



Equipped with AEM® Dryflow™ Filter  
No Oil Required!

# INSTALLATION INSTRUCTIONS

## PART NUMBER: 21-577

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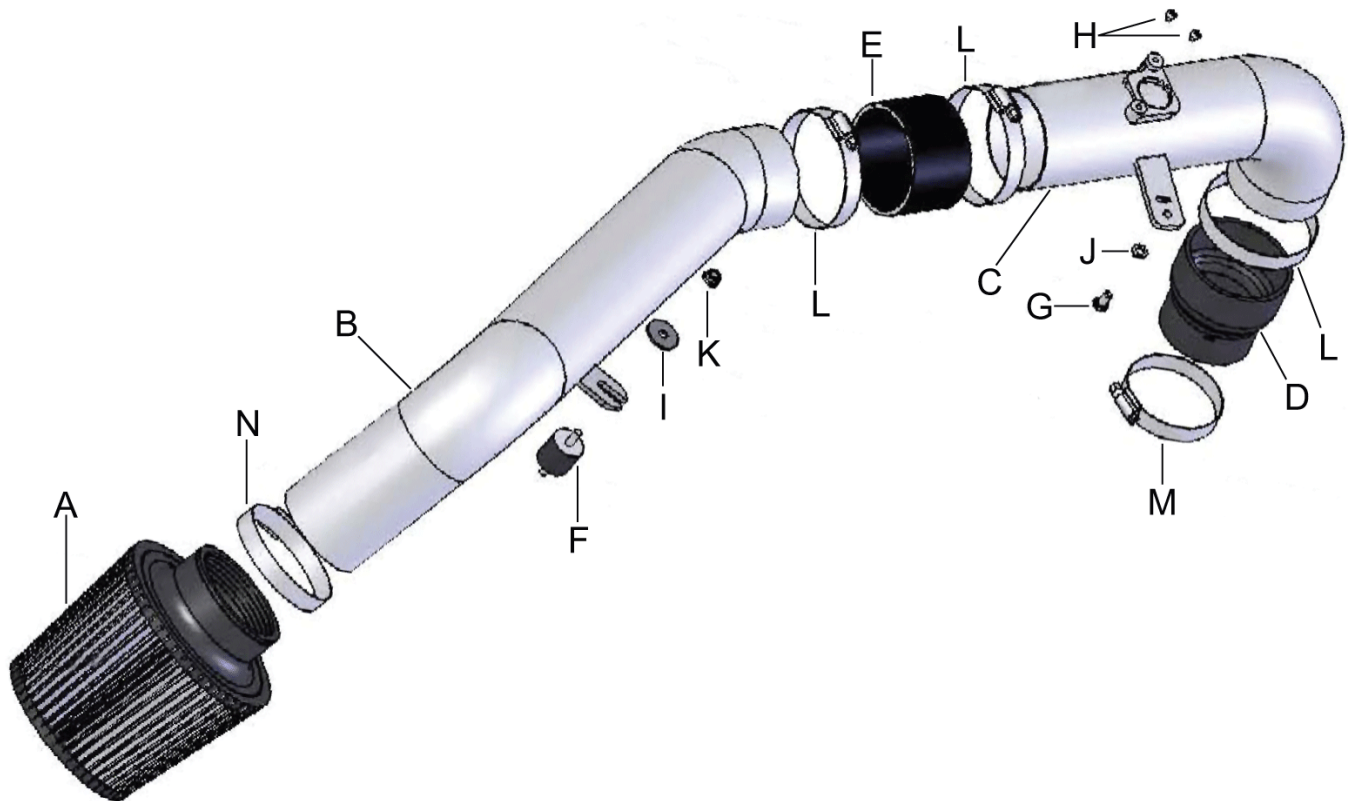
2008-2012 SCION xB L4-2.4L

**LEGAL IN CALIFORNIA ONLY FOR RACING VEHICLES  
WHICH MAY NEVER BE USED, REGISTERED  
OR LICENSED FOR USE UPON A HIGHWAY.**

See [aemintakes.com](http://aemintakes.com) for CARB status on each part for a specific vehicle

