipe/hose cutters, pick tool, zip ties and hose clamps.



Step 1

Using a 10mm wrench, remove the negative battery terminal.



Step 2

Using a 12mm socket, remove the two bolts on the BPV.



Step 3

Use a pick to loosen the clamps and disconnect the PCV lines.

Two on the passengers side and one in the drivers side.



Step 4

Using a 12mm socket, remove the bracket bolts and bracket on drivers side.



Step 5

Using a 8mm nut driver, loosen the two worm clamps on the throttle and Y pipe.



Step 6

Maneuver the intercooler away from the throttle body and remove.



Step 7

Loosen the clamp on the PCV hose with a pick and remove hose.



Step 8

Loosen clamp on rubber coupler with a nut diver.

Remove coupler from throttle body.



Step 9

Using a 10mm socket remove the four bolts attached to the throttle body.

Remove throttle body.



Step 10

Using needle nose pliers loosen clamp and disconnect the vacuum line.



Step 11

Press tab on connector and pull to remove PCV connection.



Step 12

IF the breather hose does not come off with PCV assembly use a pick to remove the lower clamp.

Then use a pair of needle nose pliers to pull up and off.



Step 12 pt.2



Step 13

Loosen the clamp with a pick.

Remove the PCV connector from assembly.



Step 14

Reinstall the PCV connector.



Step 15

Apply a small amount of lube to the fittings of the new breather assembly.

Tighten the top clamp, but keep the bottom clamp loose.

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Step 16

Install the new breather assembly and tighten the bottom clamp once installed.



Step 17

Using a pair of needle nose pliers release the clip attaching the wiring connector on passenger side strut tower.



Step 18

Press on retaining clip to release the wiring harness and remove harness from bracket.



Step 19

Use a razer blade to carefully cut the tape holding the harness together.



Step 20

Remove the bracket and bolts from the strut tower with a 10mm socket.



Step 21

Use needle nose pliers to release the clip that is attached to the wiring harness.



Step 22

Use a razor blade to carefully trim electrical tape to release the branch of the harness.



Step 23

Apply a small amount of lube to the two AOS coolant lines.



Step 24

Attach the two 19" coolant lines to the AOS.



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



Step 25

Apply a small amount of lube to the drain hose.



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



Step 26

Attach the drain hose to the AOS.



Step 27

Using the supplied hardware install the bracket to the AOS.

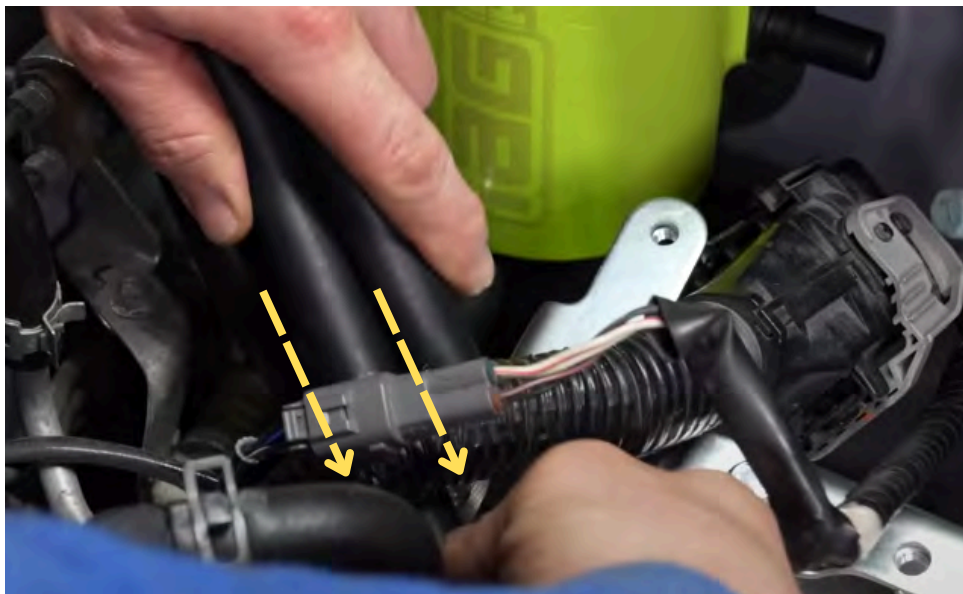
Torque bolts to 7 ft/lbs.

18



Step 28

Install the bracket and AOS onto the strut tower using a 10mm wrench.



Step 29

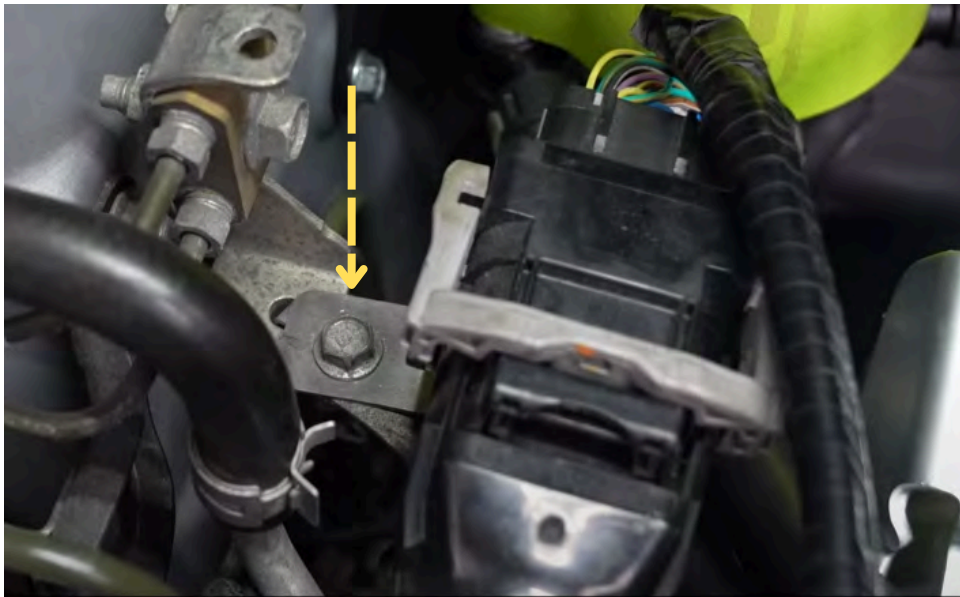
Route the two coolant lines under the main wiring harness.



