

IAG Air / Oil Separator (AOS)



**INSTRUCTIONS FOR 2020-25 OUTBACK LIMITED XT, 2020-25
OUTBACK ONYX EDITION XT, 2020-25 OUTBACK TOURING XT,
2022-2025 OUTBACK WILDERNESS**



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

Fitment:

2020-2025 Outback XT FA 2.4L TC

2020-2025 Outback Onyx Edition XT FA 2.4L TC

2020-2025 Outback Touring XT FA 2.4L

2022-2025 Outback Wilderness FA 2.4L TC

Part # IAG-ENG-7191BK, IAG-ENG-7191RD, IAG-ENG-7191NY

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. 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.

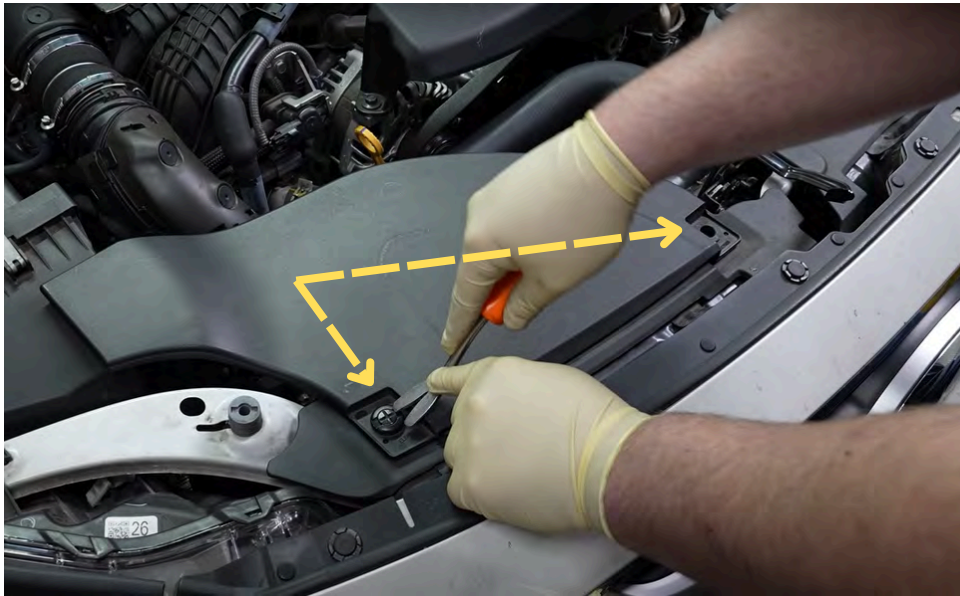


- 1** AOS Unit
- 2** AOS Bracket
- 3** (X4) AOS Bolts
- 4** PCV Adapter Fittings
- 5** AOS P Clamp
- 6** Turbo Inlet Adapter
- 7** Zipties



- 8** 27" Coolant Hose
(90° end)
- 9** 30.5" Coolant Hose
(Hose clamp end)
- 10** Drain/Vent Hose
- 11** 55.5" Vent Hose
- 12** 32" Intake Pipe Hose
- 13** 20" Intake Manifold Hose

Tools needed: 12mm socket, 19mm socket, 27mm socket, 19mm wrench, 14mm wrench, 5mm Allen wrench, 1/8" Allen wrench, small pinch off pliers, cutting pliers, long nose pliers, trim pry tool, thread sealant



Step 1

Using a trim pry tool, remove the two clips that hold the air snorkel.

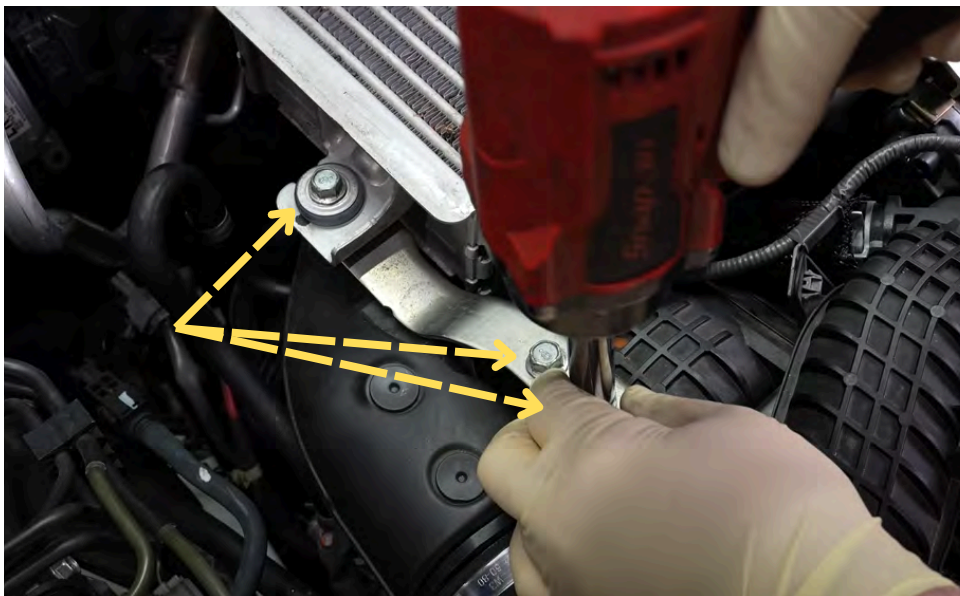
Remove the air snorkel.



Step 2

Using a small pry tool, disengage the charge pipe spring lock by prying up.

