

# IAG Air Oil Separator

## For 3.0L Broncos

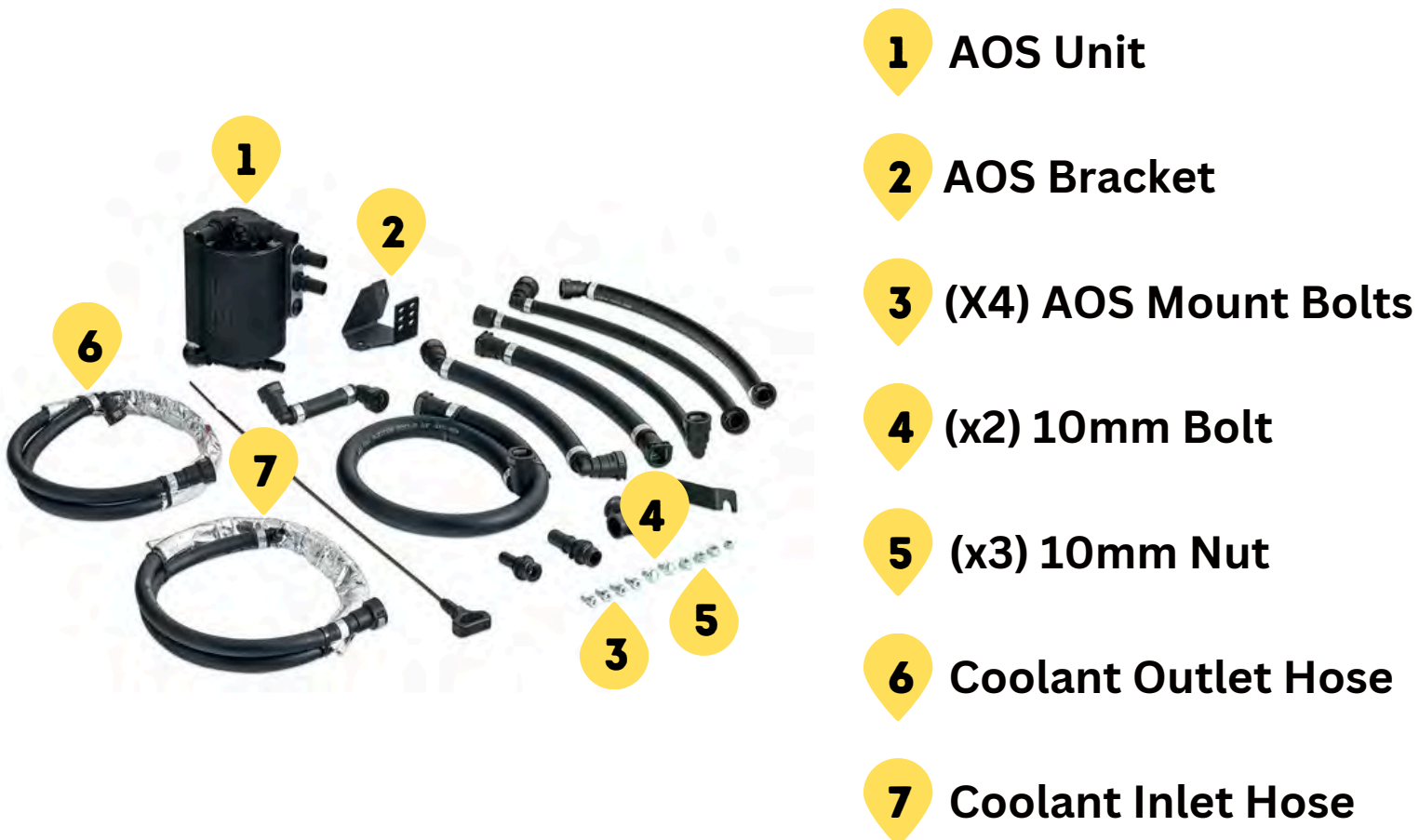




## IAG-ENG-F7904, IAG Air Oil Separator For 3.0L Broncos

Congratulations on the purchase of your Air Oil Separator, and thank you for choosing IAG Off Road! These instructions are intended for users with basic mechanical skills. Professional installation is not required.

Installation video can be found on our website.



