



Equipped with AEM® Dryflow™ Filter  
No Oil Required!

## INSTALLATION INSTRUCTIONS

### PART NUMBER: 21-8205

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2003-2004 DODGE RAM 1500 Pickup V8-4.7L

C.A.R.B. E.O. # D-392-29

\* **NOTE:** Legal in California only for racing vehicles which may never be used upon a highway

## PARTS LIST

Description	Qty.	Part Number
Air Filter Assy. 4.00 X 9" Dry Ele.	1	21-2059DK
Inlet Pipe	1	2-82051
Heat Shield	1	20-8212
Hose, Adapter 3.25/4.00 X 3" Bl.	1	5-324
Hose; 1/2"ID X 16"L	1	5-5016
Edge Trim, 22"	1	8-4022
Mount, Rubber 1" X 8mm	1	1228560
Grommet, 1/2"	1	784634
Grommet, 1"	1	784640
Rubber Edge Trim 34"	1	8-3034
Plug, 3/4" Polyethylene	1	8-129
Washer, 8mm Soft Mount	1	559960
Nut, M8 Hex Serrated	1	444.460.08
1/2" Bnd. Hose Clamp, 2.90"-3.75"	1	9452
1/2" Bnd. Hose Clamp, 3.56"-4.50"	2	9464
Hose Clamp, 1 1/4" Narrow	2	4093-8

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.

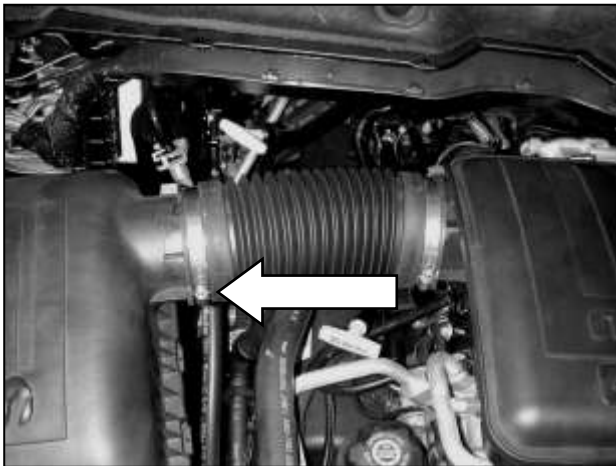
### 1. Preparing Vehicle

- 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. 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.

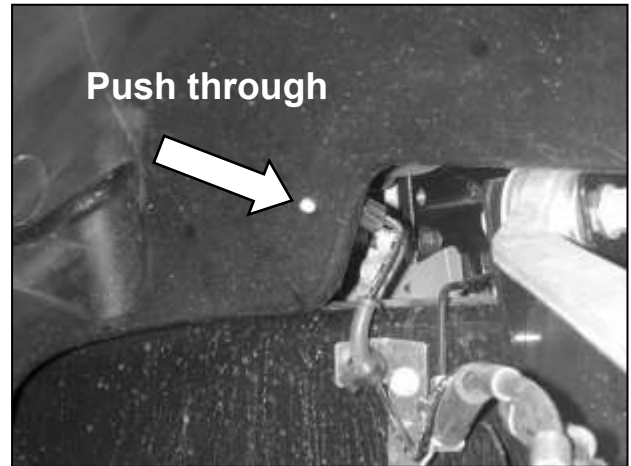
**NEVER WORK UNDER A VEHICLE WITHOUT USING JACK STANDS.**

- i. Remove the passenger side wheel.
- g. Do not discard stock components after removal of the factory system.

