



Equipped with AEM® Dryflow™ Filter  
No Oil Required!

## INSTALLATION INSTRUCTIONS

### PART NUMBER: 21-8203

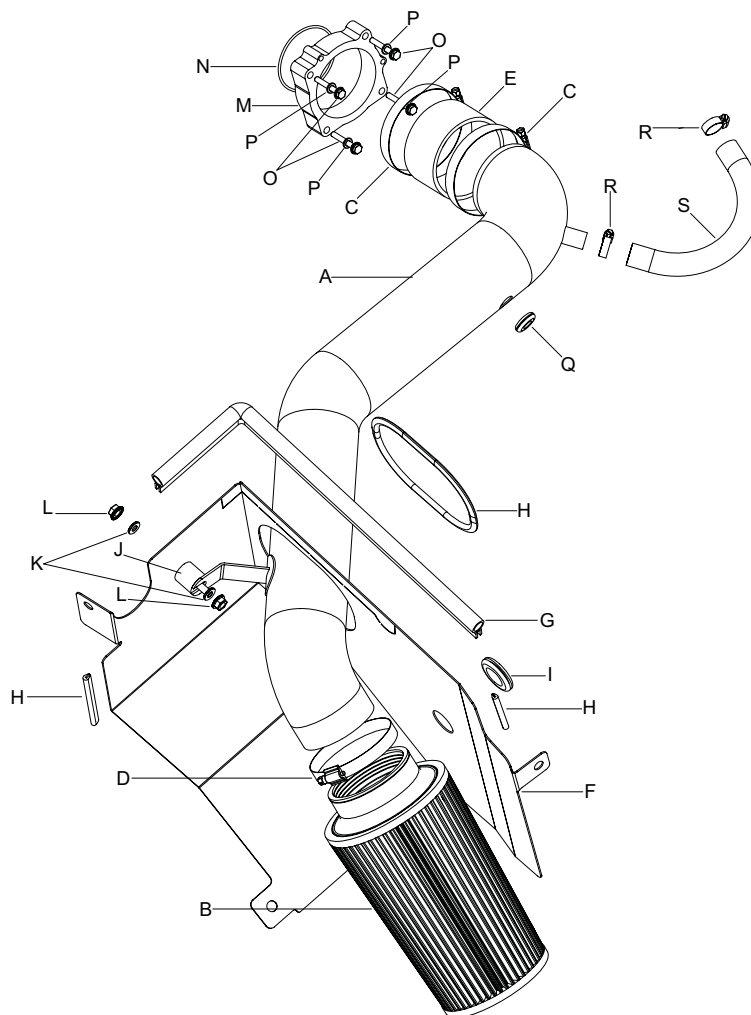
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|           |       |     |             |         |                       |
|-----------|-------|-----|-------------|---------|-----------------------|
| 2003-2005 | DODGE | RAM | 1500 Pickup | V8-5.7L | C.A.R.B. E.O. # D-670 |
| 2003-2005 | DODGE | RAM | 2500 Pickup | V8-5.7L | C.A.R.B. E.O. # D-670 |
| 2003-2005 | DODGE | RAM | 3500 Pickup | V8-5.7L | 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 |
|---|-------------------------------------|------|-------------|
| A | Inlet Pipe                          | 1    | 2-82032     |
| B | Air Filter Assy. 3.50 X 9" Dry Ele. | 1    | 21-2049DK   |
| C | 1/2" Bnd. Hose Clamp, 3.15"-4.00"   | 2    | 9456        |
| D | 1/2" Bnd. Hose Clamp, 3.31"-4.25"   | 1    | 9460        |
| E | Hose, Silicone 3.50x2" Black        | 1    | 5-351       |
| F | Heat Shield                         | 1    | 20-8212     |
| G | Edge Trim, 22"                      | 1    | 8-4022      |
| H | Rubber Edge Trim 34"                | 1    | 8-3034      |
| I | Grommet, 1"                         | 1    | 784640      |
| J | Mount, Rubber 1" X 8MM              | 1    | 1228560     |
| K | Washer, 8mm Soft Mount              | 2    | 559960      |
| L | Nut, M8 Hex Serrated                | 2    | 444.460.08  |
| M | TB Spacer                           | 1    | 2-9004      |
| N | O-ring                              | 1    | 1-3037      |
| O | Bolt, Hex M6-1 X 90MM               | 4    | 1-2089      |
| P | Washer, M6 X 12mm OD Zinc           | 4    | 1-3018      |
| Q | Grommet, 1/2"                       | 1    | 784634      |
| R | Hose Clamp, 1 1/4" Narrow           | 2    | 08420       |
| S | Hose; 3/4"ID X 10"L                 | 1    | 5-4010      |