Step 30

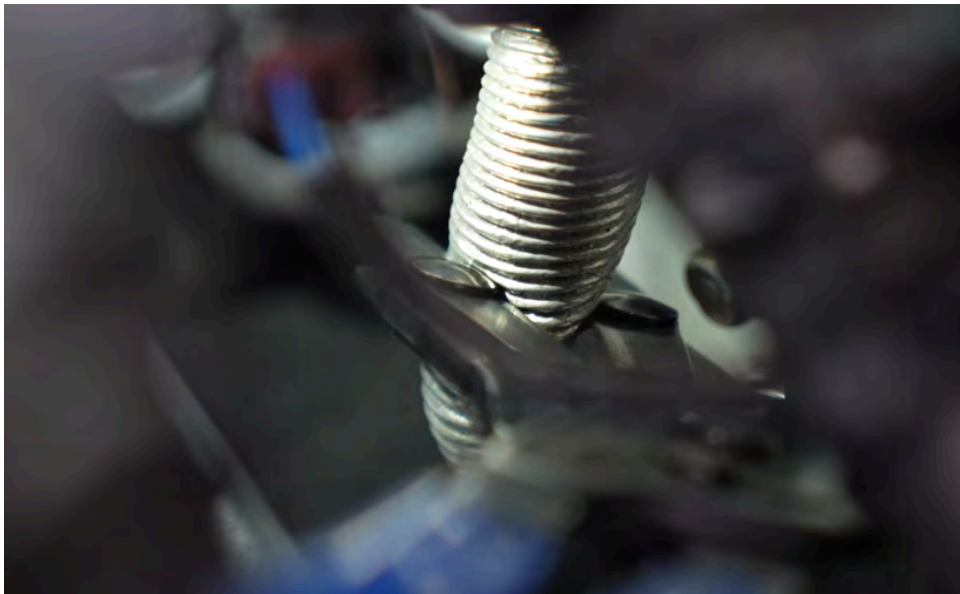
Attach the harness relocation bracket to wiring harness.

17



Step 31

Install the harness relocation bracket.



Step 32

Using hose clamp pliers, clamp the turbo coolant line.



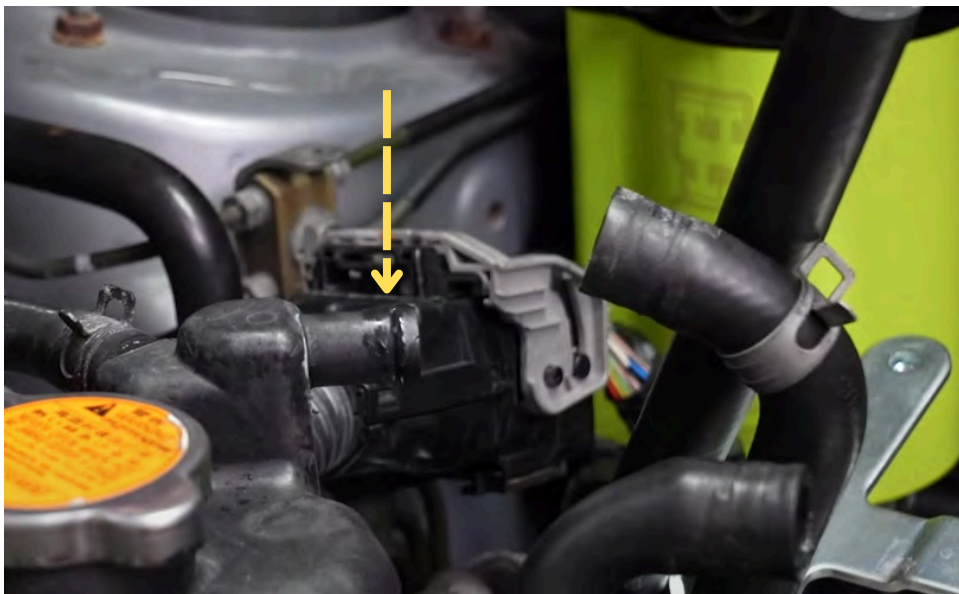
Step 33

Mark where to cut the new coolant line from AOS. Use the upper expansion tank port as a reference.



Step 34

Cut excess coolant line.



Step 35

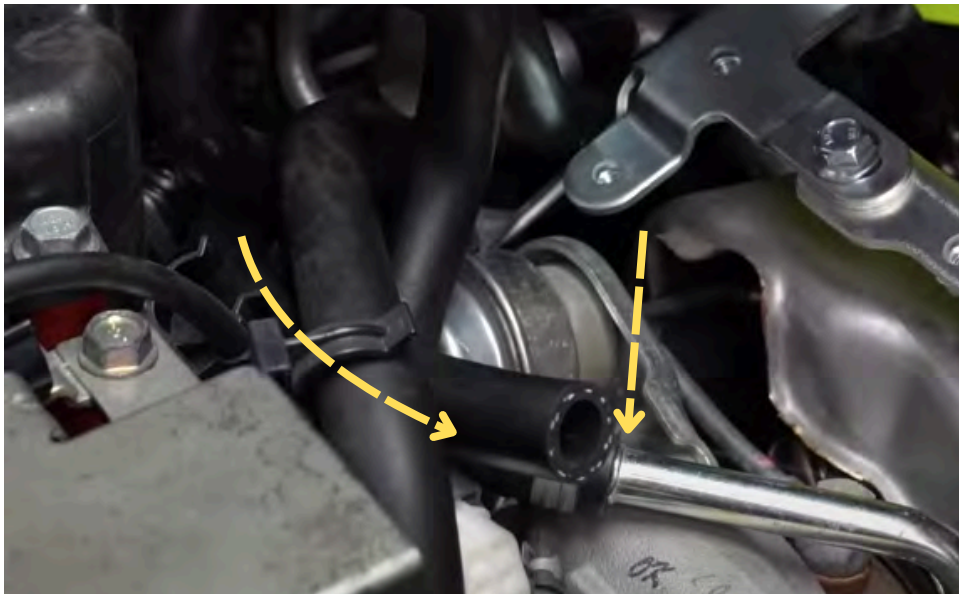
Use pliers to loosen the clamp and remove the OEM coolant line.

Note: A small amount of coolant may come out of line.



Step 36

Use the supplied clamp on new coolant line and install line to OEM port.



