

IAG Air / Oil Separator (AOS)



**INSTRUCTIONS FOR 2015-2016 SUBARU WRX, 2014-2018
FORESTER XT**



IAG-ENG-7187 IAG Air / Oil Separator (AOS)

Fitment:

2015-2016 Subaru WRX FA 2.0L TC

2014-2018 Subaru Forester XT FA 2.0L TC

Part # IAG-ENG-7187BK, IAG-ENG-7187RD, IAG-ENG-7187NY, IAG-ENG-7187GT, IAG-ENG-7187WRB, IAG-ENG-7187HP

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.



Please read through the entire instruction manual before beginning work on your vehicle. You will 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** 31.5" Coolant Line w/ 90 Degree Fitting
- 3** 34" Coolant Line w/ Straight Fitting
- 4** Y Hose
- 5** 41.5" Hose w/ 90 Degree Fitting
- 6** 39" Hose w/ 30 Degree Quick Connect
- 7** 16" Hose w/ 90 Degree Fitting
- 8** 24" Hose w/ 30 and 90 Degree Fitting
- 9** AOS Mounting Bracket



- 10** x2 M4x25mm Socket Head Cap Screws
- 11** x2 M6x1.00x12mm Low Profile Socket Cap Screws
- 12** x3 M6x10mm Allen Head Bolts
- 13** Hose Clamps
- 14** Breather Fitting
- 15** Block Breather
- 16** ECU Relocation Bracket
- 17** Zip Ties

Tools needed: 10mm wrench/allen, 12mm socket, 25mm socket, 8mm nut driver, socket, razor, all purpose lube, needle nose pliers, pick tool, pipe/hose cutters, zip ties



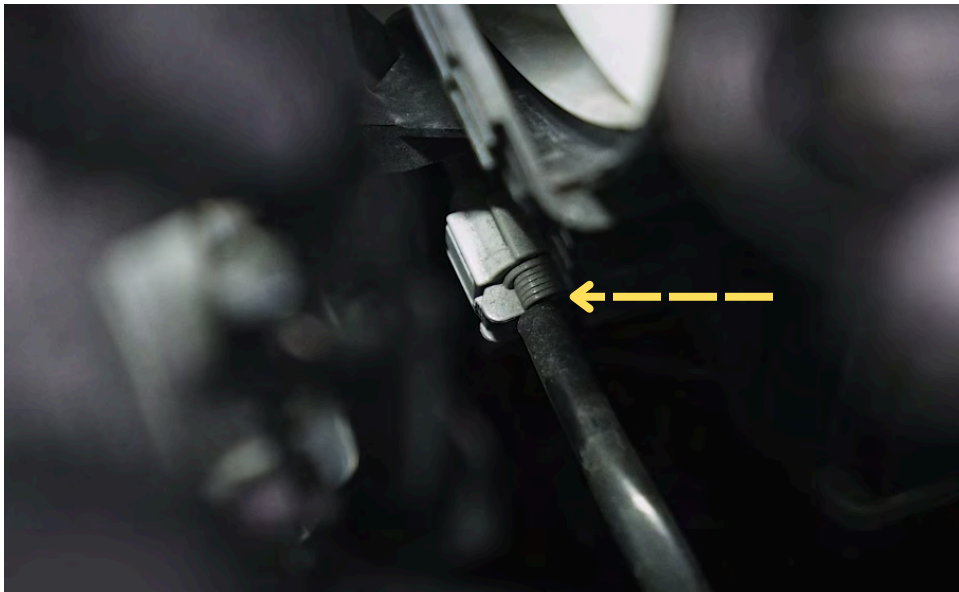
Step 1

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



Step 2

Remove the air intake duct by removing the two front clips.



Step 3

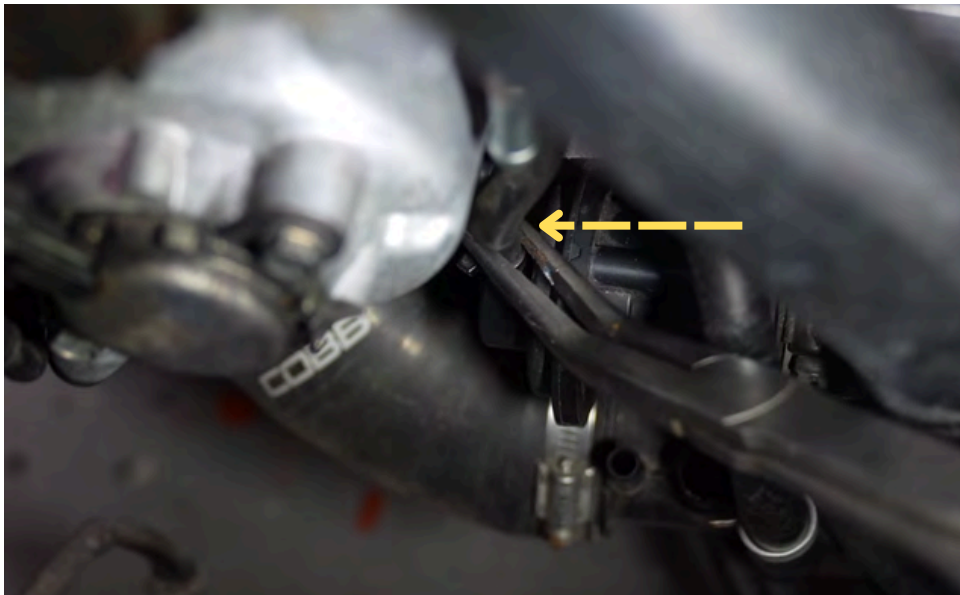
Disconnect passenger side radiator fan wiring harness.



Step 4

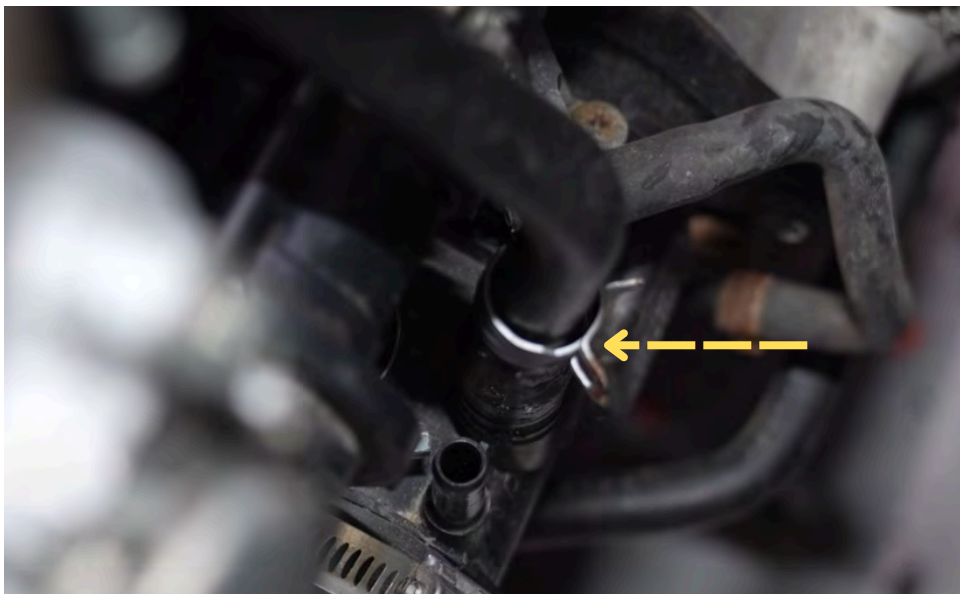
Unscrew the two bolts that secure the radiator fan.

Remove radiator fan.



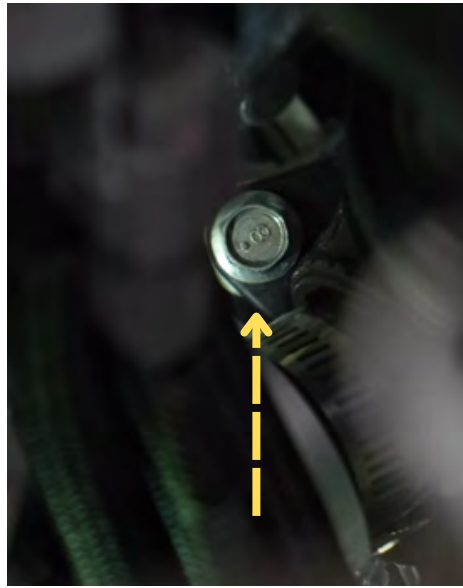
Step 5

Using a pair of needle nose pliers, disconnect the bypass valve vacuum line.



