Equipped with AEM® *Dryflow™ Filter*
No Oil Required!

INSTALLATION INSTRUCTIONS

PART NUMBER:

21-490B (Blue Finish)

21-490C (Gun Metal Grey Finish)

21-490P (Vacuum Metalized Chrome-VMC)

21-490R (Red Finish)

1999-2004	VOLKSWAGEN	Golf GTI	V6-2.8L	C.A.R.B. E.O. # D-670-15
1999-2004	VOLKSWAGEN	Jetta	V6-2.8L	C.A.R.B. E.O. # D-670-15

PARTS LIST

Parts List	Qty.	Part Number
Air Filter Assy. 2.50 X 5" Dry Ele.	1	21-201DK
Inlet Pipe	1	2-485
Hose, Adapter 2.50/3.0" X3"	1	5-253
Mount, Rubber 1" X 6mm	1	1228599
Vacuum Cap, 1-3/8	1	8-127
Washer, 6mm Soft Mount	4	08160
Nut, M6 Hex Serrated	3	444.460.04
1/2' Bnd. Hose Clamp, 2.15-3.00"	1	9440
1/2" Bnd. Hose Clamp, 2.31-3.25"	1	9444
1/2" Bnd. Hose Clamp, 2.56"-3.50"	1	9448

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 air box 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. Lift the plastic battery cover and disconnect both the negative and positive battery terminal. Remove the short positive lead from the positive battery terminal. (Fig. 1)
e. 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.
f. Remove driver side wheel.
g. Do not discard stock components after removal of the factory system.

2. Removal of stock system

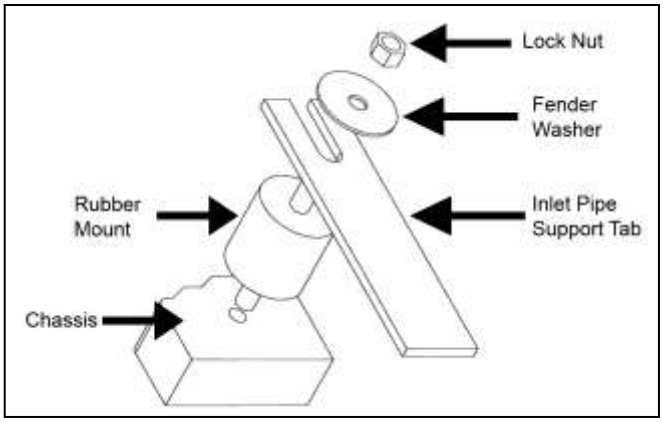
a. Swing the fuse box on top of the battery upwards and remove the hinge from the plastic battery box.
b. Remove the four screws along the top of the radiator support. (Fig. 2) Remove the two plastic covers.
c. Remove the battery hold down bolt and remove the battery from the vehicle. (Fig. 3)
d. Remove the three bolts that secure the plastic battery box in place. Two bolts are located at the rear of the battery, on either side of the plastic wire tunnel. The third bolt is located on the radiator side of the battery. (Fig. 4)
e. Unlatch the plastic wire tunnel cover on the backside of the battery box. (Fig. 5) Swing the cover open and remove the wire harness for the plastic battery box.
f. Open the plastic clip that secures the positive battery lead to the engine side of the plastic battery box. (Fig. 6) Remove the plastic battery box from the vehicle.
g. Remove the plastic battery tray from the vehicle by removing the four bolts that secure it. (Fig. 7)
h. Unplug the wire connector from the MAF sensor. (Fig. 8)
i. Loosen the hose clamp that secures the inlet tube to the MAF sensor. Pull the inlet tube clear of the MAF sensor. (Fig. 9)
j. Remove the breather hose from the air box by squeezing the plastic tabs to release the fitting. Use care to avoid damaging the o-ring. (Fig. 10)
k. Remove the nut that secures the lower intake tube to the inner fender well. (Fig. 11)
l. Remove the two bolts that secure the air box. (Fig. 12) Remove the air box, MAF sensor, and lower inlet tube from the vehicle.
m. Remove the two screws securing the MAF sensor to the air box and set the MAF sensor aside in a safe place where it won't be damaged.
n. Remove the screws securing the driver's side fender liner in place. Fold the fender liner back and out of the way to allow access to the area behind the front bumper.
o. Remove the plastic cover behind the driver's side headlight. The cover is secured with three plastic rivets.

