

LAG Air / Oil Separator (AOS)

For 2004-2007 STI





IAG-ENG-7185 IAG Air / Oil Separator (AOS) 2004-2007 Subaru STI

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.



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** 36.5" Valve Cover Hose (Drivers Side)
- 3** 26.5" Valve Cover Hose (Pass Side)
- 4** 12.5" to 15" PCV Hose Assembly
- 5** 20" Drain Hose
- 6** x2 19" Coolant Hoses
- 7** 14.5" Breather Hose (Drivers side)
- 8** 9.5" Breather Hose (Pass Side)
- 9** 16.5" Block Breather Hose



- 10** 16" Heat Sleeve
- 11** 12" Heat Sleeve
- 12** Y fitting for Block Breather
- 13** Inlet Fitting for PCV Sensor
- 14** PCV Fitting Extension
- 15** AOS Mounting Bracket
- 16** x2 Spring Clamps
- 17** Hose Clamps
- 18** Hardware Kit

19 Zip Ties



Tools needed: 10mm wrench, 12mm socket, 8mm nut driver, socket, 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 terminal disconnecting the battery.

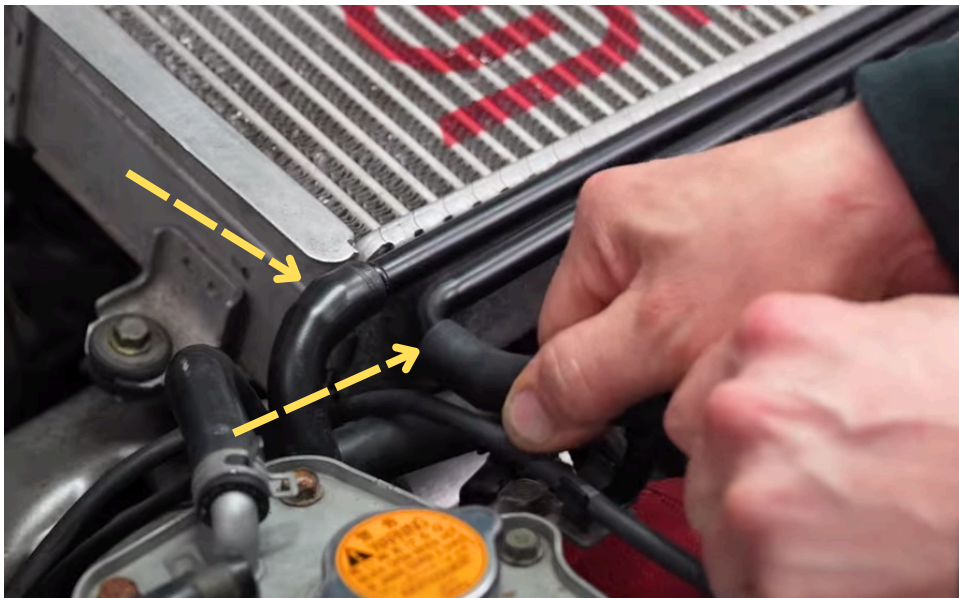


Step 2

Using a pair of needle nose pliers loosen the clamp and disconnect the PCV line.



Step 2 pt.2



Step 3

Repeat this process on the passenger side.



Step 3 pt.2



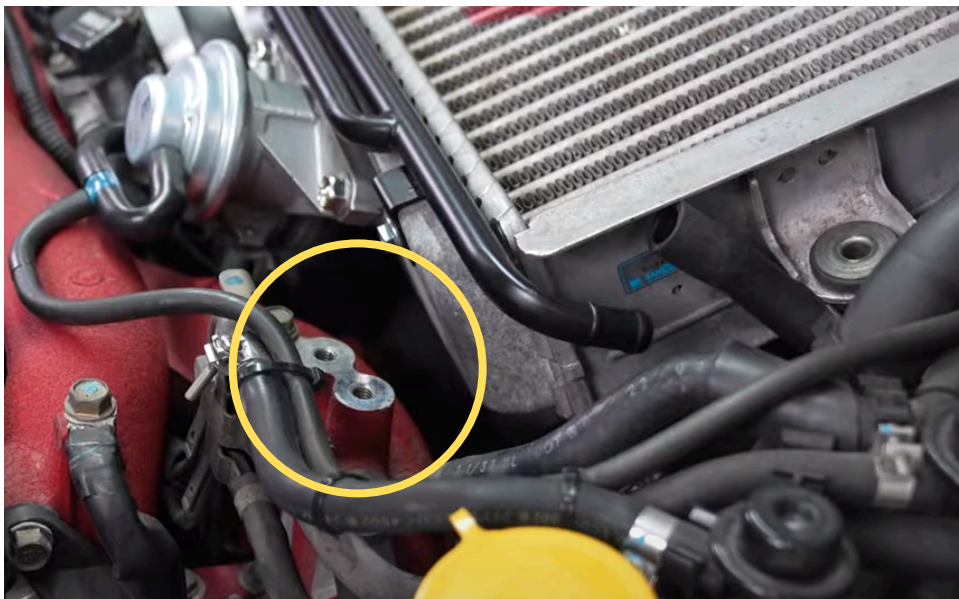
Step 4

Using a 12mm socket remove the bolt on the passenger side of the intercooler.



Step 5

Using a 12mm socket remove the three bolts on the driver side of the intercooler.



Step 6

Remove the bracket on the driver side.



Step 7

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



Step 8

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



Step 9

Carefully remove intercooler from vehicle.



Step 10

Loosen the clamps on either side of the rubber coupler and remove from the throttle body.



Step 10 pt.2



Step 11
Remove the crossover pipe
from the intercooler.



Step 11 pt.2



Step 12

On the passenger side under the hood, undo the clamp and remove the valve cover hose.

Reference step 3 for first part of removal.