**1** AOS Unit

**2** AOS Bracket

**3** (X4) AOS Mount Bolts

**4** (x2) 10mm Bolt

**5** (x3) 10mm Nut

**6** Coolant Outlet Hose

**7** Coolant Inlet Hose



**8** Dipstick Drain Hose

**9** Intake Pipe Hose  
(Option #1)

**10** Intake Manifold Hose

**11** Intake Pipe Hose  
(Option #2)

**12** AOS Vent Hose

**13** Valve Cover Hose  
(Passenger side)

**14** Valve Cover Hose  
(Driver Side)



**15** Extended Dipstick

**16** Dipstick Check Valve

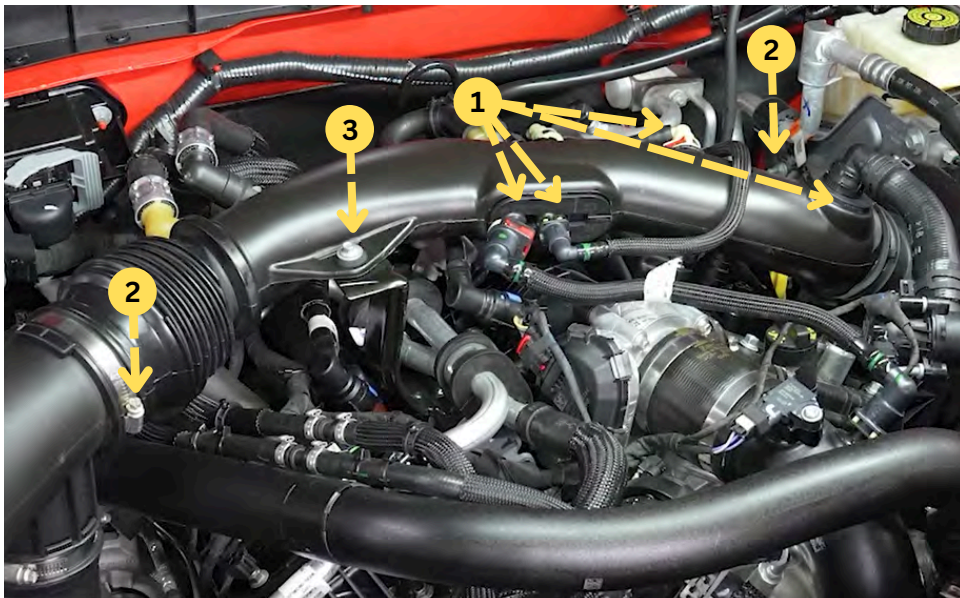
**17** PCV Adapter Fitting

**18** Dipstick Adapter

**19** Dipstick Bracket

**20** 8mm Lock Nut

**Tools needed:** 10mm Wrench, 10mm socket, 8mm socket, ratchet, 5mm Allen Wrench, trim pry tool, cutting pliers



### Step 1

Remove the top intake pipe.

- 1 Remove the four hoses.
- 2 Loosen the hose clamps.
- 3 Remove the bracket bolt.

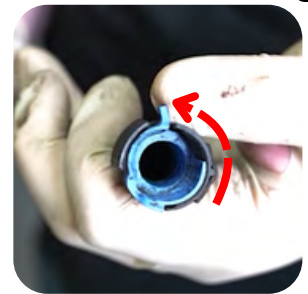
Note: Removing the intake pipe is not required for the AOS installation process. Removal was done for filming purposes, and ease of access.



### Step 2

Remove the breather hose from the passenger side valve cover.

Depress the blue tab to release the hose fitting.



### Step 3

Remove the single use breather hose on the driver side valve cover.

Using cutting pliers, cut the fitting as shown to disengage the anti tamper lock.

Cut the fitting on both sides.

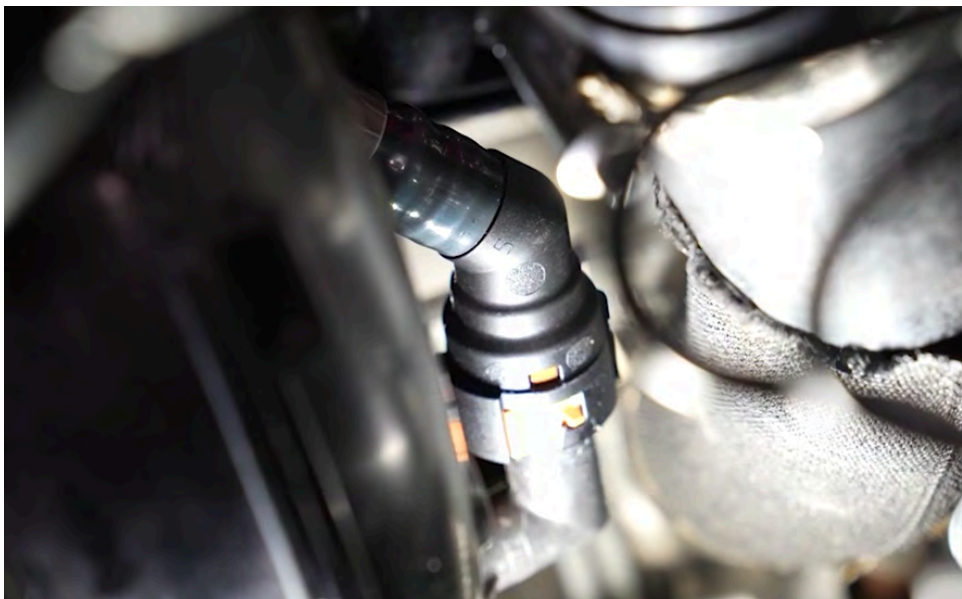


#### Step 4

Remove the inner lock from the valve cover port.

Using cutting pliers, cut the three tabs off the inner lock as shown.

Discard the lock and O rings.



#### Step 5

Following the same process, Remove the opposing end of the hose and inner lock from the intake pipe.

Discard the factory hose.



#### Step 6

Remove the dipstick.



### Step 7

Prepare and assemble the new dipstick adapter and check valve.

