



Required!

INSTALLATION INSTRUCTIONS

PART NUMBER:

21-474B (Blue Finish)

21-474C (Gun Metal Grey Finish)

21-474P (Vacuum Metalized Chrome-VMC)

21-474R (Red Finish)

2005	SAAB	9-2X	H4-2.0L	C.A.R.B. E.O. # D-670-15
2002-2005	SUBARU	Impreza WRX	H4-2.0L	C.A.R.B. E.O. # D-670-15

**AEM[®] bypass valves are not compatible with this *intake system* (part number 21-474)
DO NOT attempt to install an AEM bypass valve on this intake system!**

PARTS LIST

Description	Qty.	Part Number
Element Parts Kit 3.00 X 5" Dry Ele.	1	21-203DK
Upper Pipe	1	2-545
Lower Pipe	1	2-546
Hose, Adapter 2.75/3.00 X 3" Bl.	1	5-273
Hose, Hump 2.75/2.75x3.00"	1	5-575
Rubber Edge Trim 15"	1	8-3015
Zip Tie, 8" Tree Push-Mnt.	1	1-127
Washer, M10 X 20mm X 2mm	1	1-3022
1/2" Bnd. Hose Clamp, 2.31-3.25"	3	9444
1/2" Bnd. Hose Clamp, 2.56"-3.50"	1	9448
1/2" Bnd. Hose Clamp, 2.90"-3.75"	1	9452

Read and understand these instructions BEFORE attempting to install this product. Failure to follow installation instructions and not using the provided hardware may damage the intake tube, throttle body and engine.

The AEM® intake system is a performance product that can be used safely during mild weather conditions. During harsh and inclement weather conditions, you must return your vehicle to stock OEM airbox and intake tract configuration. Failure to follow these instructions will void your warranty.

1. Preparing Vehicle

- a. Make sure vehicle is parked on level surface.
- b. Set parking brake.
- c. If engine has run in the past two hours, let it cool down.
- d. Disconnect negative battery terminal.
- e. Do not discard stock components after removal of the factory system.

2. Removal of stock system

- a. Above the airbox, remove the two twist locks and plastic cover.
- b. Remove the two mounting bolts holding the air inlet scoop and remove the scoop from the vehicle. **(Fig. 1)**
- c. Loosen the two hose clamps on the stock air inlet tube and remove it.
NOTE: The cable for the cruise control unit is held in place by a clip that is molded in to the stock air inlet tube. Be sure to remove the cable from this clip before removing the tube from the vehicle.
- d. Unplug the harness from the MAF sensor. Remove the coolant hoses from the clips molded into the top of the airbox.
- e. Down on the frame rail, there are bolts on each side of the airbox that secure it in place. Remove the two bolts and the air filter box assembly.
NOTE: Reinstall the bolts after removing the airbox. (Fig. 2)