Step 12 pt.2



Step 12 pt.3

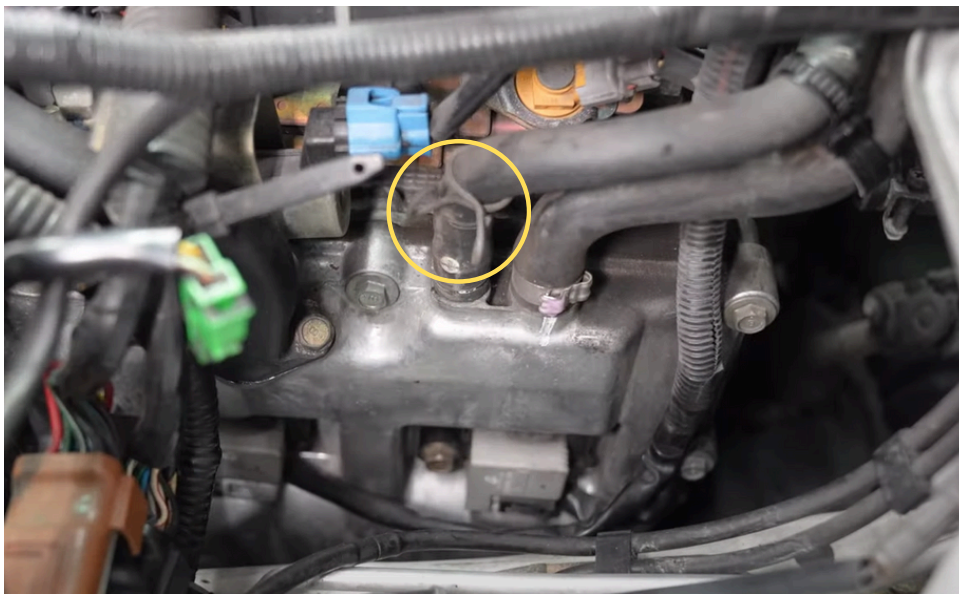


Step 13

Undo the two bolts and disconnect the electrical plug to remove washer fluid tank.



Step 13 pt.2



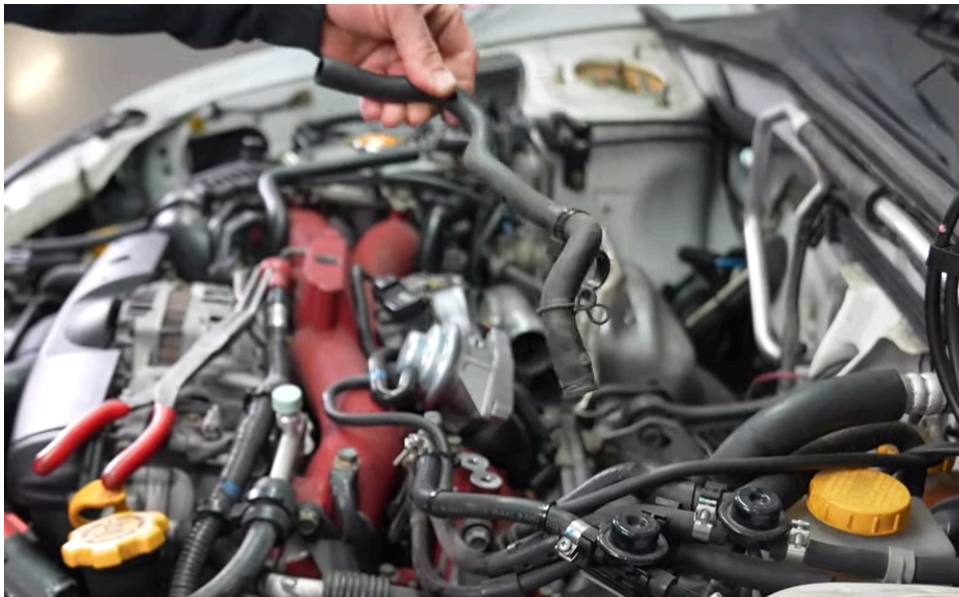
Step 14

On the driver side undo the clamp and remove the valve cover hose.

Reference step 2 for first part of removal.



Step 14 pt.2



Step 14 pt.3



Step 15

Remove the four 10mm bolts attaching the throttle body to the manifold.



Step 16

Remove the throttle body.



Step 17

Using a pick remove the clamp and disconnect the breather hose.



Step 18

Using a pair of needle nose pliers remove the breather hose from the PCV connector.



Step 19

Using a pair of needle nose pliers slide the clamp down and remove the PCV hose from the manifold.



Step 19 pt.2



Step 20

Using a pick, loosen the clamp and remove the OEM block breather by pulling up.



Step 20 pt.2



Step 21

Apply a small amount of all purpose lube to the inside of the hose and place spring clamps around it.

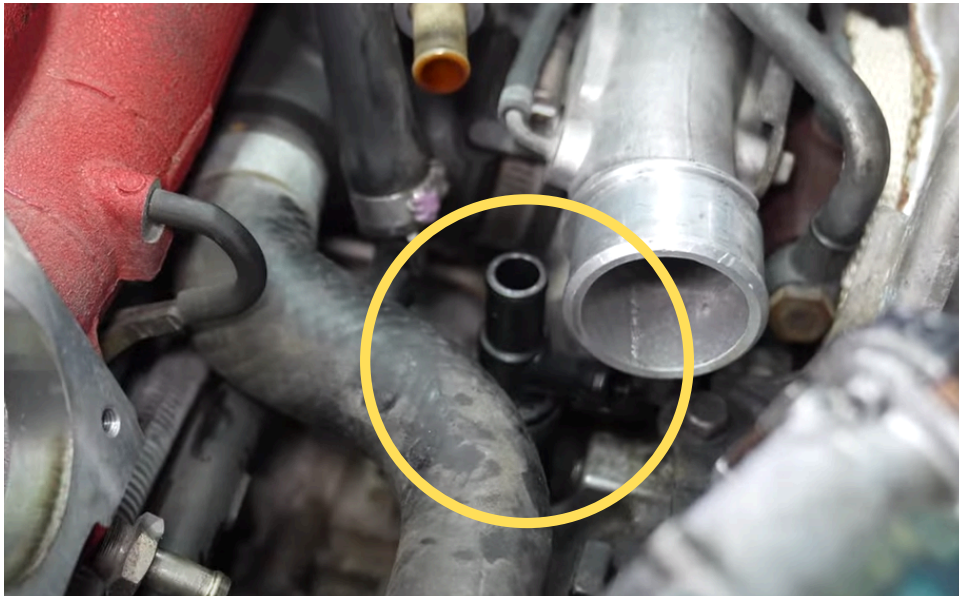


Step 22

Install the Y fitting to the hose extension.

Tighten the top spring clamp, but leave the bottom one loose.





