



Equipped with AEM® Dryflow™ Filter
No Oil Required!

INSTALLATION INSTRUCTIONS

PART NUMBER: 21-469

2003-2004	TOYOTA	Corolla	L4-1.8L	C.A.R.B. E.O. # D-670
2003-2004	TOYOTA	Matrix XR	L4-1.8L	C.A.R.B. E.O. # D-670

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

PARTS LIST

Description	Qty.	Part Number
Inlet Pipe	1	2-520
Air Filter Assy. 2.75 X 5" Dry Ele.	1	21-202DK
Nut, M6 Hex Serrated	1	444.460.04
Washer, 6mm Soft Mount	1	559999
Mount, Rubber 1" X 6mm	1	1228599
Hose, Silicone 2.75x3" Blk.	1	5-275
1/2" Bnd. Hose Clamp, 2.31-3.25"	2	9444
1/2" Bnd. Hose Clamp, 2.56"-3.50"	1	9448
Bolt, Socket 8-32 X 5/16 SS	2	1-2023
Hose; 5/16ID X 17"L	1	5-2017
Zip Tie, 6 Long	1	1-113
Bolt, Hex M6-1 X 12mm	1	1-2065
Bolt, Hex M8-1.25 X 25mm	1	1-2066
Bracket, Assembly VSV	1	32-3015
Spacer, 1.00 OD X .315 ID X .2	1	2-665
Adapter, Corolla Fuse Box Spacer	1	2-667
Bolt, Flat HD Philips M6 X 10	1	1-2069

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.

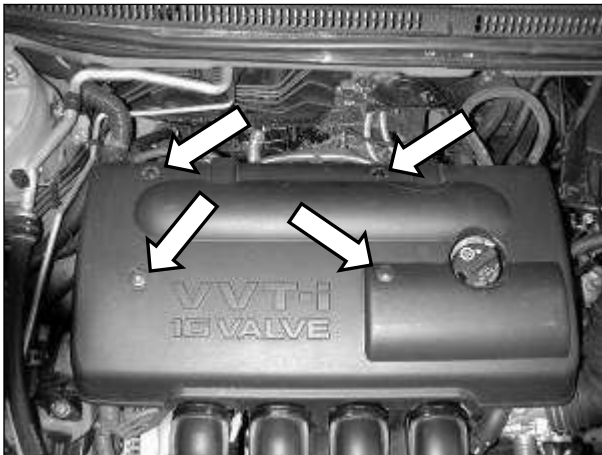
The AEM[®] intake system is a performance product that can be used safely during mild weather conditions. During harsh and inclement weather conditions, you must return your vehicle to stock OEM air box and intake tract configuration. Failure to follow these instructions will void your warranty.

1. Preparing Vehicle

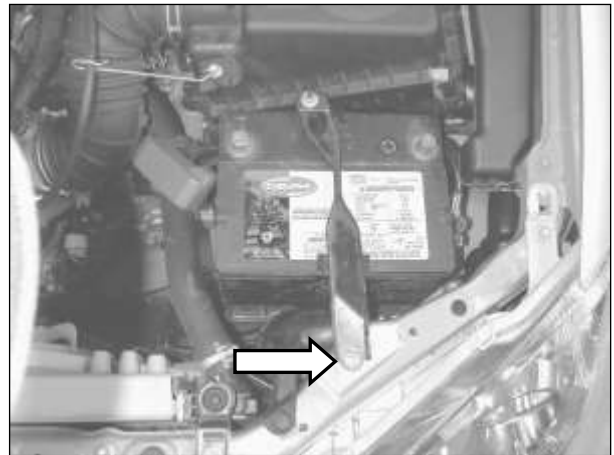
- a. Make sure vehicle is parked on level surface.
- b. Set parking brake.
- c. If engine has run in the past two hours, let it cool down.
- d. Disconnect the negative battery terminals.
- e. Do not discard stock components after removal of the factory system.