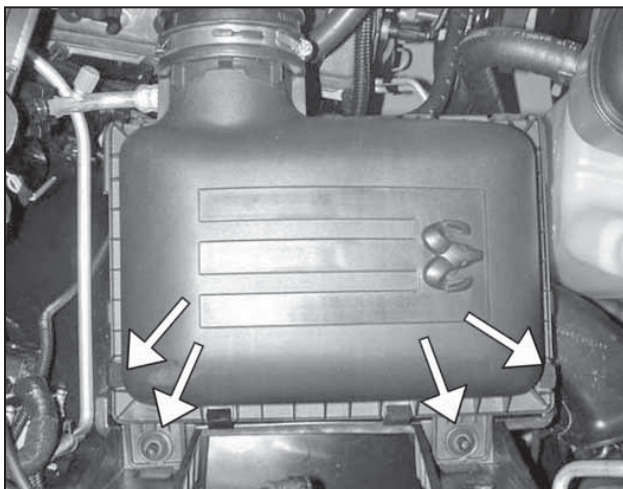


Read and understand these instructions **BEFORE** attempting to install this product. Failure to follow installation instructions and not using the provided hardware may damage the intake tube, throttle body and engine.

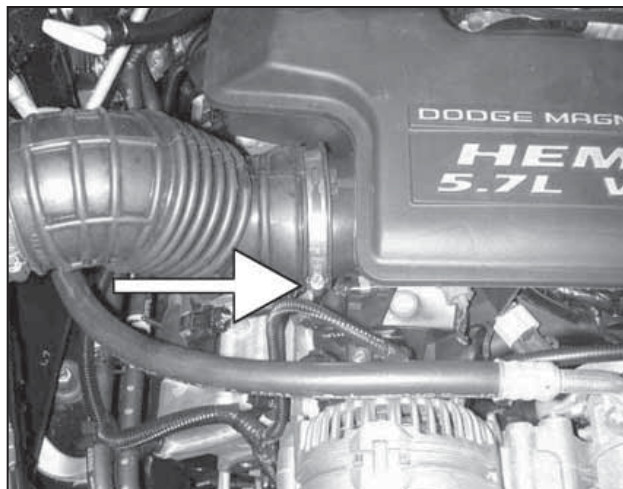
## 1. Preparing Vehicle

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

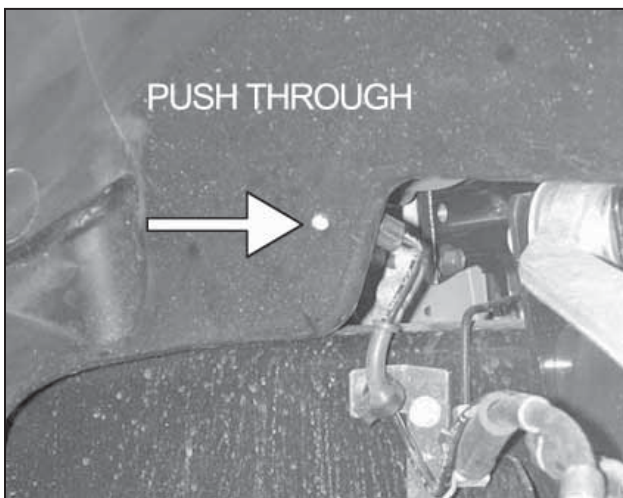
## 2. Removal of stock system



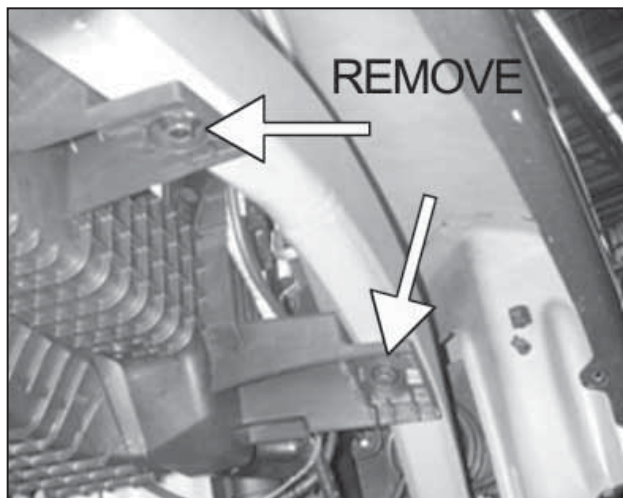
a. Release the four spring clips that hold down the top of the airbox.