Step 23

Install the new breather assembly.

Using a pick tighten the bottom clamp once installed.



Step 24

Attach the AOS bracket by using the supplied bolts.

Tighten until snug.

15



Step 25

Apply a small amount of all purpose lube to both 19" coolant hoses.

6





Step 26

Attach the coolant hoses to the bottom of AOS can.



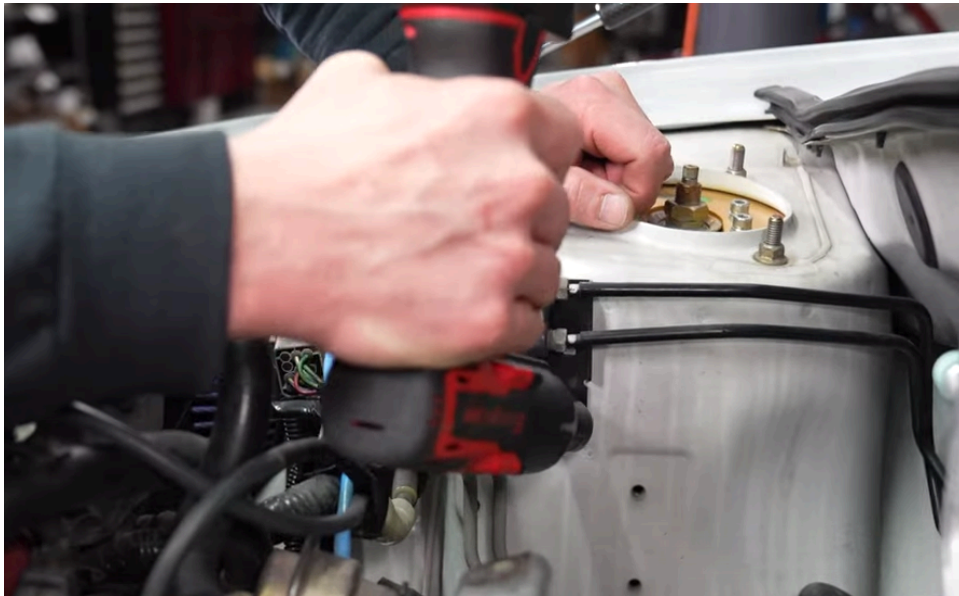
Step 27

Find the 20" drain hose and apply a small amount of all purpose lube to the fitting.



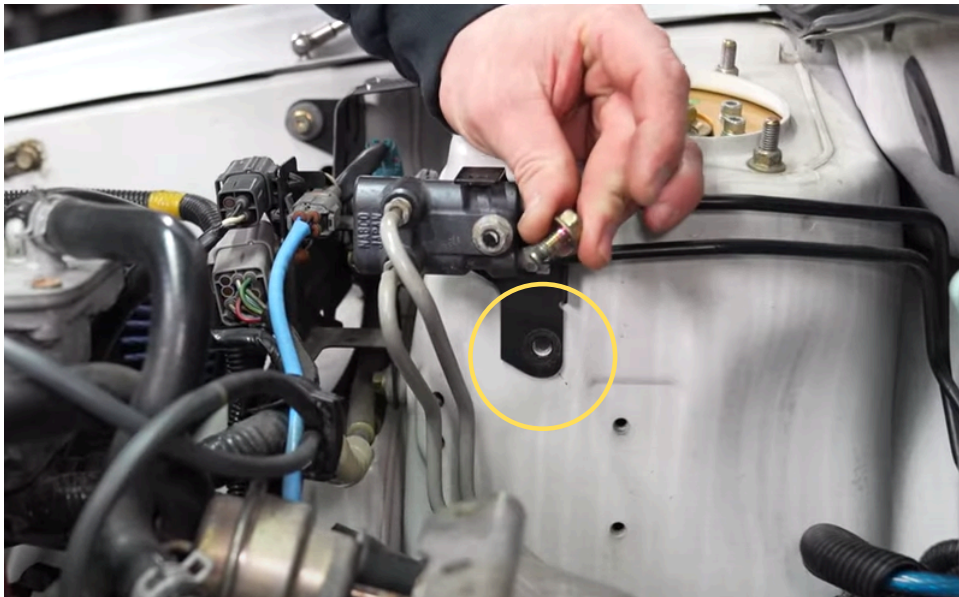
Step 28

Install the 20" drain hose to the AOS.

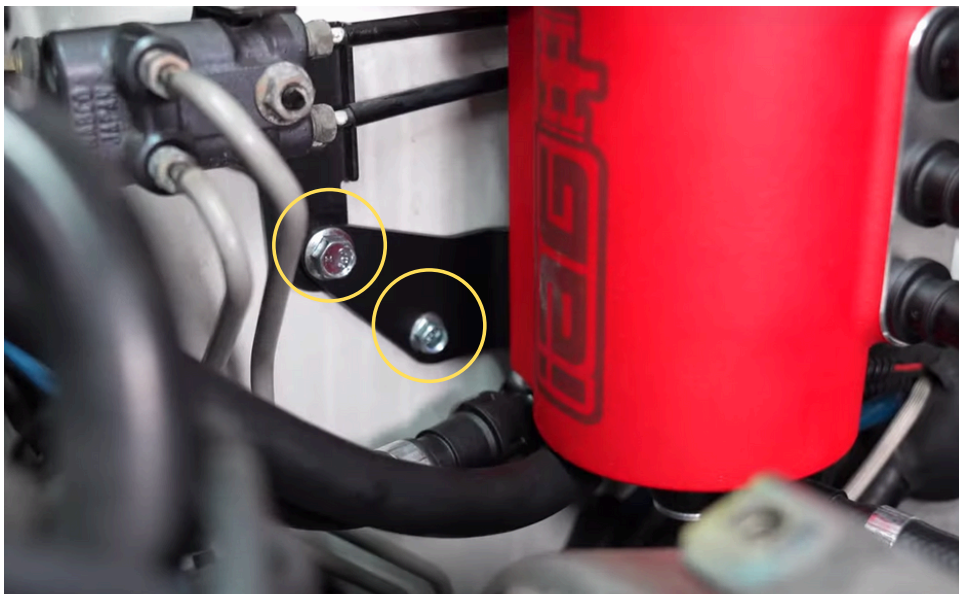


Step 29

Remove the bolt on the passenger side strut tower.