## PARTS LIST

	Description	Qty.	Part Number
A	Element Parts Kit 3.00 X 5" Dry Ele.	1	21-203DK
B	Lower Pipe	1	2-5772
C	Upper Pipe	1	2-5771
D	Hose, Adapter 2.50/3.0" X3"	1	5-253
E	Hose, Silicone 3.00x2" Black	1	5-302
F	Mount, Rubber 1" X 6mm	1	1228599
G	Bolt, Hex M5-.8, 12mm	1	1-2098
H	Bolt, Btn. Hd. M4-0.7 X 6mm	2	1-2051
I	Washer, 6mm Soft Mount	1	08160
J	Washer, M5 Split Lock SS	1	1-3046
K	Nut, M6 Hex Serrated	1	444.460.04
L	1/2" Bnd. Hose Clamp, 2.56"-3.50"	3	9448
M	1/2" Bnd. Hose Clamp, 2.15-3.00"	1	9440
N	1/2" Bnd. Hose Clamp, 2.90"-3.75"	1	9452



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<sup>®</sup> 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. 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.

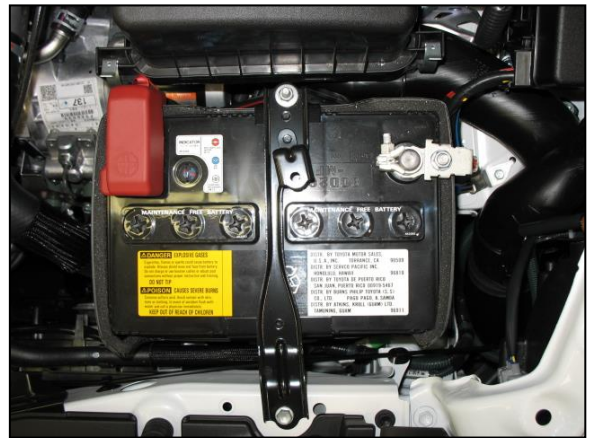
**NEVER WORK UNDER A VEHICLE WITHOUT USING JACK STANDS.**

- i. Remove driver side fender liner.
- e. Do not discard stock components after removal of the factory system.

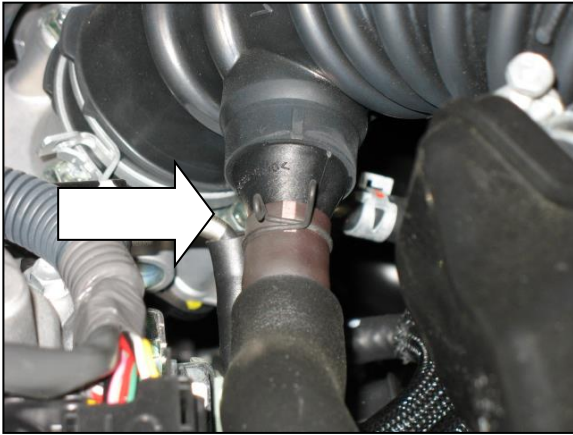
## 2. Removal of stock system



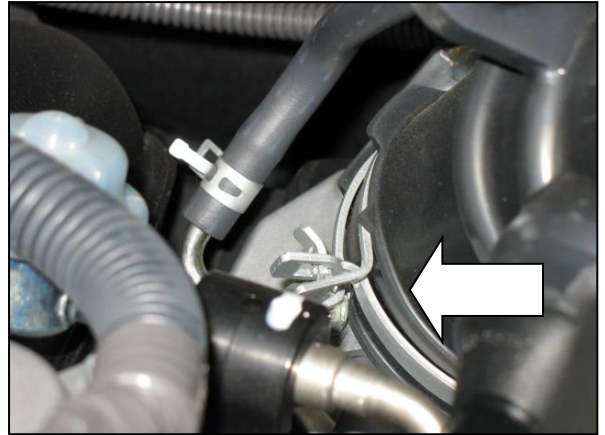
a. Loosen and remove the engine cover nuts. Remove the engine cover.