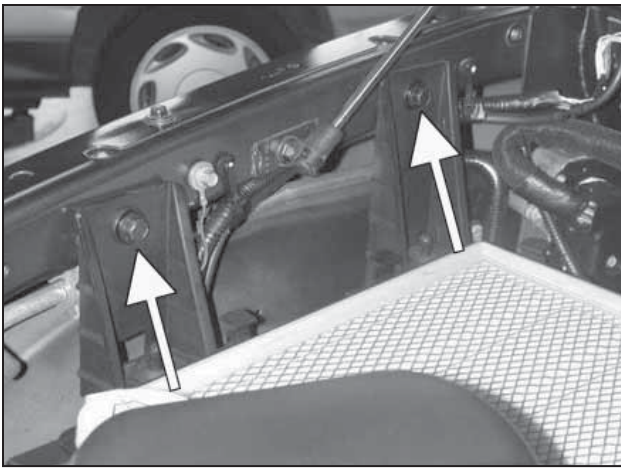
b. Loosen the hose clamp at the intake air resonator (Remove breather hose if attached to the airbox lid). Remove the rubber air hose and the airbox lid.



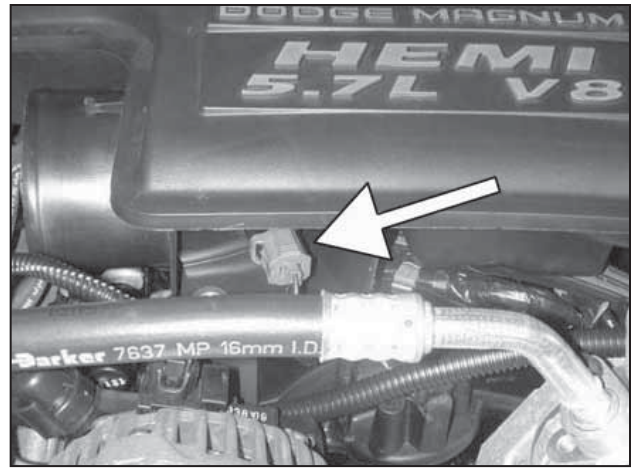
c. From inside the passenger side fender well, release the ABS wire holder. Push the wire holder through the hole towards the engine (if ABS fitted). Remove the plastic fender liner by removing the eight self-tapping screws.



d. Remove the two bolts securing the bottom half of the airbox.



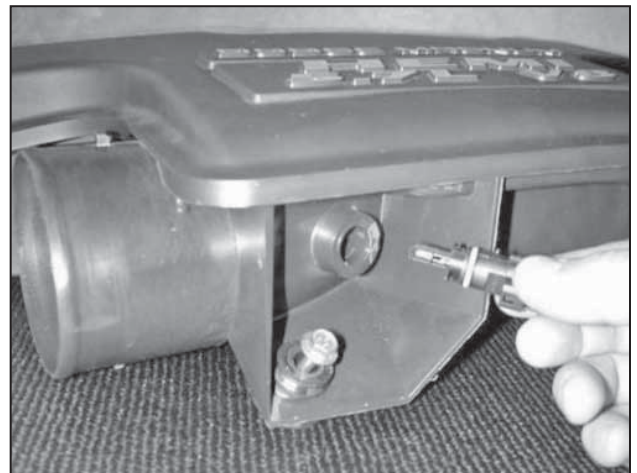
e. From inside the engine bay, remove the two remaining bolts securing the bottom half of the airbox. Remove the bottom half of the airbox and the air filter element.



