



Equipped with AEM® Dryflow™ Filter  
No Oil Required!

## **INSTALLATION INSTRUCTIONS**

**PART NUMBER:**

**21-494B (Blue Finish)**

**21-494C (Gun Metal Grey Finish)**

**21-494P (Vacuum Metalized Finish)**

**21-494R (Red Finish)**

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2004 VOLKSWAGEN Golf R32 V6-3.2L

C.A.R.B. E.O. # D-670-15

**Intake systems for vehicles listed are 50 state legal. See AEMIntakes.com for CARB status on each part for a specific vehicle.**

## PARTS LIST

Description	Qty.	Part Number
Element Parts Kit 2.75 X 5" Dry Ele.	1	21-202DK
Inlet Pipe	1	2-579
Hose, Adapter 3.25/2.75x3"	1	5-328
Mount, Rubber 1" X 6mm	1	1228599
Washer, 6mm Soft Mount	4	08160
Nut, M6 Hex Serrated	3	444.460.04
1/2" Bnd. Hose Clamp, 3.15"-4.00"	1	9456
1/2" Bnd. Hose Clamp, 2.56"-3.50"	2	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

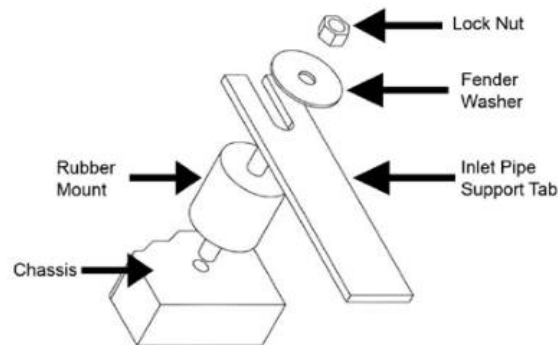
- a. Make sure vehicle is parked on level surface.
- b. Set parking brake.
- c. If engine has run in the past two hours, let it cool down.
- d. Lift the plastic battery cover, disconnect the negative battery terminal, then remove the short positive lead from the positive battery terminal. **(Fig. 1)**
- e. 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 nut that secures the lower intake tube to the inner fender well. **(Fig. 10)**
- k. Remove the two bolts that secure the air box. **(Fig. 11)** Remove the air box, MAF sensor, and lower inlet tube from the vehicle.
- l. 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.
- m. 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.**
  - i. Remove the driver side wheel.
  - ii. 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.
- n. 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. 12)** The third rivet is accessible from under the car. **(Fig. 13)** Pull the plastic cover out of the engine bay. **(Fig. 14)**
- o. Remove the wiring harness from the plastic cradle in the fender well by pulling straight up. **(Fig. 15)**
- p. 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. 16)**
- q. From inside the fender well, remove the plastic wire harness cradle from the fenderwell by squeezing the two tabs on the back. **(Fig. 17)**

### 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 outermost hole to the rear of the large opening behind the headlight. Insert the rubber mount from below (**Fig. 18**) and secure it with a large fender washer and lock nut from the top. (**Fig. 19**)
- c. Place a large fender washer on the stud that originally secured the lower intake tube in place. (**Fig. 20**)
- d. Install the reducer coupler onto the MAF sensor using the 3.25" hose clamp. The reducer coupler goes on the end that was originally in the air box. (**Fig. 21**)
- e. Insert the upper end of the AEM® inlet pipe into the small end of the reducer coupler with the 2.75" 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 large fender washer and lock nut onto both the rubber mount and the stud. (**Fig. 22 & 23**) Refer to the following diagram for proper rubber mount installation.



- 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 a similar location to the factory. Plug in the MAF sensor wire connector. Refer to Fig. 9.
- i. Install the AEM® air filter onto the bottom of the AEM® inlet pipe using the supplied hose clamp. (**Fig. 24**)
- j. Adjust the intake system for best fitment and snug the hose clamps and locknuts down. Ensure that no part of the intake system comes into contact with any part of the vehicle.
- k. Re-assemble the vehicle in the reverse order of disassembly. The large plastic cover behind the headlights that was retained by the three plastic rivets does not need to be reinstalled.

