



GrimmSpeed Air/Oil Separator

Installation Instructions

Subaru 08+ WRX / ALL LGT Application

Manual 300020 RevB



All GrimmSpeed products are intended for Off-Road use only. Park your vehicle on a level surface. Fully engage the parking brake and put wheel stops on the front and rear wheels to keep the vehicle from rolling.

Warning (read before installing):

Before moving forward with the setups outlined below, insure that you have the experience to properly modify your car. If not, please consult a professional. Without a proper install you could possibly damage your engine. Under no circumstances is the GrimmSpeed Air/Oil Separator to be used in any applications where failure of the AOS to operate as intended could jeopardize the safety of the operator or any other person or property.

NOTE: Our recommended method of installation retains the factory PCV valve.

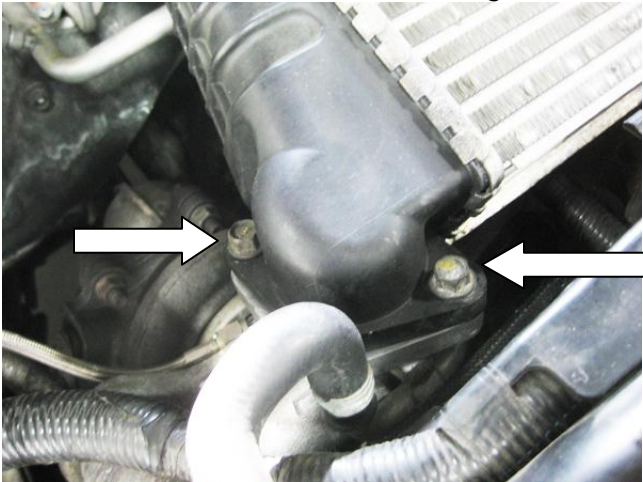
Contents:

- (1) AOS unit
- (3) AOS Hose Fittings
- (1) 1/2" to 1/2" to 1/2" Tee Hose Connector
- (4) 1/2" to 5/8" Hose Connector
- (1) 5/8" to 5/8" 90 Degree Elbow Hose Connector
- (1) 5/8" Hose Cap
- (1) 5/8" Hose Plug
- (1) 1/2" Hose Cap
- (1) 1/2" Hose Plug
- (1) 8ft of 1/2" Hose
- (1) 1ft of 3/8" Hose
- (1) 1ft of 5/8" Hose
- (20) Zip-ties

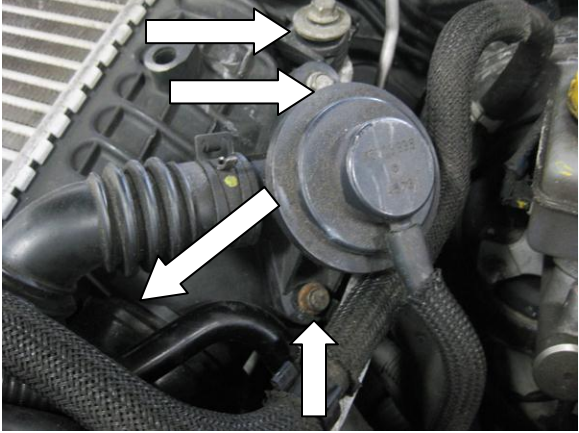
1. Install AOS fittings into AOS body. Place a drop of engine oil onto o-ring to ease installation. Remove oil cap and install GrimmSpeed AOS so that fittings face towards the master cylinder. Be careful to NOT over tighten the AOS into the oil fill.



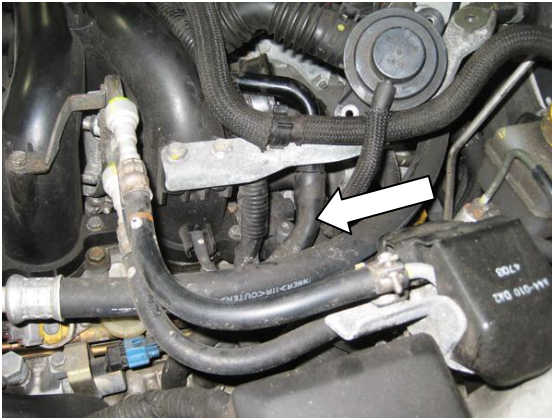
2. Remove turbo to intercooler mounting bolts.