The rivets are released by pushing the center of the plastic rivet with a small, pointed object. Two rivets are located at the top of the plastic cover, in the radiator support. (Fig. 13) The third rivet is accessible from under the car. (Fig. 14) Pull the plastic cover out of the engine bay. (Fig. 15)

p. Remove the wiring harness from the plastic cradle in the fender well by pulling straight up. (Fig. 16)
q. Move the harness to the other side of the negative battery cable by removing the negative battery cable from its plastic clip. Pass the wire harness under the negative battery cable and replace the battery cable in its plastic clip. (Fig. 17)
r. From inside the fender well, remove the plastic wire harness cradle from the fender well by squeezing the two tabs on the back. (Fig. 18)

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. Install the rubber mount in the outer-most hole to the rear of the large opening behind the headlight. Insert the rubber mount from below (Fig. 19) and secure it with a large fender washer and lock nut from the top. (Fig. 20)
c. Place a large fender washer on the stud that originally secured the lower intake tube in place. (Fig. 21)
d. Install the reducer coupler onto the MAF sensor using the 3" hose clamp. The reducer coupler goes on the end that was originally in the air box. (Fig. 22)
e. Insert the upper end of the AEM® inlet pipe into the small end of the reducer coupler with the 2.5" hose clamp. The upper end is the end with the AEM® decal.
f. Feed the AEM® inlet pipe into the engine bay and fender well. The lower bracket should line up with the rubber mount installed in step 3b. The upper mount should line up with the stud originally used to mount the lower intake tube.
g. Install a lock nut onto the stud the upper mount lines up with (Fig. 23a). Install a large fender washer and lock nut onto the rubber mount's stud (Fig. 23b). Refer to the following diagram for the proper installation of the rubber mount assembly.



h. Insert the MAF sensor into the factory upper intake tube using the original hose clamp. Rotate the MAF sensor so that the wire connector is in approximately the factory location. Plug in the MAF sensor wire connector. Refer to Fig. 8.
i. Install the AEM® air filter onto the bottom of the AEM® inlet pipe using the supplied hose clamp. (Fig. 24)
j. Adjust the inlet system for best fitment and snug the hose clamps and lock nuts down.
NOTE: Make sure that the inlet system does not come into contact with any part of the vehicle.
k. Connect the breather hose to the barb nipple on the front side of the AEM® inlet pipe. (Fig. 25) It may be helpful to lubricate the o-ring with a small amount of clean engine oil. Use caution to avoid damaging the o-ring. The plastic barb end may need to be rotated in the hose to prevent kinks in the breather hose.
NOTE: 2003+ models equipped with the 24V VR6 engine lack the secondary air injection pump. On these vehicles, install the supplied vinyl cap on to the barb breather nipple on the front side of the

AEM® inlet pipe.

l. Re-assemble the vehicle in the reverse order of disassembly. The large plastic cover behind the head lights that was retained by the three plastic rivets does not need to be reinstalled.

m. At this point the entire intake tube and filter can be re-adjusted for position and alignment. Make sure that no part of the AEM® intake pipe rubs anywhere along its length.

NOTE: The AEM® air bypass valve cannot be installed on 1999 1/2 - 2004 Volkswagen GTI & Jetta applications because there is not a suitable location to properly install the AEM® air bypass valve. If you anticipate traversing deep water, remove this system and replace it with the stock system.