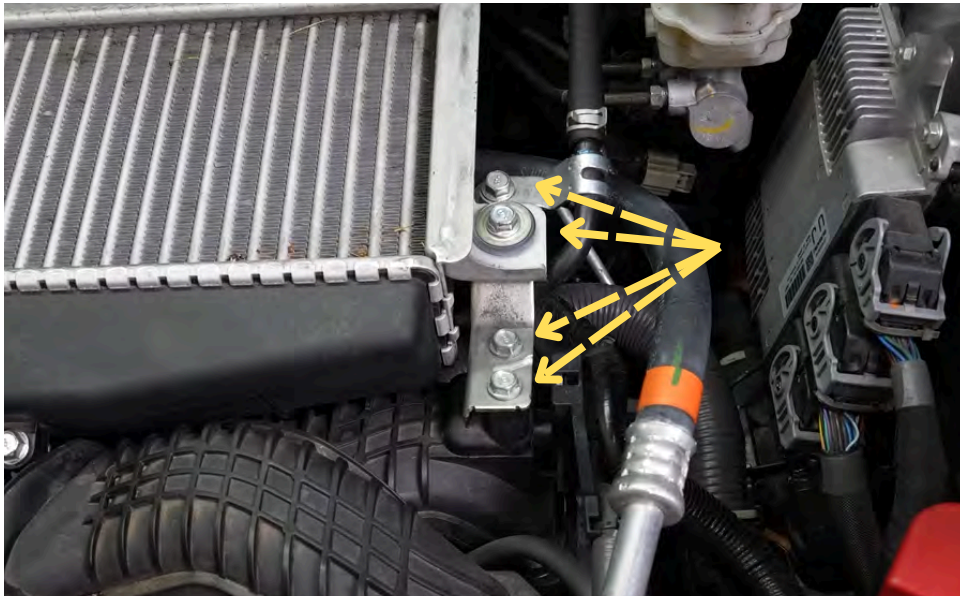
Once the spring lock is in the open position it will lock in place.



Step 3

Remove the three 12mm bolts from the intercooler bracket on the passenger side.

Remove the bracket.



Step 4

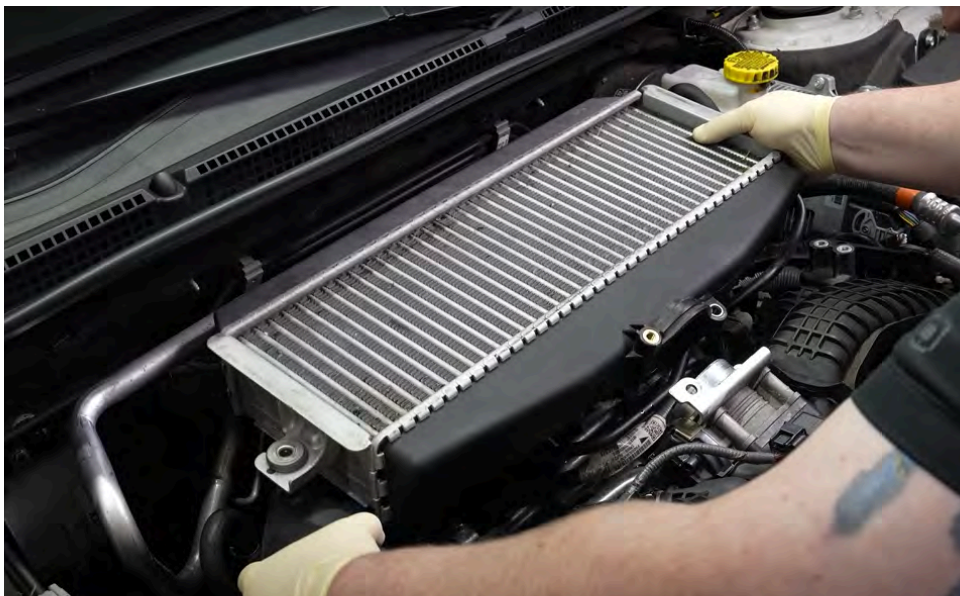
Remove the four 12mm bolts from the intercooler bracket on the passenger side.

Remove the bracket.



Step 5

Remove the two 12mm bolts from the throttle body.



Step 6

Remove the intercooler.

Slide the intercooler toward the rear of the car, and lift up to remove the intercooler.



Step 7

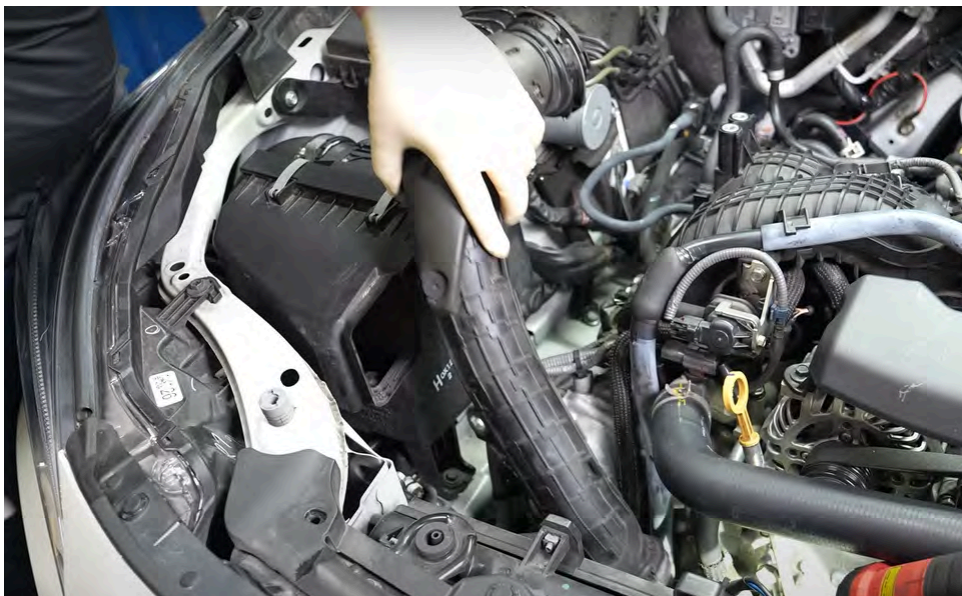
Remove the 12mm bolt from the charge pipe.



Step 8

Using a long pry tool, disengage the spring lock on the bottom end of the charge pipe.

Once the spring lock is in the open position it will lock in place.



Step 9

Remove the charge pipe from the vehicle.



Step 10

Locate the vent hose in front of the intake manifold.

Using cutting pliers, cut the collar off of the single use fitting.



Step 11

Locate the opposing end of the vent hose on the turbo inlet.