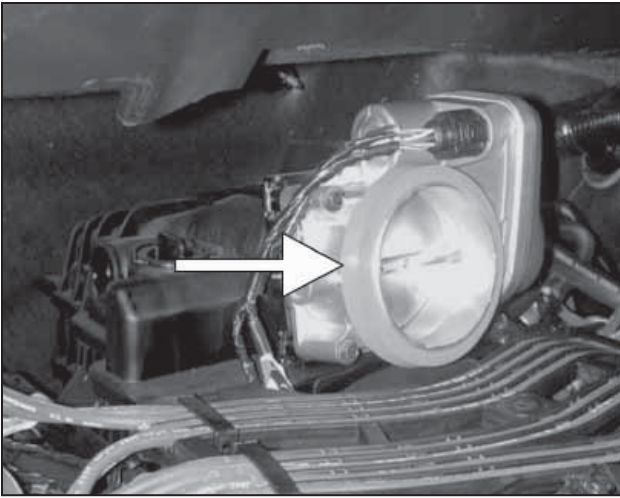
f. Unplug the inlet air temperature (IAT) sensor located on the front side of the intake air resonator.



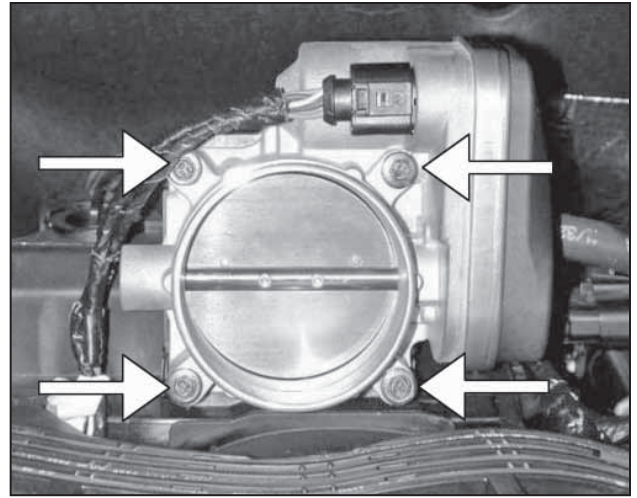
g. Remove the two bolts retaining the intake air resonator (Remove the breather hose if attached to the intake air resonator).



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.



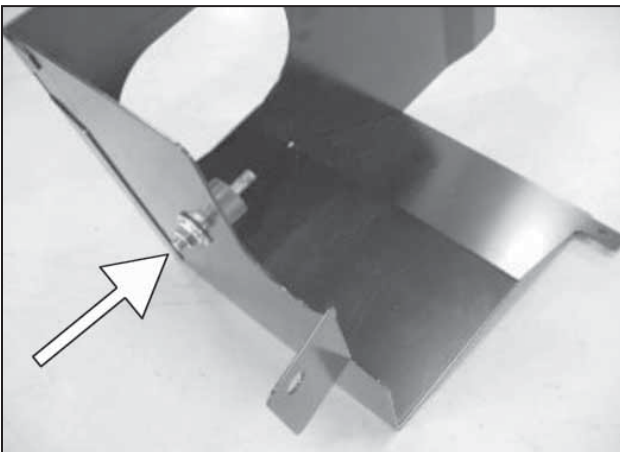
i. Remove the orange rubber gasket from the throttle body.



j. Remove the four bolts securing the throttle body. Unplug the electrical connector and remove the throttle body from the intake manifold.

### 3. Installation of AEM® intake system.

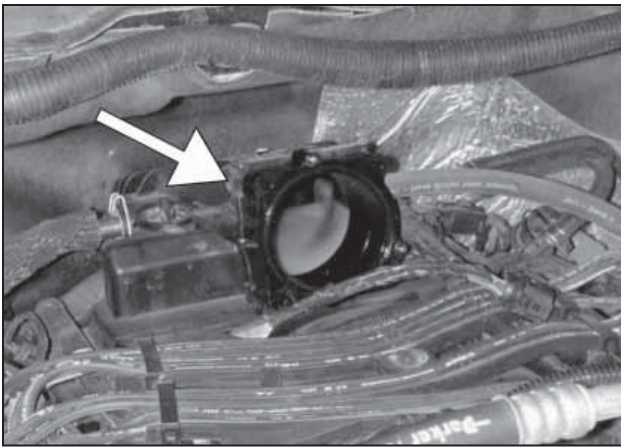
a. When installing the intake system, do not completely tighten the hose clamps or mounting hardware until instructed to do so.