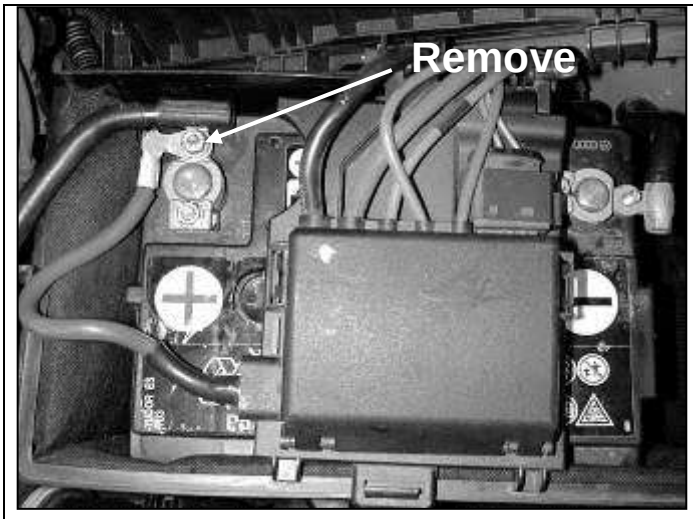


Fig. 1

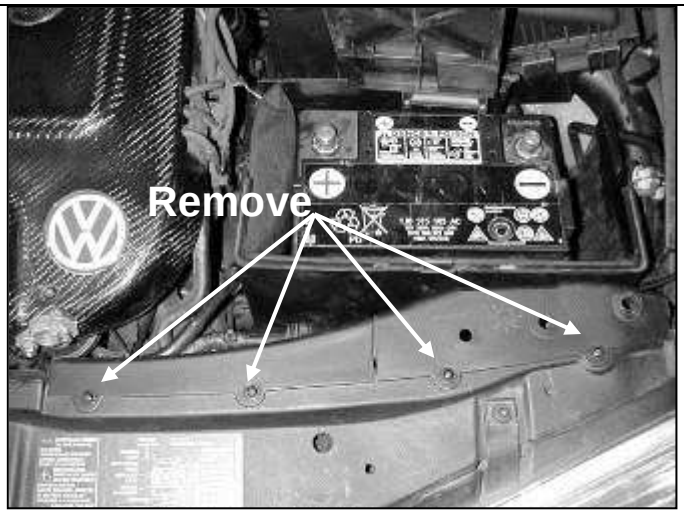


Fig. 2

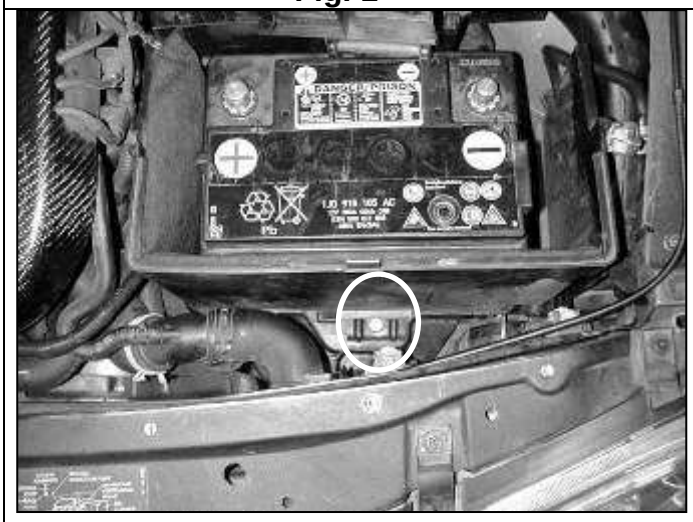


Fig. 3

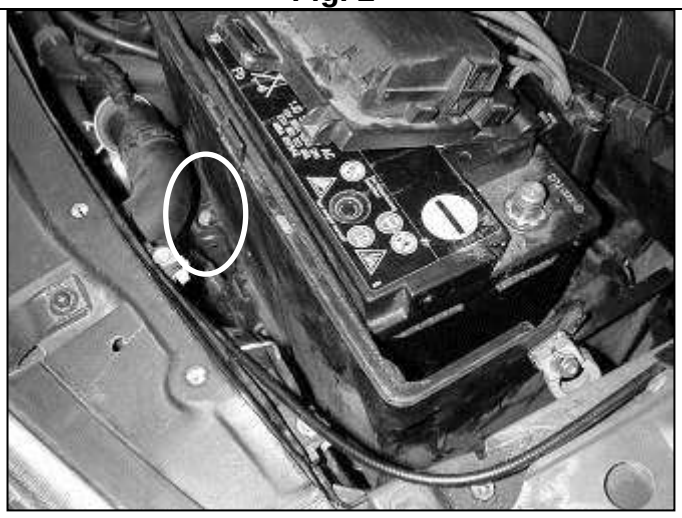


Fig. 4

Fig. 5

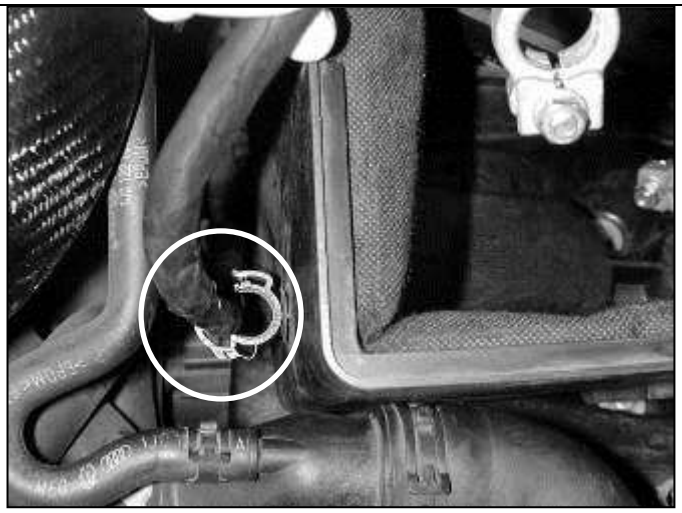


Fig. 6

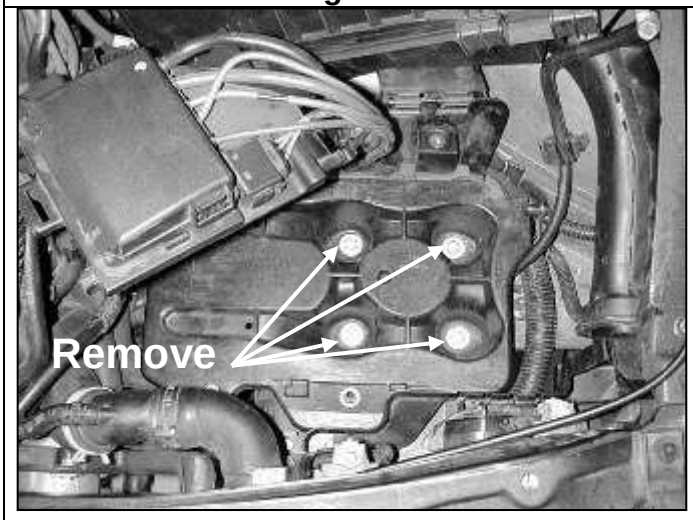


Fig. 7