**16**



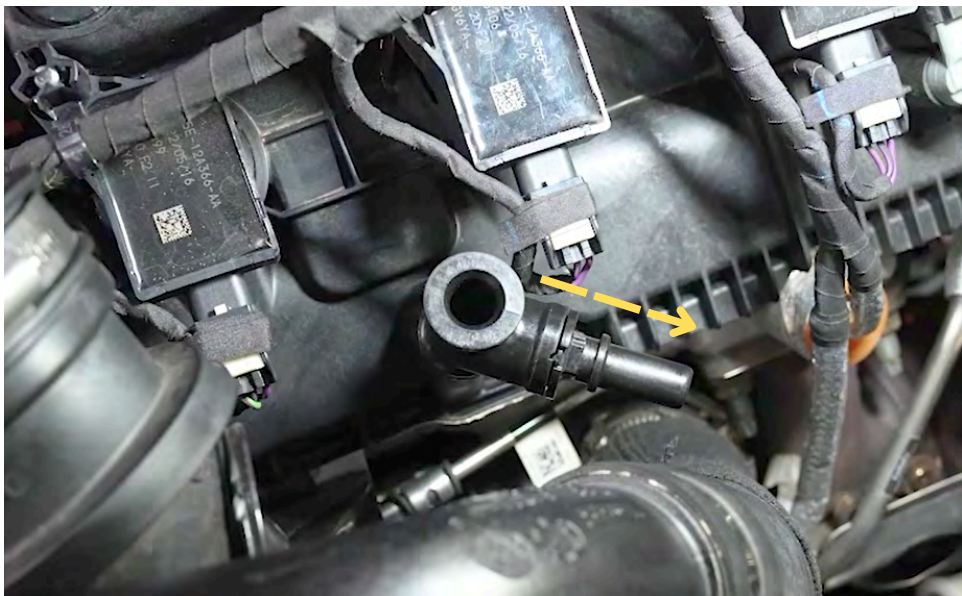
**18**



### Step 7 pt. 2

Install the check valve onto the dipstick adapter as shown.

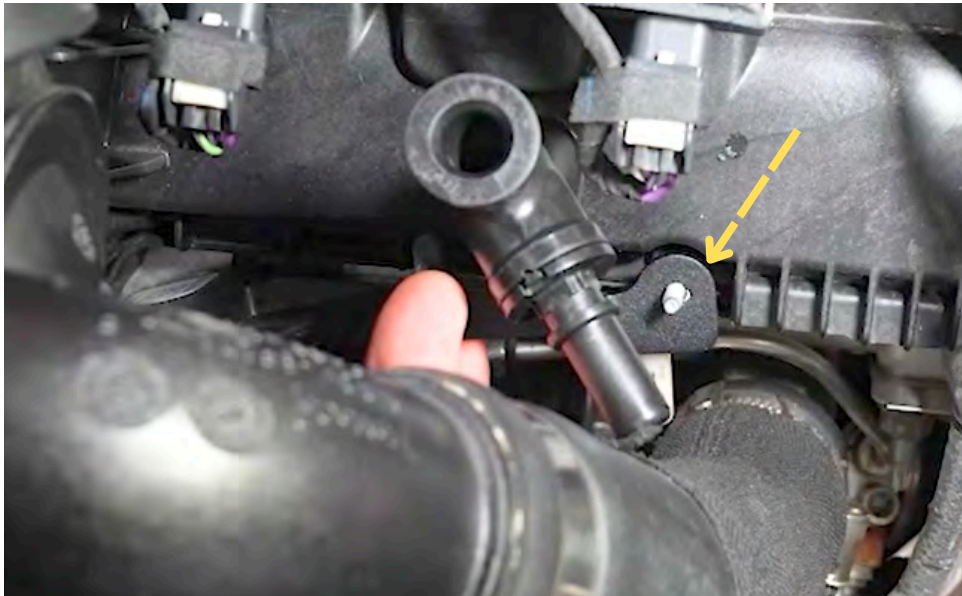
Thread on and tighten by hand.



### Step 8

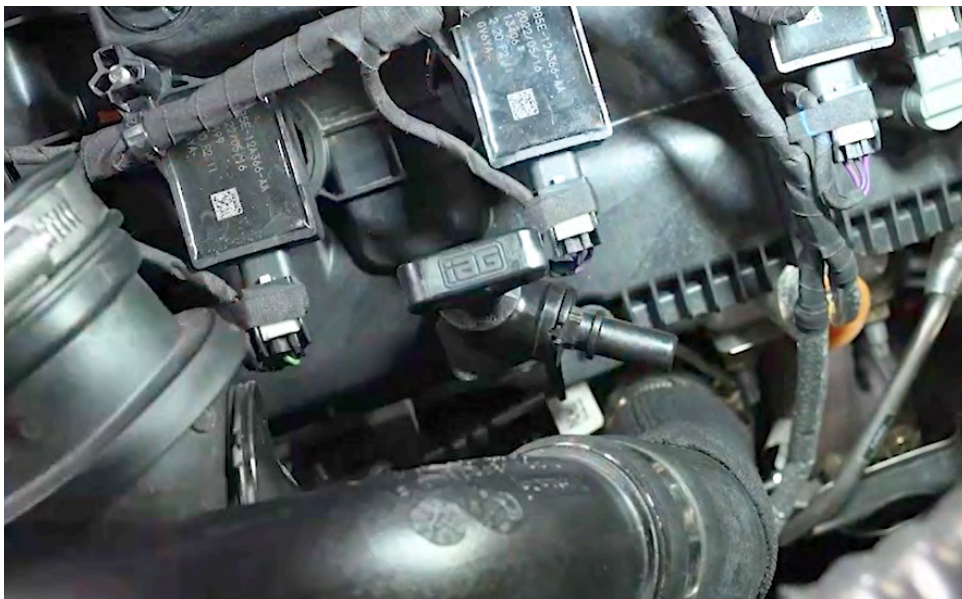
Install the new dipstick assembly into the factory dipstick tube.