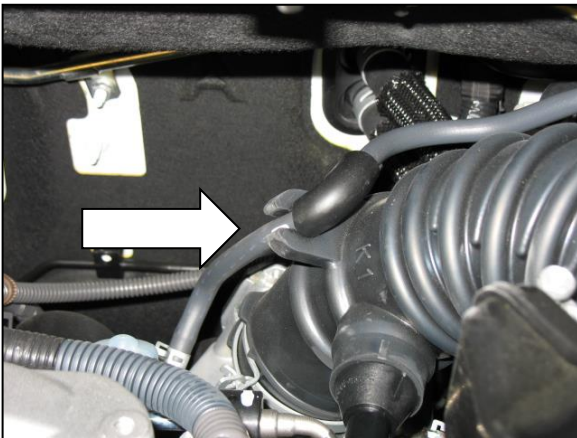
b. Disconnect the negative battery terminal and loosen the mounting bracket for the battery.



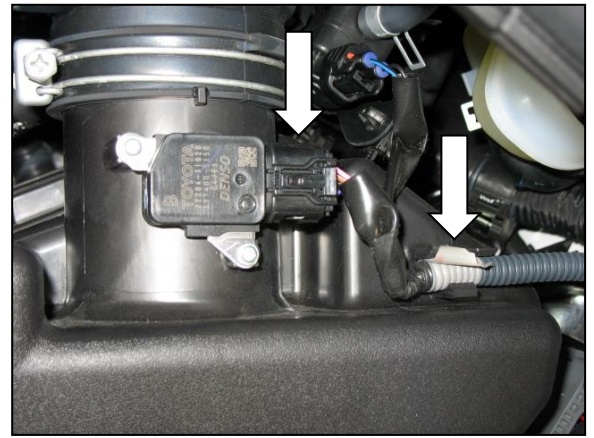
c. Unclasp the crankcase breather tube clip from the inlet tube.



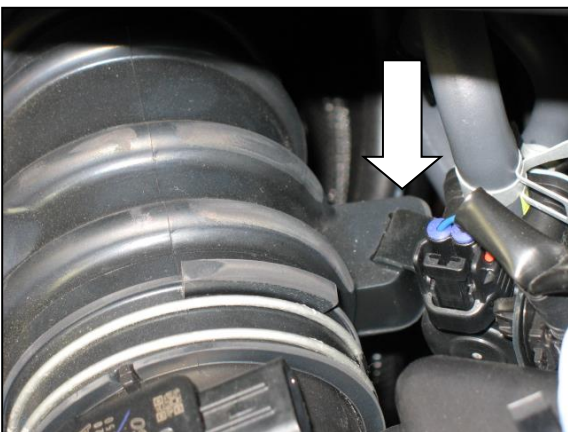
d. Unclasp the spring clamp at the throttle body and lock in the open position.



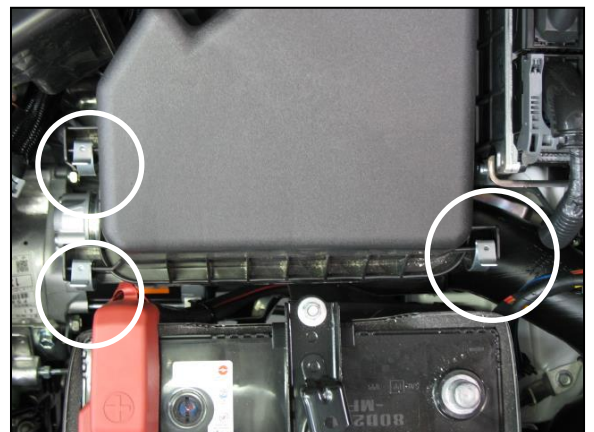
e. Remove the vacuum line from the inlet tube.



f. Unclip the Mass Air Flow (MAF) sensor harness connector from the sensor. Unclasp the harness from the air box.



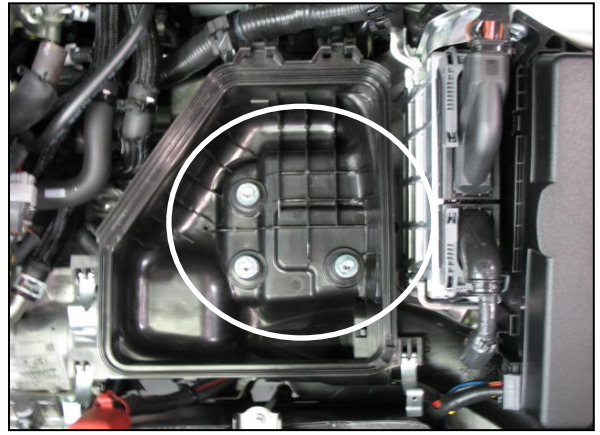
g. Lift the VSV bracket from the slot in the inlet tube.