Step 6

With a pair of pliers loosen the clamp on the vent hose and disconnect hose from turbo inlet.



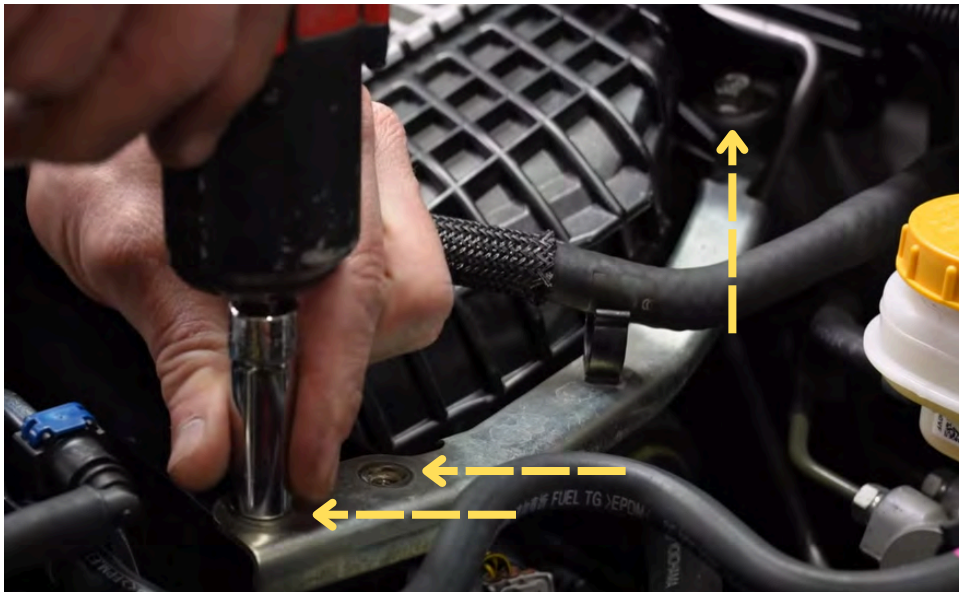
Step 7

Remove hardware securing charge pipe.



Step 8

Loosen the clamp and remove charge pipe.



Step 9

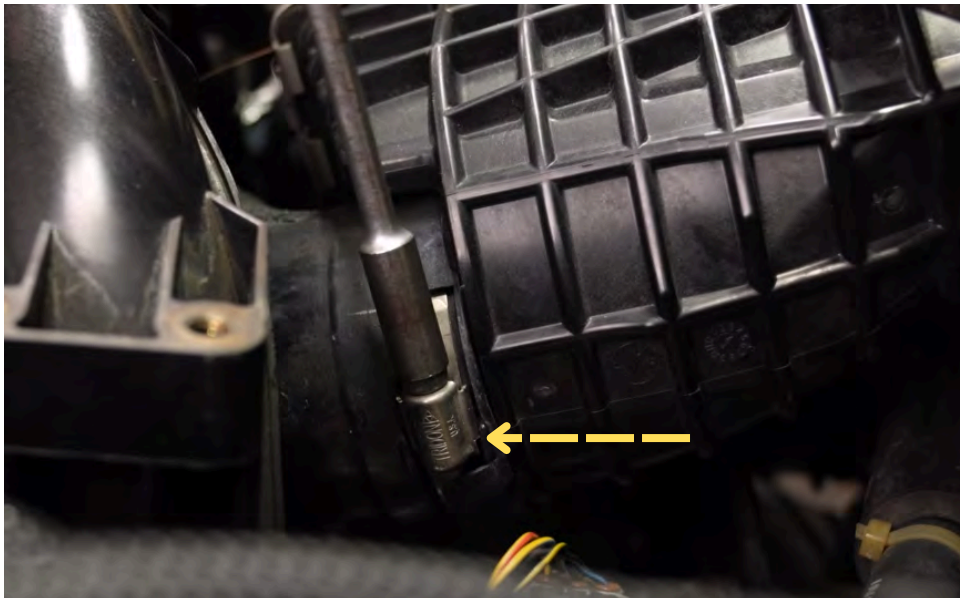
Remove the three intercooler bolts on drivers side with a 12mm socket.

Then remove intercooler bracket.



Step 10

Remove the intercooler bolt on the passenger side with a 12mm socket.



Step 11

Loosen the clamp on the throttle body.



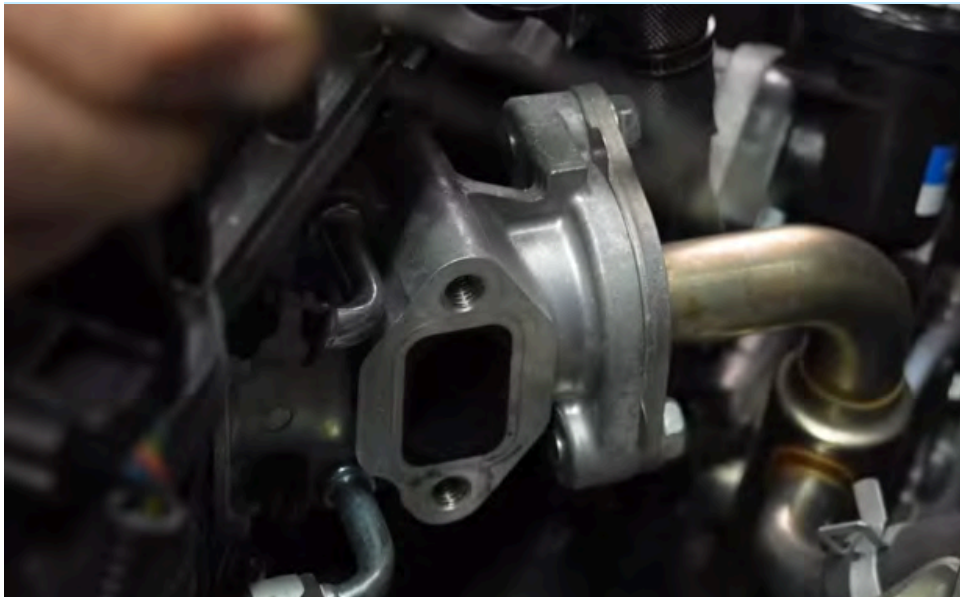
Step 12

Remove the intercooler by pulling up and away from the throttle body.



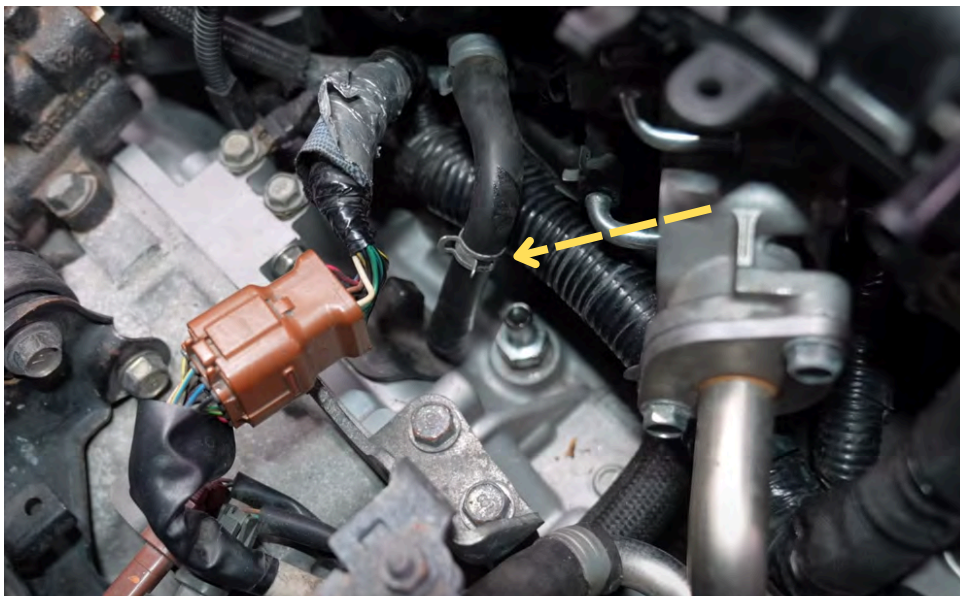
Step 13

Remove the four 12mm bolts that secure the EGR pipe.