2. Removal of stock system

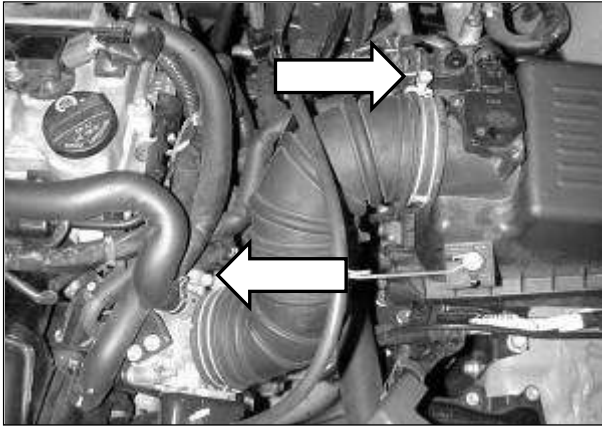
- a. There are two Vacuum Switching Valves (VSV), and one air flow meter that have electrical and/or vacuum connections going to them. Be sure to label these connections before disconnecting them.



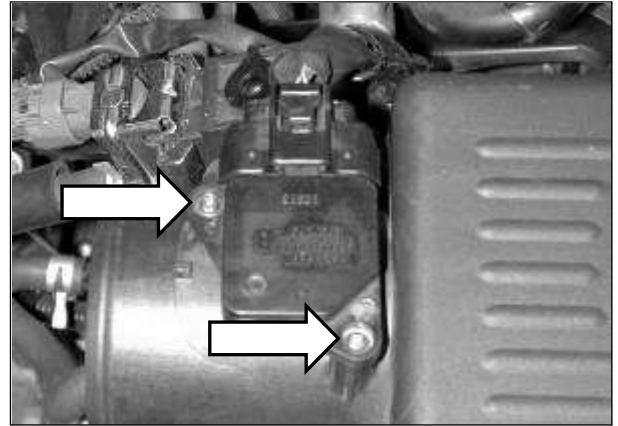
b. Remove the two nuts and two plastic rivets that hold the plastic engine cover on. The plastic rivets may be gently lifted with a small screwdriver. Remove the cover.



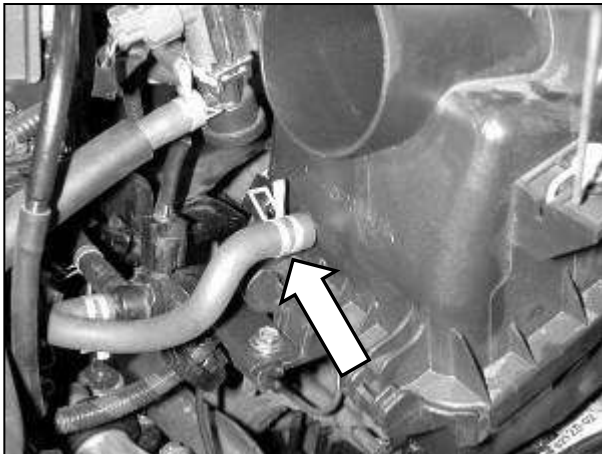
c. Remove the bolt in the radiator support that holds the battery bracket. Unhook the rod at the rear of the battery bracket. Remove the battery from the vehicle.



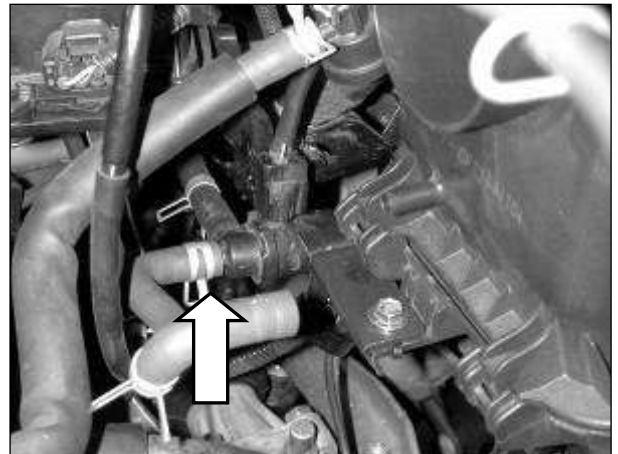
d. Loosen the two 10mm hose clamps at the throttle body and air box. Remove the stock rubber intake hose from the engine bay.