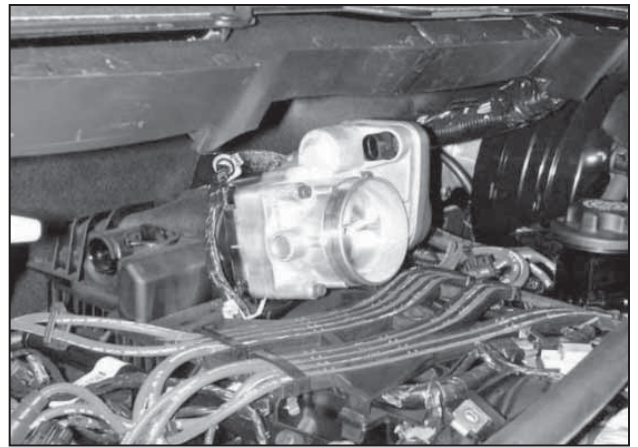
b. Install the supplied rubber mount into the heat shield as shown, place an M8 washer on the stud and an M8 nut to secure.



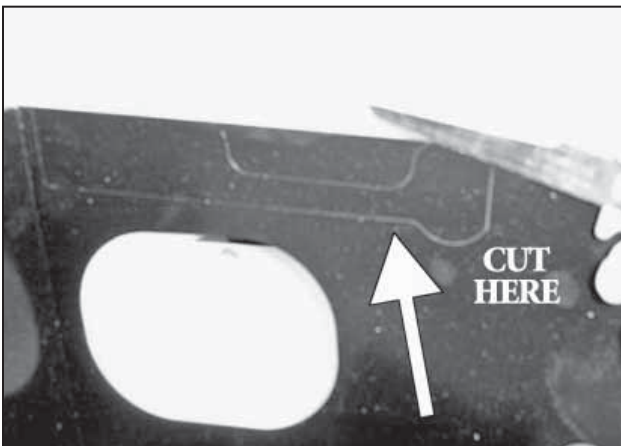
c. Install the supplied o-ring into the groove in the front of the throttle body spacer. Make sure the o-ring is properly seated in the groove around the entire circumference. Use a small amount of grease to trap o-ring in place.



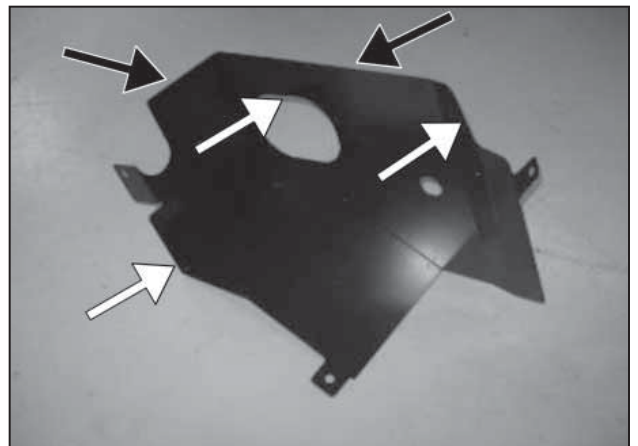
d. Install the throttle body spacer, aligning the pins on the intake manifold with the holes in the back of the throttle body spacer. The o-ring groove on the spacer should be facing forward.



e. Install the throttle body using the supplied M6 bolts and washers. Align the dowel pins on the throttle body spacer with the holes in the throttle body. Before installing the throttle body spacer, make sure the o-ring is seated. Reconnect the electrical connector.



f. On trucks equipped with the optional under hood light on the passenger side, cut the corners on the small section of the top notch in the 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. For installation on all other trucks, proceed to next step.



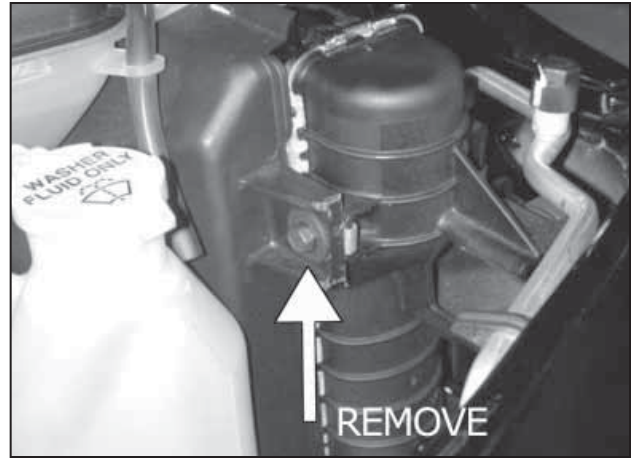
g. Install the rubber edge trim (PN: 8-3034) on the edges indicated with the white arrows. The rubber edge trim will need to be cut appropriately to fit along the heat shield as specified. Install the edge trim (PN: 8-4022) along the top of the heat shield indicated with black arrows.