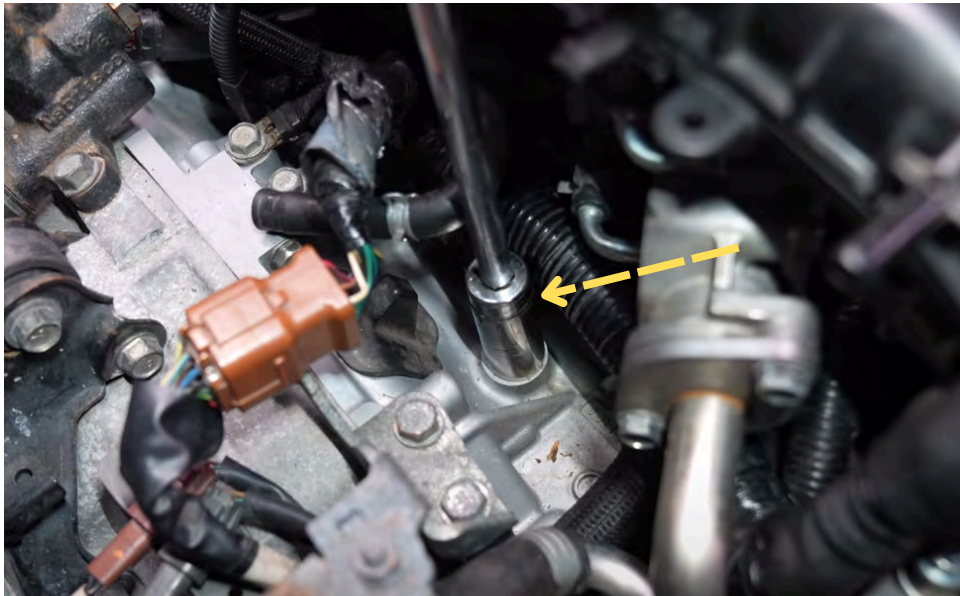
Step 14

Remove EGR pipe.



Step 15

Remove hose going to OEM PCV valve.



Step 16

Remove the OEM PCV fitting from the block.



Step 17

Reinstall the OEM PCV valve into the new fitting.

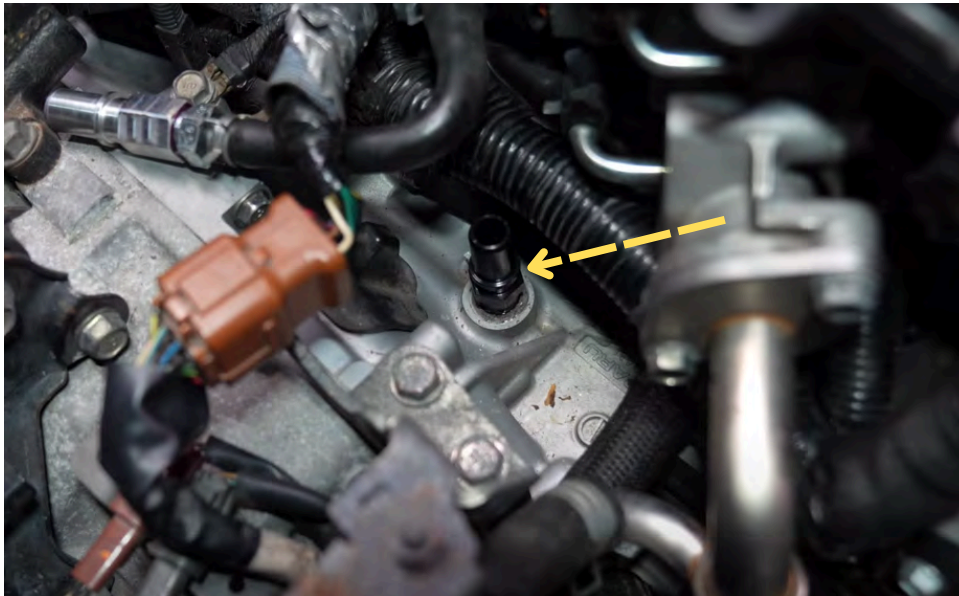
14



Step 18

Install the new fitting into the OEM hose that went to the OEM PCV valve.

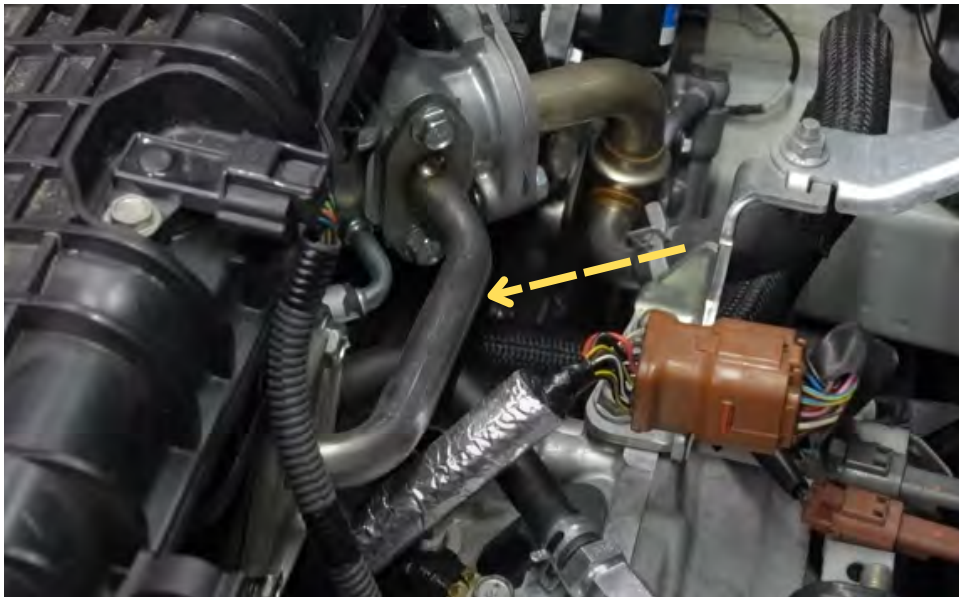
Re-secure the clamp on the breather hose.



Step 19

Install the new block breather and tighten to OEM specs.

15



Step 20

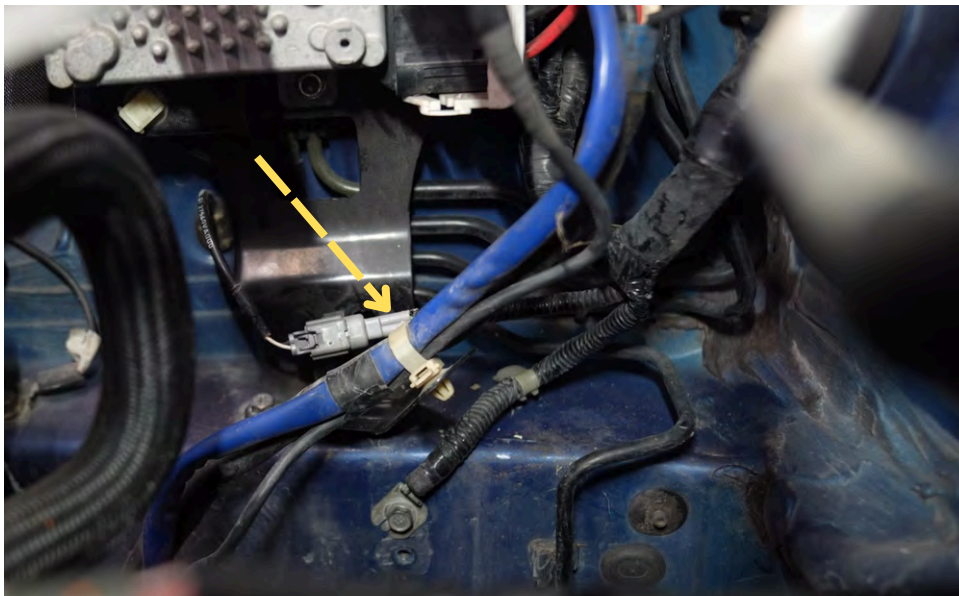
Reinstall the EGR pipe back to the manifold.

Use a torque wrench and tighten to OEM specs.