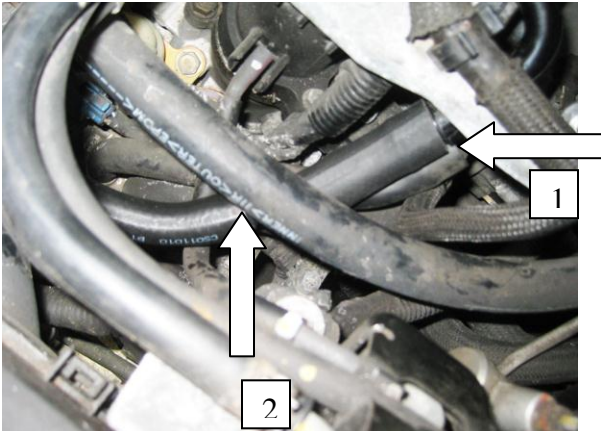
3. Remove BOV mounting bolts, remove IC mounting bolt, and loosen intercooler outlet hose clamp. Remove intercooler.



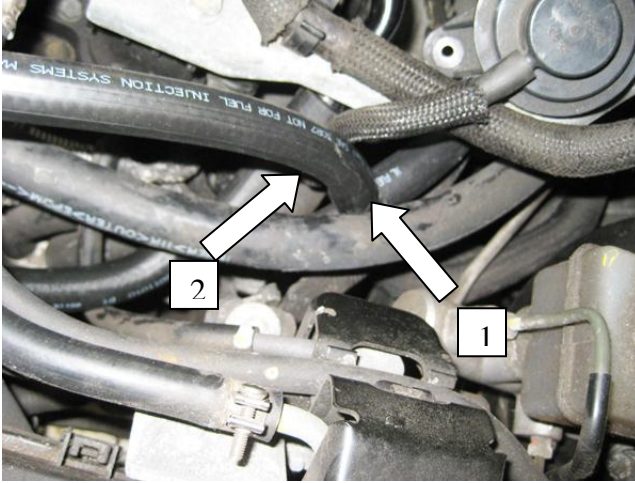
4. Starting on the driver's side of the engine bay, locate cylinder head crossover tube and pull rubber hose off of crossover tube.



5. Cut 2.5" of 5/8" ID hose (arrow 1 below) and push onto crossover tube. Push 5/8" to 1/2" hose connector into the 2.5" of 5/8" hose. Push 1/2" hose (arrow 2 below) into other end of the connector and then run the hose to the center port on the AOS, cut to length. We find that using a small amount of water on the connector aids in pushing the hose on the plastic connectors. Push 1/2" hose onto the AOS center fitting.



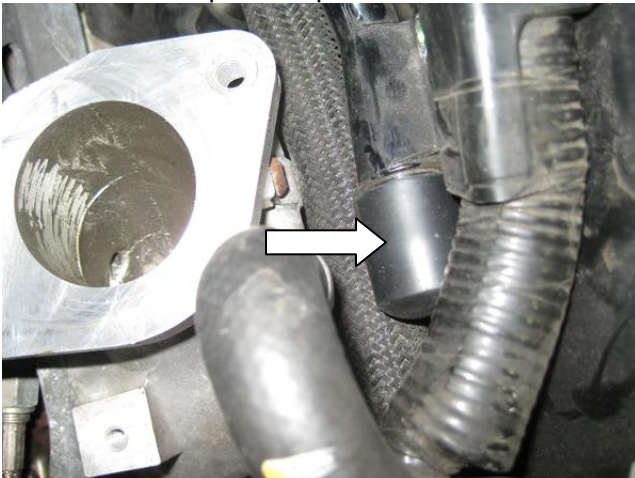
6. Install 5/8 x 1/2" connector into driver side 5/8" head hose that was removed in step 4. Cut 2" of 1/2" hose and connect it to the connector. Then install 1/2" x 1/2" x 1/2" tee (1) into the 1/2" hose. Install 1/2" hose (2) into the tee. Route this 1/2" hose to the right side fitting of the AOS. Cut the 1/2" hose and push it onto the AOS right fitting. Note that on 2012 vehicles, there may be a white plastic flow sensor in the system, just after the valve cover. It should be left in the system. You can connect the hose going to the tee directly to the sensor.