**NOTE: Some trimming of the edge trim may be necessary.**

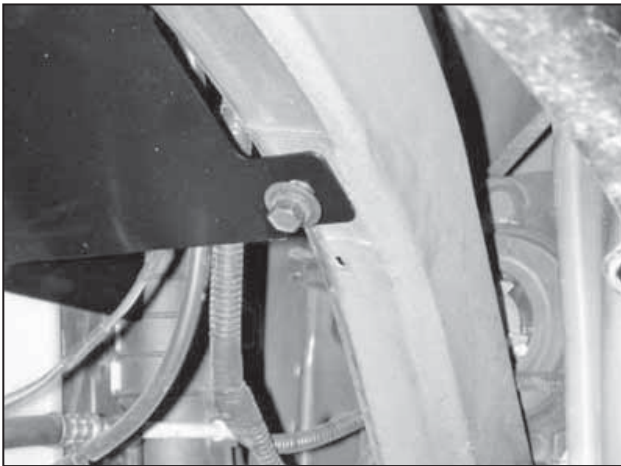


h. Install the intake tube in heat shield.

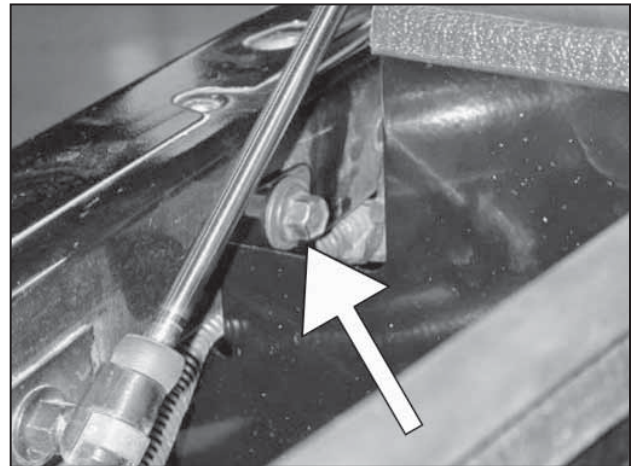
**NOTE:** Leave the plastic bag over the intake pipe to help prevent damage to the pipe while being installed. Remove the plastic bag after the heat shield is installed.



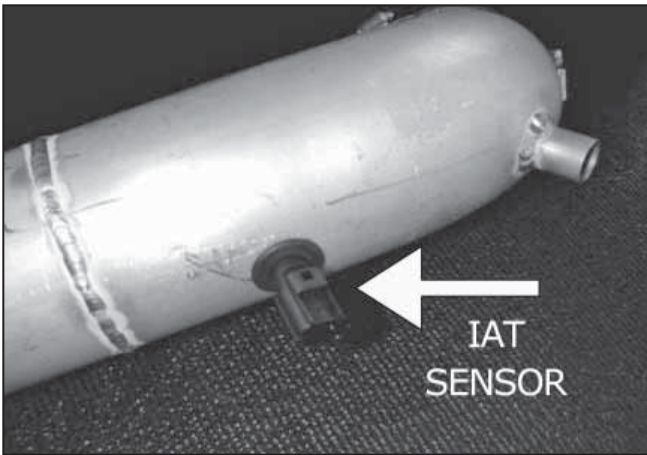
i. Remove the upper radiator fan shroud bolt. On vehicles fitted with a one piece washer radiator overflow reservoir; loosen and remove the mounting bolts and disconnect the overflow tube to gain access. Install the heat shield and intake tube, place the front heat shield tab between the fan shroud and radiator end tank. Replace the factory bolt and overflow bottle if removed.



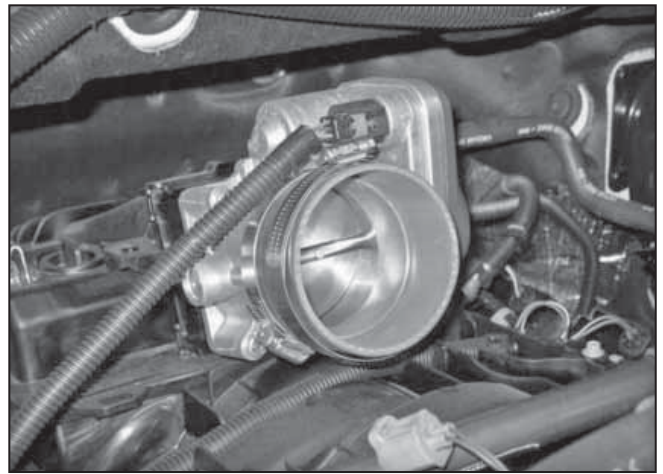
j. The lower heat shield mounting tab will line up with the lower airbox mounting hole. Loosely secure the mounting tab with one of the original bolts.