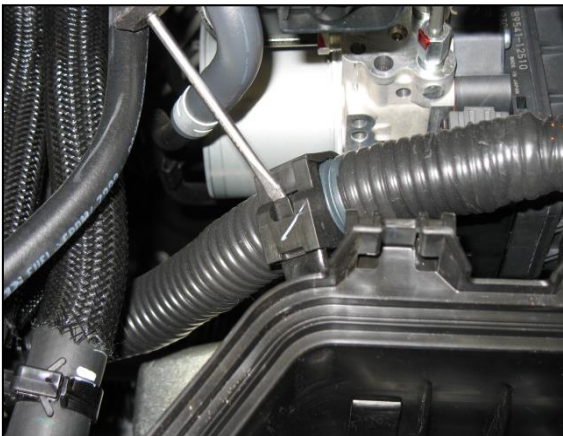
h. Unclasp the air box lid clips. Remove the air box lid and inlet tube from the engine bay.



i. Remove the air filter element.



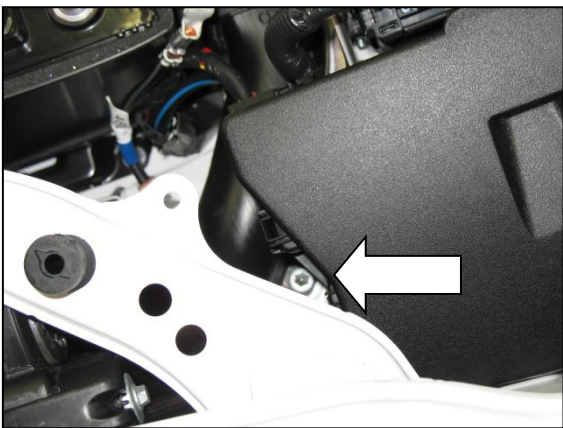
j. Loosen and remove the air box mounting bolts.



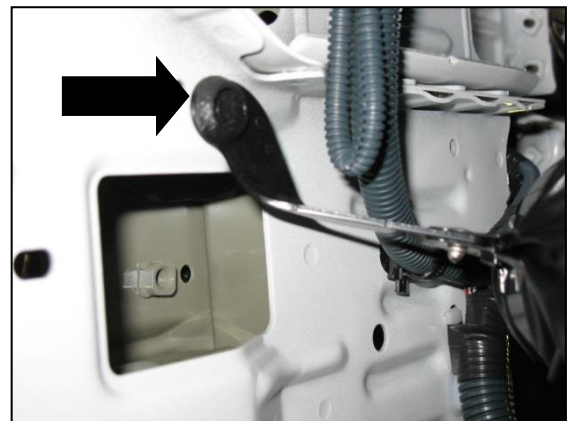
k. Remove the wire harness from the lower air box by lifting up the tab on the clasp. Remove the lower air box.



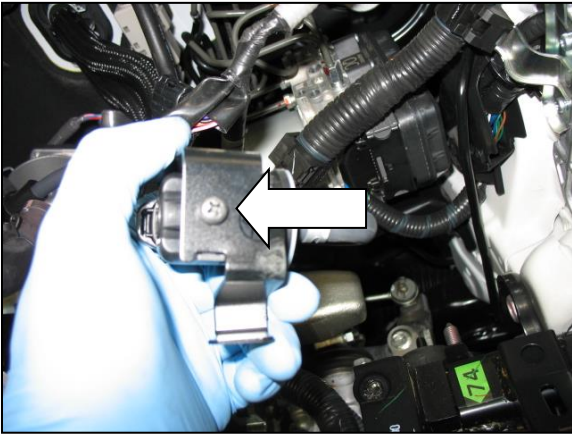
l. Remove the push-in clip from the air horn inlet. Remove the inlet from the remainder of the tubing located in the fender well.