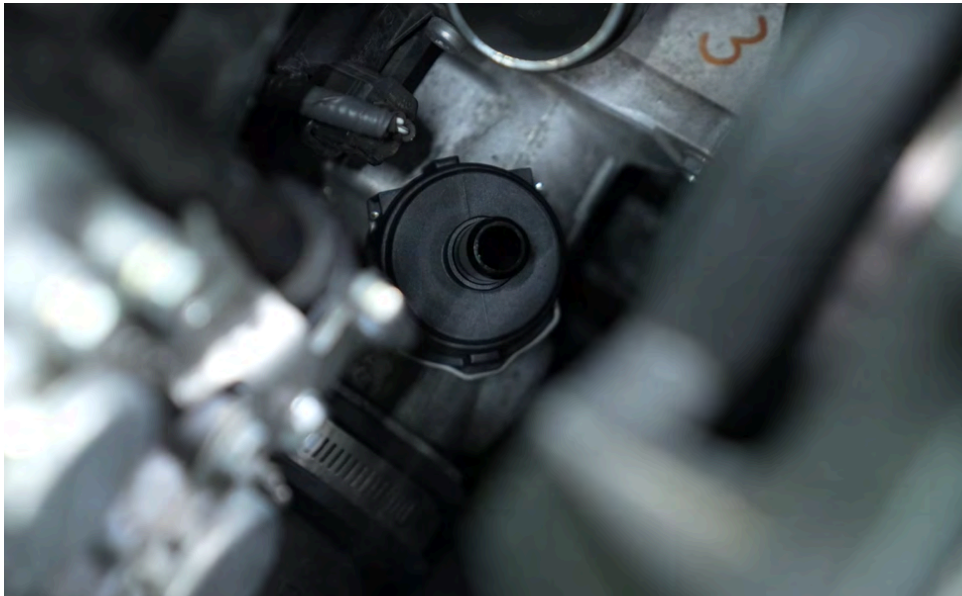
Using a long pry tool, disengage the spring lock.

Once the spring lock is in the open position it will lock in place.



Step 12

Remove and discard the factory vent hose.



Step 12 pt. 2

Install the provided Turbo Inlet adapter onto the turbo inlet.

Ensure that the spring lock is engaged and properly seated.

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Step 13

Locate the factory PCV valve behind the intake manifold.

Using a long pliers, disengage the hose clamp.



Step 13 pt. 2

Remove the intake manifold hose from the PCV valve.



Step 15

Remove the PCV valve from the block with a 27mm socket.



Step 15 pt. 2

Prepare the provided PCV adapter fitting with external threads.

Apply thread sealant to the threads of the fitting.

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Step 16

Install the PCV adapter fitting into the block with a 19mm socket.

Tighten until snug.



Recommended

When installing the quick disconnect fittings, it is recommended to apply a small amount of multipurpose automotive grease/lube to the O-rings.

This helps the O-rings to properly seat, and prevents the seals from pinching.



Step 17

Prepare the 27" AOS Coolant Hose with the 90° end. Install the quick fitting end onto the AOS unit as shown.



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



Step 18

Prepare the 30.5" AOS Coolant Hose with the hose clamp end. Install the quick fitting end onto the AOS unit as shown.





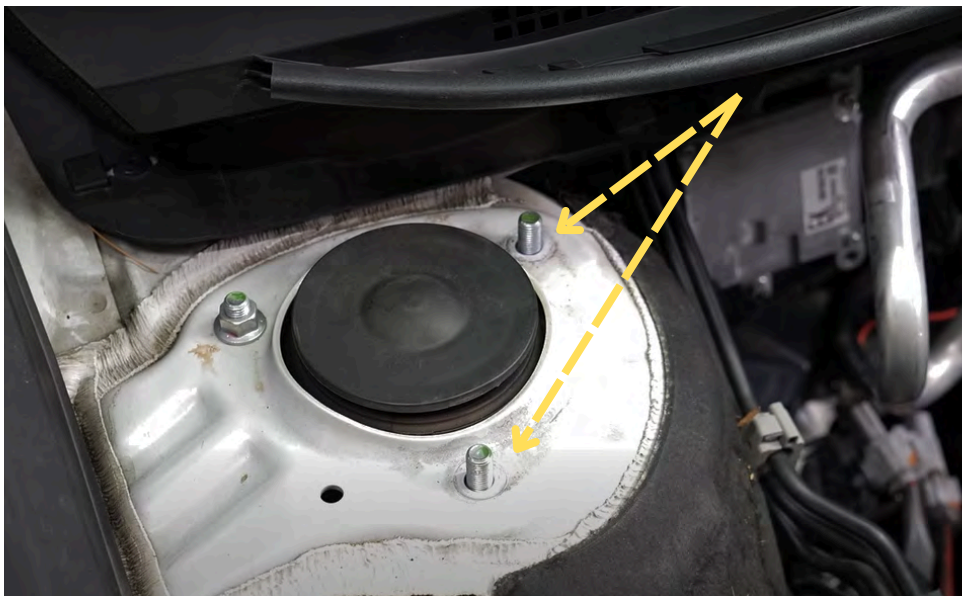
Step 19

Assemble the AOS unit and bracket.
Position the AOS bracket as shown, leaving 5 holes open toward the bottom.



Step 20

Using a 5mm Allen wrench, install and tighten the AOS bolts.



Step 21

Using a 14mm wrench, remove the two nuts from the passenger side strut tower.