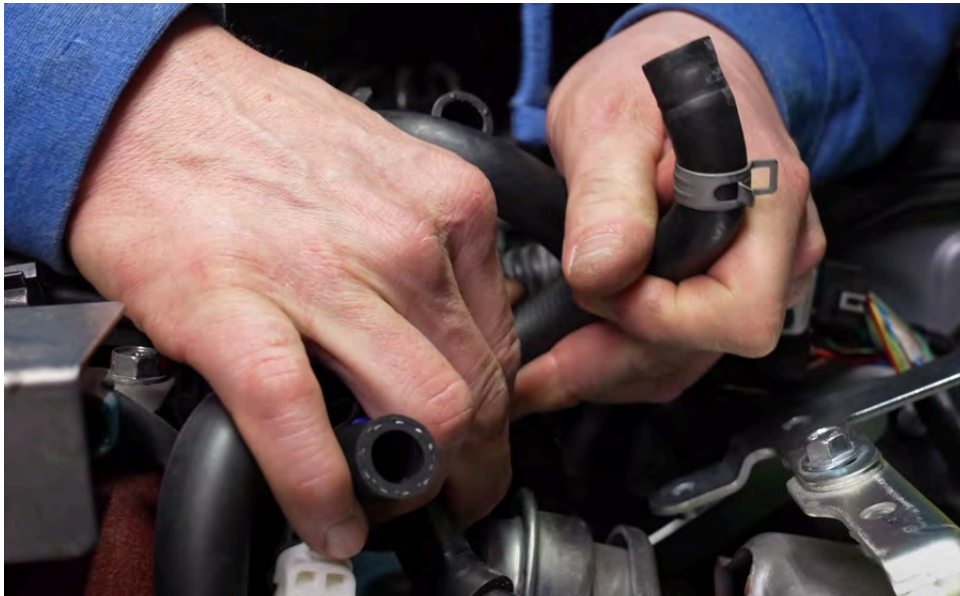
Step 37

Route other coolant line under hose and line up with OEM coolant line on turbo hard pipe.



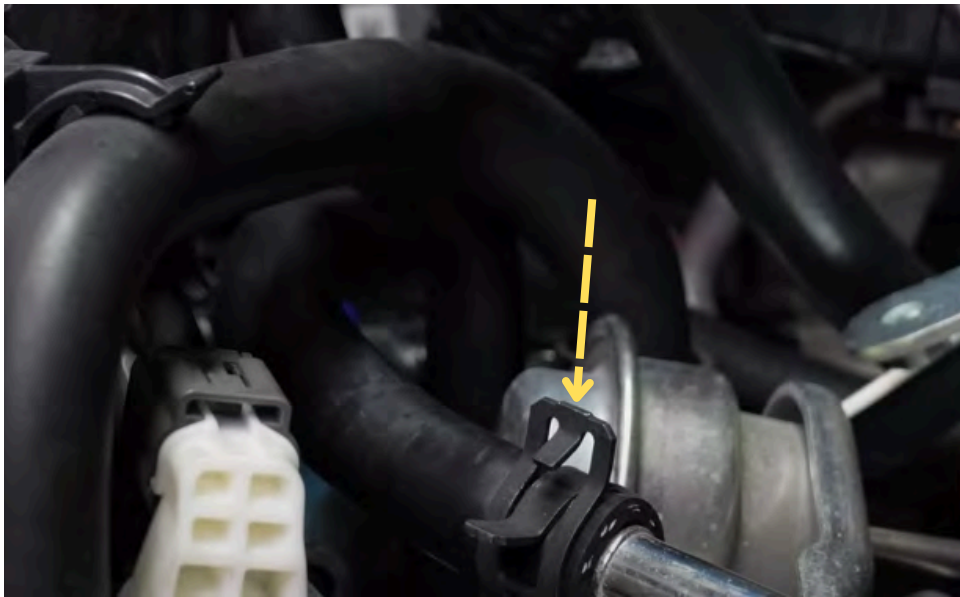
Step 38

Once marked and lined up cut excess coolant hose.



Step 39

Loosen clamp and remove OEM coolant line from turbo hard pipe.



Step 40

Install the new coolant line with new clamp.



Step 41

Remove the coolant hose clamp from step 32.



Step 42

Secure both coolant lines to the bracket with a zip tie.

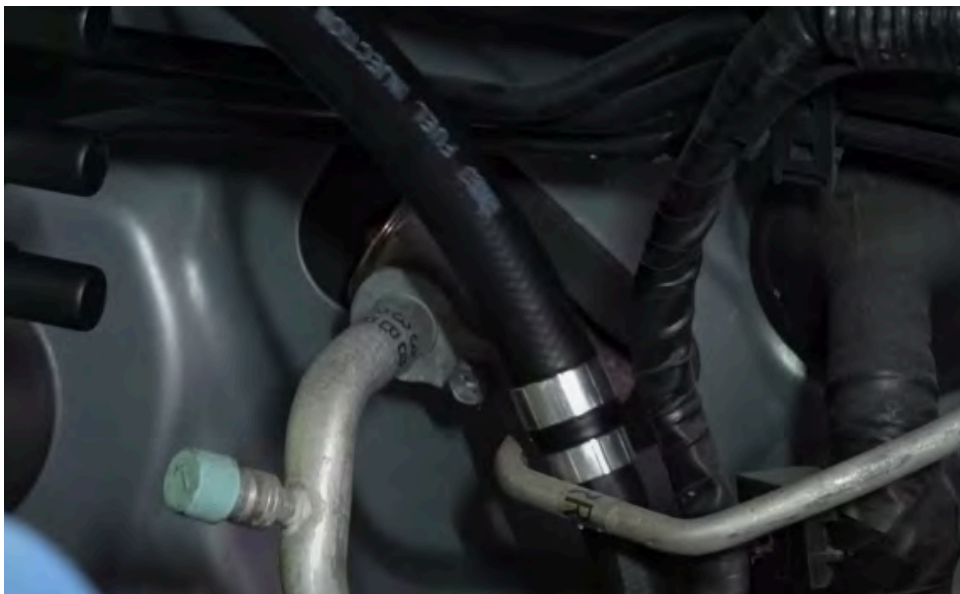
Cut off excess zip tie.



Step 43

Apply a small amount of lube to the PCV hose.