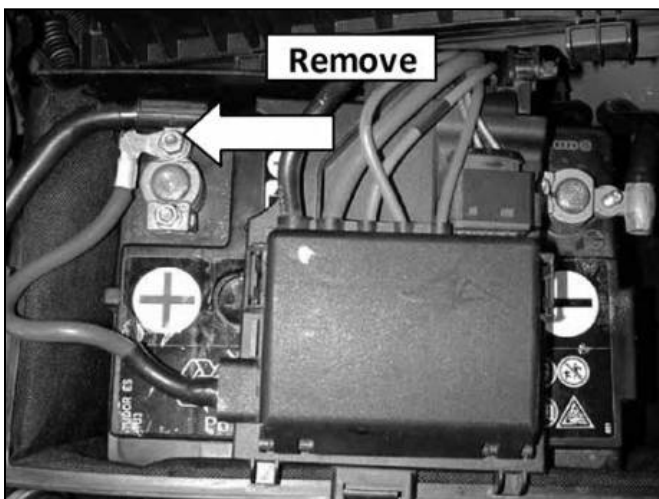


Fig.1

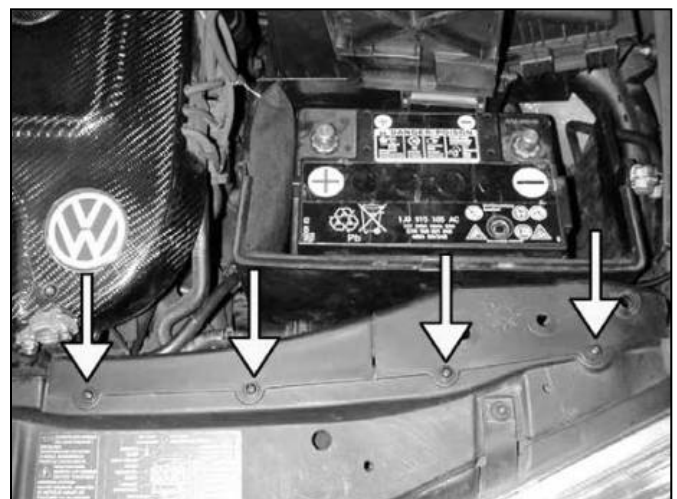


Fig.2



Fig.3



Fig.4

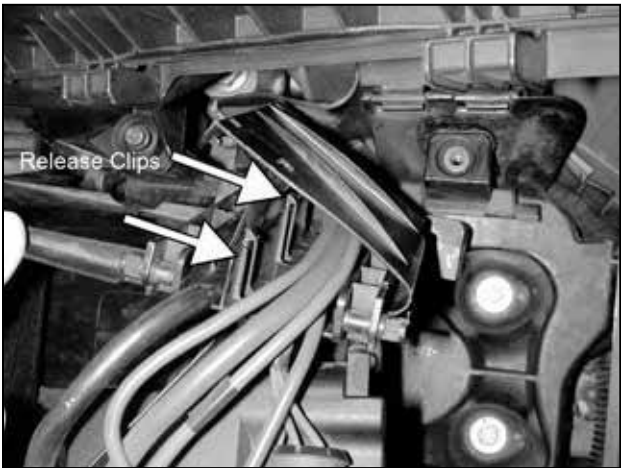


Fig.5

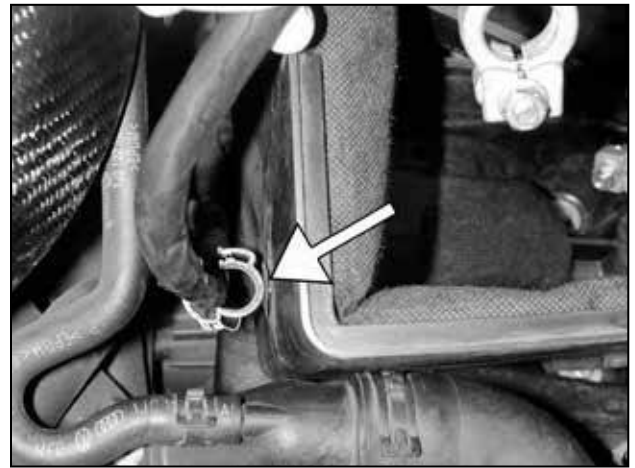


Fig.6

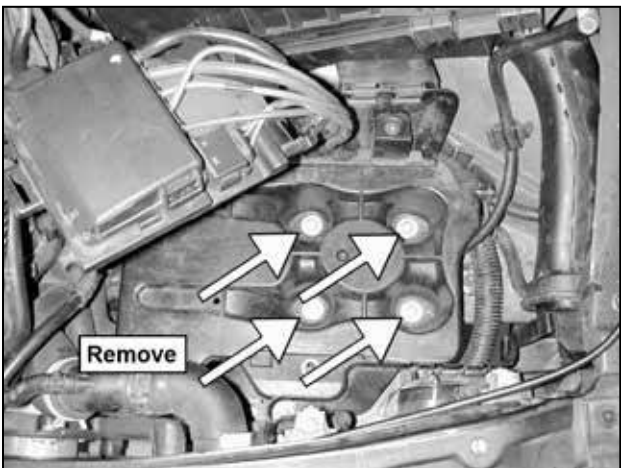


Fig.7



Fig.8

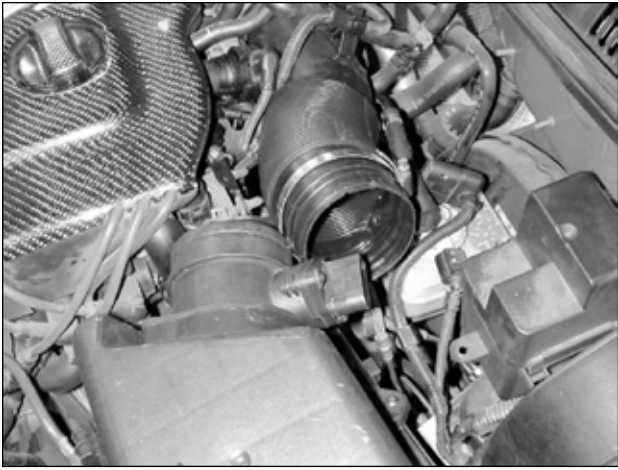


Fig.9

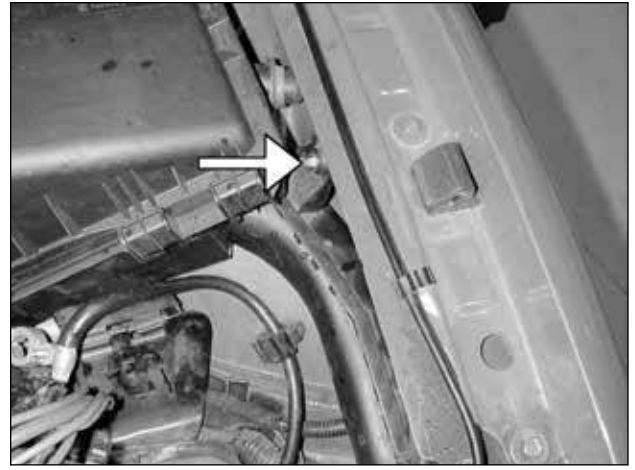


Fig.10

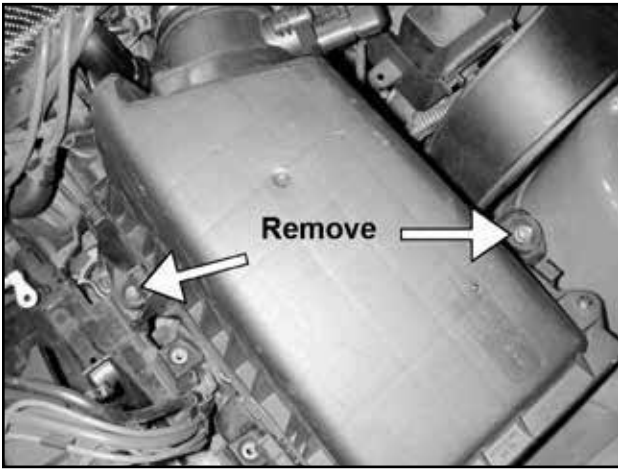


Fig.11

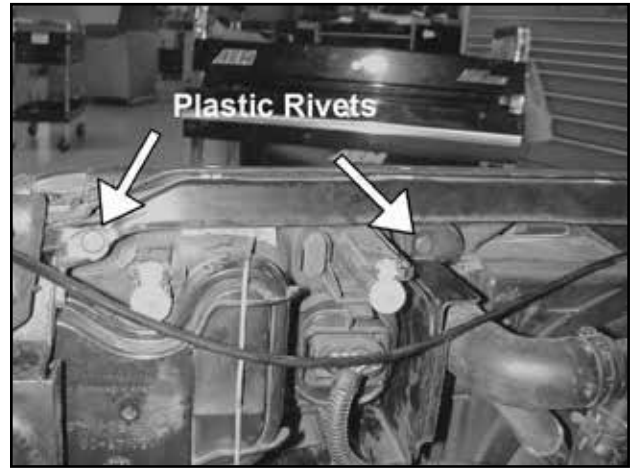


Fig.12

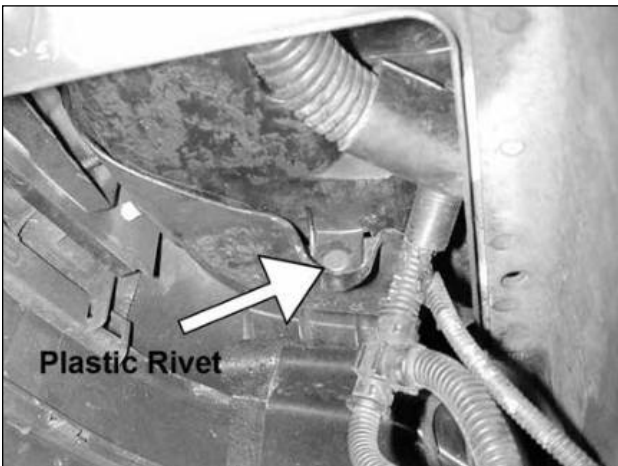


Fig.13



Fig.14

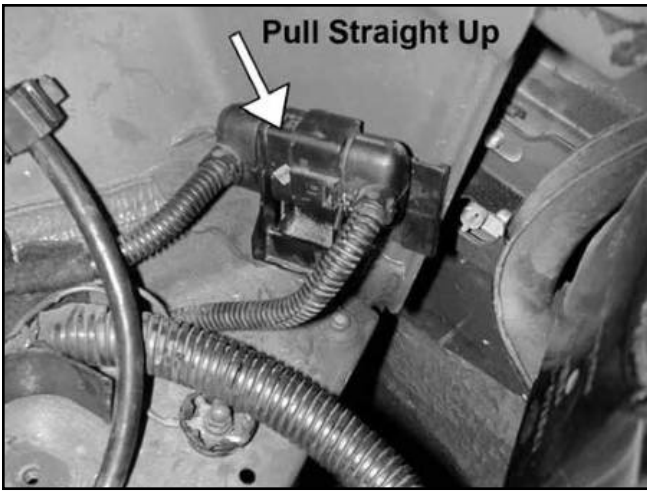


Fig.15



Fig.16

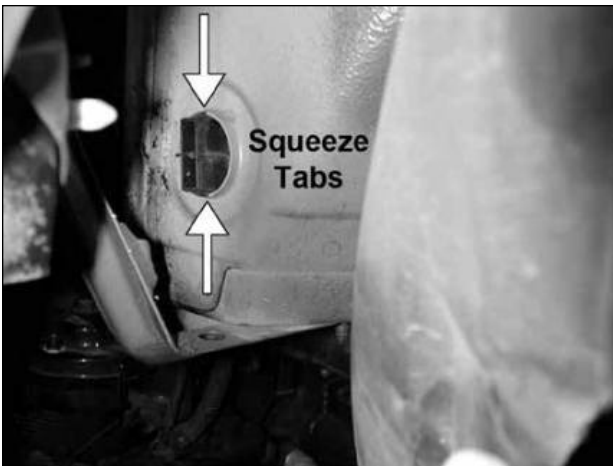


Fig.17

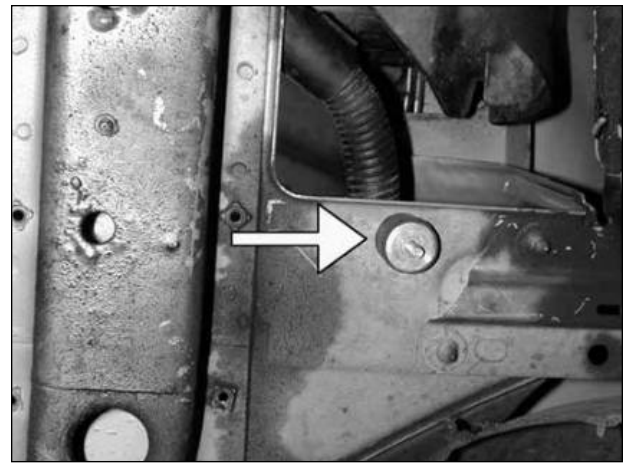


Fig.18

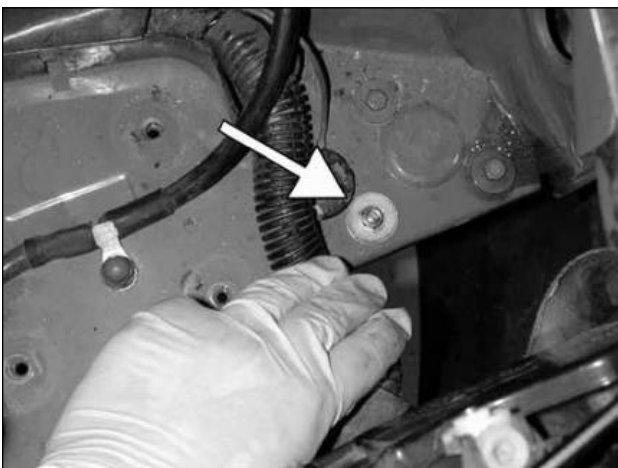