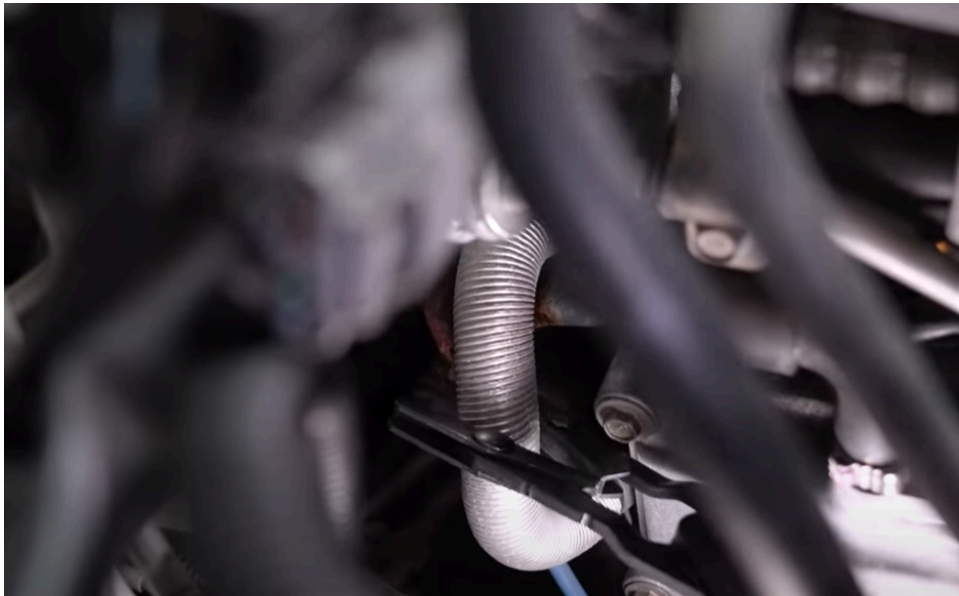
Step 29 pt.2



Step 30

Using the supplied bolts install the AOS bracket to the strut tower.

Tighten until snug.



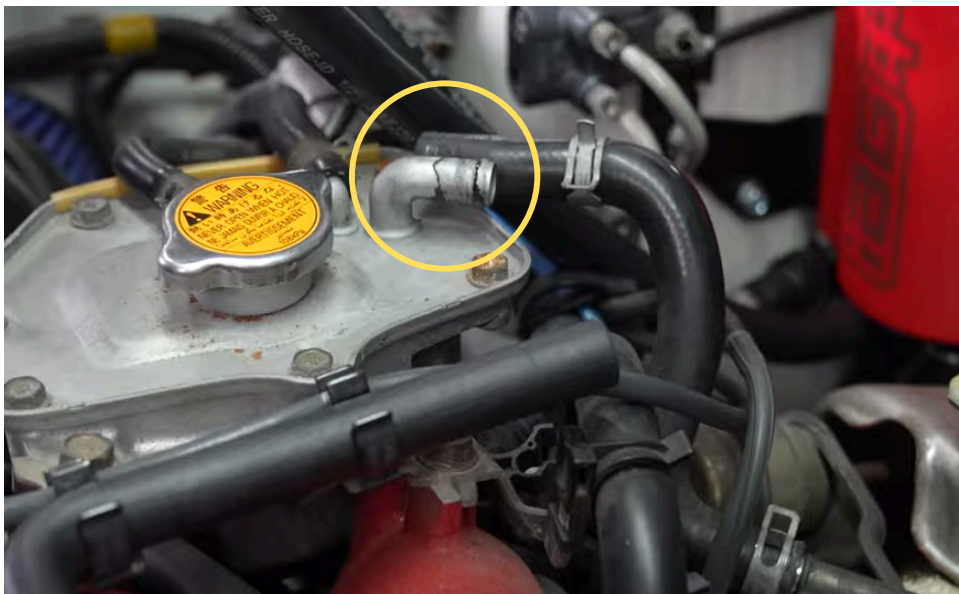
Step 31

Using hose clamp pliers, clamp the turbo coolant line.



Step 32

Using a pair of pliers loosen the clamp and remove the coolant hose.



Step 32 pt.2

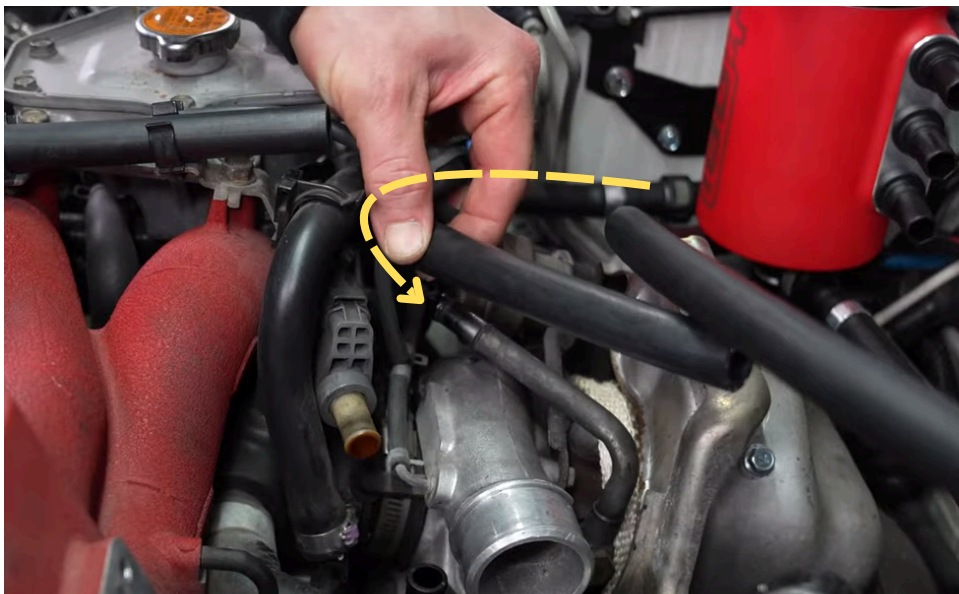


Step 33

Using a pair of pliers loosen the clamp and remove the coolant hose.



Step 33 pt.2



Step 34

Route the coolant hose to OEM fitting.



Step 35

Measure the coolant hose so it lines up with the OEM fitting.