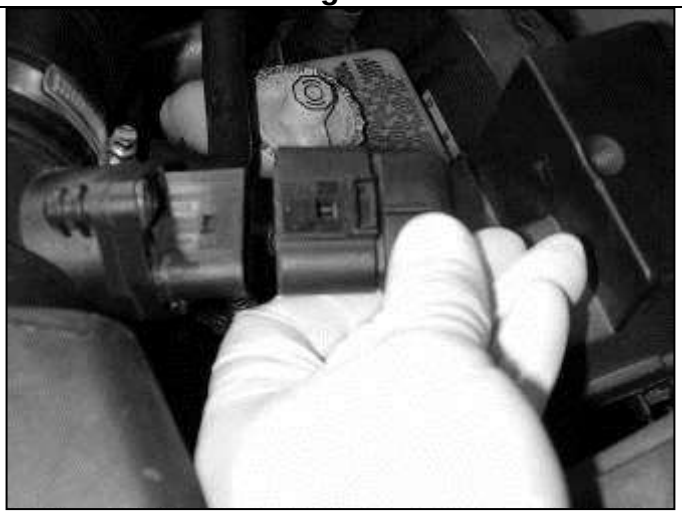


Fig. 8

Fig. 9

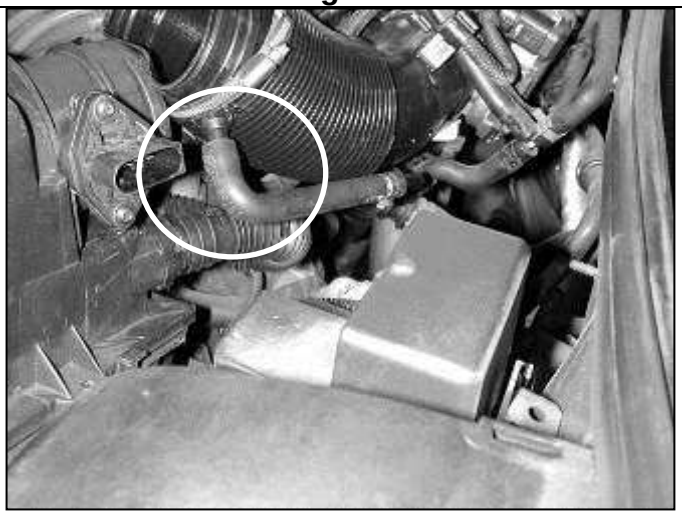


Fig. 10

Fig. 11

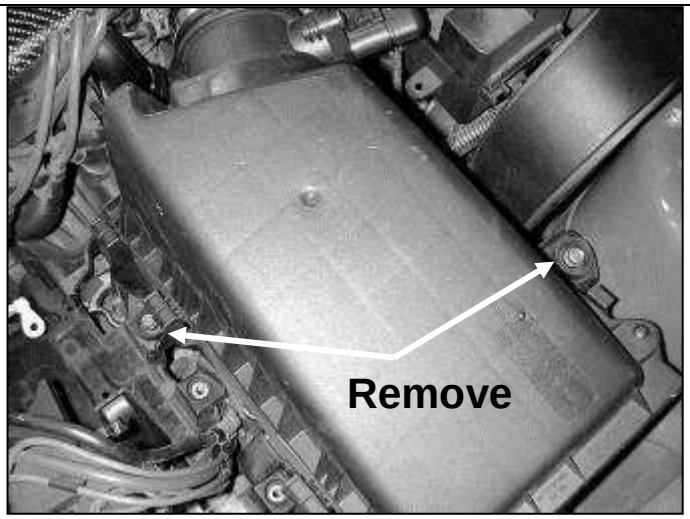


Fig. 12

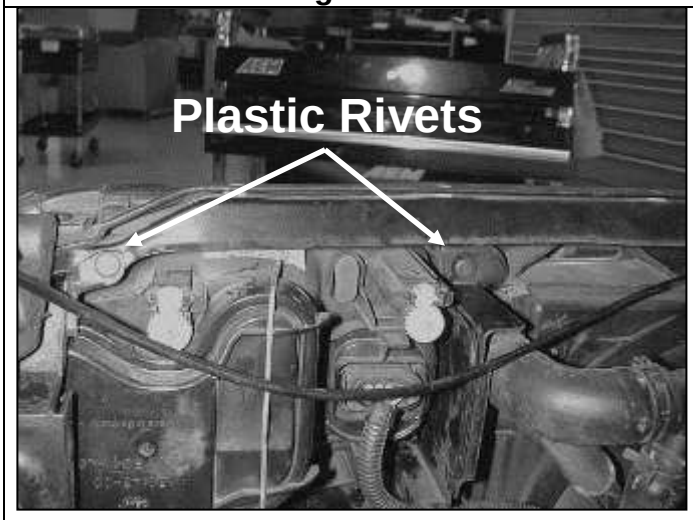


Fig. 13

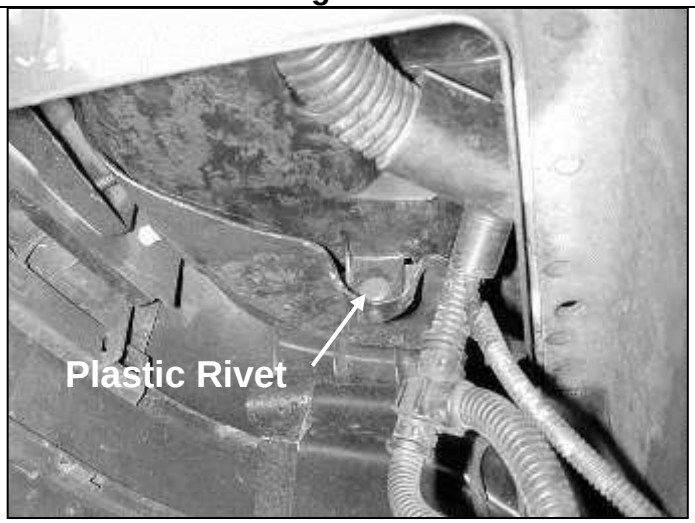


Fig. 14

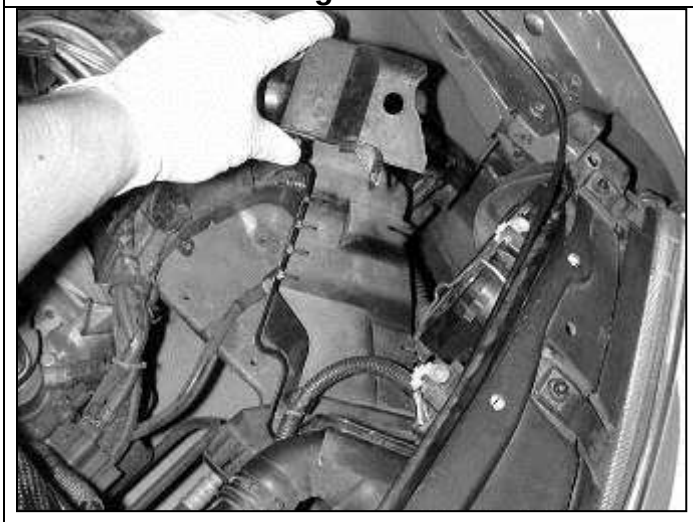


Fig. 15

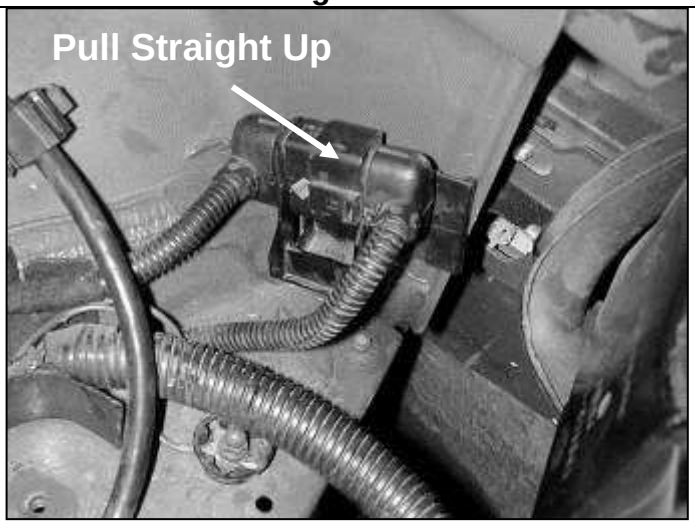