Face the check valve port towards the rear of the vehicle.



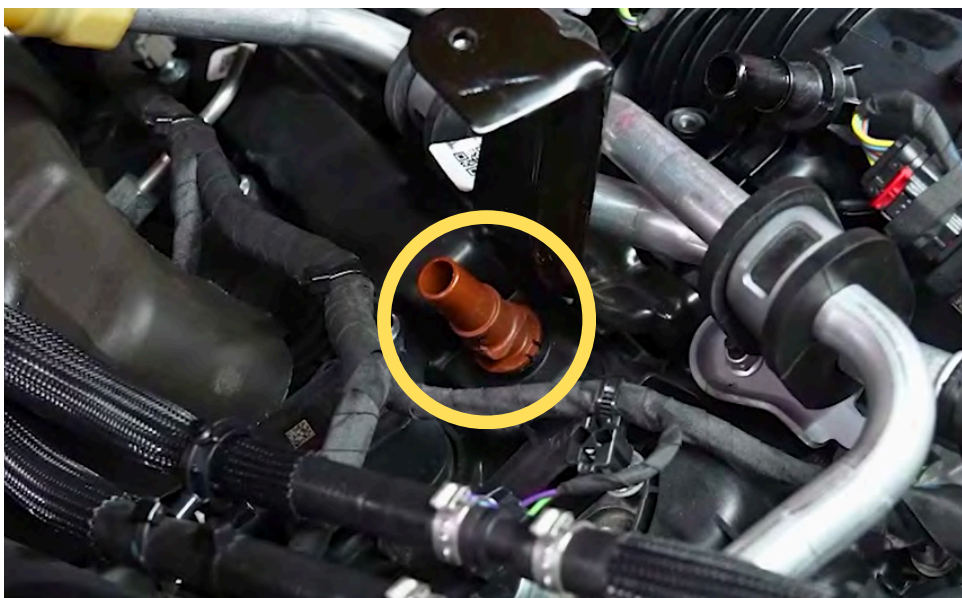
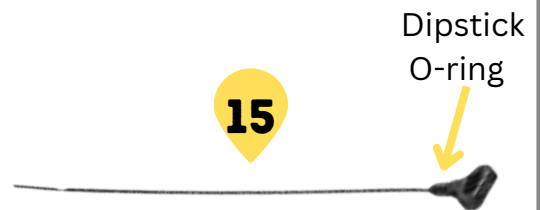
### Step 9

Install the dipstick tube bracket onto the stud. Ensure that the bracket is fully seated on the new dipstick tube adapter. Install a 8mm nut on the stud and tighten.



### Step 10

Prepare the new dipstick by applying a small amount of lube/oil to the dipstick O-ring. Install the new dipstick into the dipstick tube.



### Step 11

Remove the OEM PCV fitting from the passenger side valve cover.

Rotate the fitting counter clockwise by hand and remove the fitting.

Save this fitting as it will be used in a future step.



### Step 12

Prepare the new PCV fitting.

Apply a small amount of lube to the fitting O-ring.

17



### Step 12 pt. 2

Install the new PCV fitting into the passenger side valve cover.



### Step 13

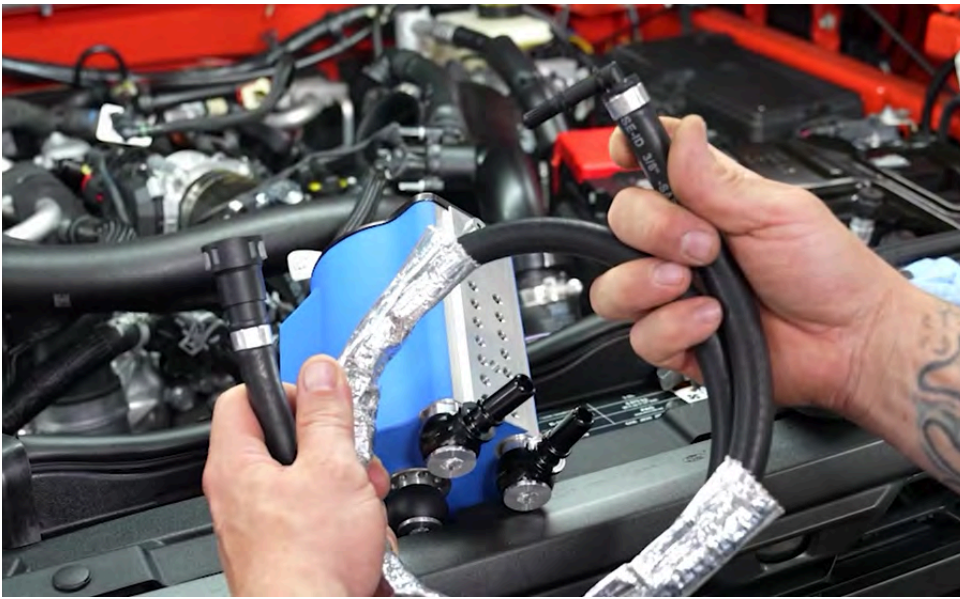
Using a pry tool, remove the wiring harness fastener from the firewall.