Cut off excess hose.



Step 35 pt.2



Step 36

Install the supplied clamp to the new coolant hose.



Step 37

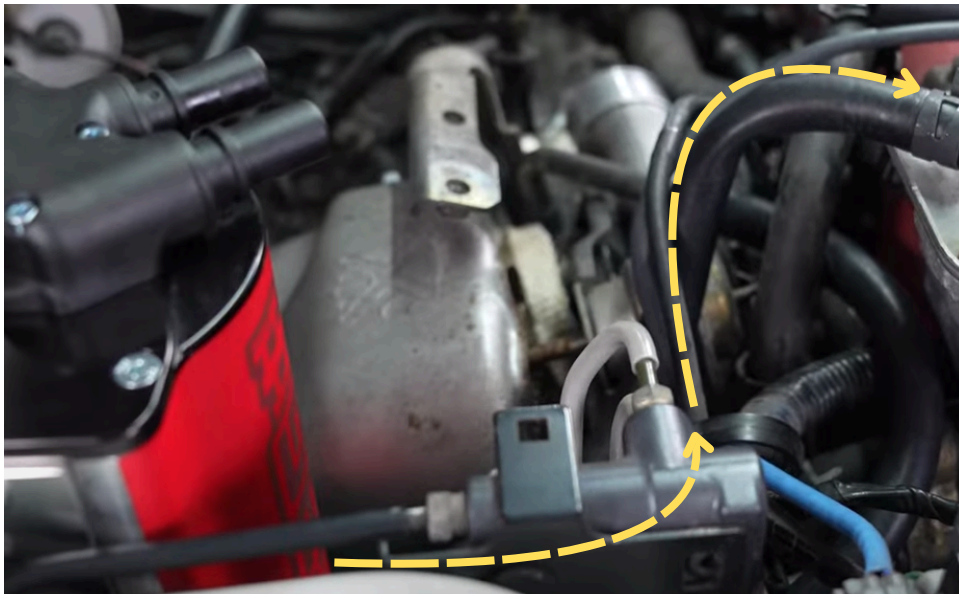
Install new coolant hose to OEM fitting.



Step 38

Secure coolant hose to bracket using a zip tie.

Cut off excess zip tie.



Step 39

Route other coolant hose up towards coolant expansion tank.

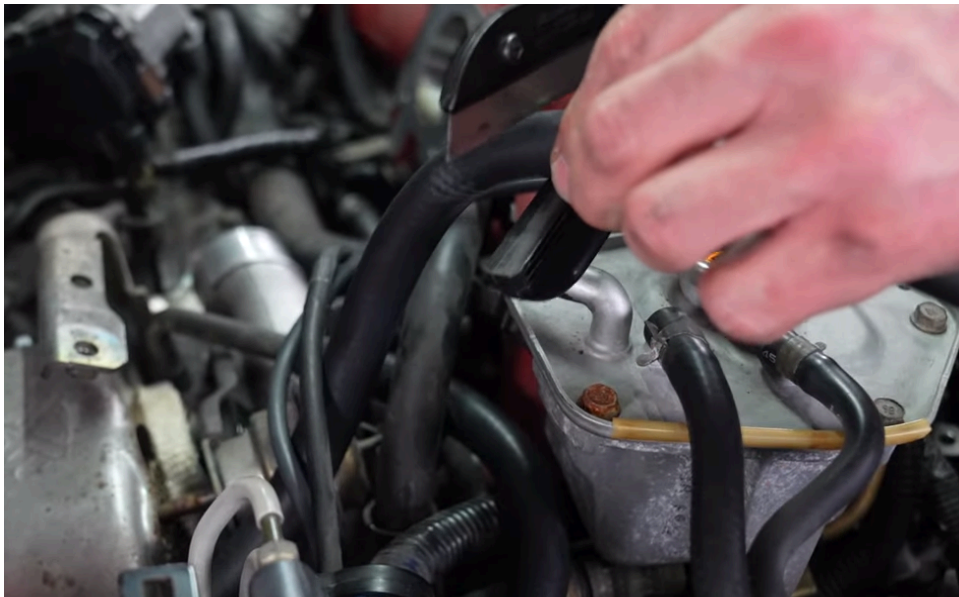
Reference step 32.



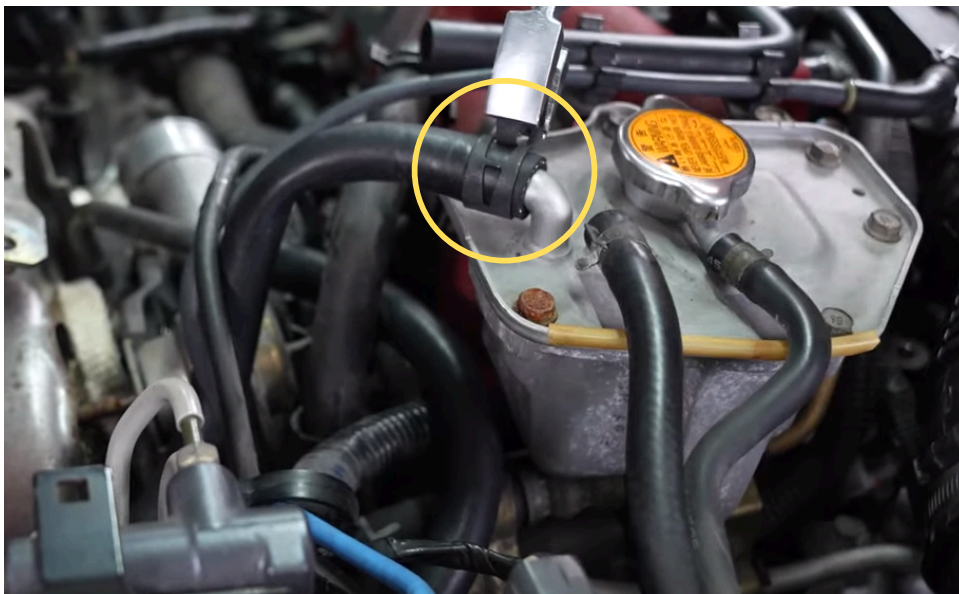
Step 40

Measure the coolant hose so it lines up with the OEM fitting.

Cut off excess hose.