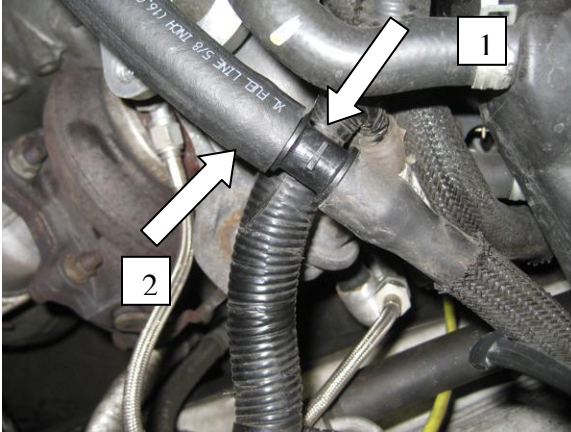
7. On the passenger side of the engine bay near the turbo, locate the other end of the plastic cylinder head crossover tube. Disconnect the head vent hose from this tube.



8. Install 5/8" cap on the plastic tube.

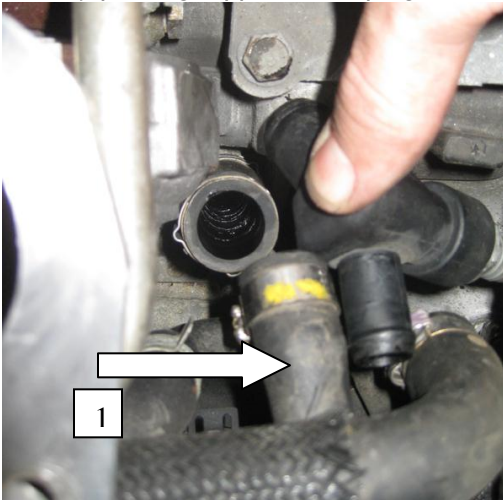


9. Install the 5/8" to 1/2" connector (1) into the passenger side cylinder head hose that you removed in step 8. Connect a piece of 1/2" hose (2) in the other end of the connector. Route this hose to the remaining connector on the Tee from step 6. This hose needs to be long enough so that it will tuck under the intercooler when it is reinstalled. Cut hose and push it onto the tee. Again, note that 2012 vehicles may have a white plastic flow sensor inline here. It should be left in the system and you can connect the hose going to the tee directly to it.