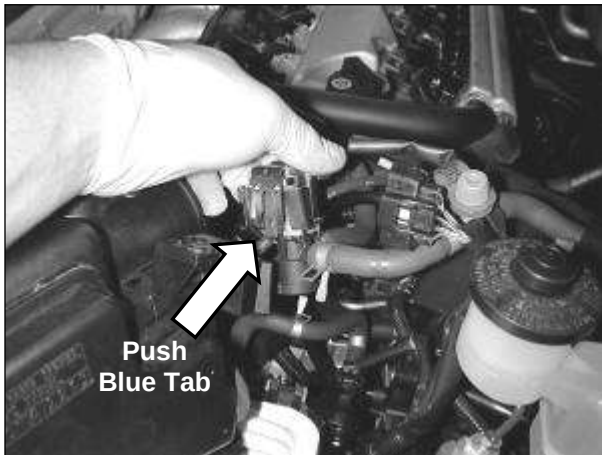
e. Remove the air flow meter connector, and then remove the air flow meter by loosening the two small screws. Be extremely careful with this component as it can be damaged easily. Set the air flow meter aside in a safe place.



f. Remove the large vacuum line from the engine side of the air box cover.



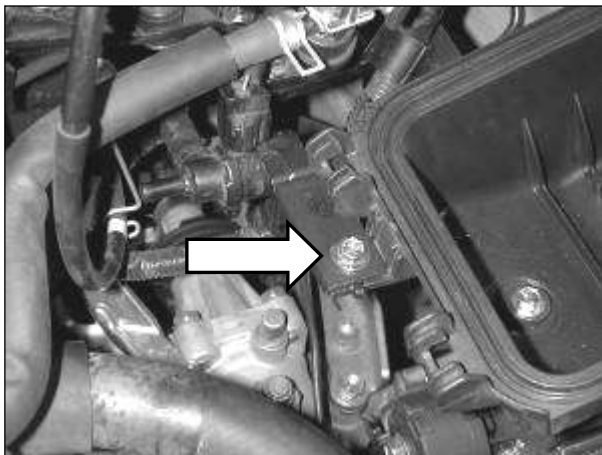
g. Remove the other side of the large vacuum line from the VSV mounted on the air box lid. Keep both vacuum line spring clamps for use with the AEM[®] intake system.



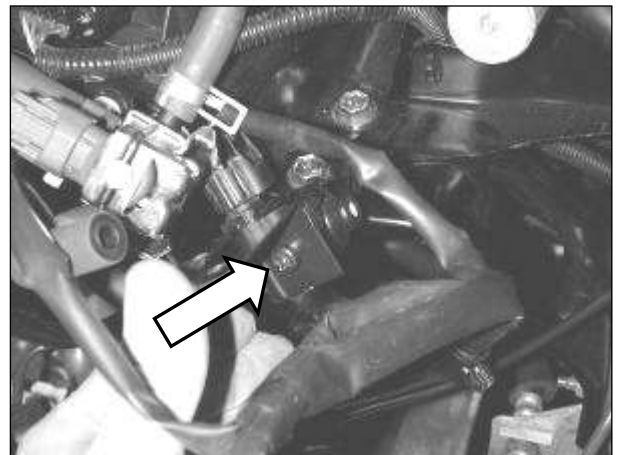
h. Release the two air box cover clips and lift the air box cover to gain access to the VSV with the blue connector on the back side of the cover. Press the tab on the VSV and slide upwards to release the VSV from the air box cover.



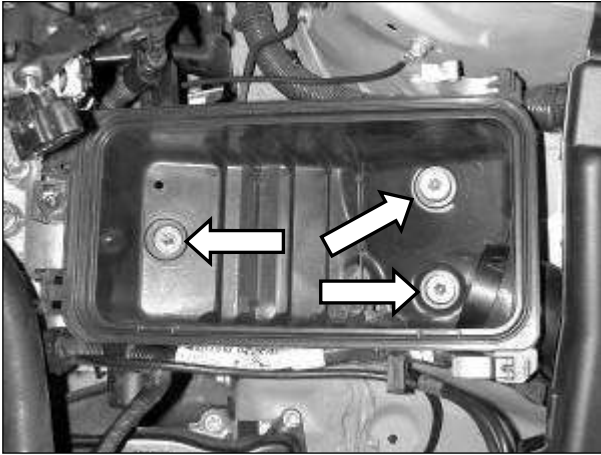
i. Remove the air box cover from the vehicle.