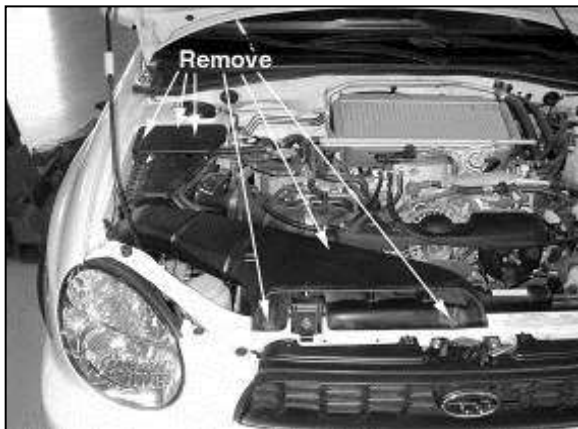


Fig. 1

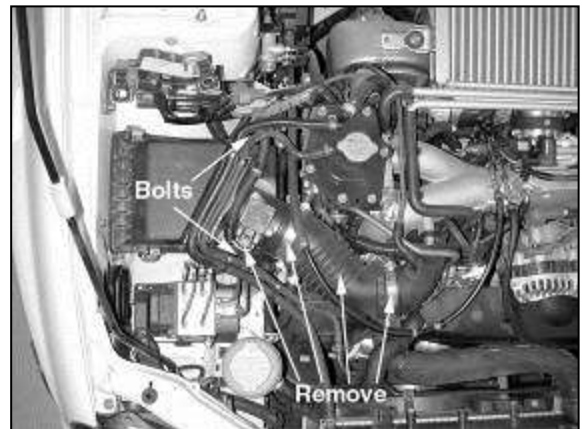


Fig. 2

- f. **Raise the front of the vehicle with a jack. Refer to your owner's manual for proper jack and jack stand placement to properly support vehicle. Support your vehicle using properly rated jack stands before wheel removal or while working under the vehicle. NEVER WORK UNDER A VEHICLE WITHOUT USING JACK STANDS.**
Remove the two plastic clips holding the wheel well liner to the underside of the vehicle's passenger side bumper. **(Fig. 3)**
- g. With the front wheels turned all the way to the right, locate the fender liner's plastic clips. Remove these clips to detach the fender liner from the passenger side wheel well. **(Fig.4)**

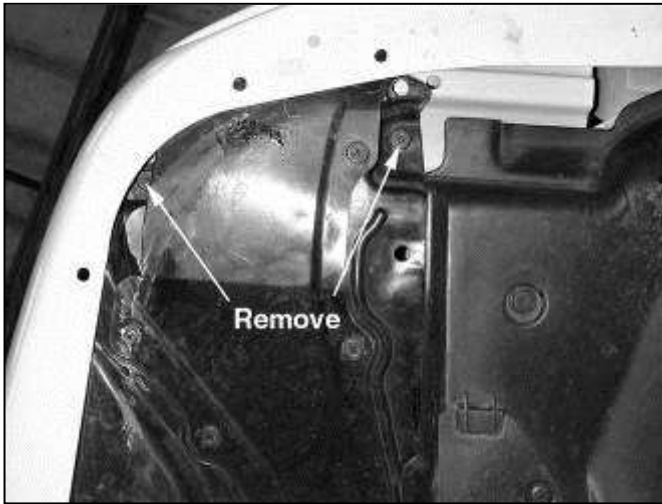


Fig. 3

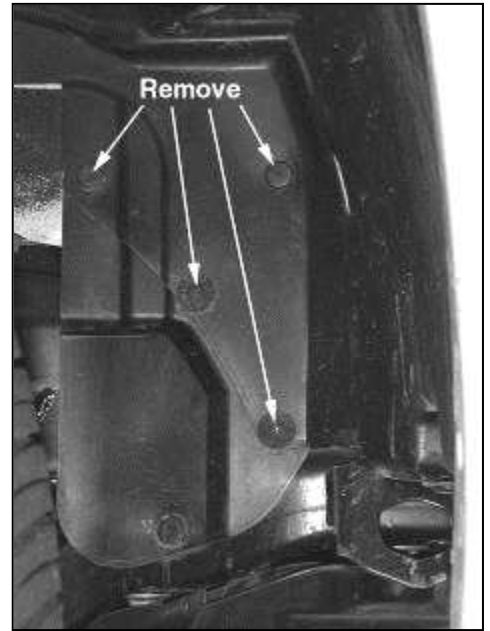


Fig. 4

- h. Remove the nut holding the resonator box to the inner fender. **(Fig. 5)**
- i. Pull the wheel well liner down and towards the back of the car. Locate the bracket, just behind the driving light, holding the resonator box on the underside of the passenger's side bumper cavity. Remove the nut and the resonator box from the vehicle. **(Fig. 6)**