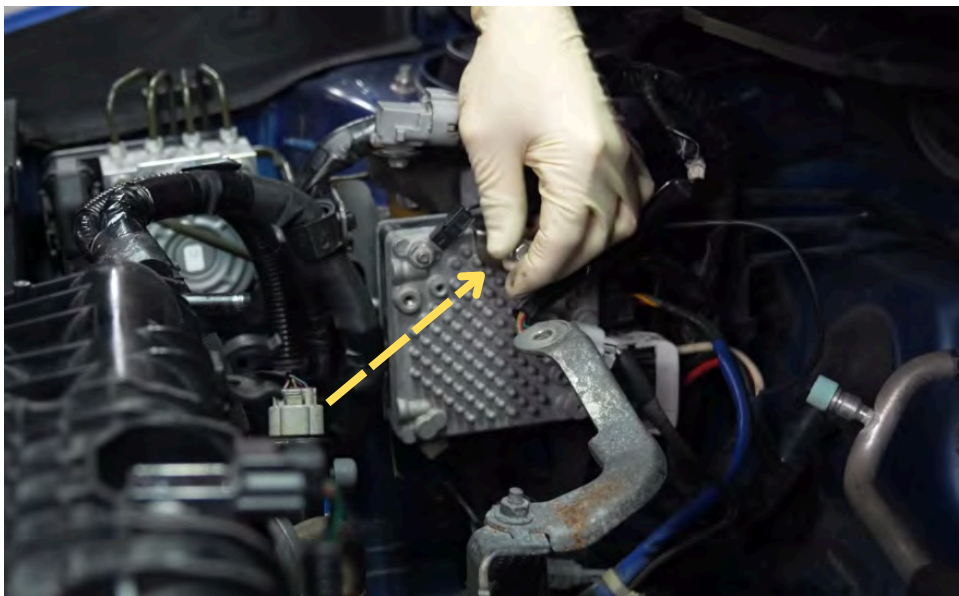
Step 21

Using a pair of needle nose pliers remove the clip holding the harness in place.



Step 22

Using a pair of needle nose pliers remove the clip holding the harness in place below.



Step 23

Remove the 10mm bolt securing the wiring harness to the ECU.



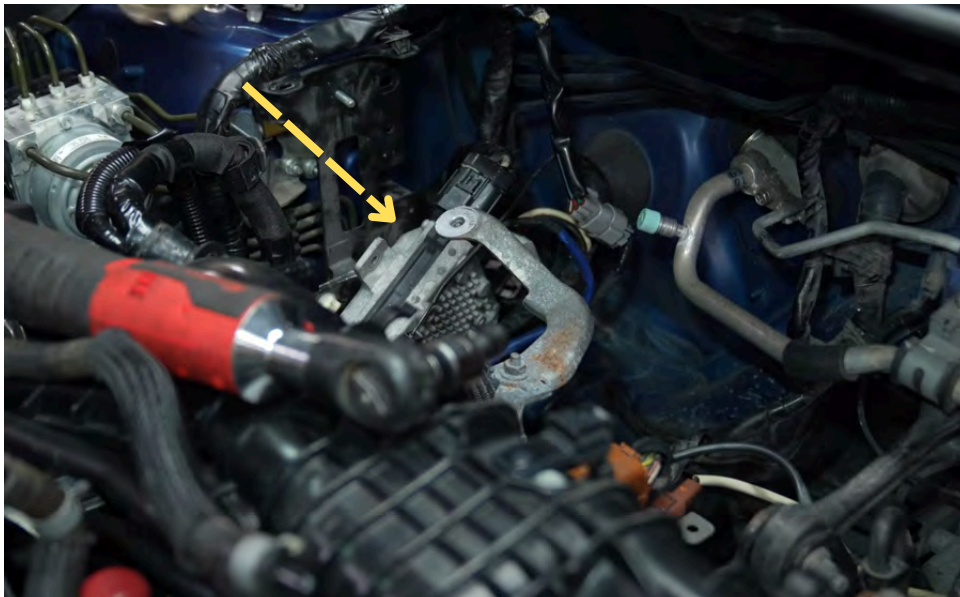
Step 24

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



Step 25

Remove the bolts holding the ECU to the bracket on the strut tower.



Step 26

Detach ECU from bracket.



Step 27

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

Remove the bracket.



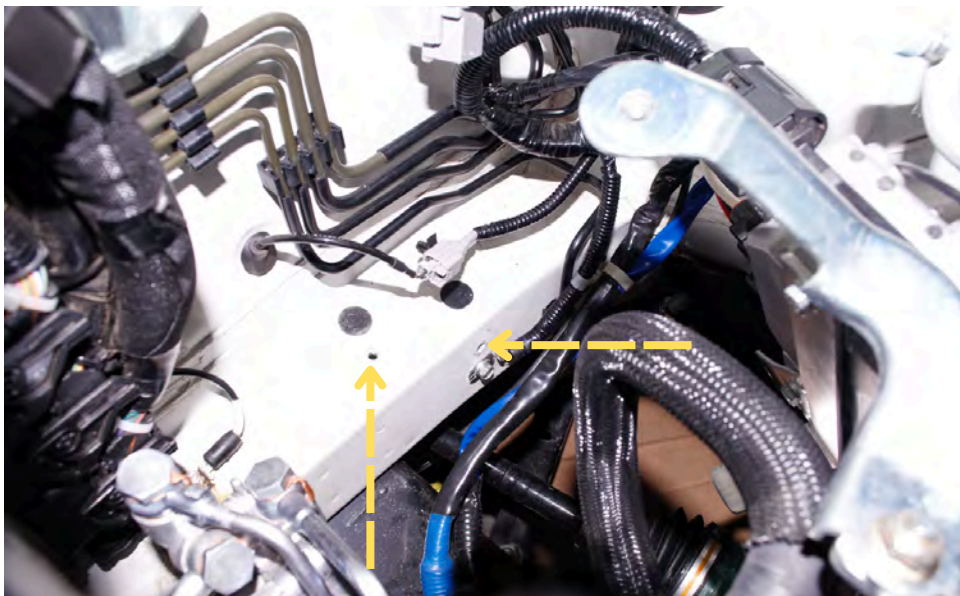
Step 28

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



Step 29

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



Step 30

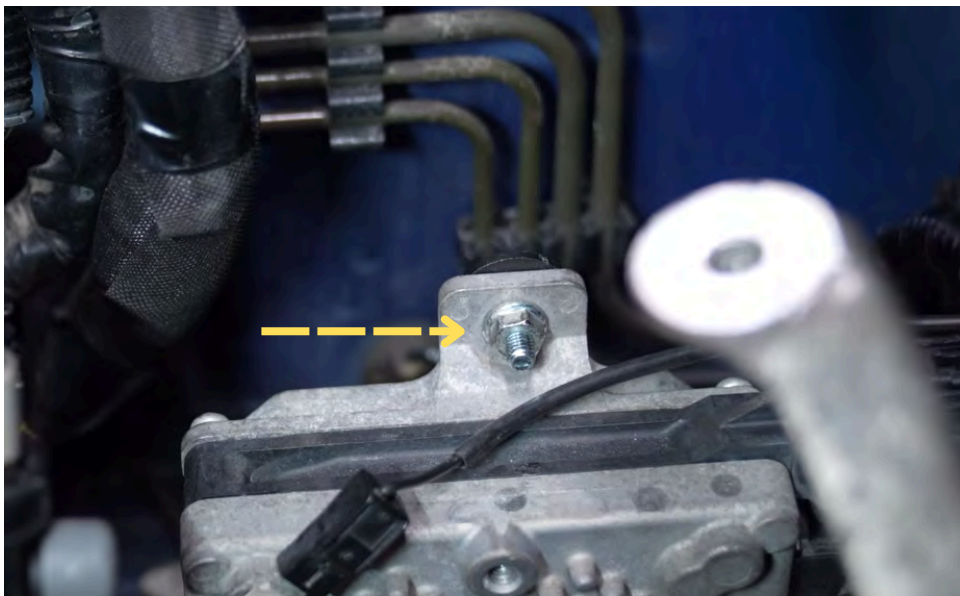
Attach the ECU relocation bracket using the OEM ECU bracket 10mm hardware.



Step 31

Install the ECU relocation bracket.

16



Step 32

Attach the ECU to the new bracket using the supplied bolts.



Step 33

Zip tie the harness together.

Cut the excess zip tie.



Step 34

Install the bracket onto the AOS and tighten until snug.

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Step 35

Apply a small amount of lube to the coolant hose with the 90 degree fitting.

Install on AOS.