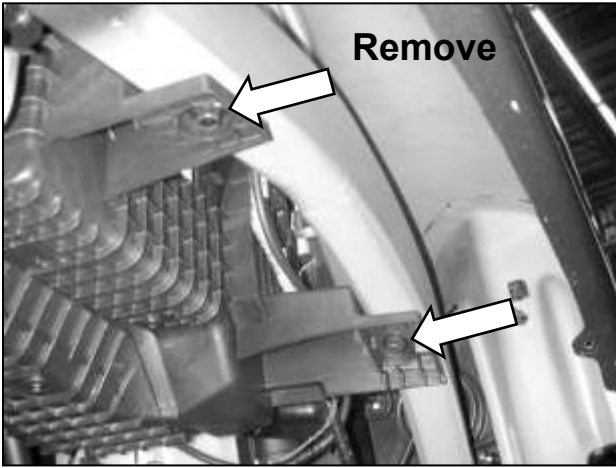
### 2. Removal of stock system



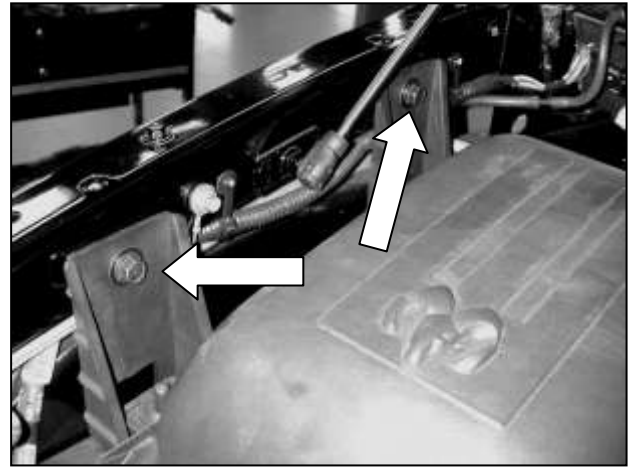
a. Loosen the hose clamp at the air box. Pull the rubber air hose away from the air box lid.



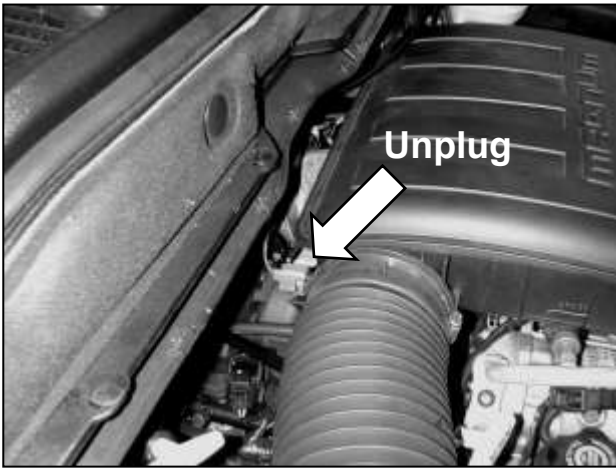
b. From inside the passenger side fender well, release the ABS wire holder (if so equipped). Push the wire holder through the hole, towards the engine. Remove the plastic fender liner by removing the eight self-tapping screws.



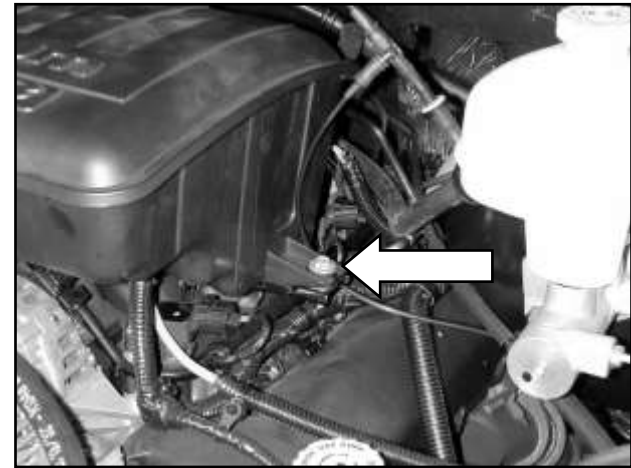
c. Remove the two bolts securing the bottom half of the air box.