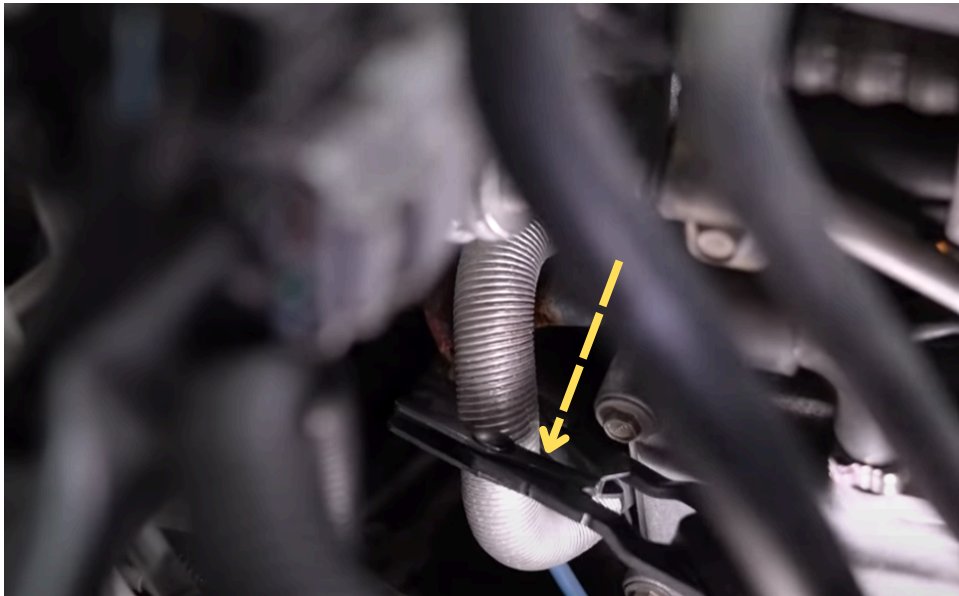


Step 40 pt.2



Step 41

Install the supplied clamp to the new coolant hose and secure hose to fitting.



Step 42

Remove the coolant hose clamp from step 31.



Step 43

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



Step 44

Route drain hose through heat shield bracket.



Step 45

Measure and cut drain hose so it matches up with the new breather assembly fitting from step 23.

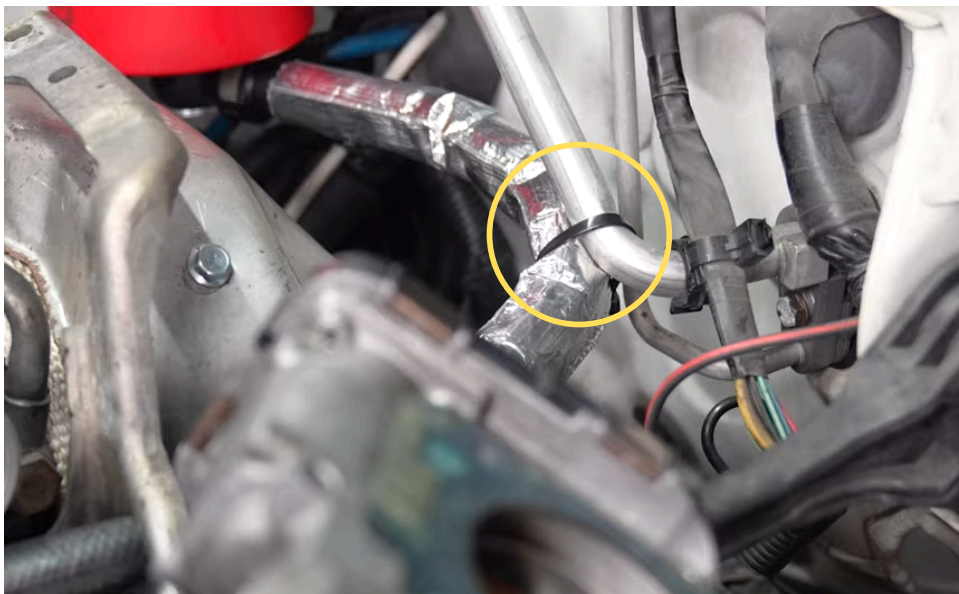


Step 46

Slide supplied clamp onto hose.

Install hose to Y fitting on breather assembly. Secure the clamp in place.

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



Step 47

Using a zip tie secure the drain hose to the AC hard line.

Cut off excess zip tie.



Step 48

Locate the 26" hose and install the 16" heat sleeve.



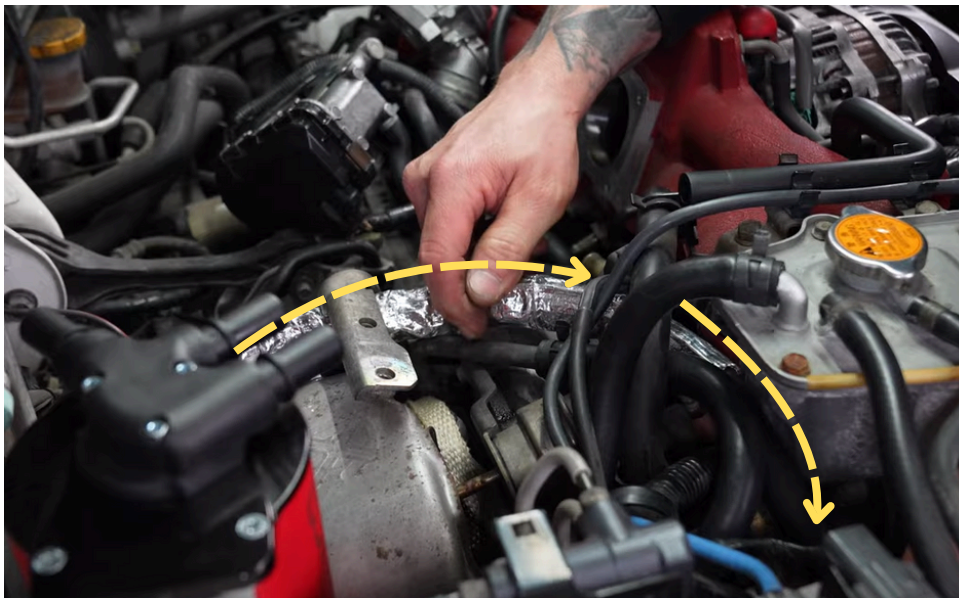
Step 49

Apply a small amount of all purpose lube to the fitting.