2



Step 35 pt.2

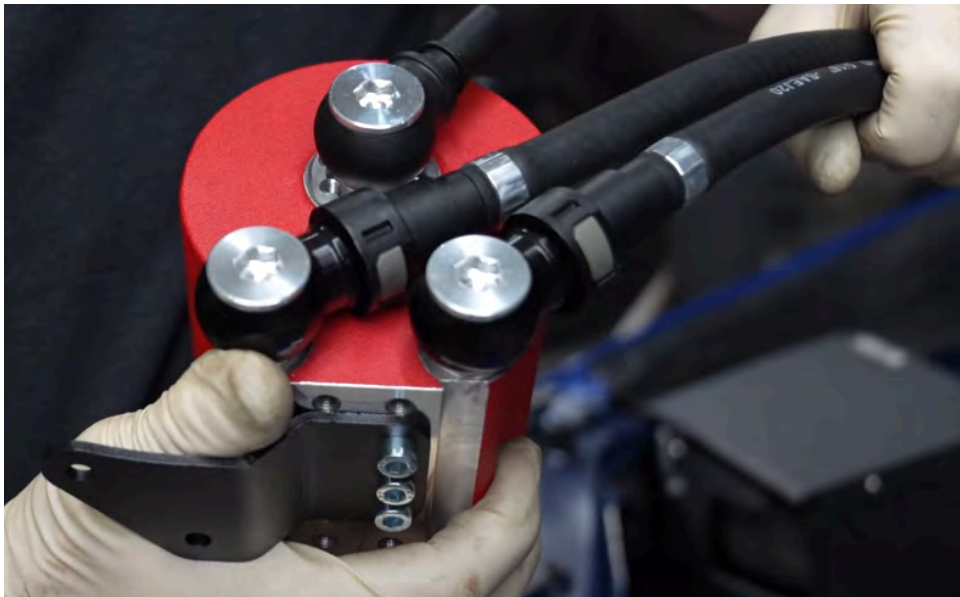
Note: These fittings are preinstalled and torqued. The fitting is designed to swivel around the bolt. Do not remove or tighten further.



Step 36

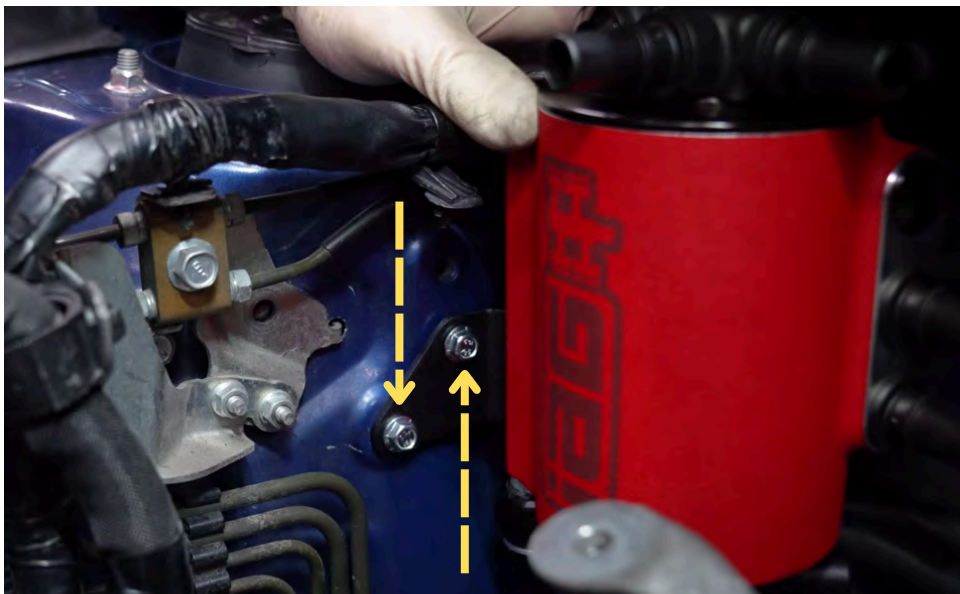
Apply a small amount of lube to fitting on the other coolant hose.

Install on AOS.



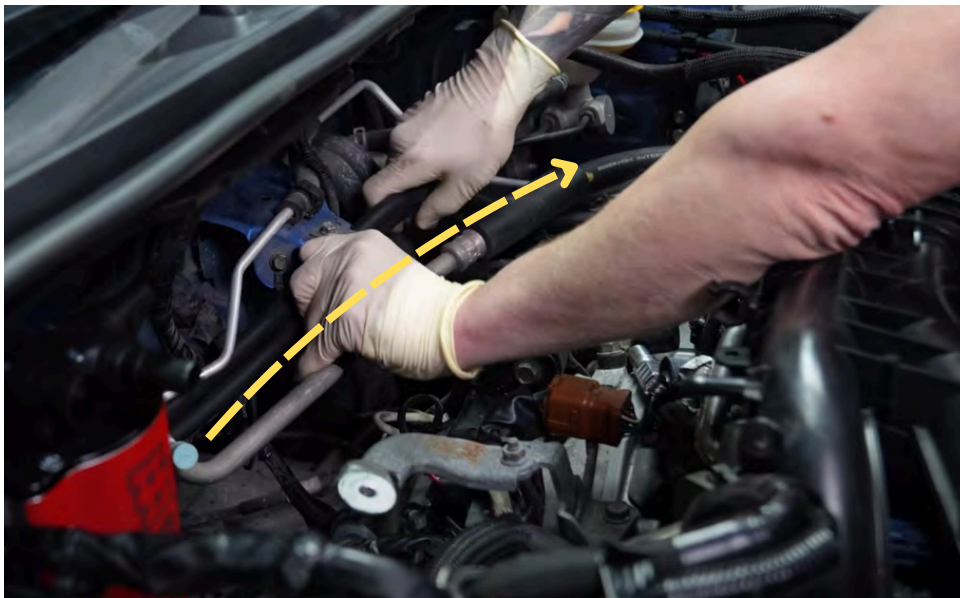
Step 36 pt.2

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



Step 37

Using a 10mm wrench Install the AOS onto the bracket located on the passenger side strut tower.



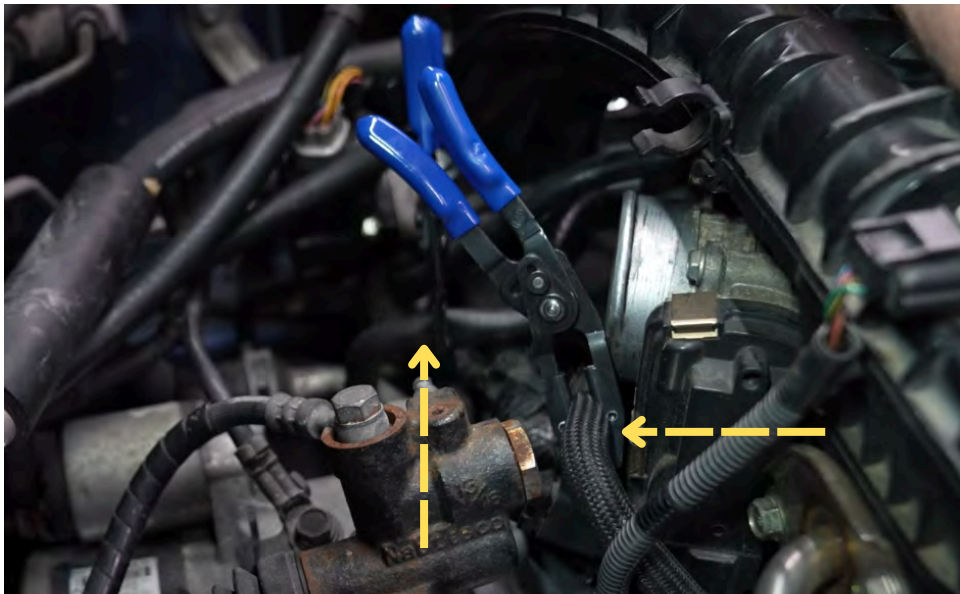
Step 38

Route the two coolant lines behind the AC hardline.



Step 39

Slide a supplied clamp onto smaller coolant line.