#### Step 14

Using a pry tool, remove the ground cable fastener from the firewall.



#### Step 15

Prepare the coolant inlet hose.  
Apply a small amount of lube to the end fitting.



#### Step 15 pt. 2

Install the coolant inlet hose onto the driver side AOS coolant fitting.

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



### Step 16

Prepare the coolant outlet hose.

Apply a small amount of lube to the end fittings.



### Step 16 pt. 2

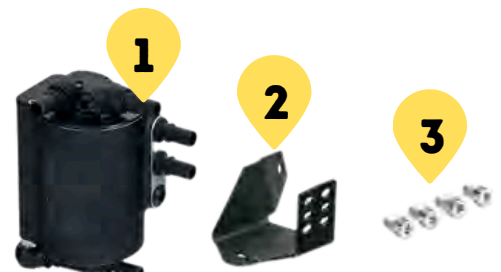
Install the coolant outlet hose onto the passenger side AOS coolant fitting.

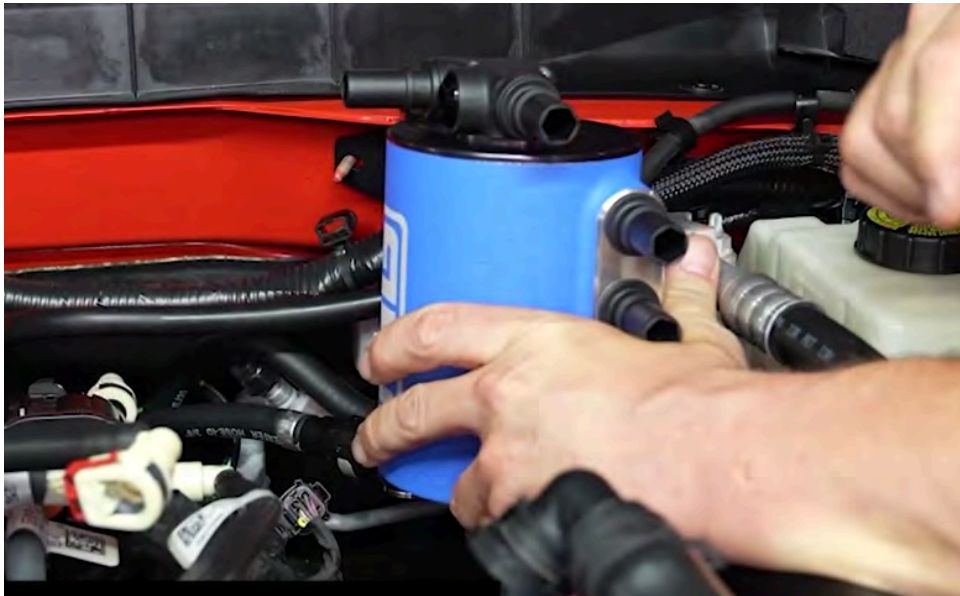


### Step 17

Prepare the AOS unit.

Using provided 5mm Allen bolts, attach the AOS bracket to the AOS. Position bracket at highest setting as shown.





### Step 18

Position the AOS onto the firewall as shown.

Place AOS bracket onto stud. Route the wiring harness and ground cable underneath the AOS bracket.



### Step 18 pt. 2

Install the provided 10mm nut onto the firewall stud. Do not tighten.



### Step 19

Route both AOS coolant hoses behind motor, towards the coolant reservoir.

Route hoses underneath factory EVAP line.



### Step 20

Install the provided 10mm bolt through the top of the AOS bracket, hand tighten the provided 10mm nut to the bottom of the bolt.