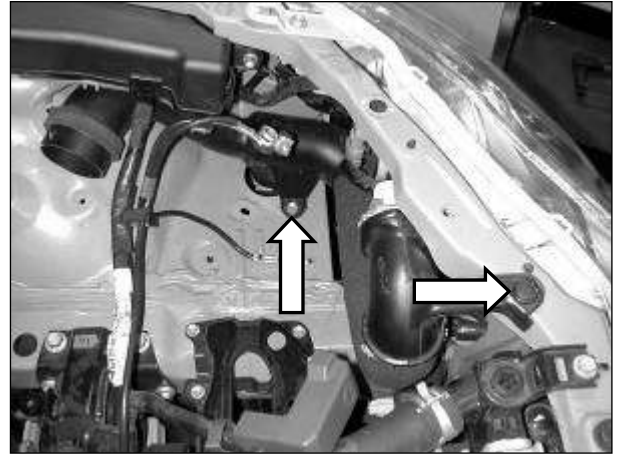
j. Remove the bolt holding the lower VSV bracket to the air box.



k. Remove the Phillips head screw that holds the metal bracket to the VSV. This bracket will not be reused with the AEM[®] intake system.



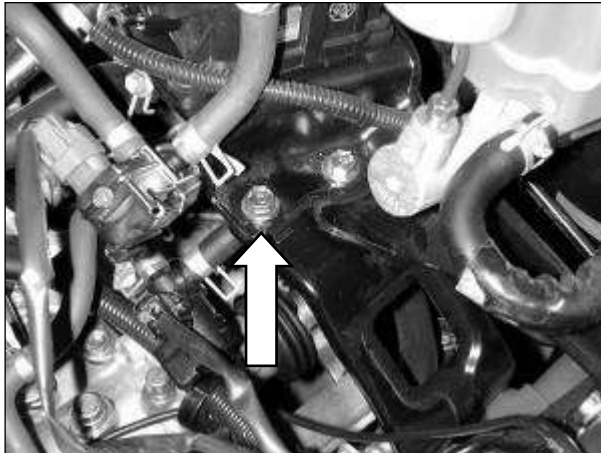
l. Remove the three bolts retaining the lower air box. Remove the lower air box from the vehicle.



m. Remove the stock intake air duct from the engine bay. The duct is retained by one bolt and one plastic rivet. Pry the center of the plastic rivet up with a small screwdriver, and then the entire rivet should pull out.

3. Installation of AEM® intake system.

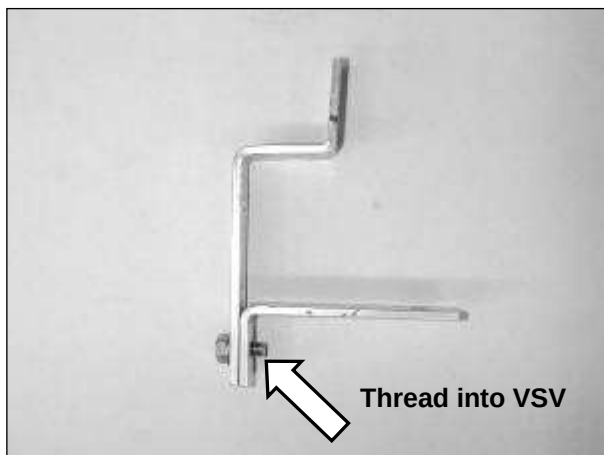
a. When installing the intake system, do not completely tighten the hose clamps or mounting hardware until instructed to do so.



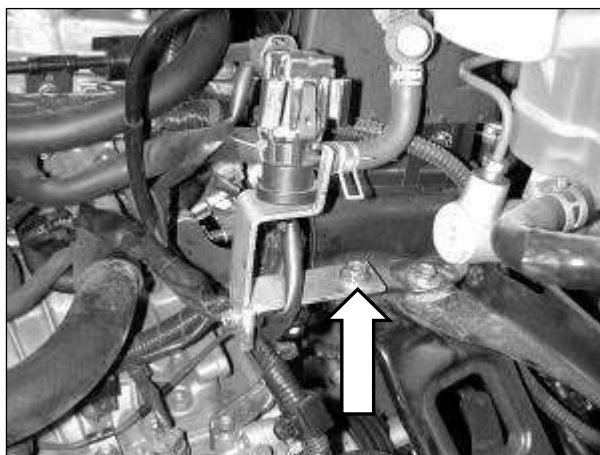
b. Remove the forward-most M8 bolt from the black bracket under the brake master cylinder.



c. Place the supplied VSV bracket spacer in line with the hole exposed in the previous step.