2



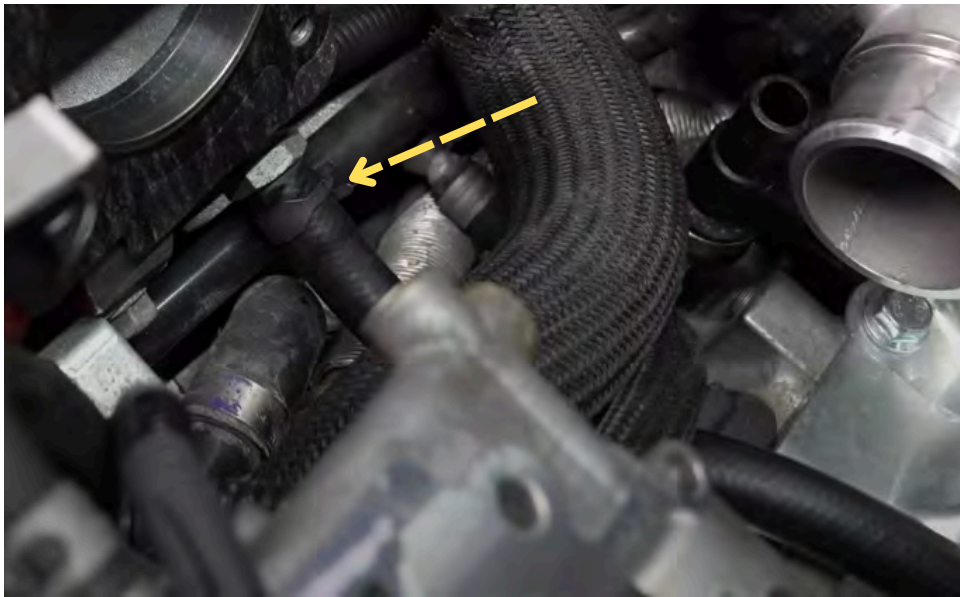
Step 44

Route the hose behind the AC hard line.



Step 45

Install the PCV hose to the top of AOS can.



Step 46

Route top PCV line from AOS to nipple on the intake manifold.

Install clamp to secure.

Reference step 10.



Step 47

Reinstall the throttle body with four 10mm bolts.

With a torque wrench tighten bolts to OEM specs.



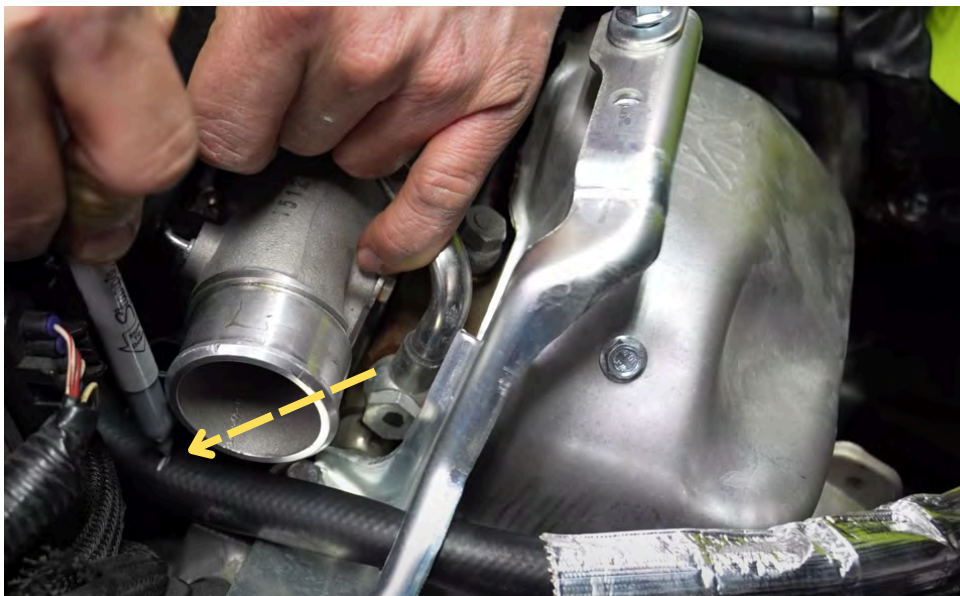
Step 48

Slide the 12 inch piece of heat sleeve over the drain hose.



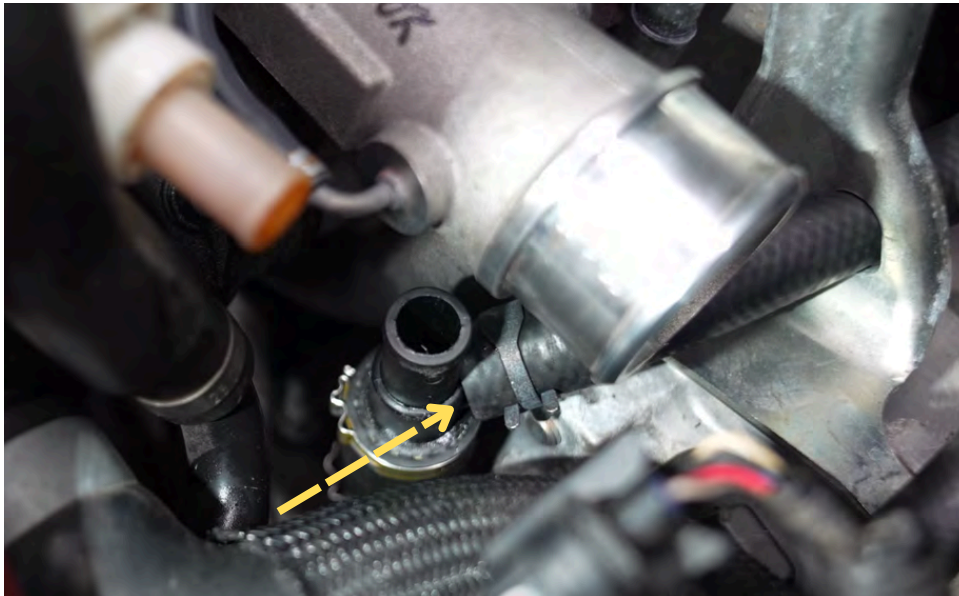
Step 49

Route the drain hose through bracket as shown.



Step 50

Measure, mark and cut off the excess length from hose.



Step 51

Route drain line back through the bracket and install onto breather assembly.

Slide clamp onto drain line and secure.

Reference step 49.

Note: Make sure drain hose is at a downward slope for proper drainage.



Step 52

Install supplied clamp to 90 degree elbow on hose.