Fig.19

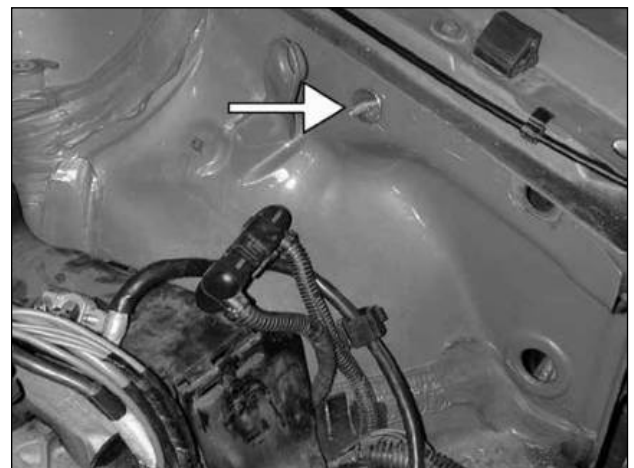


Fig.20



Fig.21



Fig.22

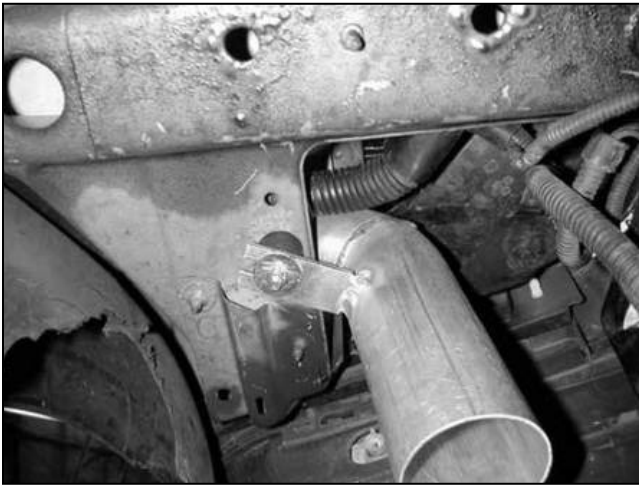


Fig.23

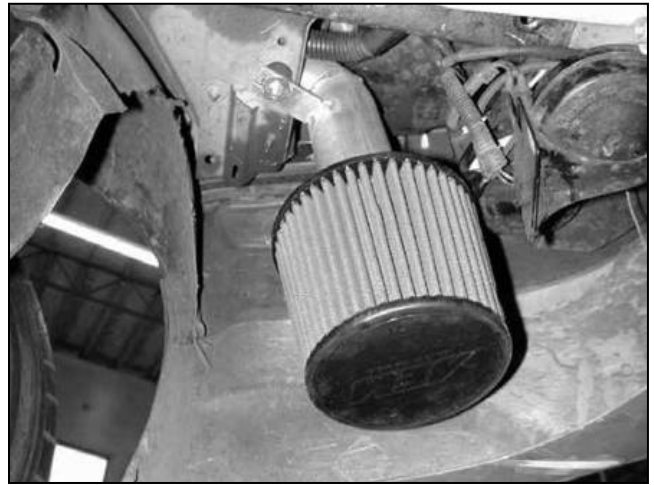


Fig.24



Factory air box system installed



AEM® intake system installed

#### 4. Reassemble Vehicle

- a. **Fender liner:** Install the fender liner and any hardware that was removed in steps 2mi. and 2mii.  
**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. **Wheel:** Install the driver's side wheel using the factory torque specification (see owner's manual).
- c. **Battery:** Install the battery in the reverse order of disassembly.
- d. 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.
- e. Check for proper hood clearance. Re-adjust pipes if necessary and re-tighten them.