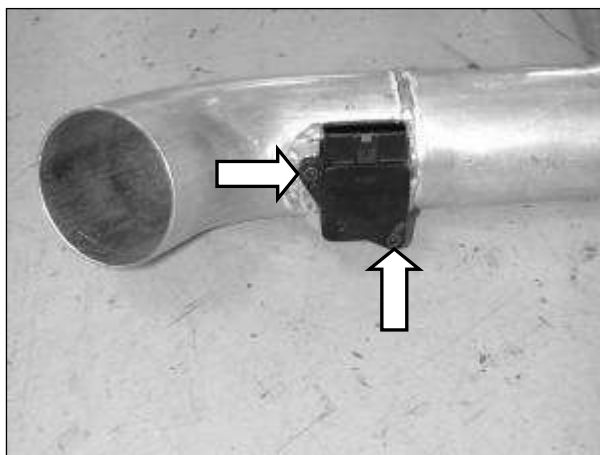
d. Using the supplied M6 bolt, mount the VSV bracket assembly to the lower VSV from step 2k.



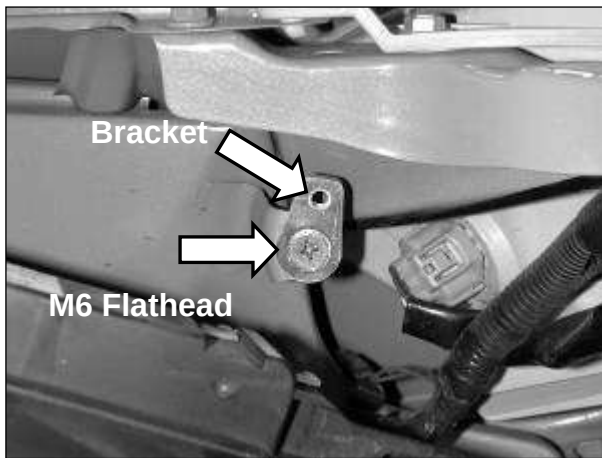
e. Use the supplied M8 bolt to secure the assembly to the bracket beneath the master cylinder. Be sure that the spacer remains in place. Rest the upper VSV on the bracket as shown. The rear vacuum line may need to be pulled back slightly to clear the bracket.



f. Use one of the supplied zip ties to secure the upper VSV to the bracket. Make sure the zip tie rests in the notches in the bracket to ensure that it does not slide off.



g. Mount the MAF sensor to the adaptor on the underside of the AEM® intake pipe using the two supplied 8-32 cap screws.



h. Move the fuse box out of the way by removing the M6 bolt at the front and the M6 nut at the rear. Mount the supplied fuse box spacer bracket using the supplied M6 flathead bolt as shown in the figure.



i. Reinstall the fuse box using the factory nut at the rear and the supplied rubber mount at the front.

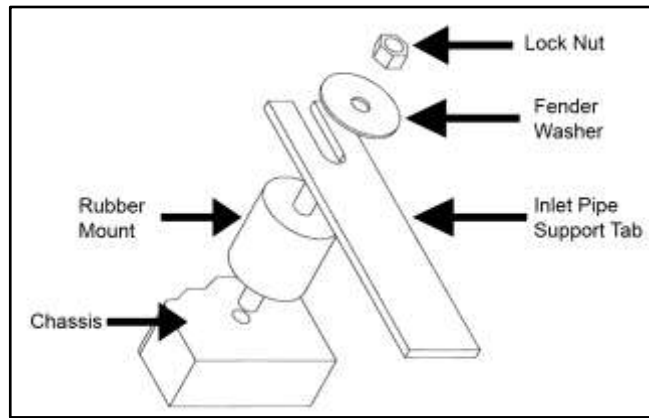


j. Loosely install the 2.75" silicone hose on to the AEM® intake pipe with the two #44 hose clamps. Insert the AEM intake pipe into the engine bay, filter end first. The pipe should pass under the bundle of wires going to the fuse box. Loosely secure the silicone hose to the throttle body.