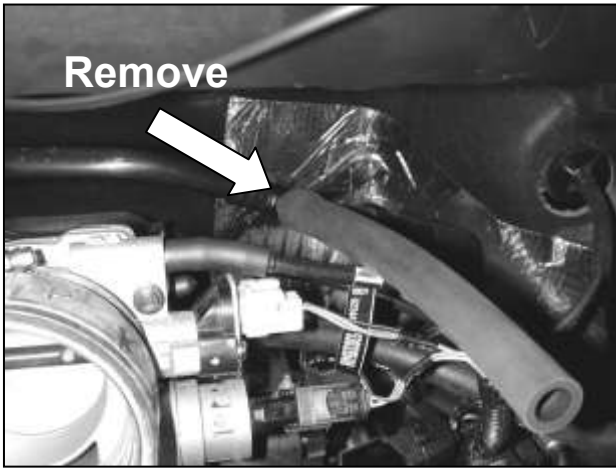
d. From inside the engine bay, remove the two remaining bolts securing the air box. Remove the air box from the engine bay.



e. Unplug the inlet air temperature (IAT) sensor located on the back side of the intake air resonator (except 2002 models).



f. Remove the two bolts retaining the intake air resonator. One is located on the driver's side (pictured); the other is located near the oil dipstick.



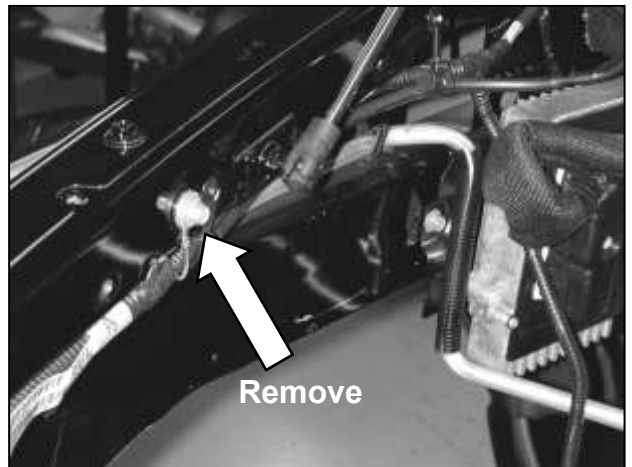
g. Disconnect the breather hose from the back of the resonator. Remove the resonator from the engine bay. Remove the breather hose from the tee near the back of the intake manifold. This hose will be replaced with one supplied with the AEM® intake kit.



h. Remove the inlet air temperature (IAT) sensor from the intake resonator by gently twisting counter-clockwise. Remove the o-ring from the IAT sensor. Keep the o-ring for use if the vehicle ever needs to be returned to stock. (Except 2002 models)



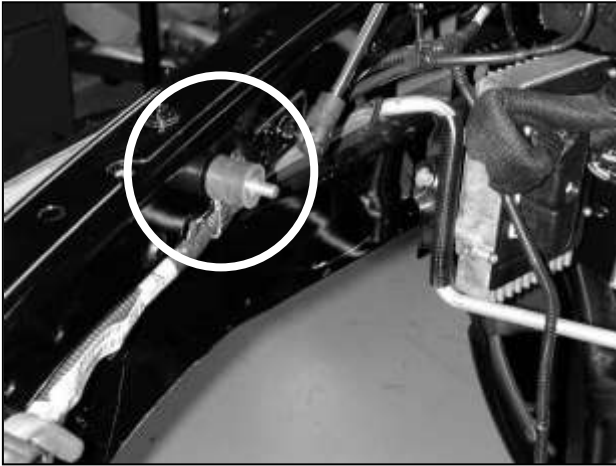
i. Remove the rubber adapter from the throttle body.



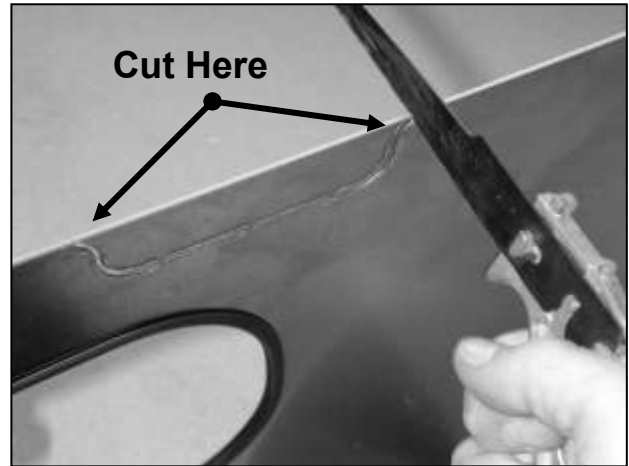
j. Remove the ground bolt located in front of the hood prop cylinder.