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



l. Install the supplied IAT grommet into the inlet pipe. Insert the factory IAT sensor into the grommet. Use care to avoid pushing the grommet inside of the pipe.



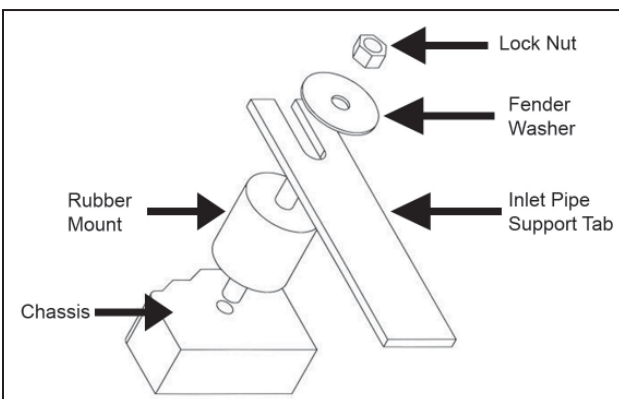
m. Attach the coupler to the throttle body. Slide the provided hose clamps onto the coupler and loosely tighten.



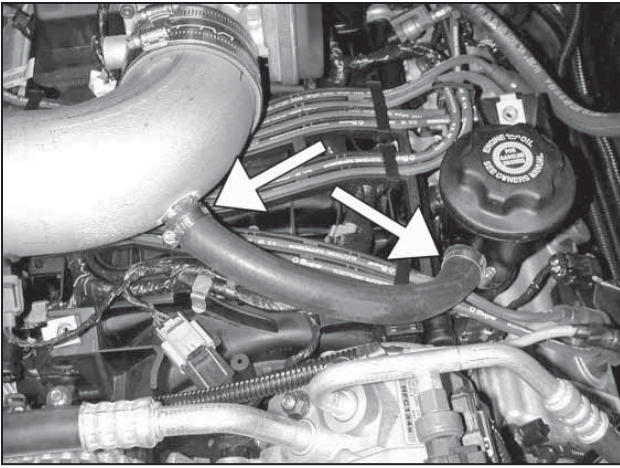
n. Insert the intake pipe as shown. Align the support bracket to the rubber mount and secure. See the diagram below for proper rubber mount installation.



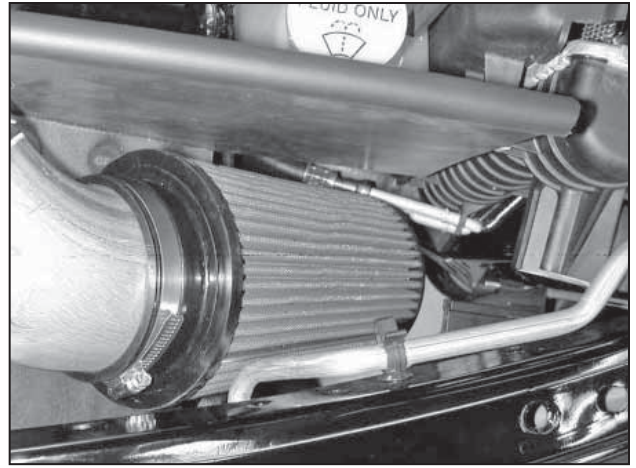
o. Reconnect the wire harness to the IAT sensor. Do not push the grommet through into the intake pipe.



Proper installation of rubber mount assembly.



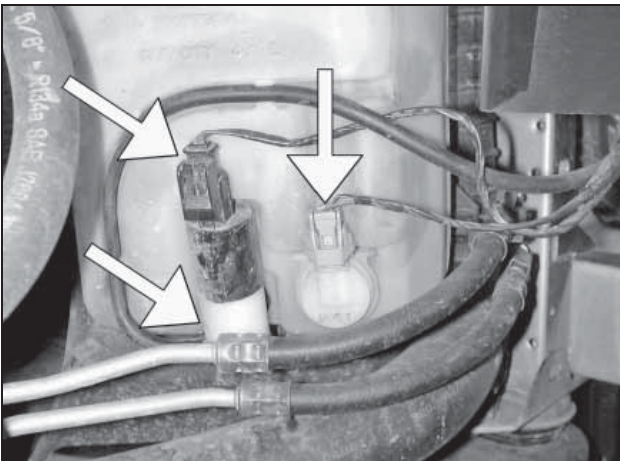
p. Install the supplied breather hose and secure with the two supplied hose clamps.