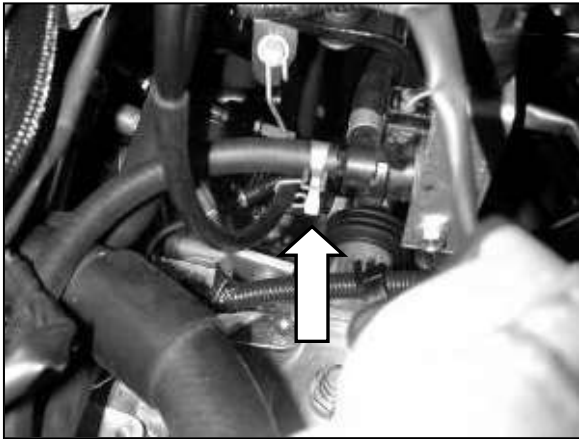


k. Loosely secure the bracket to the rubber mount with the supplied washer and locknut. Plug in the MAF sensor on the back side of the pipe.

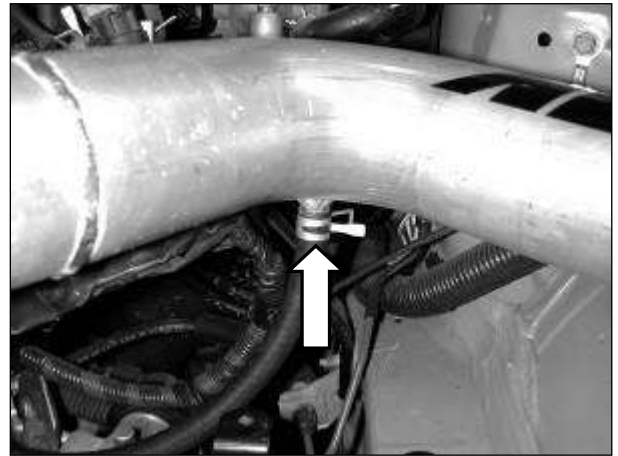
NOTE: Failure to plug the MAF sensor in will cause the check engine light to illuminate and the vehicle to run poorly.



Proper rubber mount assembly installation.

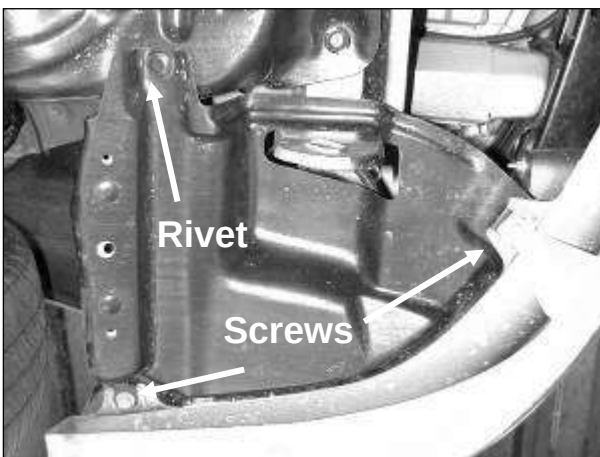


l. Replace the vacuum line removed in step 2g with the supplied length of 5/16" vacuum hose. Reuse the stock spring clamp.



m. Use the other stock spring clamp on the intake pipe side of the 5/16" vacuum hose. Route the hose carefully to avoid kinks.

n. Install the battery that was previously removed in step 2c.



o. Remove the two screws and one plastic rivet from the plastic splashguard under the bumper. Pull the plastic liner back to allow access to the filter end of the AEM® intake pipe.



p. Install the AEM® air filter on the end of the AEM® intake pipe. Ensure the air filter does not contact any part of the vehicle and tighten the #48 hose clamp.

- q. **Plastic splashguard:** Install the plastic splashguard and any hardware removed during steps 3o.
NOTE: Failure to install the plastic splashguard will result in diminished performance and increase the potential for engine damage due to water ingestion in rainy conditions.



Factory air box system installed



AEM® intake system installed

4. Reassemble Vehicle

- 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.
- Check for proper hood clearance. Re-adjust pipes if necessary and re-tighten them.
- Inspect the engine bay for any loose tools and check that all fasteners that were moved or removed are properly tightened.
- Reconnect negative battery terminals and start engine. Let the vehicle idle for 3 minutes. Perform a final inspection before driving the vehicle.

NOTE: If vehicle was started without one of the VSV's or the air flow meter connected then the "Check Engine" light may come on. If this happens turn the engine off and disconnect the battery for one minute. Reconnect the battery and restart the engine.

5. CARB Sticker Placement

- 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

- 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.
- Use aluminum polish to clean your polished AEM intake tube.
- 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
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.