Fig. 16

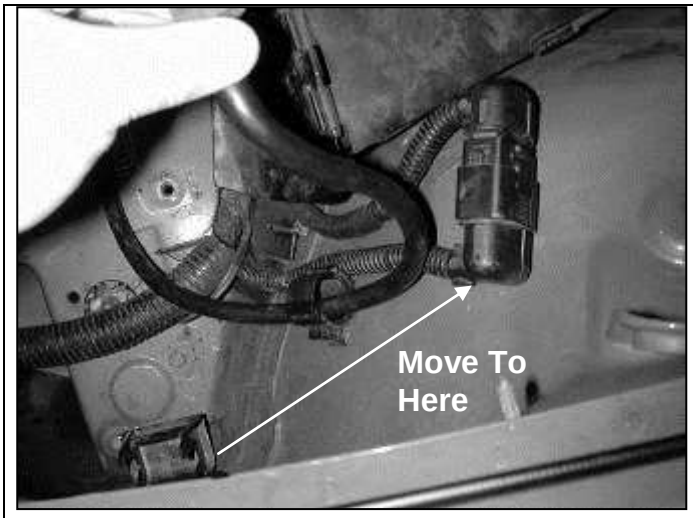


Fig. 17

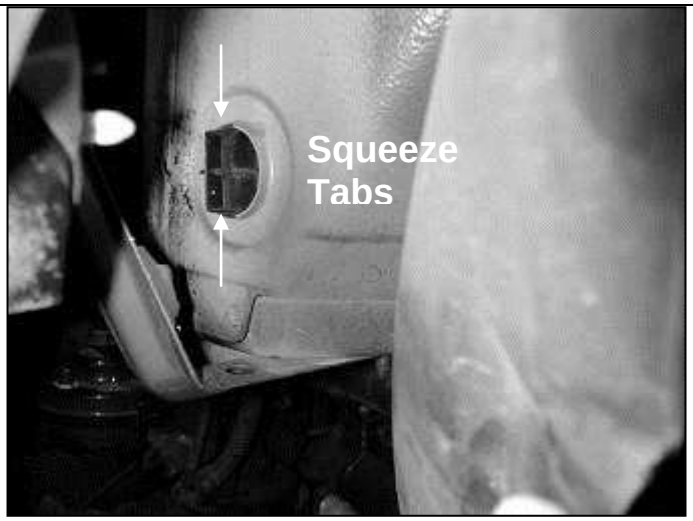


Fig. 18

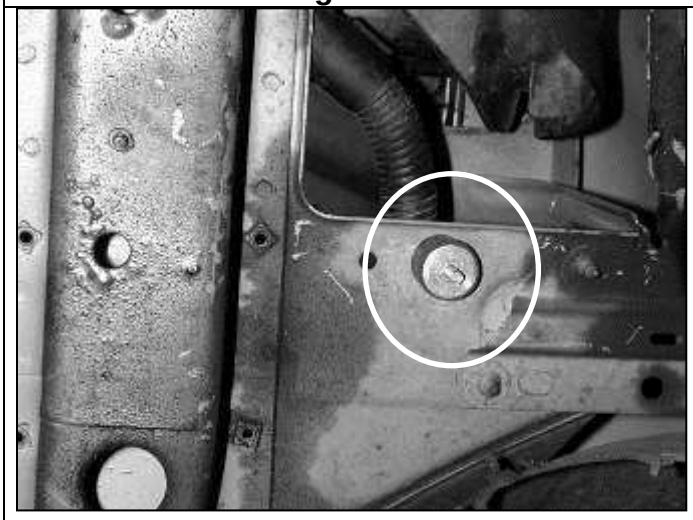


Fig. 19

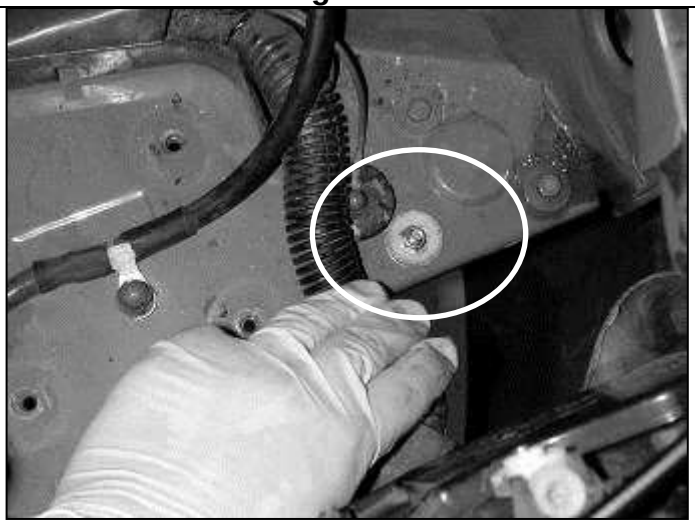


Fig. 20

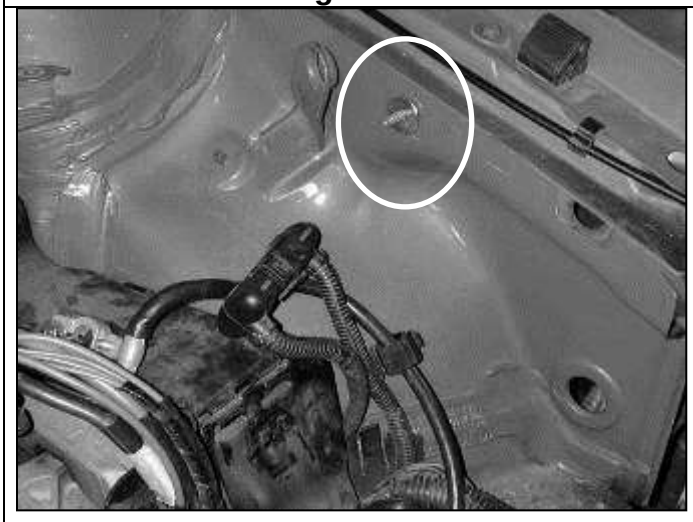


Fig. 21

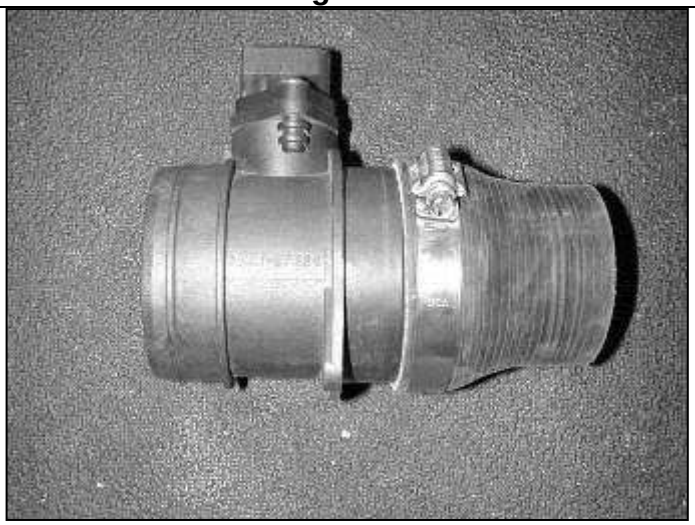


Fig. 22