Step 50

Connect the fitting to the bottom port on the AOS.



Step 51

Route the hose under the heat shield bracket and down towards the passenger side valve cover.

Reference step 12.



Step 52

Secure the hose to the bracket and coolant hose with zip ties.

Cut excess zip ties.



Step 53

Use a pair of pliers to install the supplied clamp to hose.



Step 54

On passenger side install the hose to the valve cover and secure the clamp to hose.

Reference step 12.

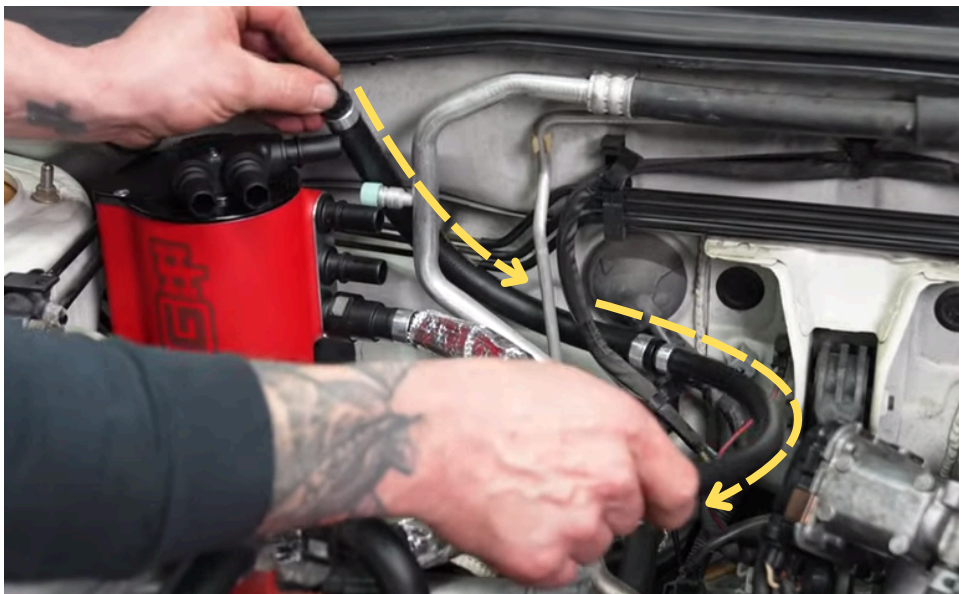


Step 55

Find the 12.5" to 15" hose.

Apply a small amount of all purpose lube to the fitting.

4



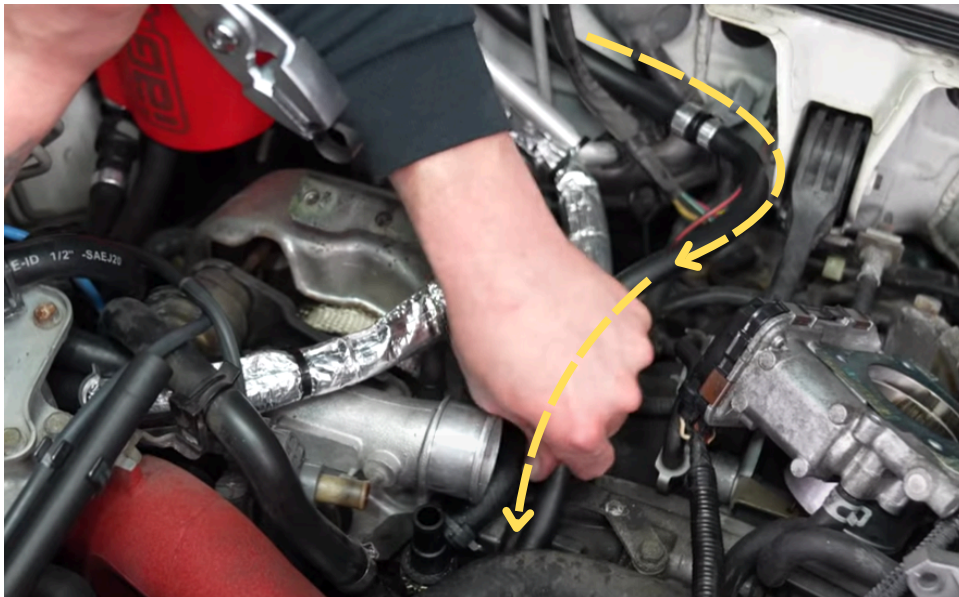
Step 56

Route hose behind the AC hard line.



Step 57

Connect 45 degree fitting to top of AOS can.



Step 58

Route hose as shown down towards the nipple on the intake manifold from step 19.



Step 59

Install clamp to the hose and then install the hose to nipple on the intake manifold.

Secure the clamp.



Step 60

Using a zip tie secure the hose.

Cut excess zip tie.



Step 61

Reinstall the four 10mm bolts from the throttle body.

Then tighten bolts to OEM spec.

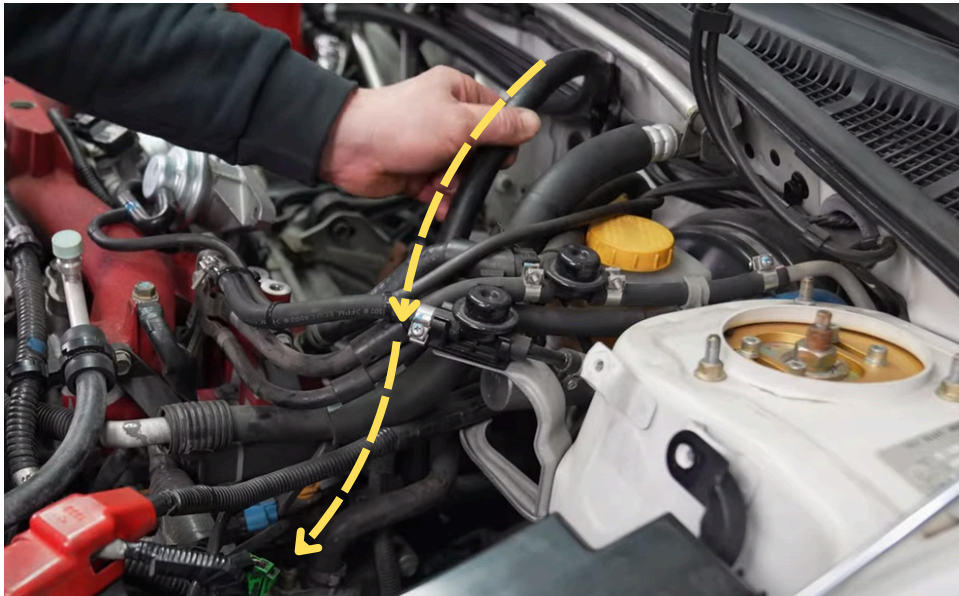


Step 62

Find the 36.5" valve cover hose and apply a small amount of all purpose lube to fitting.