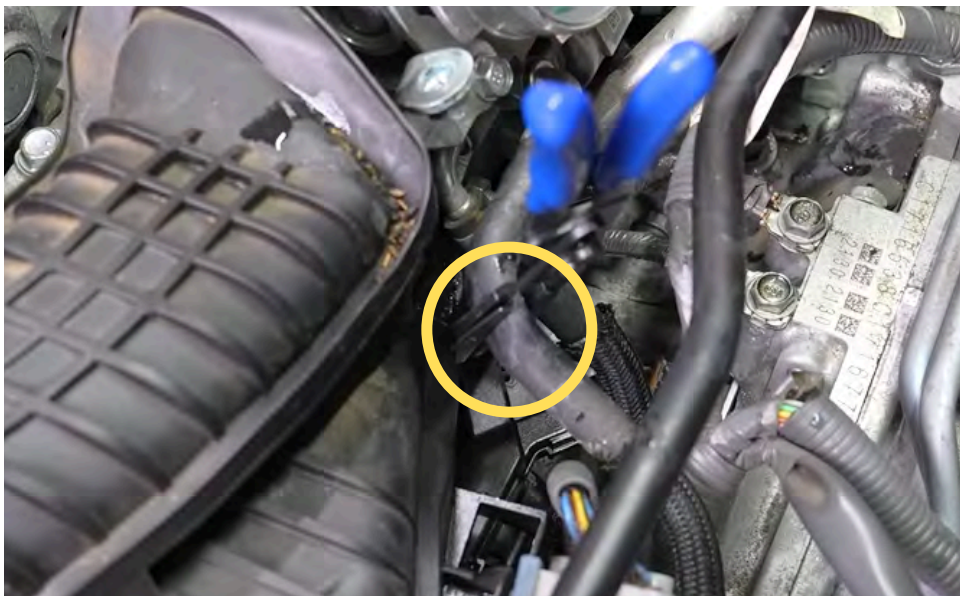
Step 22

Install AOS assembly onto the strut tower.



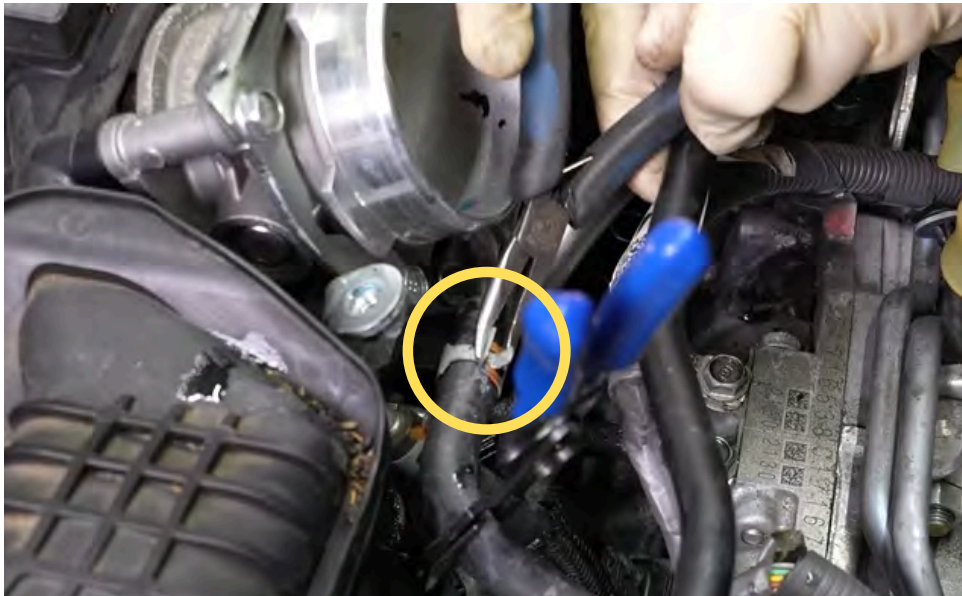
Step 23

Reinstall the strut tower nuts and tighten.



Step 24

Install coolant pinch off pliers onto the throttle body coolant hose.



Step 25

Using pliers, loosen the hose clamp for the coolant line.



Step 25 pt. 2

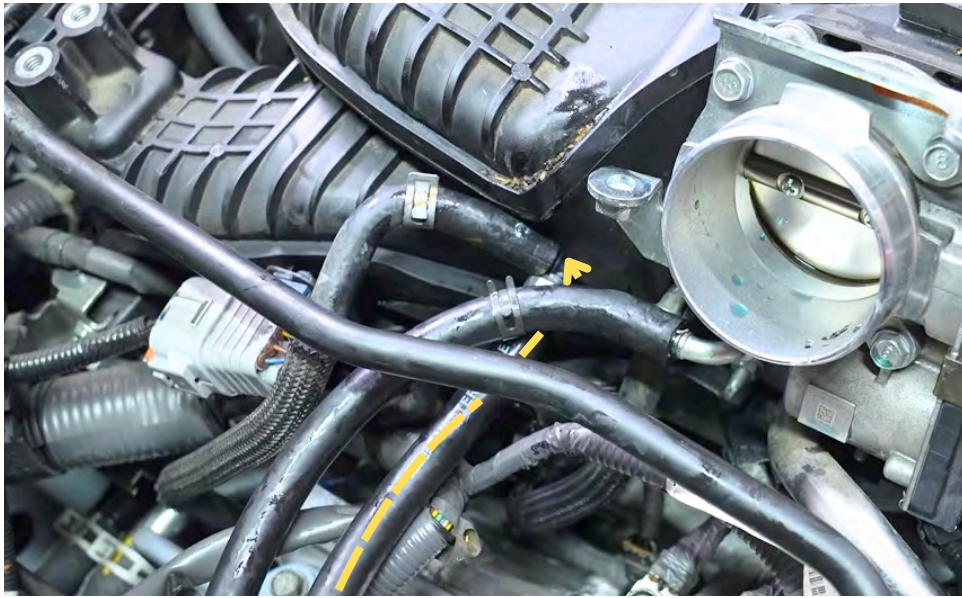
Remove the coolant line from the throttle body.



Step 26

Route the hose clamp end of the AOS coolant hose as shown.

Connect the AOS coolant hose to the throttle body.