Fig. 23a

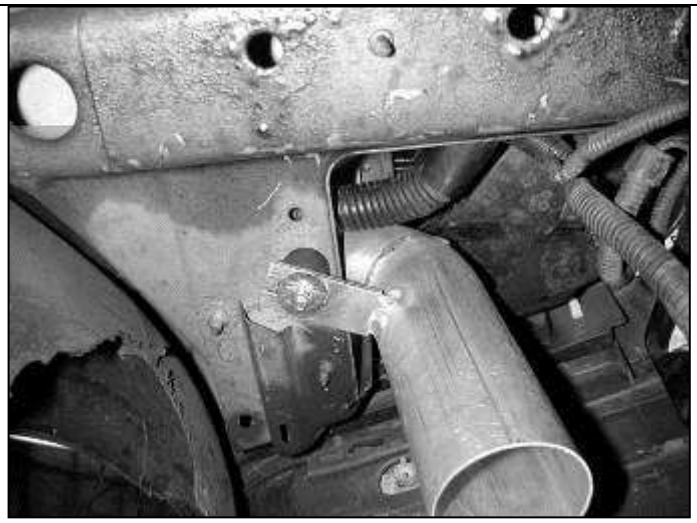


Fig. 23b

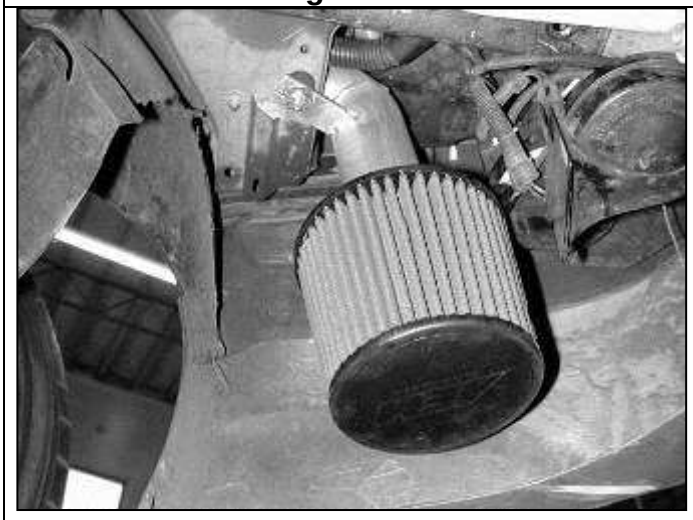


Fig. 24

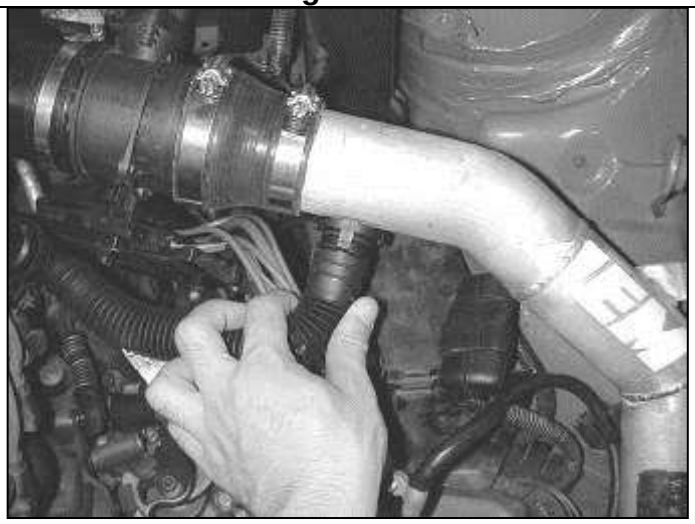


Fig. 25

Factory air box system installed

AEM® intake system installed

4. Reassemble Vehicle

a. **Wheel:** Install the driver's side wheel using the factory torque specification (see owner's manual).
b. **Fender liner:** Install and secure the driver's side fender liner that was partially removed in step 2n.
c. 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.
d. Check for proper hood clearance. Re-adjust pipes if necessary and re-tighten them.
e. Inspect the engine bay for any loose tools and check that all fasteners that were moved or removed are properly tightened.
f. Reconnect negative battery terminals and start engine. Let the vehicle idle for 3 minutes. Perform a final inspection before driving the vehicle.

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)**

Learn more about performance air intake systems we have.