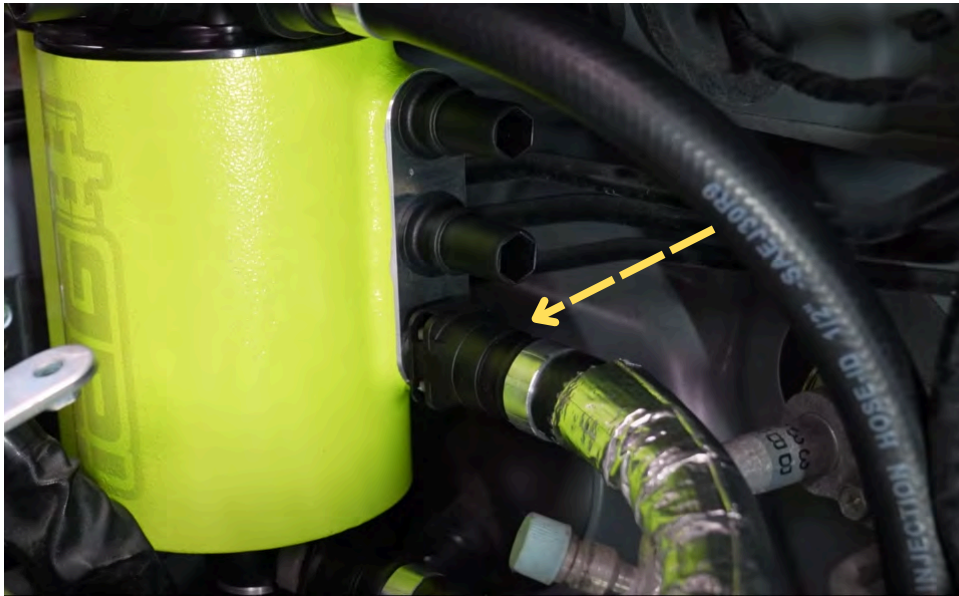
Apply a small amount of lube to other end.



Step 53

Route the hose under heat shield bracket.

Make sure 90 degree fitting is not routed towards the AOS.



Step 54

Connect the hose to bottom port of AOS can.



Step 55

Install 90 degree vent hose fitting to top of breather hose.

Use supplied clamp to secure.



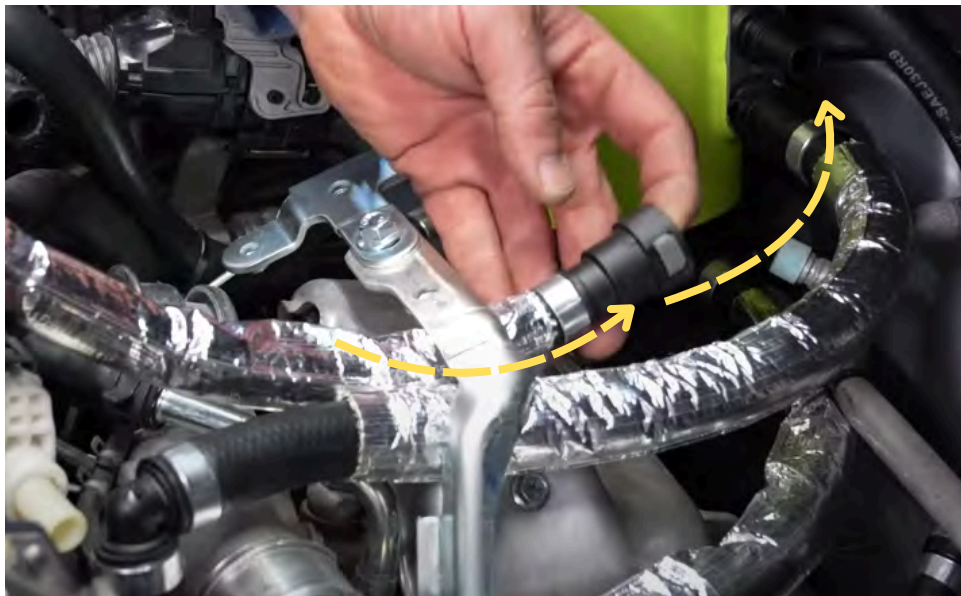
Step 56

Install heat sleeve on 28 inch vent hose.

Apply a small amount of lube to the fitting.

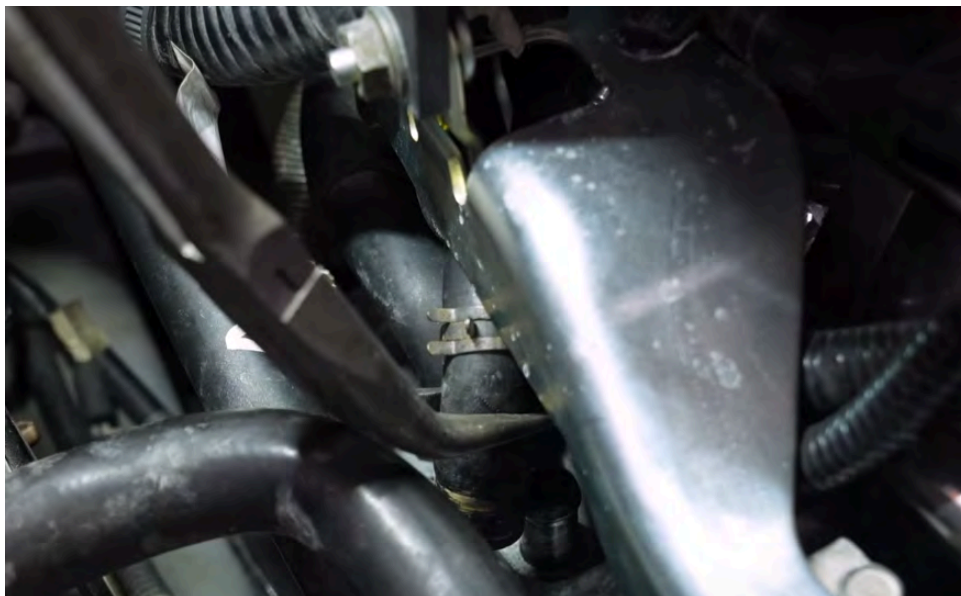
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Step 57

Route hose under heat shield bracket and install to middle AOS port.



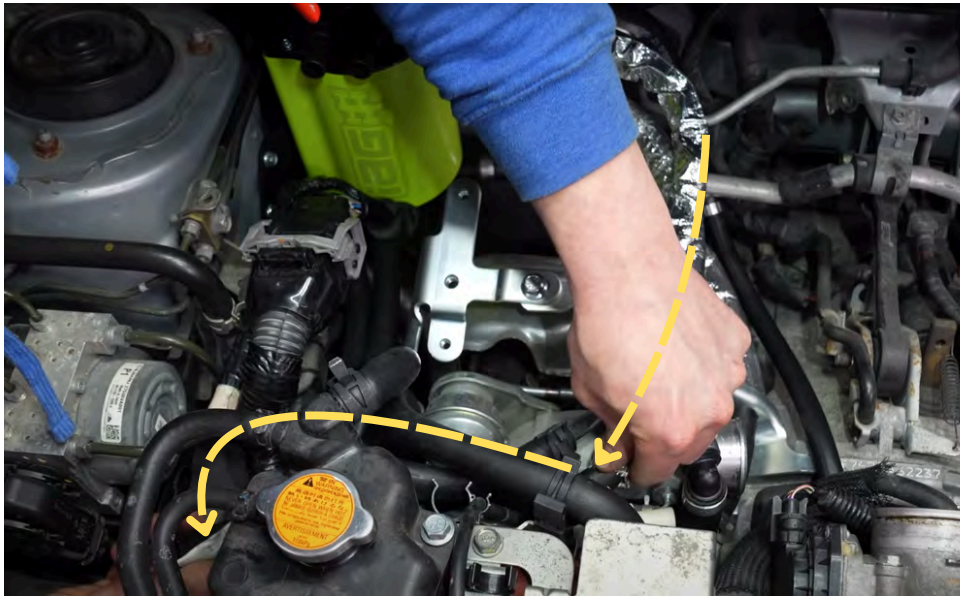
Step 58

Using needle nose pliers to loosen clamp and remove hose on passenger side valve cover.