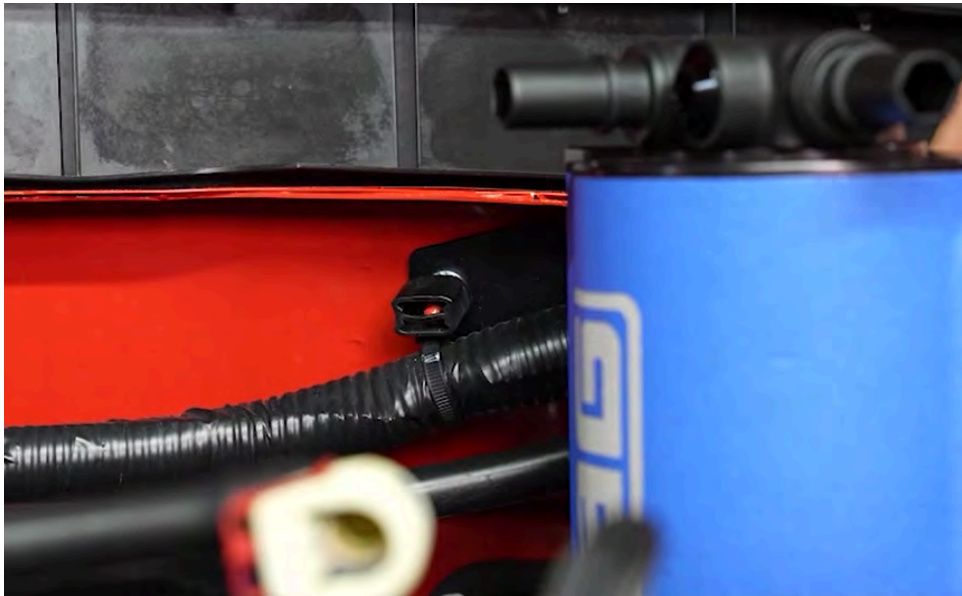
### Step 21

Tighten the AOS nut and bolt.



### Step 22

Tighten the AOS nut.



### Step 23

Reinstall the wiring harness fastener to the stud.



### Step 24

Reinstall the ground cable fastener to the AOS bracket.



### Step 25

Disconnect the factory upper coolant hose from the coolant reservoir.



### Step 26

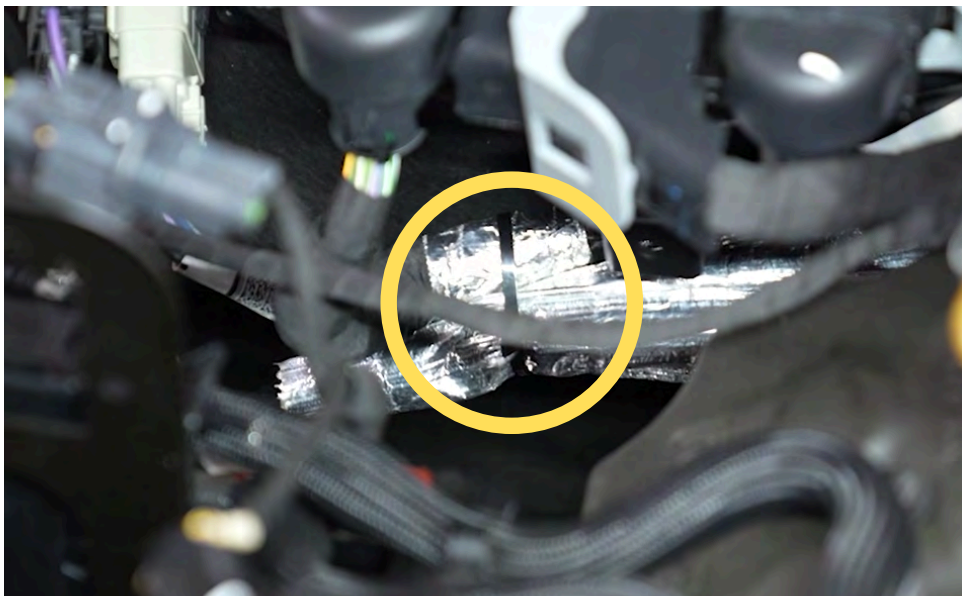
Connect the AOS coolant hoses inline to the coolant reservoir, and the factory coolant hose.



### Step 27

Zip tie the AOS coolant hoses together.

Trim excess zip tie.



### Step 28

Zip tie the AOS coolant hoses to the factory wiring harness.

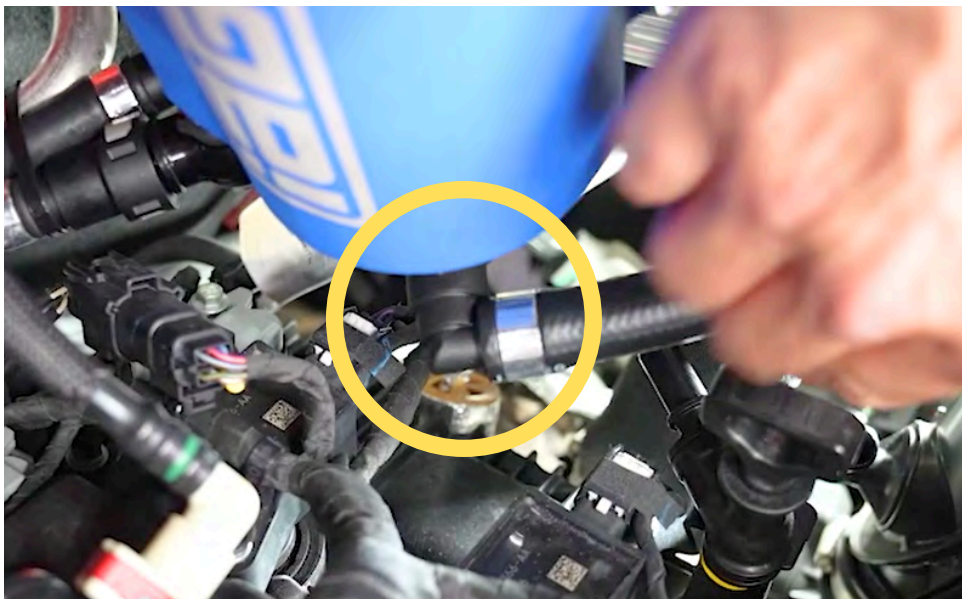
Trim excess zip tie.