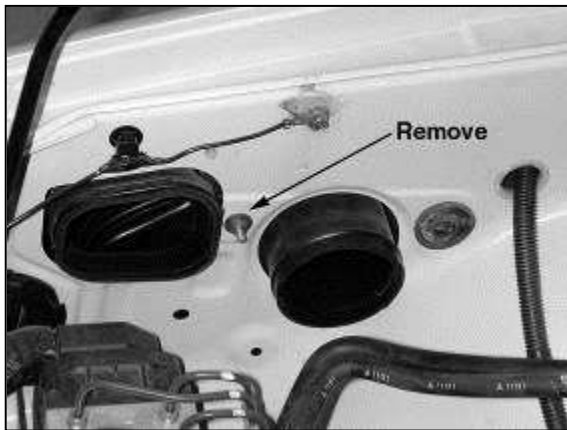


Fig. 5

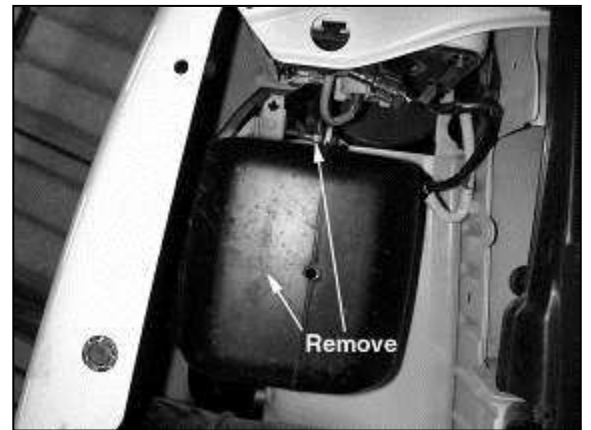


Fig. 6

3. Installation of AEM® Intake System

- a. When installing the intake system, do not completely tighten the hose clamps or mounting hardware until instructed to do so.
- b. Check to see that the inside of the AEM® inlet pipe and air filter are clean and free from any debris or obstructions.
- c. Install the 2.75" hump hose onto the turbo inlet tube using a #44 hose clamp. **(Fig. 7)**
- d. Place the other 2.75" hose clamp onto the other end of the coupler.
- e. Install the rubber edge trim around the edge of the hole that passes through the fender.

NOTE: The edge trim will need to be cut to size. (Fig. 8)

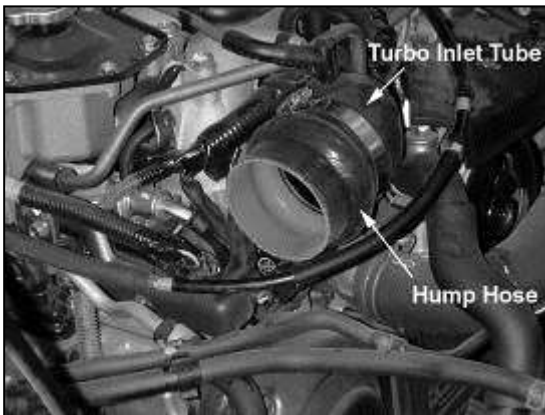


Fig. 7

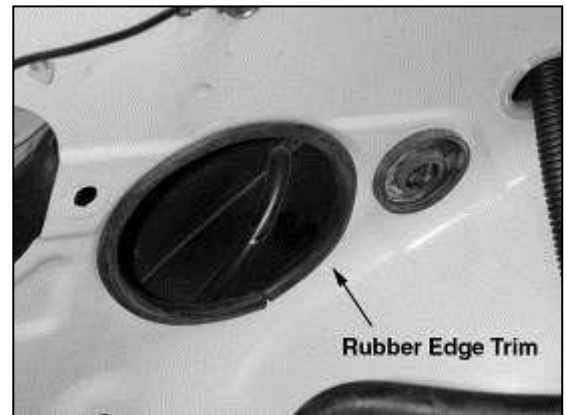


Fig. 8

- f. In the bumper cavity, locate the nut holding the ABS unit to the fender well and remove it. **(Fig. 9)**
- g. Place the supplied washer onto the stud coming through the fender well. **(Fig. 10)**