Step 27

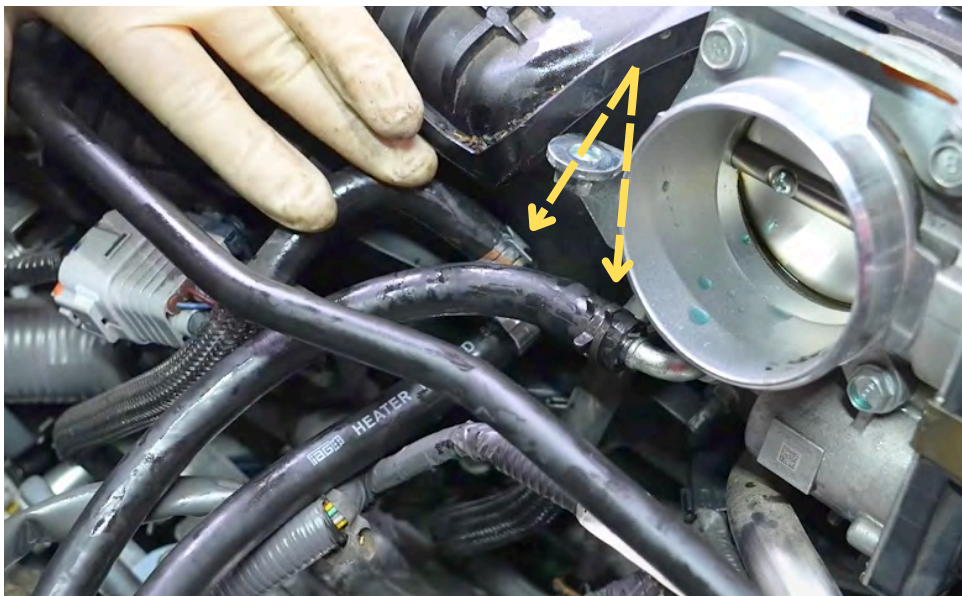
Route the 90° hose end of the AOS Coolant Hose as shown.

Connect the AOS Coolant Hose to the factory coolant line.



Step 28

Remove the pinch off pliers.



Step 29

Resecure both hose clamps for the coolant lines.

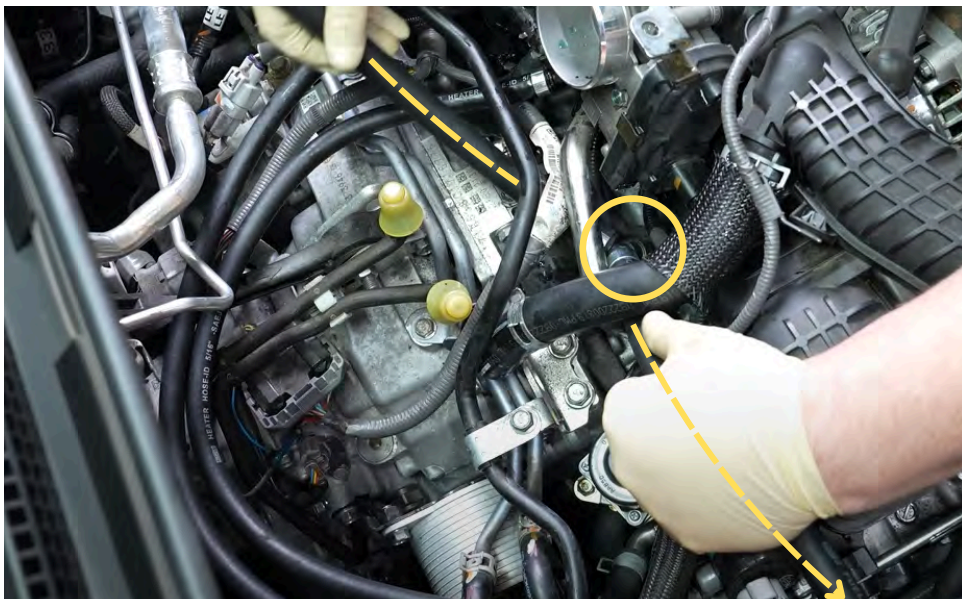


Step 30

Prepare the AOS Vent/Drain hose.

Route the 90° hose end under the factory hardlines as shown.

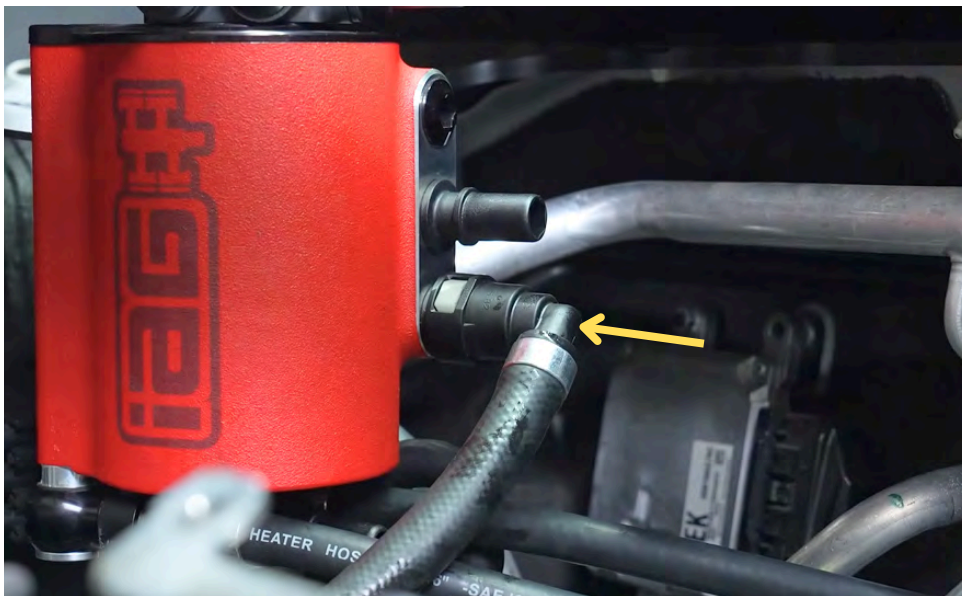
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Step 30 pt. 2

Continue routing the 90° end toward the AOS unit.

Connect the Y fitting to the PCV adapter fitting on the block.