### 3. Installation of AEM<sup>®</sup> intake system.

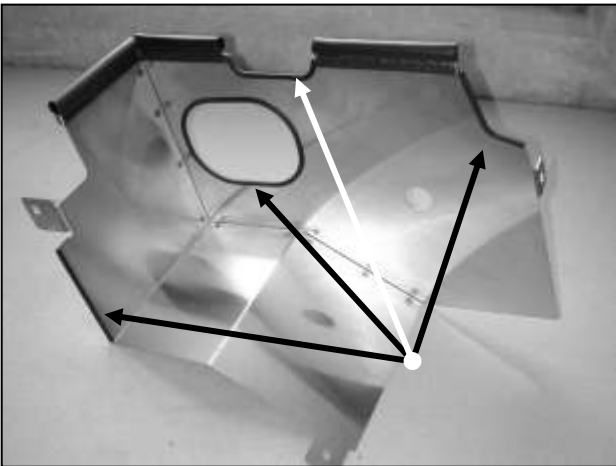
- a. When installing the intake system, do not completely tighten the hose clamps or mounting hardware until instructed to do so.



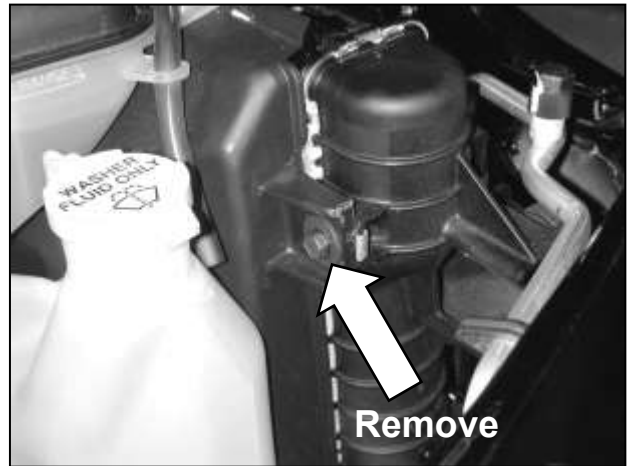
b. Install the supplied rubber mount through the ground loop and into the hole left open from step 2j.



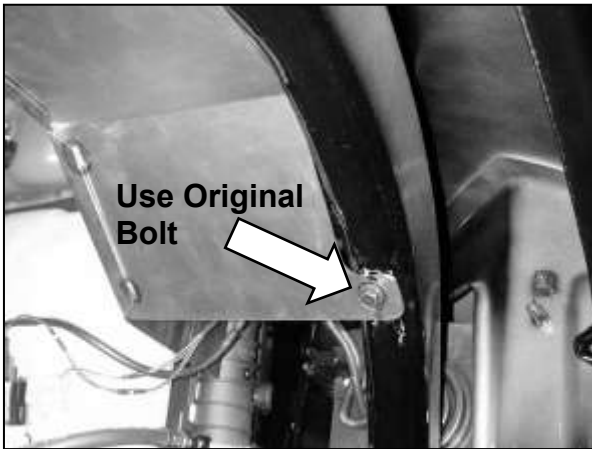
c. On 2004+ trucks equipped with the optional under hood light on the passenger side, cut the corners of the notch in the AEM<sup>®</sup> heat shield using a hacksaw or other suitable tool. Bend the tab back and forth until it breaks free. Clean up any sharp edges with a file.



d. Install the rubber edge trim and edge trim where shown in the picture. Trim length to fit. **NOTE: If your vehicle did not require cutting out the heat shield area described in step 3c, the rubber edge trim piece depicted by the white arrow will not be necessary. Use the edge trim along the full length of the heat shield's edge.**



e. Remove the upper radiator fan shroud bolt located behind the windshield washer reservoir. Install the heat shield from inside the fender well. The front mounting tab will line up with the bolt just removed. Loosely secure the front mounting tab with the original bolt.