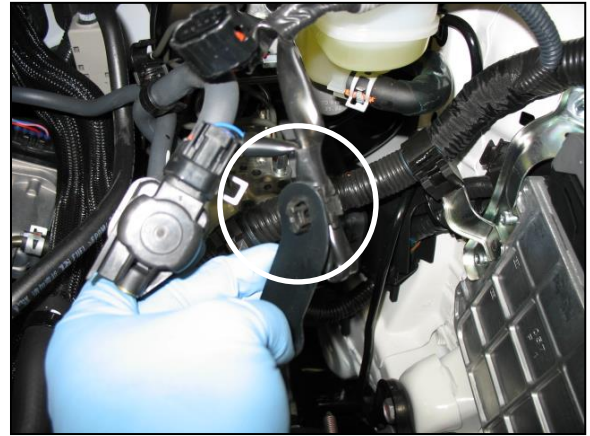
m. Loosen and remove the mounting bolt for the tubing located in the fender well.



n. Remove the push-in clip from inside the fender well.



o. Loosen and remove the VSV bracket mounting bolt.



p. Remove the push-in zip tie from the VSV bracket. Remove the tape securing the MAF wire lead to the main engine harness.

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

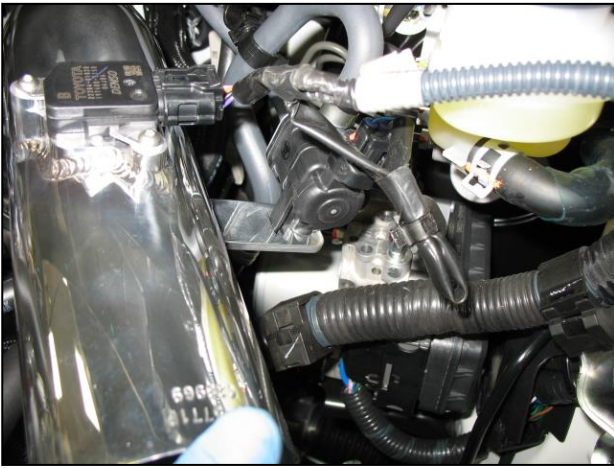
a. When installing the intake system, do not completely tighten the hose clamps or mounting hardware until instructed to do so.



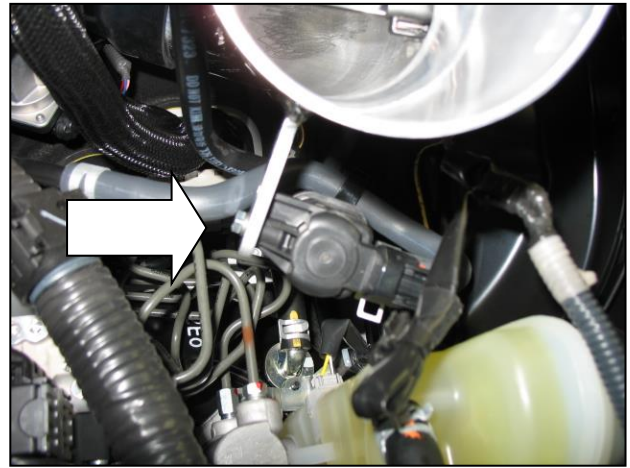
b. Install the reducer coupler onto the throttle body. Tighten at the throttle body with a #40 hose clamp. Loosely install #48 hose clamp.



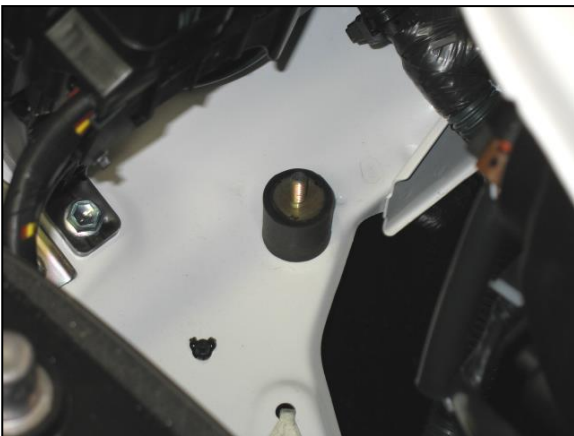
c. Remove the MAF sensor from the air box lid. Reinstall into the upper inlet pipe. Take care not to damage the o-ring during installation. Tighten with two 1-2051 button head bolts.