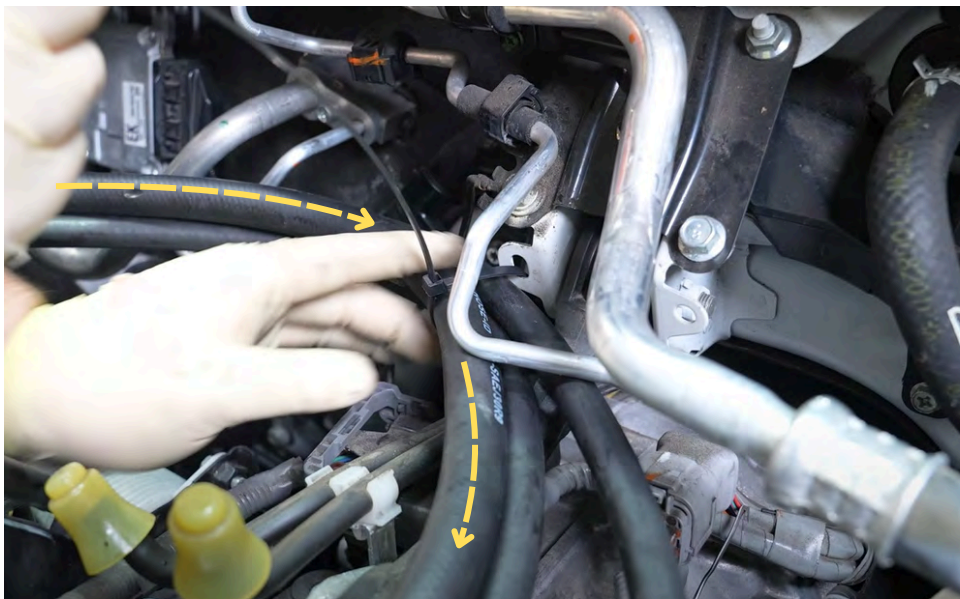
Step 31

Install the 90° hose end onto the lower side port of the AOS.



Step 32

Connect the straight hose end to the bottom drain port of the AOS.



Step 33

Route the AOS drain hose and AOS coolant hoses toward the rear of the vehicle.

Zip-tie the AOS coolant hoses and drain hose onto the bracket as shown.

Trim excess zip-tie.

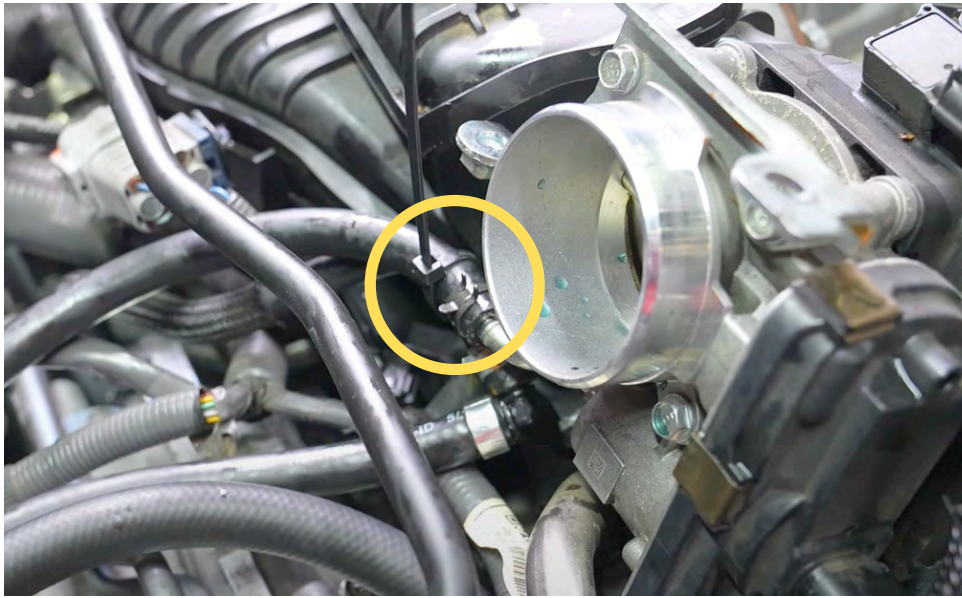


Step 34

Zip-tie the AOS drain and coolant hoses together close to the AOS unit.

Ensure that the AOS Drain Hose is sloped downwards to prevent oil from pooling.

Trim excess zip-tie.



Step 35

Zip-tie the AOS coolant hoses together next to the throttle body.

Trim excess Zip-tie.



Step 36

Prepare 55.5" AOS Vent Hose.

Install the 45° quick fitting hose end onto the remaining side port of the AOS unit.



Step 36 pt.2

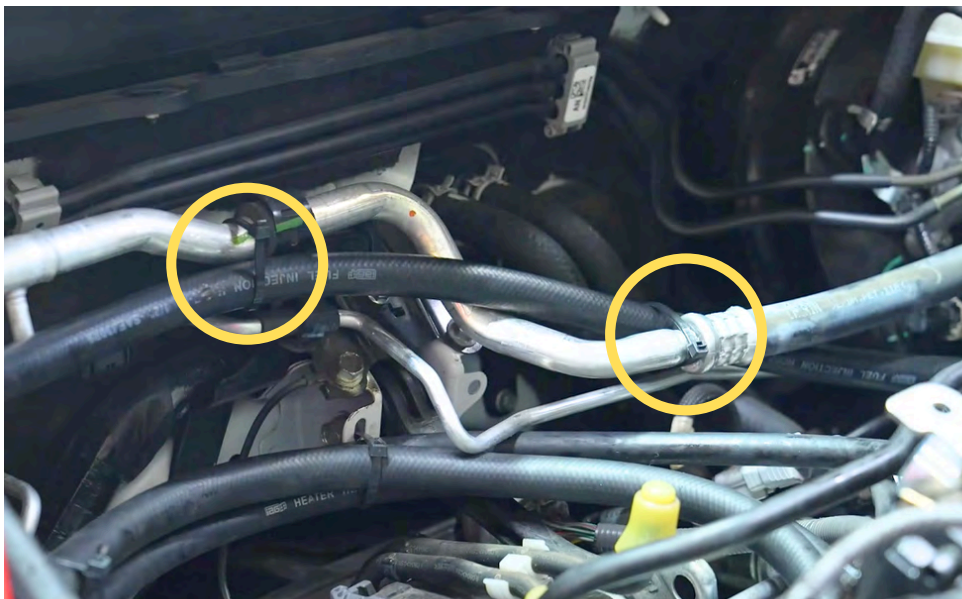
Route the AOS Vent Hose along the factory A/C line.



Step 36 pt. 3

Route the hose underneath the factory A/C line as shown and connect the fitting onto the factory vent port.