### Step 29

Zip tie the AOS coolant hoses to the factory A/C line.

Trim excess zip tie.



### Step 30

Prepare the dipstick drain hose.

Apply a small amount of lube to the end fittings.

Install the drain hose onto the bottom AOS drain fitting.



### Step 30 pt. 2

Install the drain hose onto the dipstick adapter assembly.



### Step 31

Prepare the driver side valve cover hose.  
Apply a small amount of lube to the end fittings.

Install the hose onto the driver side valve cover port.

**13**



### Step 32

Install the opposing end onto the front facing bottom port of the AOS.



### Step 33

Prepare the passenger side valve cover hose.  
Apply a small amount of lube to the end fittings.

Install the straight end onto the front port of the AOS.

**14**



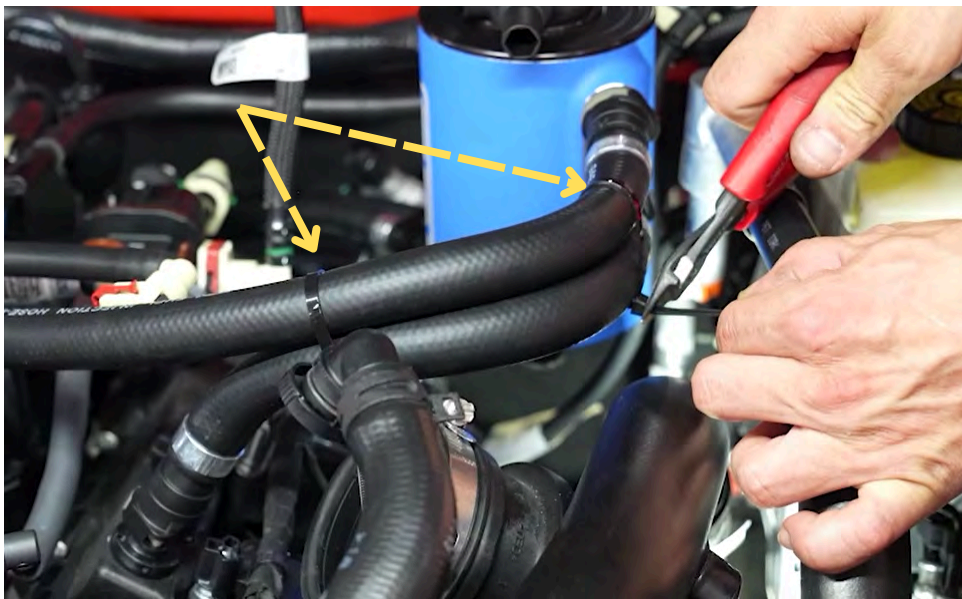




#### Step 34

Install the opposing 90° end onto the passenger side valve cover port.

Route hoses underneath factory heater hoses.



#### Step 35

Install zip ties onto AOS valve cover hoses.

Trim excess zip tie.



#### Step 36

Install zip tie onto the passenger side valve cover hose and the factory wiring harness.

Trim excess zip tie.



### Step 37

Prepare the intake manifold hose.

Apply a small amount of lube to the end fitting.

Install the OEM PCV valve from step 11 on the straight hose end.

**10**



### Step 38

Prepare the AOS vent hose.  
Apply a small amount of lube to the end fittings.

Install the 45° hose end onto the OEM PCV valve.

**12**



### Step 39

Install the 90° end of the intake manifold hose onto the intake manifold.

Ensure that the correct orientation of the PCV valve.



#### Step 40

Route the AOS vent hose underneath the wiring harness and towards the back of the motor.



#### Step 41

Route the AOS vent hose up from behind the motor, and install the 90° end to the AOS side facing top port.

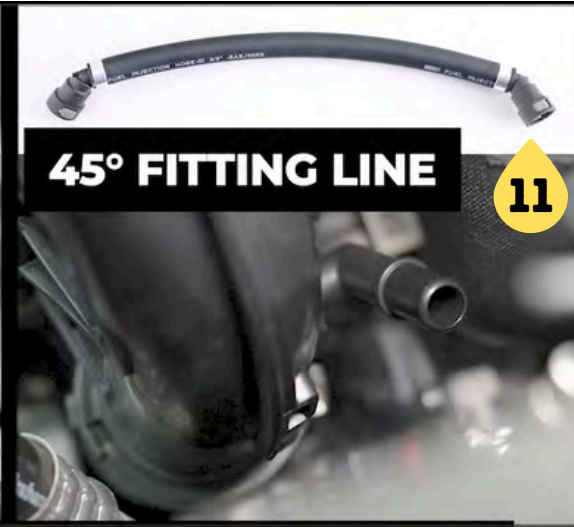
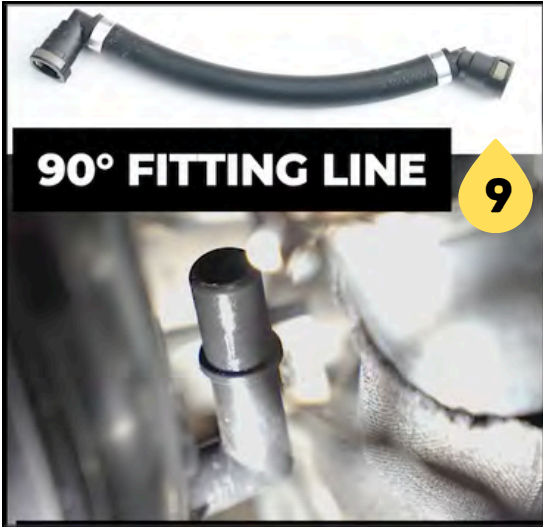


#### Step 42

Install Zip tie on AOS vent line to the AOS coolant lines.