Step 40

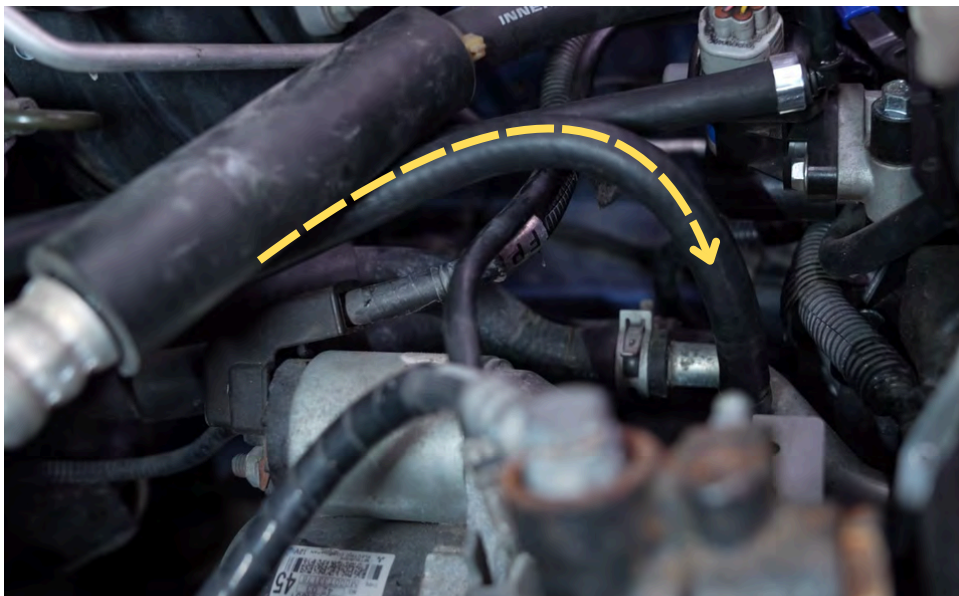
Clamp both OEM coolant lines.



Step 41

Loosen clamp and remove OEM coolant line.

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



Step 42

Install new coolant line to OEM fitting.

Secure the clamp to the line.



Step 43

Install the new coolant line with the 90 degree fitting into the OEM coolant line.

Slide the clamp back into place and secure.



Step 44

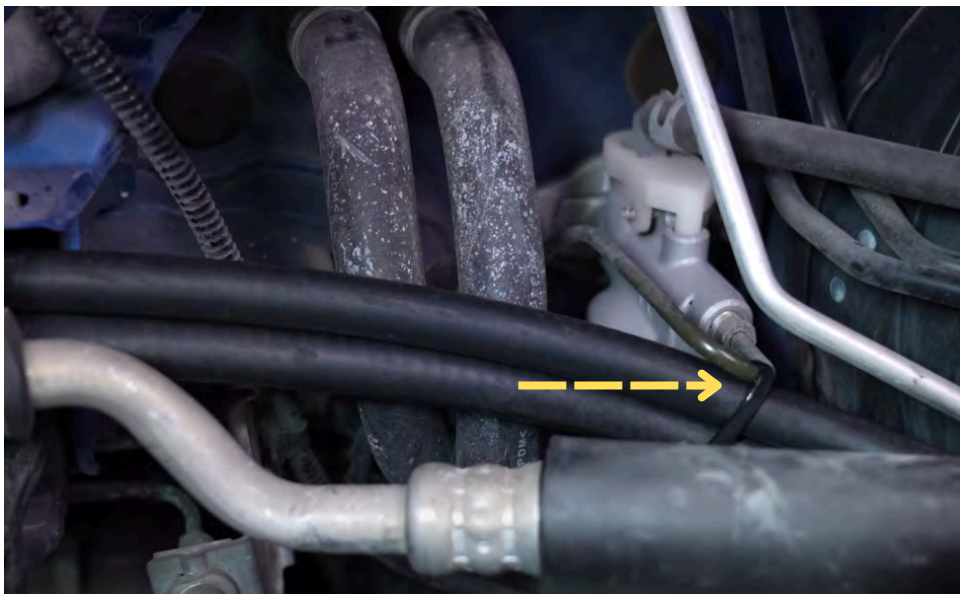
Remove both coolant line clamps from step 40.



Step 45

Using two zip ties secure the coolant lines to the AC hard line and brake master line.

Cut excess zip tie.



Step 45 pt.2



Step 46

On the 24" hose apply a small amount of lube to both fittings.

8



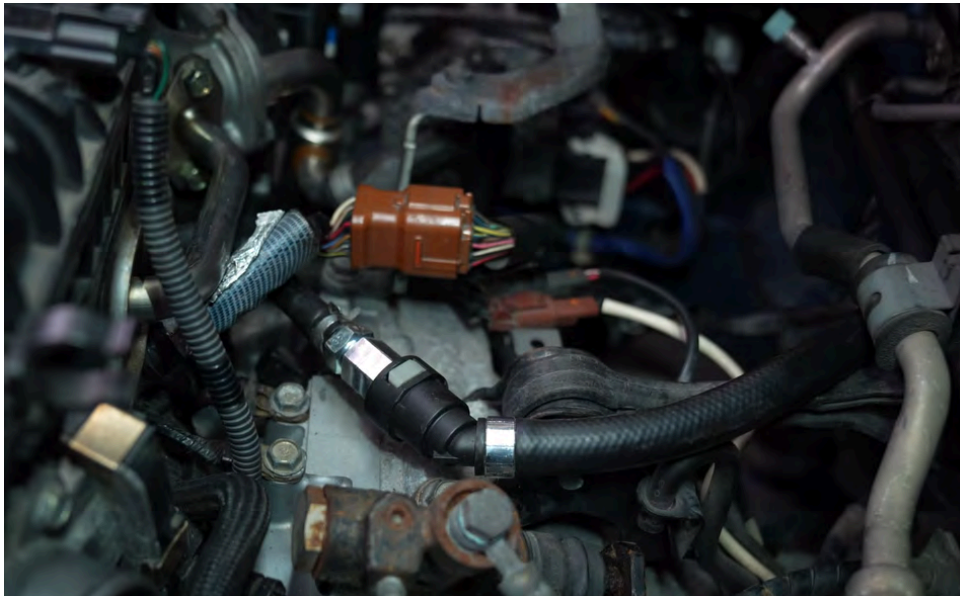
Step 47

Route breather hose behind and under the AC hard line.



Step 48

Connect 90 degree fitting to top of AOS can.



Step 49

Connect the 30 degree fitting to the new breather fitting.

Reference step 18.



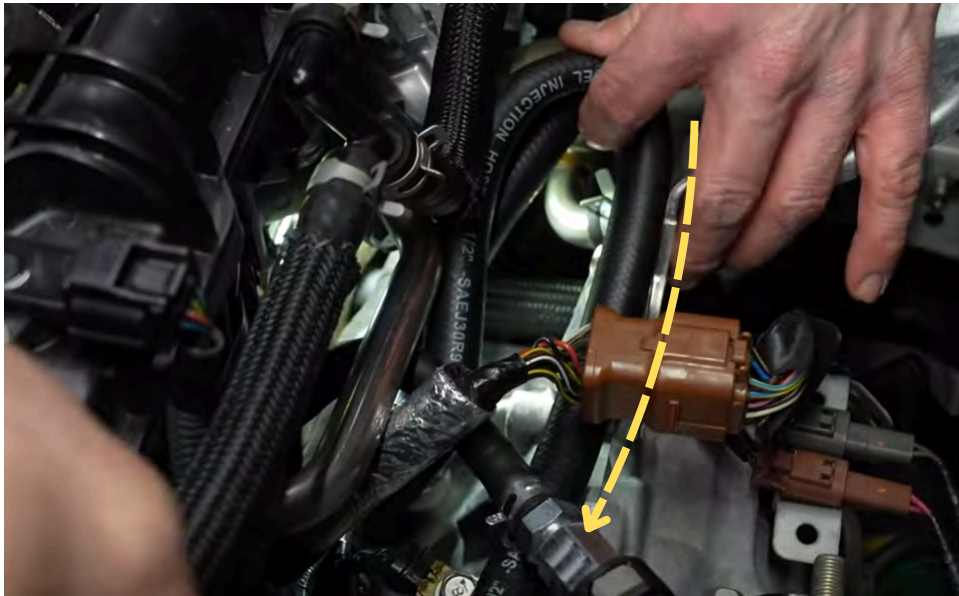
Step 50

Apply some all purpose lube to each fitting on the Y hose.



Step 51

Install the Y hose fitting onto block breather and push down.