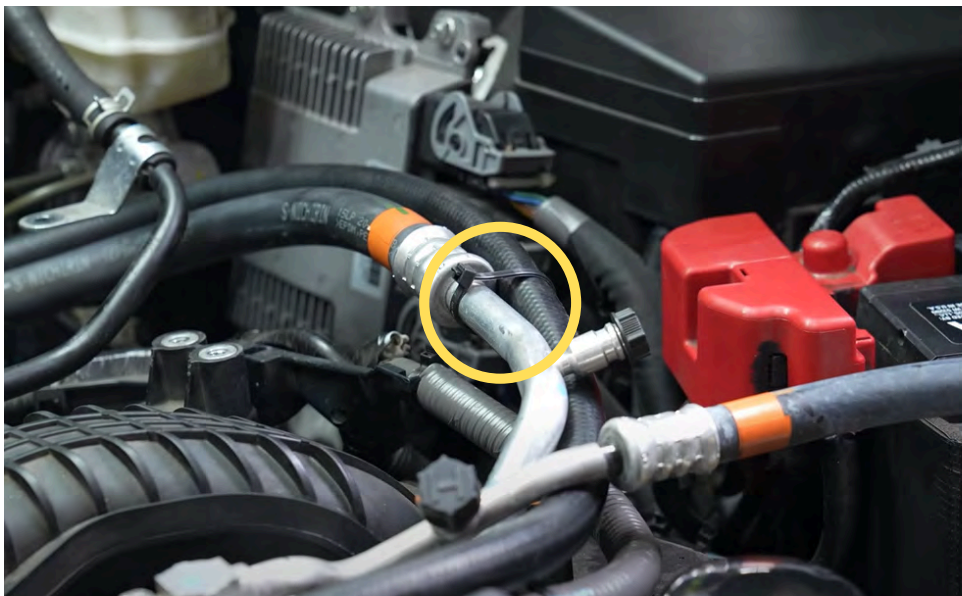
Ensure that the spring lock is engaged and properly seated.



Step 37

Zip-tie the AOS hose to the A/C line as shown.

Trim excess Zip-tie.



Step 37 pt. 2

Zip-tie the AOS hose to the A/C line as shown.

Trim excess Zip-tie.



Step 38

Prepare the OEM PCV valve and the other provided PCV adapter fitting.

Apply thread sealant to the OEM PCV valve.

4



Step 39

Thread the PCV valve onto the PCV adapter fitting.



Step 40

Tighten the PCV valve onto the adapter fitting with a 27mm socket and 19mm wrench.

Tighten until snug.



Step 41

Install the PCV valve onto the factory intake manifold hose.

Resecure the hose clamp to the valve.



Step 42

Prepare the 20" AOS Intake Manifold Hose. Install the 90° hose end onto the side facing top port of the AOS.

Route the hose towards the rear of the vehicle as shown.

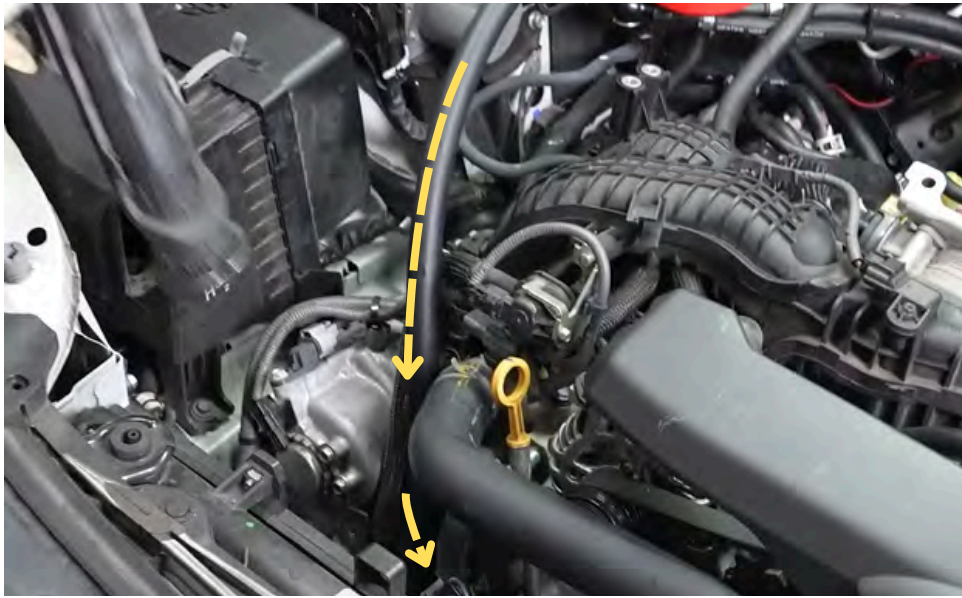
13



Step 43

Route the factory intake manifold hose underneath the hardline as shown.

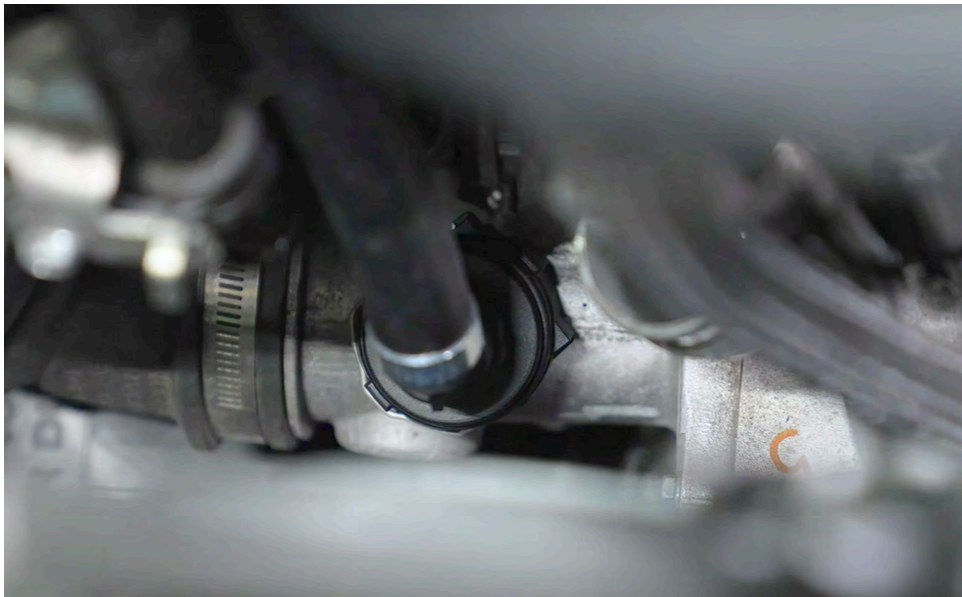
Install the 90° hose end onto the PCV adapter fitting.