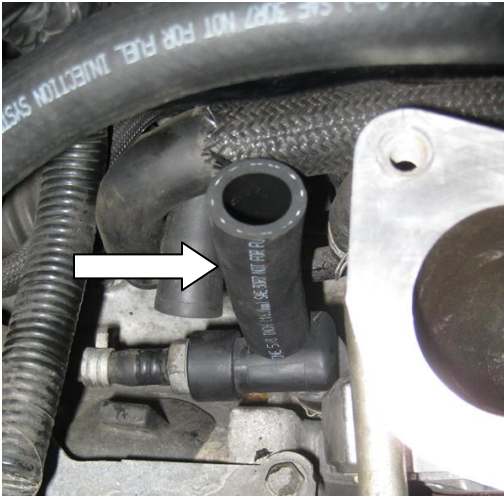


STEPS 10-13 ARE FOR LGT. 2008 WRX SKIP TO STEP 14. 2009+ WRX skip to STEP 17

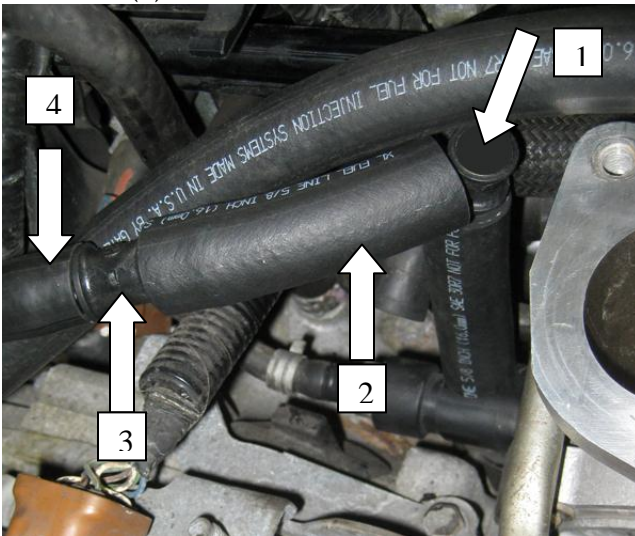
10. Locate crankcase breather port Tee near the turbo. Remove the factory tee by pulling up on it. There is some resistance but it will come out (you don't need to take metal clamp off). Then remove the top 5/8" hose from the top of this factory tee. You will need to plug the 5/8" hose by pushing supplied 5/8" plug into it.



11. Push the tee back into the factory breather hose. Cut approximately 2" of 5/8" hose and install it onto the factory tee.



12. Install 5/8" elbow (1) so that it is pointing towards the driver's side of the engine bay. Install approximately 2.5" of 5/8" hose (2) into the other end of the tee. Then install 5/8" to 1/2" hose connector (3) into the 5/8" hose. Then install the remaining 1/2" hose into the connector (4).



13. Route 1/2" hose (arrow 4 above) back to the left AOS port. This hose needs to be long enough so that it will tuck under the intercooler when it is reinstalled. Place zip ties on all hose barb connections. Reinstall intercooler. (this includes the outlet hose clamp, BOV bolts, mounting bolt, and turbo outlet bolts). Skip to STEP 19.

STEPS 14-16 are for 2008 WRX ONLY

14. Locate crankcase breather port Tee near the turbo. Disconnect the electrical connector from the tee. Disconnect the 3/8" PCV line from both ends. Rotate the crankcase tee 90 degrees.



15. Remove white connector from hose end and reconnect it to the tee. Plug the hose that had the connector with supplied 1/2" hose plug (see arrow). Connect longer supplied 3/8" PCV line into rotated crankcase tee.



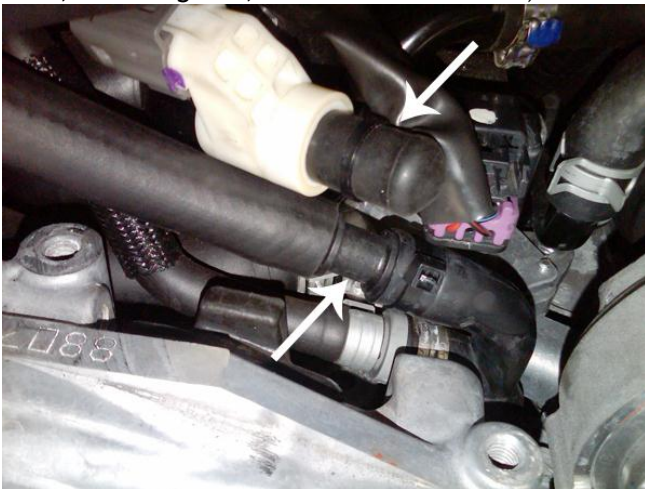
16. Using supplier 1/2" hose, place 1/2" hose onto the white hose connector and bring hose to one of the bottom ports on the AOS. Skip to step 19.

STEPS 17-18 are for 2009+ WRX ONLY

17. Locate crankcase breather port Tee near the turbo. Pull white sensor off of Tee.



18. Using supplied $\frac{1}{2}$ " Cap, cap off white sensor from step 14. Insert $\frac{1}{2}$ " to $\frac{1}{2}$ " hose connector into open crankcase Tee port. Using supplier $\frac{1}{2}$ " hose, place $\frac{1}{2}$ " hose onto other end of $\frac{1}{2}$ " to $\frac{1}{2}$ " hose connector and bring hose to one of the bottom ports on the AOS. This hose needs to be long enough so that it will tuck under the intercooler when it is reinstalled. Place zip ties on all hose barb connections. Reinstall intercooler. (this includes the outlet hose clamp, BOV bolts, mounting bolt, and turbo outlet bolts).



19. When intercooler is in position and not pinching any of the new AOS hoses, cut the final hose from step 13, 16, or 18 and push it onto the AOS. Place a zip tie on it. You're done!