Trim excess zip tie.

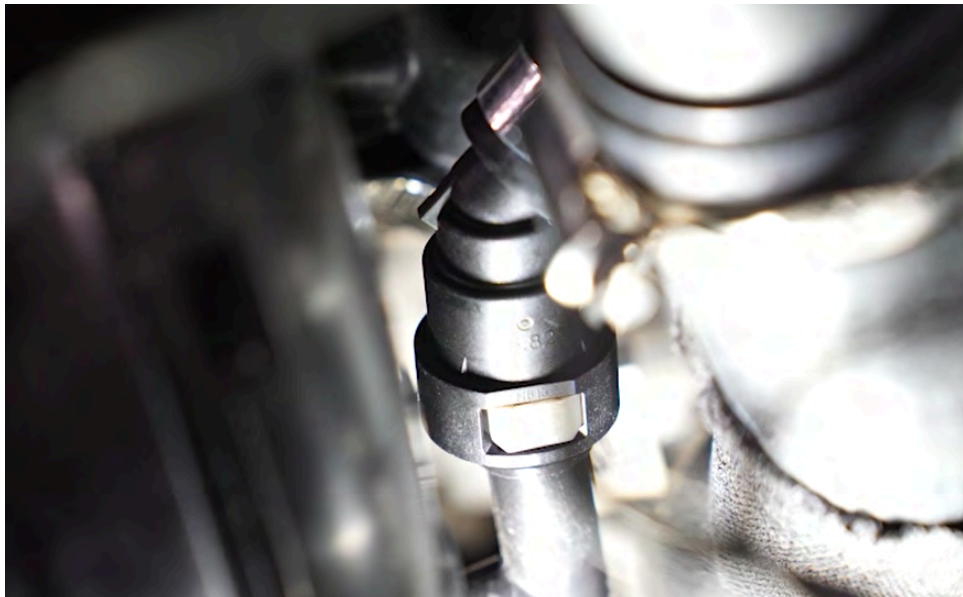
### Step 43



Determine intake pipe fitting style.

For an up facing intake port use hose style #1 **9**

For a side facing intake port use hose style #2 **11**



### Step 44

Prepare the intake pipe hose. Apply a small amount of lube to the end fittings.

For either style hose install the 45° hose end to the intake pipe.

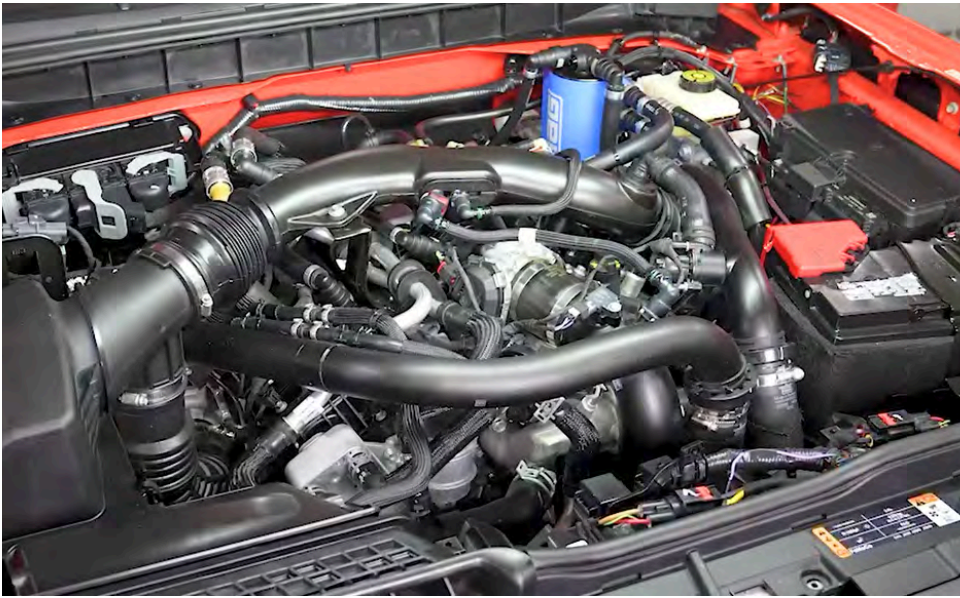


### Step 45

Install the opposing end of the hose to the front facing top port of the AOS.

Step 46

Reinstall the top intake pipe.



If you have any questions about the product or install please reach out to [support@iagoffroad.com](mailto:support@iagoffroad.com) or call 410-840-3555