Step 44

Prepare the 32" AOS Turbo Inlet Hose.

Route the 45° hose end down in front of the motor, towards the turbo inlet.



Step 45

Install the 45° hose end onto the Turbo Inlet Adapter.



Step 46

Install the opposing 90° hose end onto the remaining top port of the AOS.



Step 47

Reinstall the charge pipe.



Step 48

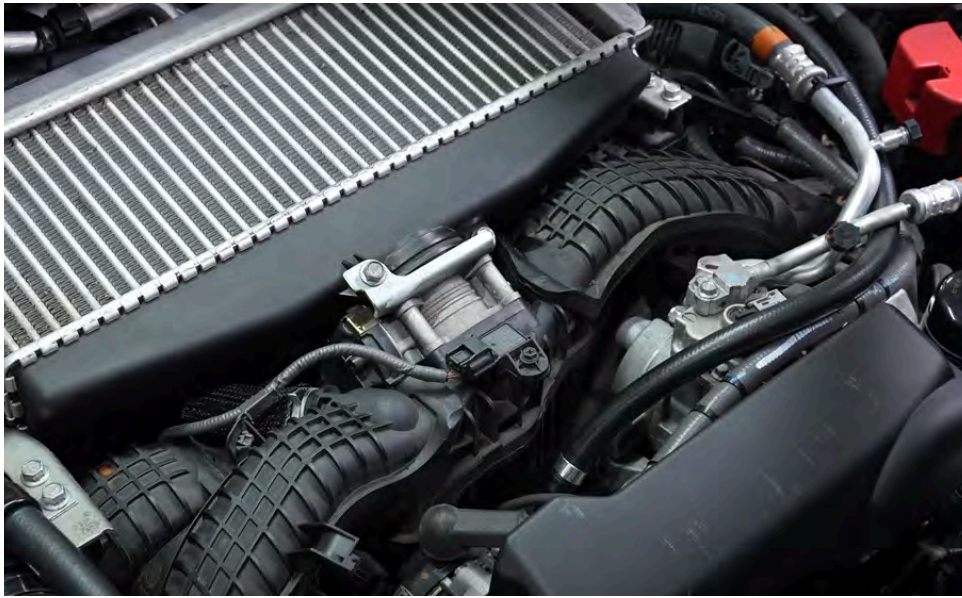
Reinstall the Intercooler and intercooler brackets.



Step 49

Install the provided P clamp onto the AOS Turbo Inlet Hose.

Bolt the P clamp to the passenger side intercooler bracket.



Step 50

Reinstall the throttle body bolts.



Step 51

Reinstall the intake snorkel.



Step 51

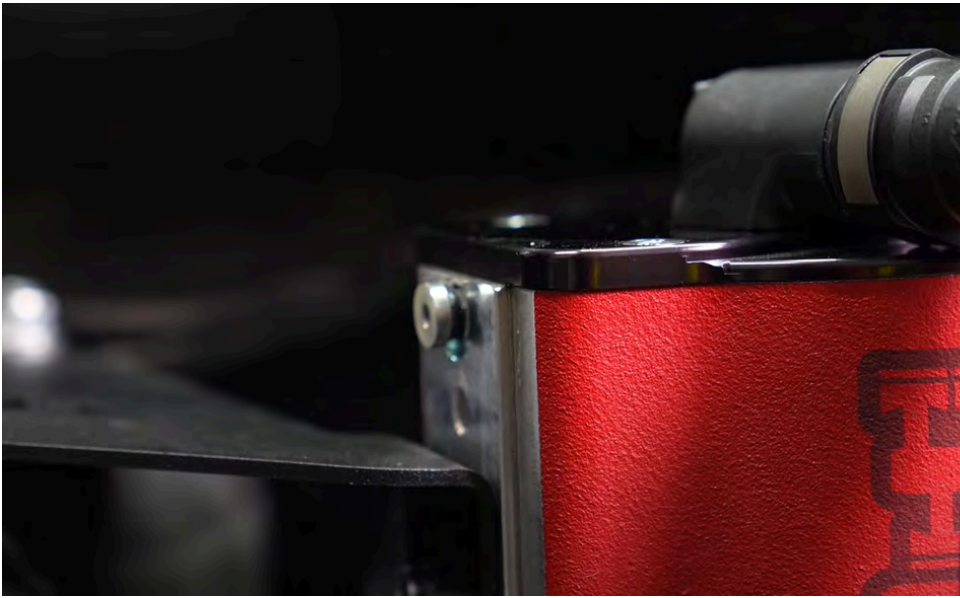
Loosen the AOS coolant bleed screw with a 1/8 Allen wrench.

Top off the coolant level.

Start the vehicle and idle until operating temperature.

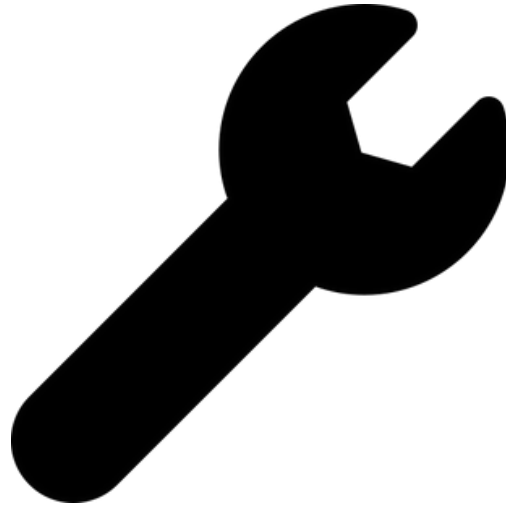
Note: Do not fully remove the bleed screw, loosen the screw until the O-ring is visible and not seated on the AOS unit.

Step 51 pt. 2



Wait until coolant begins to drip from the bleed screw.

Once coolant begins to drip, retighten the bleed screw.



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