- f. Inspect the engine bay for any loose tools and check that all fasteners that were moved or removed are properly tightened.
- g. Reconnect the short positive lead removed earlier in step 1d. Reconnect the 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).**

For technical inquiries  
e-mail us at  
[sales@aemintakes.com](mailto:sales@aemintakes.com)  
or  
call us at  
800.992.3000

#### AEM Air Intake System Warranty Policy

AEM® warrants that its intake systems will last for the life of your vehicle. AEM will not honor this warranty due to mechanical damage (i.e. improper installation or fitment), damage from misuse, accidents or flying debris. AEM will not warrant its powder coating if the finish has been cleaned with a hydrocarbon-based solvent. The powder coating should only be cleaned with a mild soap and water solution. Proof of purchase of both the vehicle and AEM intake system is required for redemption of a warranty claim.

This warranty is limited to the repair or replacement of the AEM part. In no event shall this warranty exceed the original purchase price of the AEM part nor shall AEM be responsible for special, incidental or consequential damages or cost incurred due to the failure of this product. Warranty claims to AEM must be transportation prepaid and accompanied with dated proof of purchase. This warranty applies only to the original purchaser of product and is nontransferable. Improper use or installation, use for racing, accident, abuse, unauthorized repairs or alterations voids this warranty. AEM disclaims any liability for consequential damages due to breach of any written or implied warranty on all products manufactured by AEM. Warranty returns will only be accepted by AEM when accompanied by a valid Return Merchandise Authorization (RMA) number. Credit for defective products will be issued pending inspection. Product must be received by AEM within 30 days of the date RMA is issued.

If you have a warranty issue, please call (800) 992-3000 and our customer service department will assist you. A proof of purchase is required for all AEM warranty claims.

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