Reference step 3 for first part of vent hose removal.



Step 58 pt.2



Step 59

Route the AOS vent hose under the coolant line.



Step 60

Install valve cover hose to the passenger side valve cover vent and secure with supplied clamp.

Reference step 58.



Step 61

Secure the two lines together with zip ties.

Cut excess zip tie.



Step 62

Apply a small amount of lube to fitting on 38 inch hose.



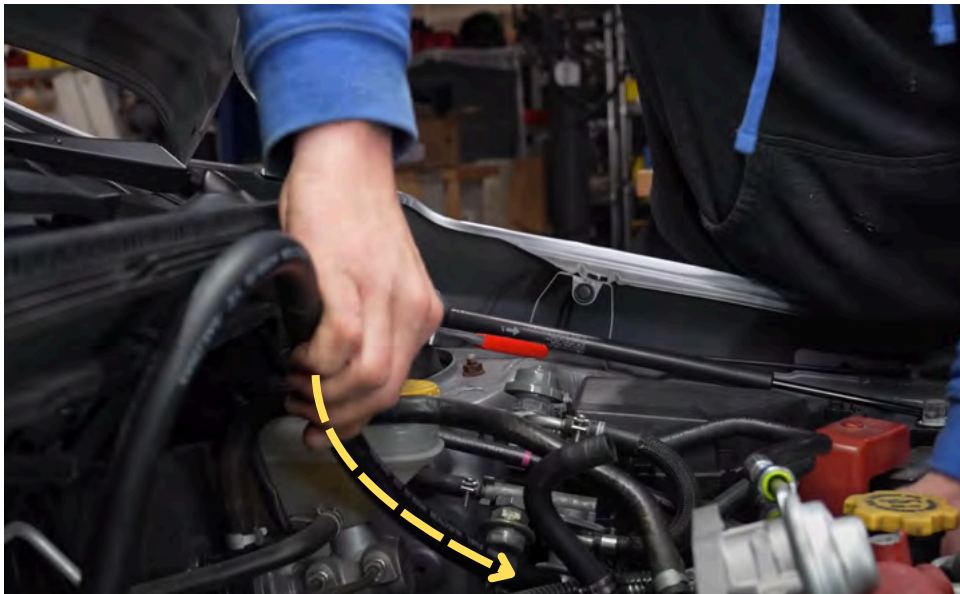
Step 63

Install the fitting to the top side port on the AOS.



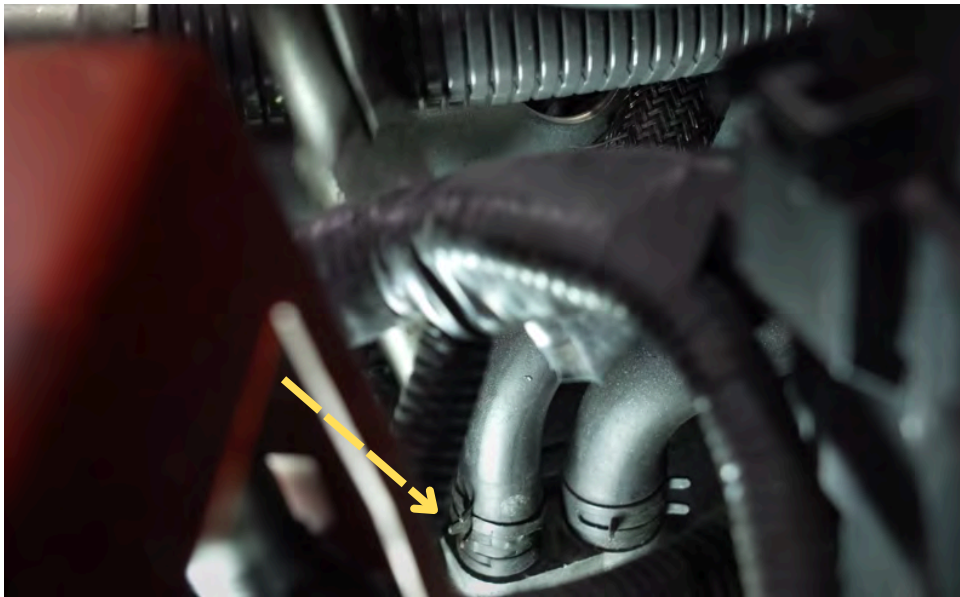
Step 64

Use pliers to attach the supplied clip to hose.



Step 65

Route new vent hose to the drivers side valve cover.



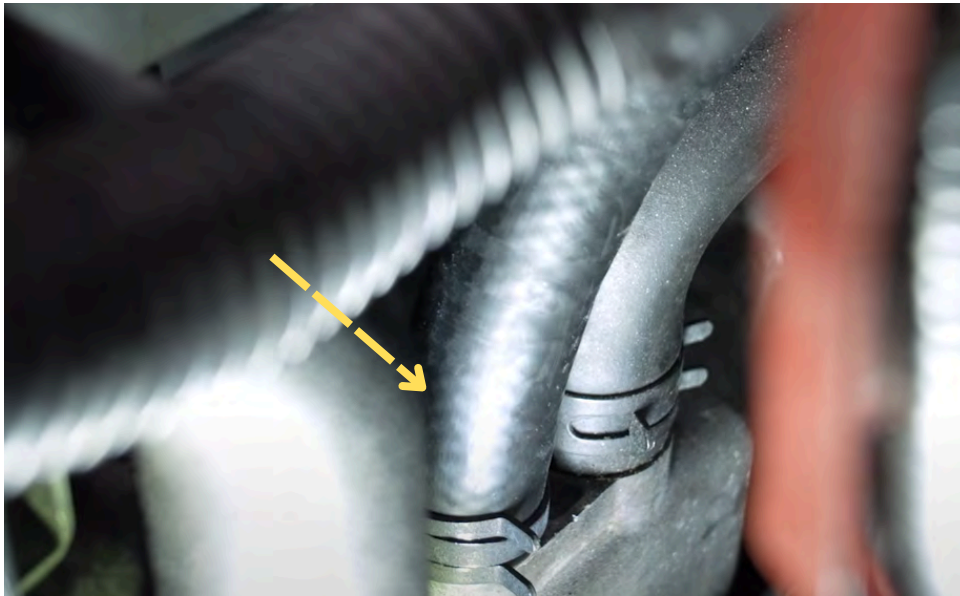
Step 66

Loosen clamp and remove the OEM vent hose.