2



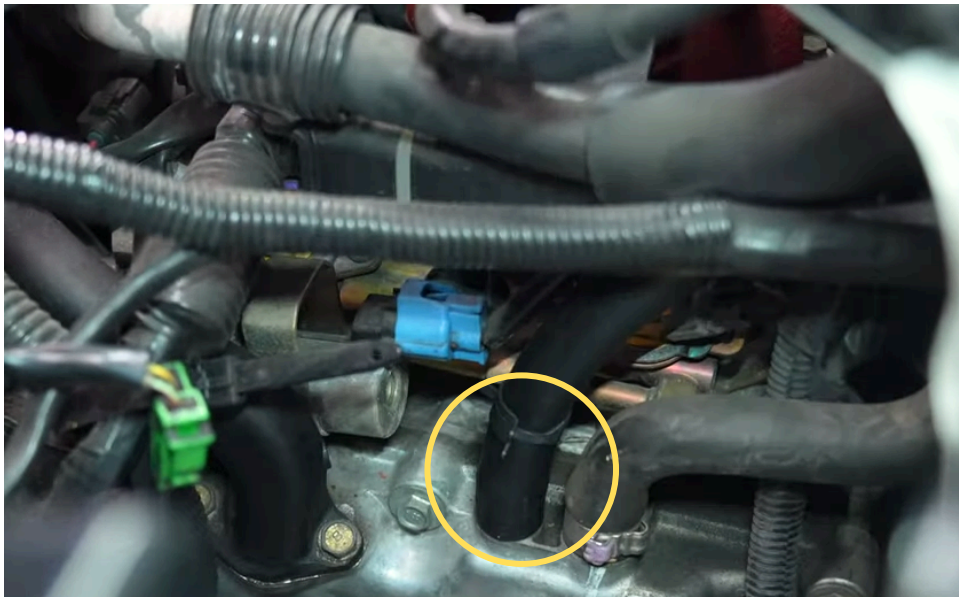


Step 63

Install fitting to middle port on the AOS.

Route hose under as shown down towards the valve cover on the driver side.

Reference step 14.



Step 64

Install the supplied clamp to the hose.

Then install hose to valve cover fitting.



Step 65

Secure the clamp to the hose.



Step 66

Using a zip tie secure the hose to the AC line.



Step 67

Find the 16.5" breather hose and apply a small amount of all purpose lube to fitting.

9



Step 68

Install the supplied clamp to breather hose.



Step 69

Install the breather hose to the Y fitting on the breather assembly.

Reference step 23.



Step 70

Secure the clamp on hose.



Step 71

Connect the hose fitting to top port on the AOS.



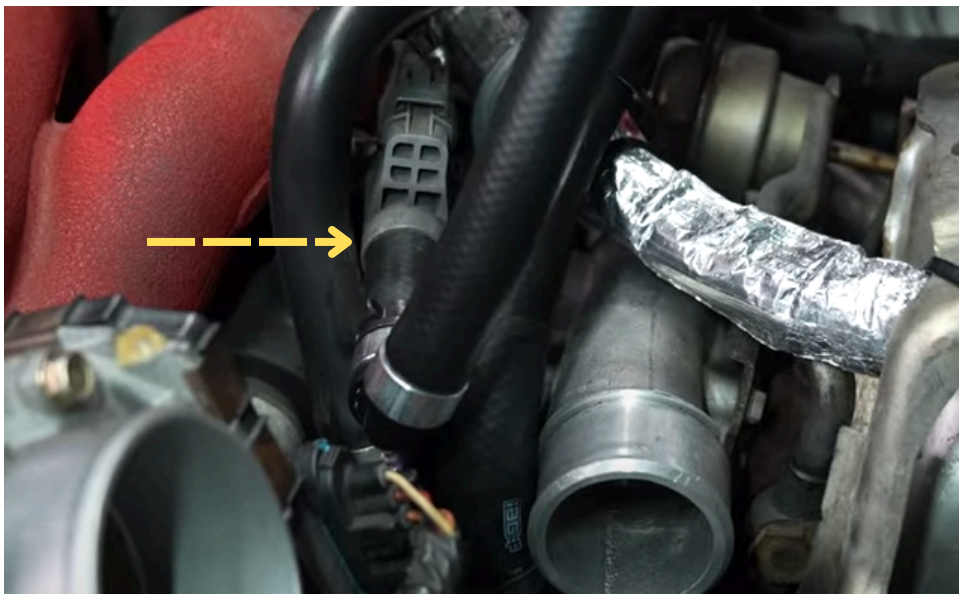
Step 72

Using a zip tie secure the breather hose to the drain hose.



Step 73

Find the 14.5" breather hose and apply a small amount of all purpose lube to the fitting.



Step 74

Install the supplied clamp to hose and install to the PCV connector.

Reference step 18.



Step 75

Secure the clamp to the hose and PCV connector.



Step 76

Connect fitting to top right port of AOS can.



Step 77

Find the 9.5" breather hose and apply a small amount of all purpose lube to the fitting.



Step 78

Connect the fitting to the top left port on AOS can.



Step 79

Install the 90 degree fitting to the breather fitting from step 3.



Step 80

Secure the clamp to the hoses.



Step 81

Use a zip tie to secure the two breather hoses together.

Cut excess zip tie.



Step 82

Reconnect the electrical plug for the washer fluid tank.



Step 83

Reinstall the washer fluid tank and tighten hardware.



Step 84

Reinstall the top mount intercooler, BPV and intercooler brackets.



Step 85

Reinstall the negative battery terminal.



Step 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.



**If you have any questions about the product or install
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410-840-3555**