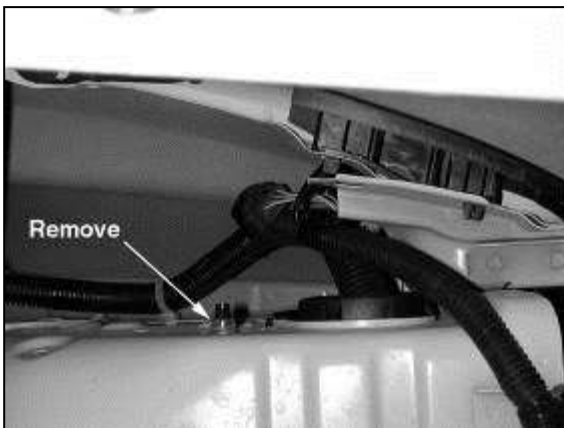


Fig. 9

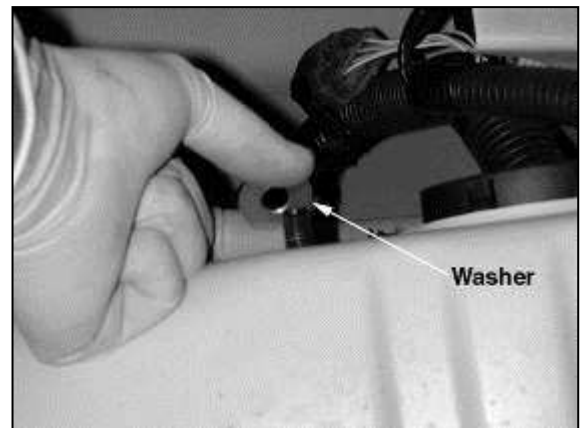


Fig. 10

- h. From underneath the car, install the AEM® lower inlet pipe into the passenger side bumper cavity. The end bent to 90° should pass through the hole in the fender well. **(Fig. 11)**
- i. Align the mounting bracket of the AEM® inlet pipe onto the threaded stud coming through the fender well. Install the nut removed earlier onto the stud to secure the inlet pipe in place. Do not completely tighten the nut.
- j. Install the AEM® air filter using a #52 hose clamp. **(Fig. 12)**

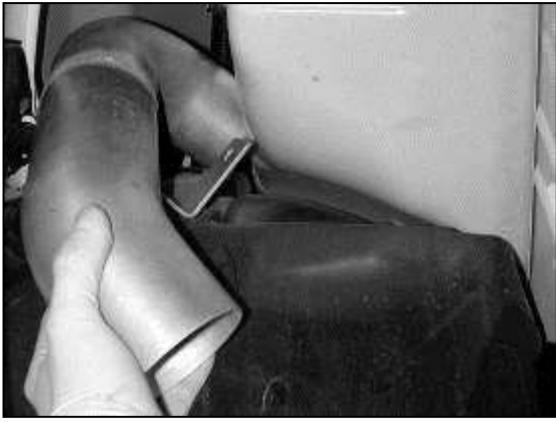


Fig. 11

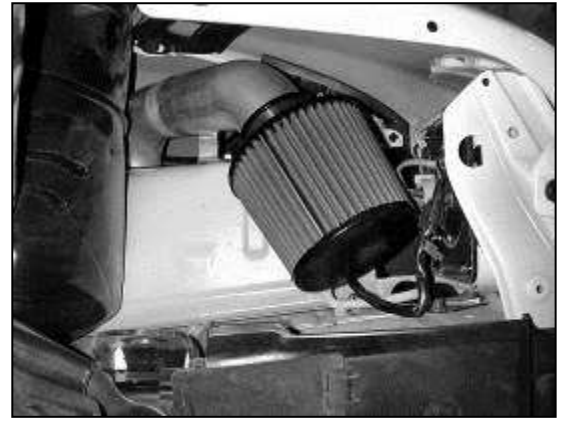


Fig. 12

- k. Remove the MAF sensor from the stock airbox assembly. **(Fig. 13)**
- l. Using the screws removed in the previous step, install the MAF sensor onto the AEM® upper inlet pipe. The MAF sensor connector should be positioned as figure 14 illustrates. **(Fig. 14)**
- m. Install the reducer hose and hose clamp onto the intake pipe as fig 14 illustrates. The intake pipe should not protrude past the step inside of the reducer hose. **(Fig. 14)**