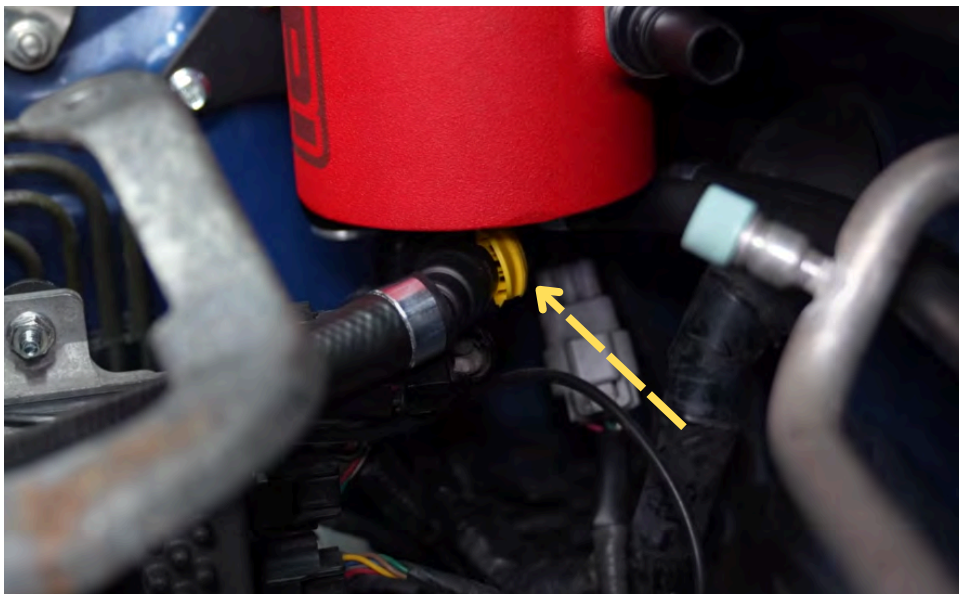
Step 52

Route the Y hose under harness and breather fitting.



Step 53

Connect the other end of the breather hose to the bottom port on the AOS.



Step 54

Connect the drain hose to the bottom of the AOS can and press tab down to secure.



Step 55

Attach zip tie to hoses and tighten.

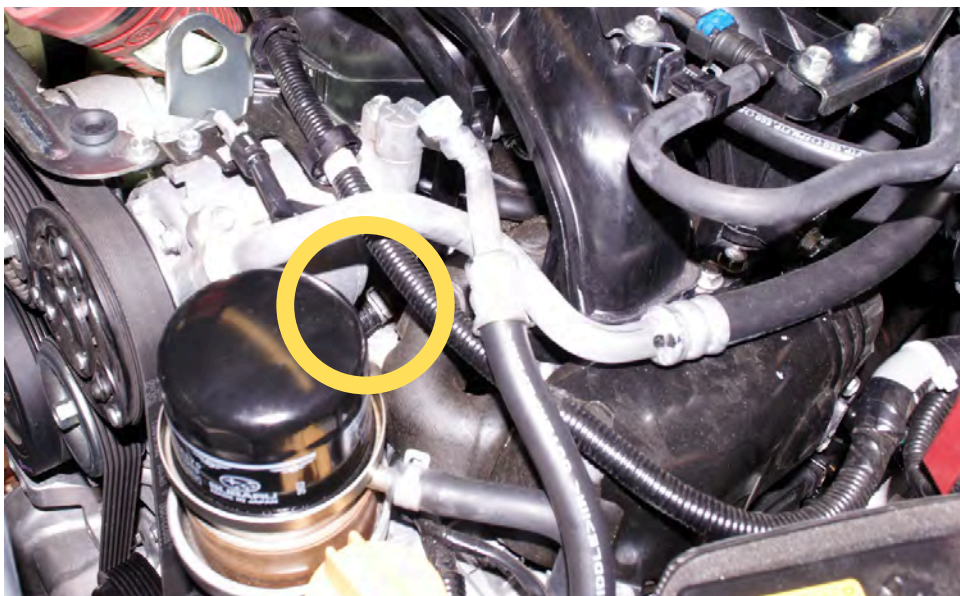
Cut off excess zip tie.



Step 56

Attach zip tie to drain line and bracket.

Cut excess zip tie.



Step 57

With a pair of needle nose pliers loosen the clamp and disconnect the PCV hard tube.

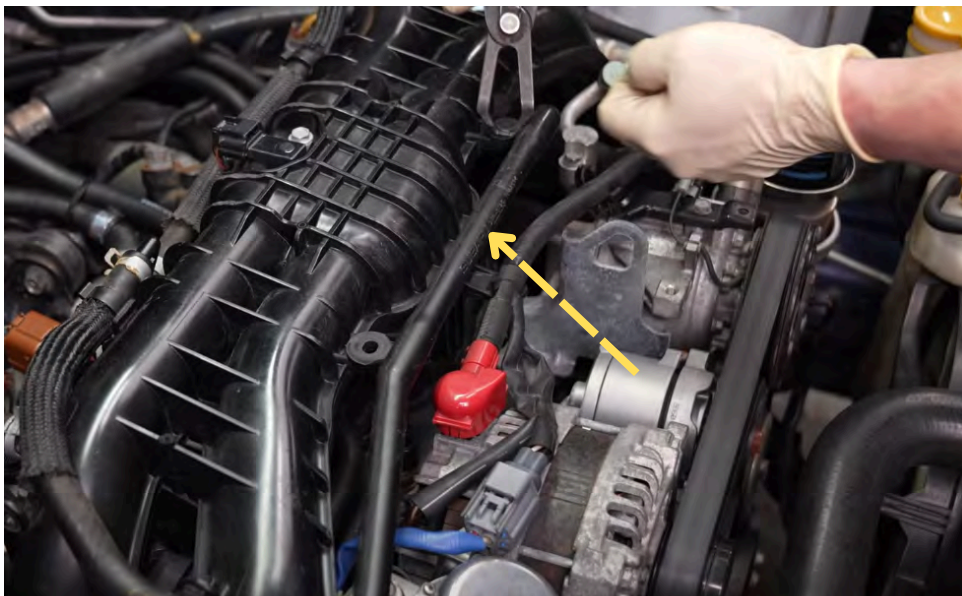


Step 58

Remove the PCV hose that is attached to the turbo inlet.



Step 58 pt.2



Step 59

Remove the two clips holding the PCV tube.

Remove the PCV hard tube.



Step 60

Install supplied clamp on the 90 degree fitting.

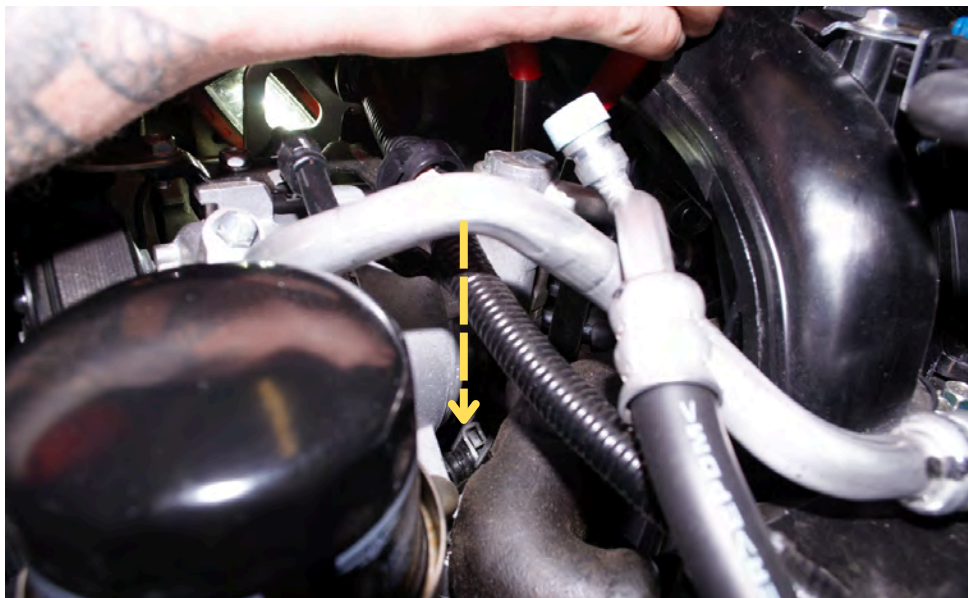
Apply a small amount of lube to the fitting.