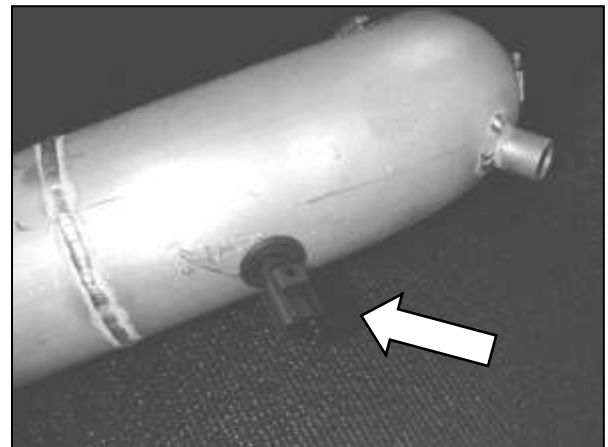
f. The lower heat shield mounting tab will line up with the lower air box mounting hole. Loosely secure the mounting tab with one of the original bolts.



g. The rear mounting tab on the heat shield will line up with one of the lower air box mounting holes. Install one of the original bolts. Adjust the heat shield for best fitment then tighten the three mounting bolts.



h. On 2002 models install the supplied polyethylene plug into the hole in the AEM® inlet pipe.



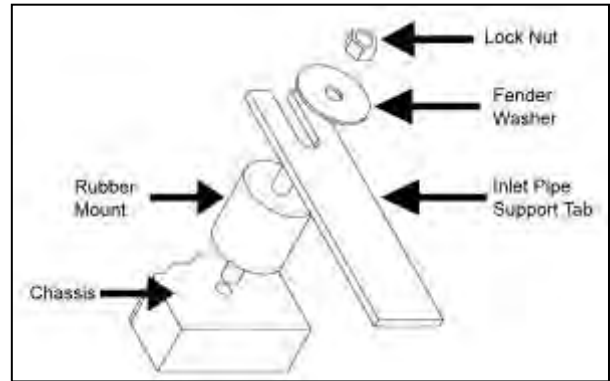
i. On models with an IAT sensor, install the supplied grommet into the AEM® inlet pipe. Insert the IAT sensor into the grommet. Use care to avoid pushing the grommet into the pipe.



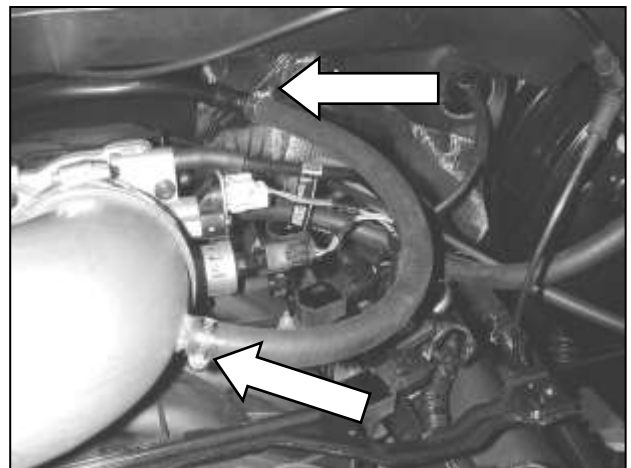
j. Loosely install the coupler and hose clamps on to the end of the AEM® inlet pipe nearest the vacuum nipple.



k. Install the bracket end of the AEM® inlet pipe through the cutout in the heat shield. Install the coupler on to the throttle body. The bracket will line up with the rubber mount installed in step 3b. Loosely secure the bracket with the supplied washer and locknut. Refer to the diagram below for proper rubber mount installation.

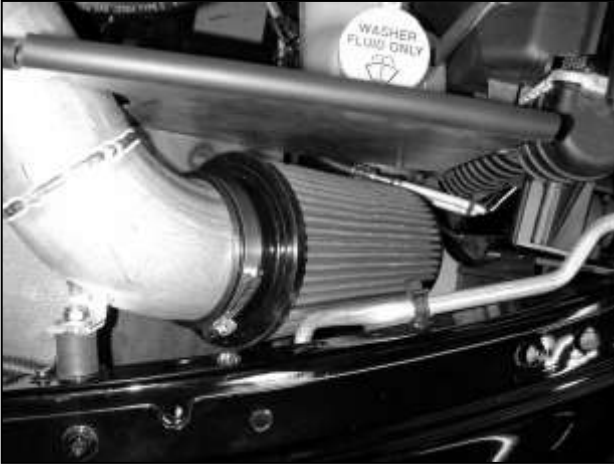


l. Reconnect the wire harness to the IAT sensor (if applicable). Do not push the grommet through into the pipe.



m. Install the supplied breather hose and secure with the two supplied hose clamps.