Reference step 3 for first part of vent hose removal.

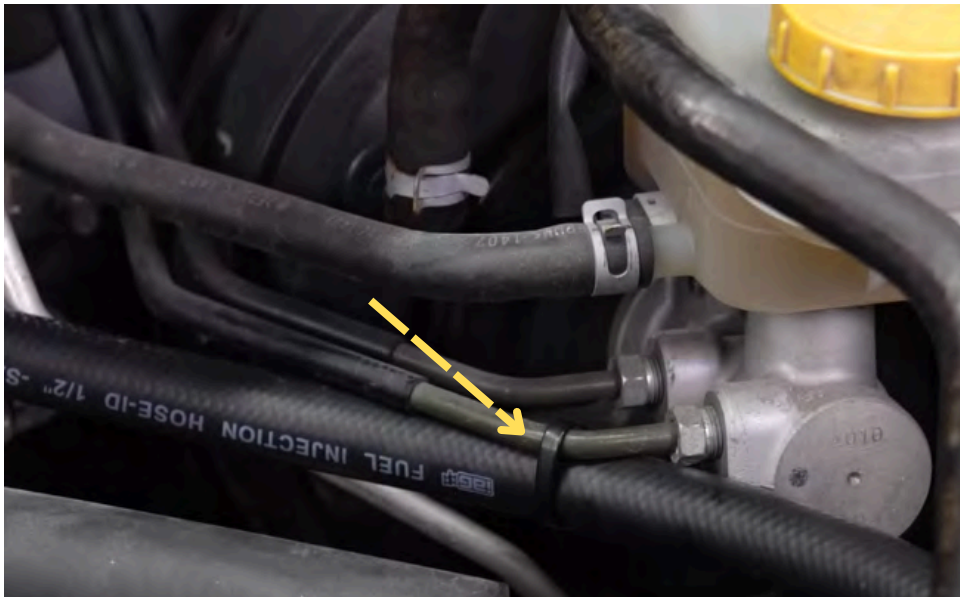


Step 66 pt.2



Step 67

Install new drivers side valve cover hose and secure with supplied clamp.



Step 68

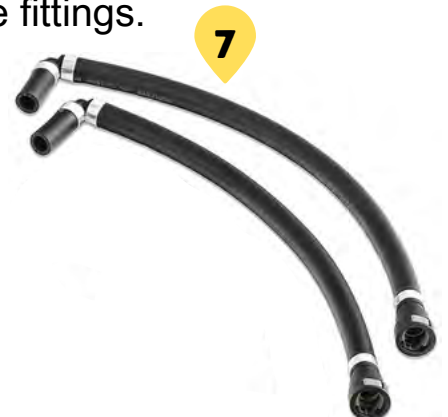
Attach the vent hose to the brake master cylinder with a zip tie.

Cut off excess zip tie.



Step 69

Apply a small amount of lube on one of the 18 inch breather hose fittings.





Step 70

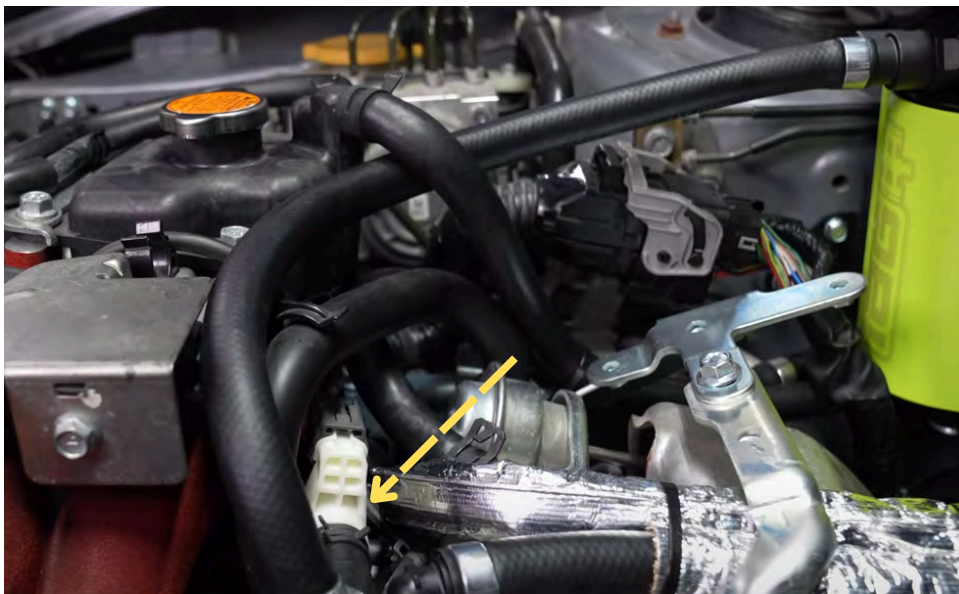
Install the hose to the fitting on the top of the AOS can.



Step 71

Route the hose under the coolant line.

Attach supplied clamp to end of 90 degree fitting.



Step 72

Attach hose to PCV connector and secure the clamp.



Step 73

Apply a small amount of lube to the other 18 inch breather hose fitting.