5



Step 61

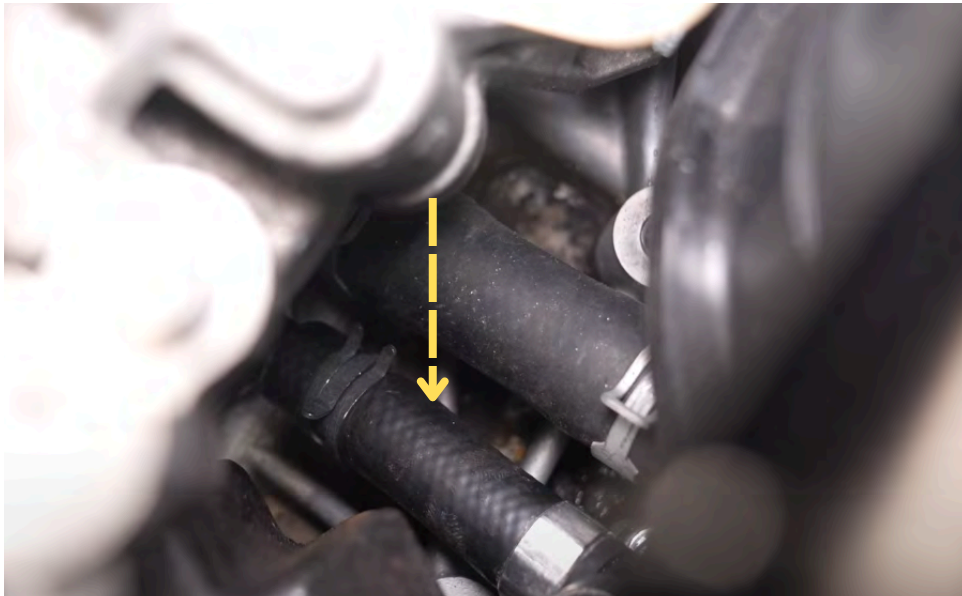
Route the 90 degree fitting under the intake manifold.



Step 62

Install the 90 degree fitting to the turbo inlet. Secure the clamp.

Reference step 57.



Step 62 pt.2



Step 63

Install fitting from hose to AOS.



Step 64

Zip tie AOS lines together.

Cut excess zip tie.



Step 65

Zip tie line to brake master line.

Cut excess zip tie.



Step 66

Reinstall the charge pipe and tighten the top clamp.

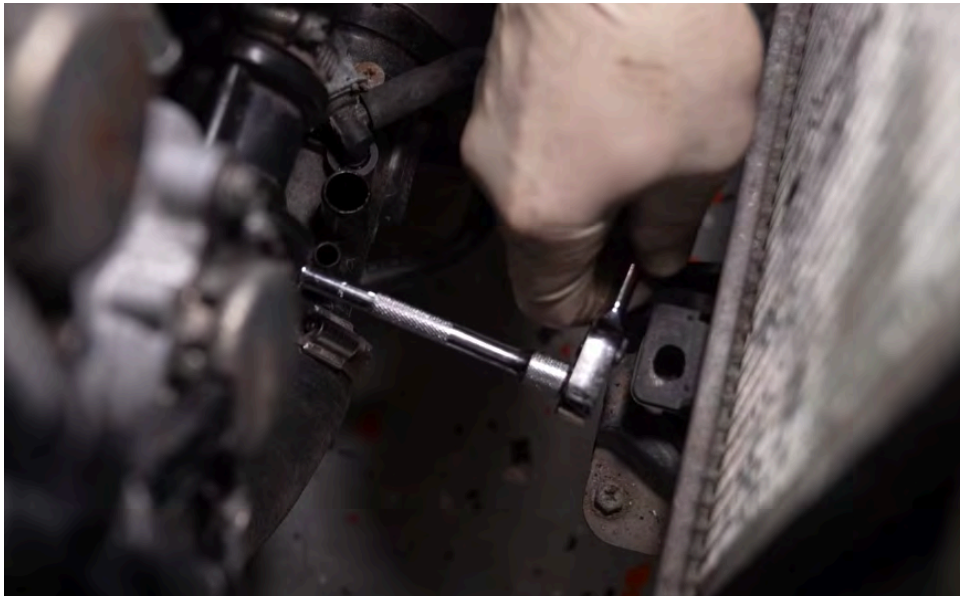
Do not install the bottom bolts for the charge pipe yet.



Step 67

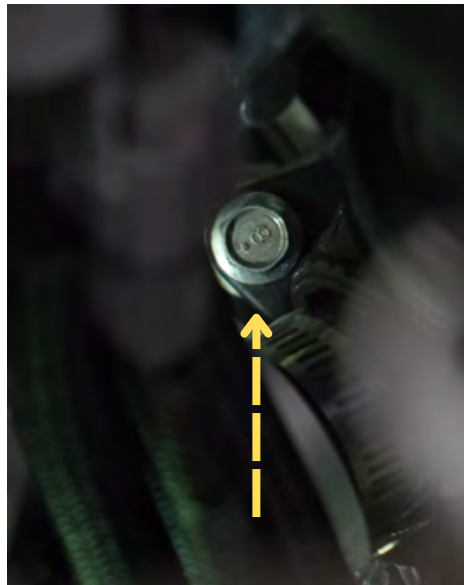
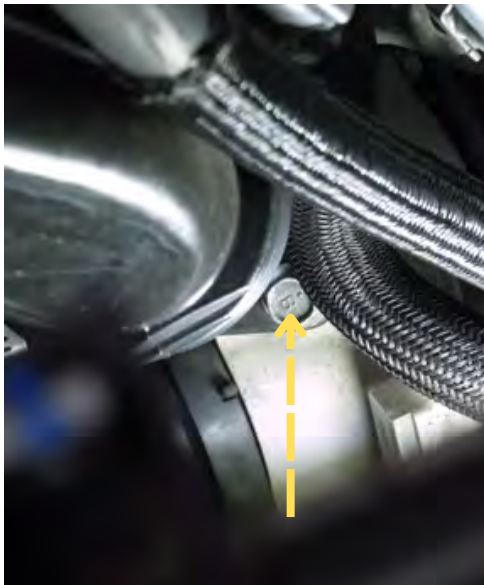
Reconnect the vacuum line for the bypass valve.

Reference step 5.



Step 68

Use a socket to tighten the worm clamp on the bottom of charge pipe.



Step 69

Install the bottom bolts of the charge pipe.



Step 70

Apply a small amount of lube to the 30 degree fitting.

Install clamp on other end.

6





Step 71

Route the new breather hose under the charge pipe.



Step 72

Route 30 degree fitting under harness.



Step 73

Connect fitting to top of AOS can.



Step 74

Use a pair of pliers to slide clamp onto hose.



Step 75

Connect breather hose to the turbo inlet.

Secure with clamp.

Reference step 6.



Step 76

Secure hose with a zip tie.

Cut excess zip tie.



Step 77

Reinstall the radiator fan and tighten the hardware.



Step 78

Reconnect the radiator fan harness.



Step 79

Reinstall the top mount intercooler back on the engine.



Step 80

Reinstall the brackets and hardware.

Hand tighten at first and then tighten until snug.



Step 81

Reinstall the duct for the air intake using the plastic clips.



Step 82

Using a nut driver, tighten the throttle body clamp.



Step 83

Reattach the negative battery terminal.

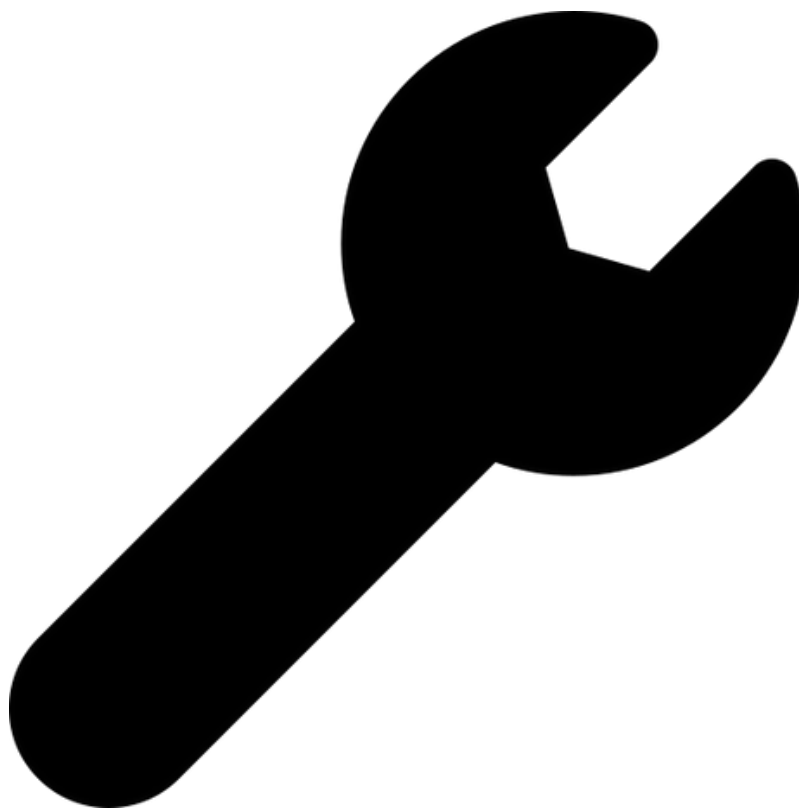


Step 84



Step 85

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 OEM 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