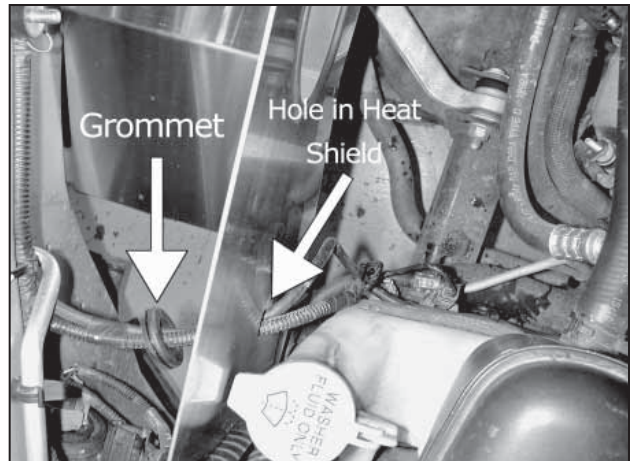
q. Install the AEM® air filter from inside the fender well. Slide the air filter onto the intake pipe until it stops. Secure with the supplied hose clamp. Ensure the windshield washer wires and hose do not make contact with the air filter.

#### 4. Windshield Washer Hose and Wire

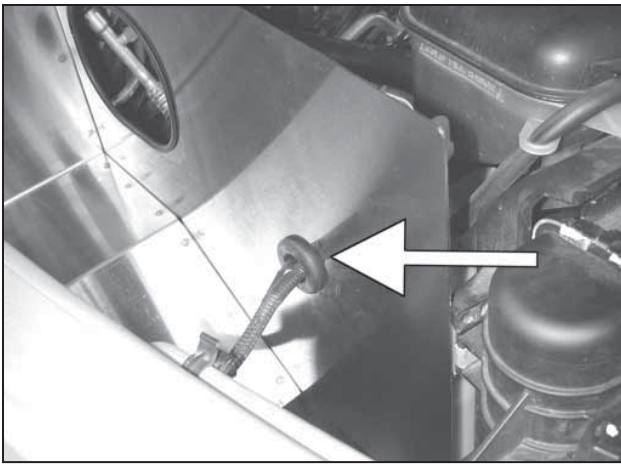
a. If the air filter is rubbing the windshield washer hose and wires, remove the air filter and follow the instructions below. If the air filter does not rub the lines and wires proceed to step 5.



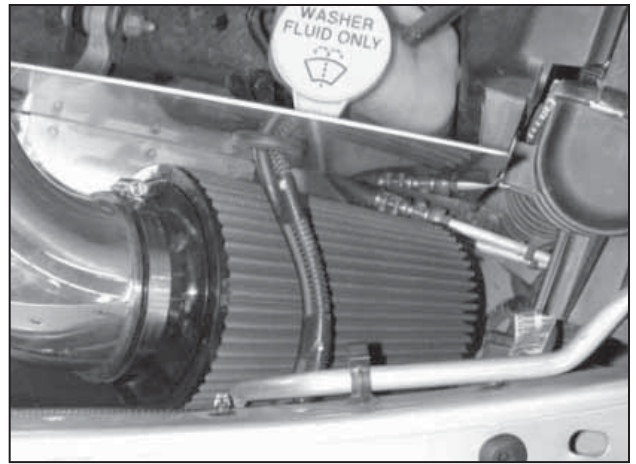
b. Unplug the wire connectors going to the windshield washer fluid pump and level indicator. Unplug the washer fluid hose. Block the nipple on the pump to prevent the washer fluid from draining.



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



d. Install the rubber grommet in the heat shield's hole as shown. 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 airbox system installed



AEM® intake system installed

#### 4. Reassemble Vehicle

- a. 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.
- b. Check for proper hood clearance. Re-adjust pipes if necessary and re-tighten them.
- c. Inspect the engine bay for any loose tools and check that all fasteners that were moved or removed are properly tightened.
- d. 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).**

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.