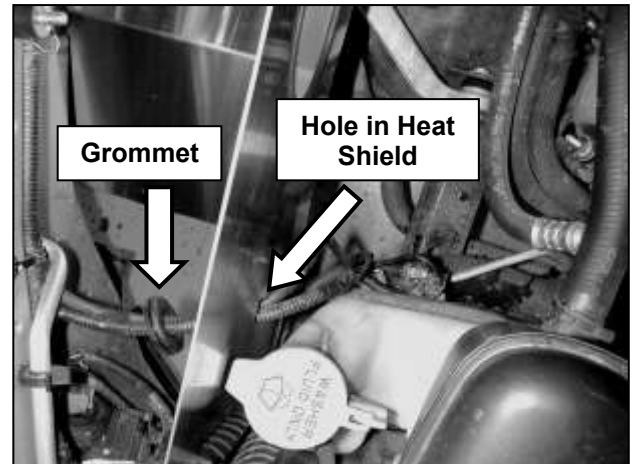
n. Install the AEM<sup>®</sup> air filter from inside the fender well. Slide the air filter on to the pipe until it stops. Secure with the supplied hose clamp. Make sure the windshield washer wires and hose do not come into contact with the air filter.

#### 4. Relocating windshield fluid reservoir hose and wires

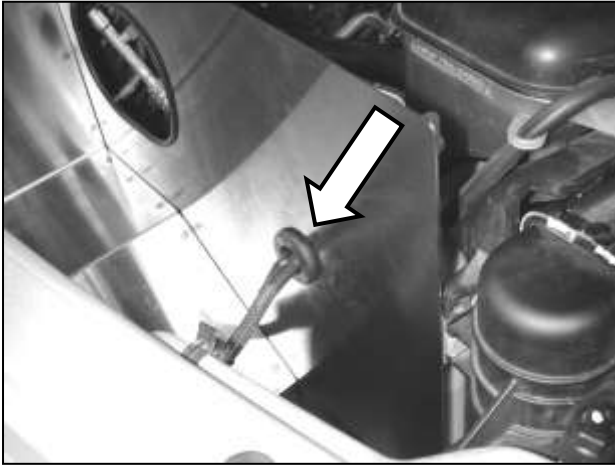
a. If the AEM air filter is rubbing the windshield washer hose and wires, remove the filter and follow the instructions below. If the air filter does not rub the lines and wires, proceed to step 5.



b. Unplug the wire connectors going to the windshield washer fluid pump and level indicator. Unplug the washer fluid hose. Block the nipple on the pump to prevent the washer fluid from draining.



c. Pass both connectors through the supplied large grommet and then through the hole in the heat shield. Reconnect wire connectors and washer fluid hose to the washer fluid reservoir.



d. Install the rubber grommet in to the hole in the heat shield. Make sure the groove in the grommet is properly seated in the heat shield.



e. Reinstall the AEM® air filter. Adjust the windshield washer hose and wires so they do not rub against the AEM® air filter.



Factory air box system installed



AEM® intake system installed

## 5. Reassemble Vehicle

- a. **Fender liner:** Install the fender liner and any hardware that was removed in steps 2b.  
**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 passenger side wheel using the factory torque specification (see owner's manual).
- 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.

## 6. 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.

## 7. Service and Maintenance

- a. It is recommended that you service your AEM<sup>®</sup> 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<sup>®</sup> intake tube.
- c. Use window cleaner to clean your powder coated AEM<sup>®</sup> intake tube. **(NOTE: DO NOT USE aluminum polish on powder coated AEM intake tubes)**

For technical inquiries  
e-mail us at  
sales@aemintakes.com  
or  
call us at  
800.992.3000

### AEM Air Intake System Warranty Policy

AEM<sup>®</sup> 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.