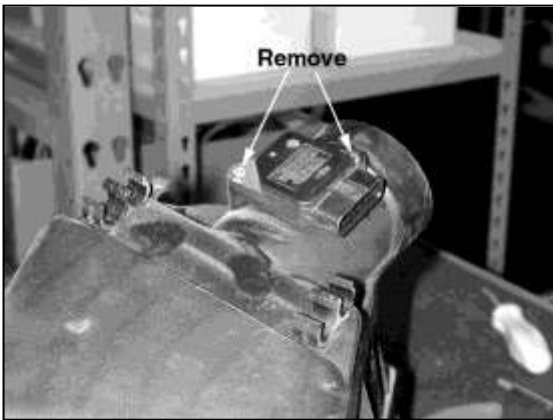


Fig. 13

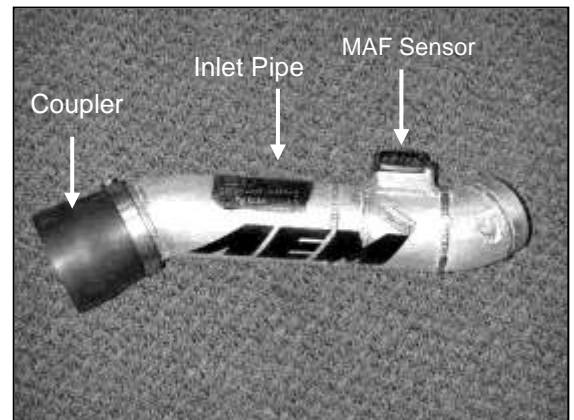


Fig. 14

- n. Place a 3.00" hose clamp onto the other end of the reducer hose.
- o. From the engine compartment, install the upper inlet tube.
NOTE: The inlet pipe should slide below the coolant hoses and cruise control cable.
- p. Insert the lower inlet pipe into the reducer hose of the upper inlet pipe and then loosely secure the hose clamps. The MAF sensor plug should be oriented towards the front of the vehicle. Align the upper end of the upper inlet pipe with the hump hose that was installed in step 3c.
- q. Plug the harness back into the MAF sensor.
- r. Position the inlet pipes for proper fitment and secure hardware. Once installed the AEM® intake system should look similar to figure 15.
- s. If applicable, secure the cruise control cable to the inlet pipe's tab and secure with the provided zip tie.
NOTE: This is not necessary for the Subaru WRX STi models.

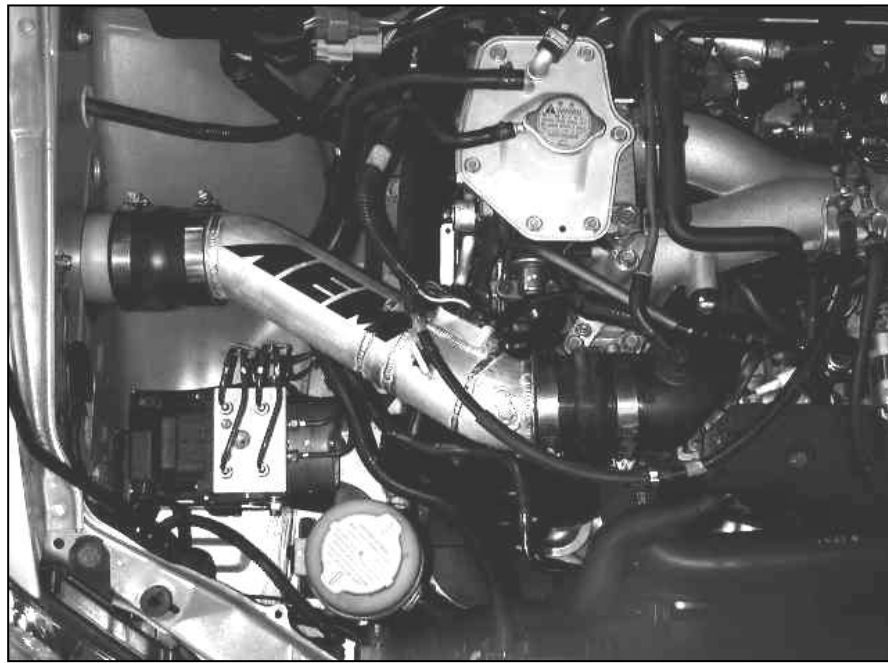


Fig. 15



AEM® intake system installed.

4. Reassemble Vehicle

- a. **Fender liner and splashguard:** Install the fender liner, lower splash guard and any hardware that was removed in steps 2f through 2g.

NOTE: Failure to install the fender liner will result in diminished performance and increase the potential for engine damage due to water ingestion in rainy conditions.

- b. Position the inlet pipes for the best fitment. Be sure that the pipes or any other components do not contact

- any part of the vehicle. Tighten the rubber mount, all bolts, and hose clamps.
- c. Check for proper hood clearance. Re-adjust pipes if necessary and re-tighten them.
 - d. Inspect the engine bay for any loose tools and check that all fasteners that were moved or removed are properly tightened.
 - e. Reconnect negative battery terminals and start engine. Let the vehicle idle for 3 minutes. Perform a final inspection before driving the vehicle.
 - f. Please note that AEM[®] bypass valves will not work with this application (part number 21-474). The use of a bypass valve could have adverse effects on the performance of the system.

5. CARB Sticker Placement

- a. The C.A.R.B. exemption sticker, (attached), must be visible under the hood so that an emissions inspector can see it when the vehicle is required to be tested for emissions. California requires testing every two years, other states may vary.

6. Service and Maintenance

- a. It is recommended that you service your AEM[®] Dryflow™ filter every 20,000 miles for optimum performance. Use AEM Dryflow cleaning kit part # 21-110.
- b. Use aluminum polish to clean your polished AEM[®] intake tube.
- c. Use window cleaner to clean your powder coated AEM[®] intake tube. **(NOTE: DO NOT USE aluminum polish on powder coated AEM intake tubes).**