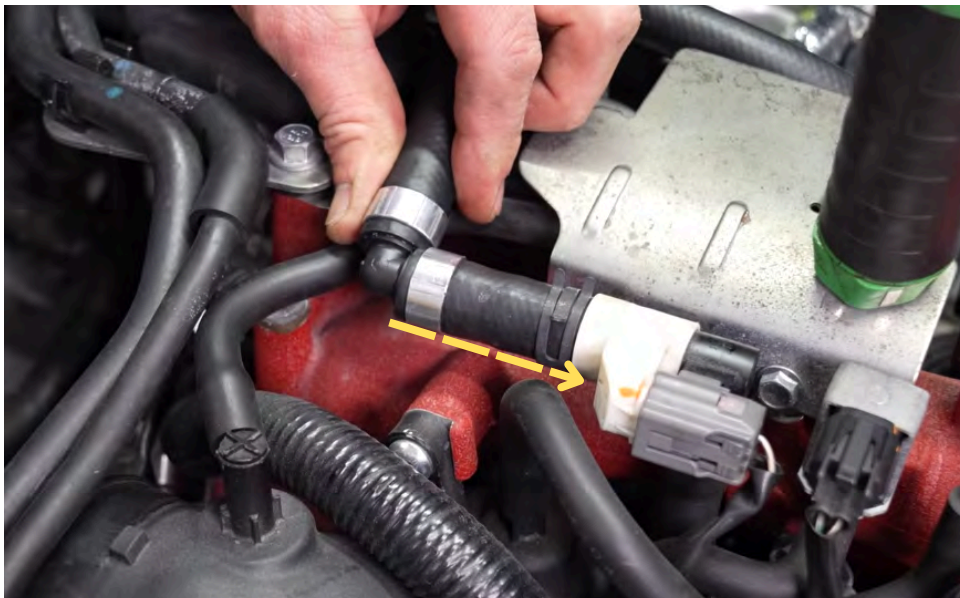
Step 74

Route 90 degree fitting and hose under coolant line.



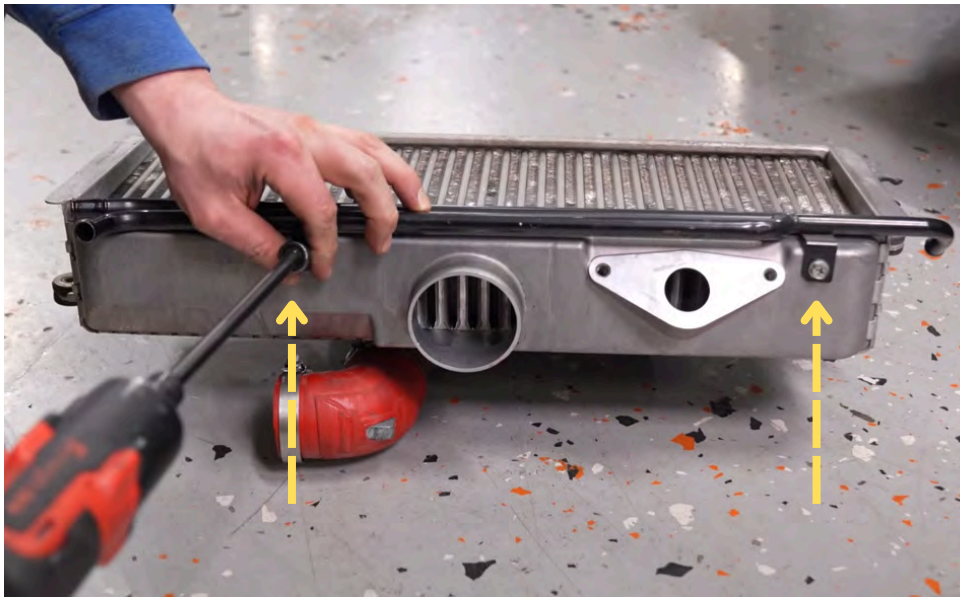
Step 75

Install the hose to the fitting on the top left port of the AOS can.



Step 76

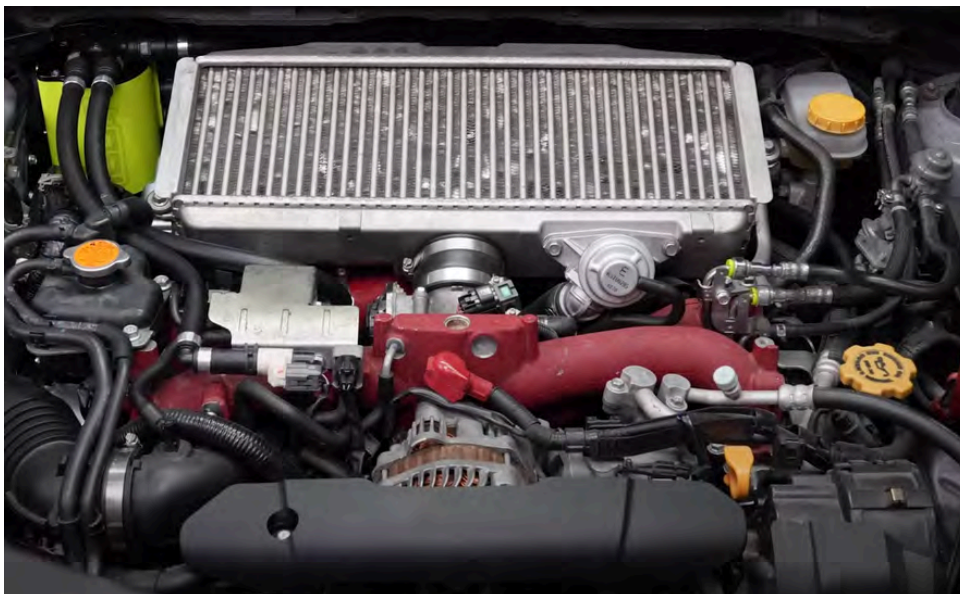
Connect hose to PCV connector and secure with clamp on 90 degree fitting.



Step 77

On intercooler use a 10mm socket to remove the two bolts attached to the crossover pipe.

Remove crossover pipe from intercooler.



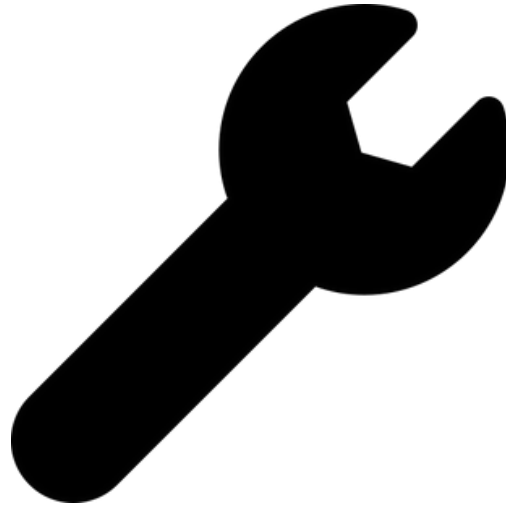
Step 78

Reinstall the intercooler, BPV, Y pipe, throttle body and intercooler brackets.

Step 79



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.



The included PCV valve should be replaced following the factory service and maintenance schedule. Please refer to the factory Subaru service guide for more information.



If you have any questions about the product or install please reach out to support@iagperformance.com or call 410-840-3555