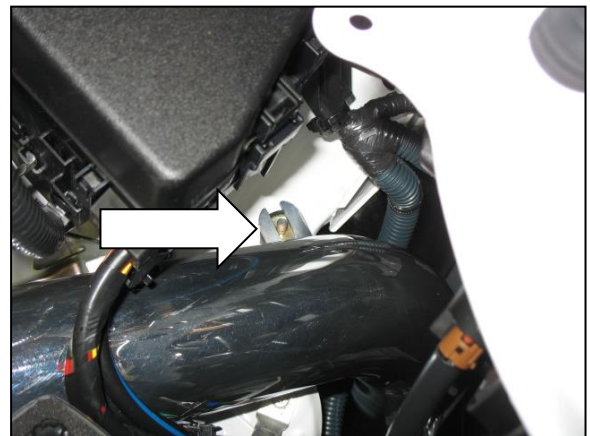
d. Insert the upper inlet pipe into the EPDM coupler and secure with the installed #48 hose clamp. Re-attach the crank case breather hose. Re-attach the VSV to the inlet pipe bracket slot. Reconnect the MAF sensor wire harness connector.



e. Secure the VSV with split lock (1-3046) washer and M5 bolt (1-2098).



f. Insert the rubber mount where the mounting bolt from step 2m was removed.



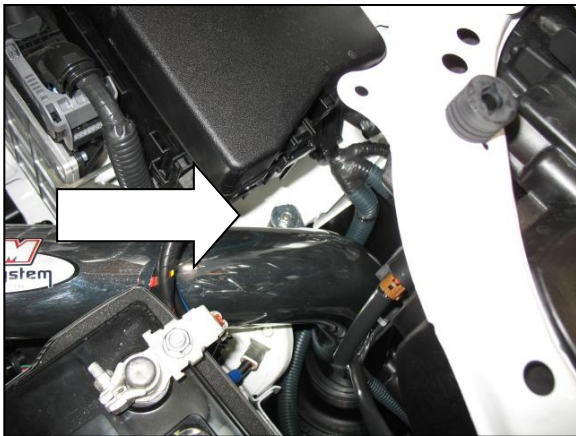
g. Insert the lower inlet pipe. Align the bracket with the rubber mount.



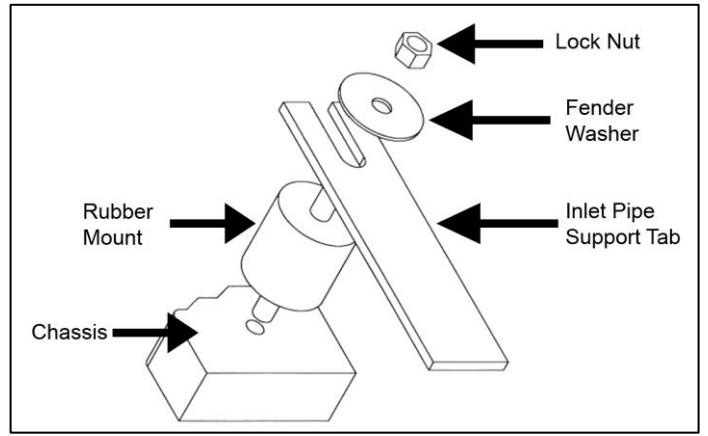
h. Join both pipes with the silicone coupler and two #48 hose clamps. Check for clearance around the battery.



i. Attach the air filter element and secure with #52 hose clamp.



j. Secure the bracket with fender washer and M6 nut. Make sure there is at least 1/8" clearance between the intake pipe and the battery cover.



Proper installation of the rubber mount assembly.





AEM® intake system installed

#### 4. Reassemble Vehicle

- a. Install the engine cover removed in step 2a.
- b. **Fender liner:** Install the fender liner and any hardware that was removed during step 1di.  
**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.**
- 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 terminal and start engine. Let the vehicle idle for 3 minutes. Perform a final inspection before driving the vehicle.

#### 5. Service and Maintenance

- a. AEM Induction Systems requires cleaning the intake system's air filter element every 100,000 miles. When used in dusty or off-road environments, our filters will require cleaning more often. We recommend that you visually inspect your filter once every 25,000 miles to determine if the screen is still visible. When the screen is no longer visible some place on the filter element, it is time to clean it. To clean, purchase our Synthetic air filter cleaner, part number 99-0624 and follow the easy instructions.
- 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.

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