Equipped with AEM® *Dryflow™ Filter*

No Oil Required!

INSTALLATION INSTRUCTIONS

PART NUMBER: 22-469

2004	TOYOTA	Matrix XR	L4-1.8L	C.A.R.B. E.O. # D-392-28
2004	TOYOTA	Corolla	L4-1.8L	C.A.R.B. E.O. # D-392-28
2003	TOYOTA	Matrix XR	L4-1.8L	C.A.R.B. E.O. # D-392-21
2003	TOYOTA	Corolla	L4-1.8L	C.A.R.B. E.O. # D-392-19

PARTS LIST

Description	Qty.	Part Number
Element Parts Kit 2.75 X 5" Dry Ele.	1	21-202
Short Pipe	1	2-4691
Hose; 5/16ID X 17"L	1	5-2017
Hose, Silicone 2.75x3" Blk.	1	5-275
Mount, Rubber 1" X 6mm	1	1228599
Zip Tie, 6 Long	1	1-113
Spacer, 1.00 OD X .315 ID X .2 - Anodize Black	1	2-665
Bracket; Assembly	1	32-3015
Bolt, Socket 8-32 X 5/16 SS	2	1-2023
Bolt, Hex M6-1 X 12mm	1	1-2065
Bolt, Hex M8-1.25 X 25mm	1	1-2066
Washer; 1"D X 1/4 Hole Fender	1	08160
Nut, M6 Hex Serrated	1	444.460.04
1/2" Bnd. Hose Clamp, 2.31-3.25"	2	9444
1/2" Bnd. Hose Clamp, 2.56"-3.50"	1	9448

Read and understand these instructions <u>BEFORE</u> 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.

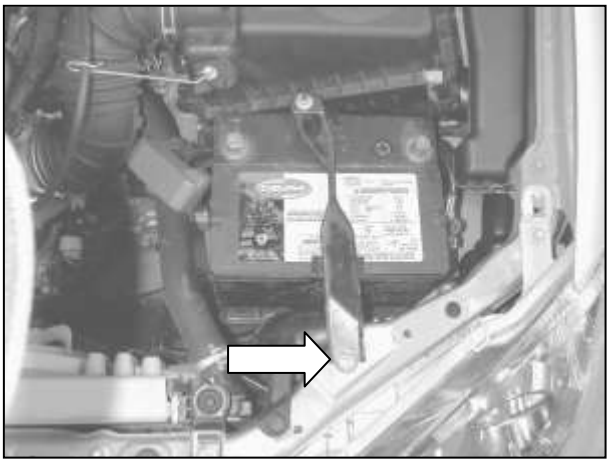
1. Preparing Vehicle

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 all negative battery terminals.
e. Do not discard stock components after removal of the factory system.

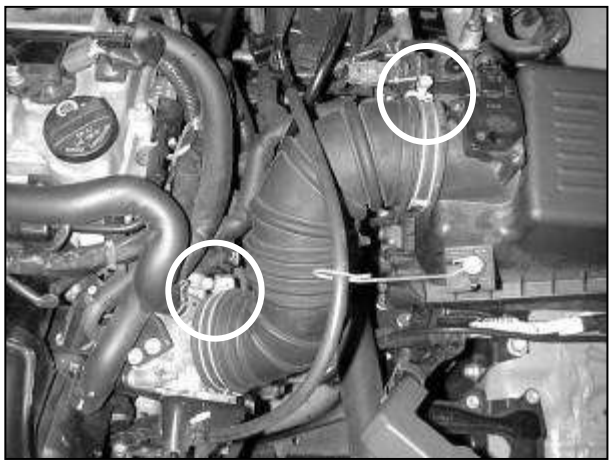
2. Removal of stock system

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.

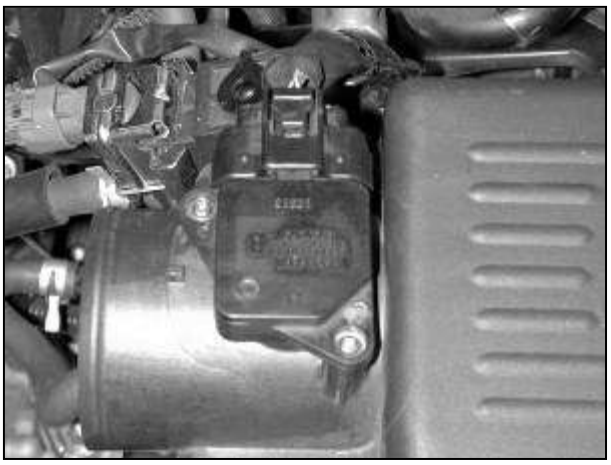
b. Remove the two nuts and two plastic rivets that hold the plastic engine cover on. The plastic rivets may be gently lifted with a small screwdriver. Remove the engine cover.



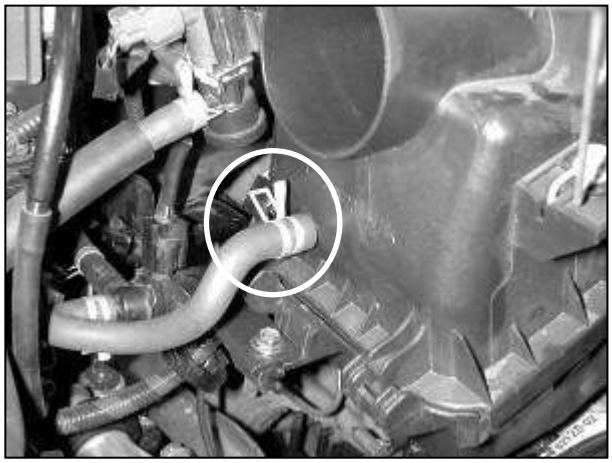
c. Disconnect the positive battery terminal. Remove the bolt on the radiator support that secures the battery bracket. Unhook the rod at the rear of the battery bracket. Remove the battery from the vehicle.
NOTE: Refer to the owner's manual for specific details regarding battery removal.



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

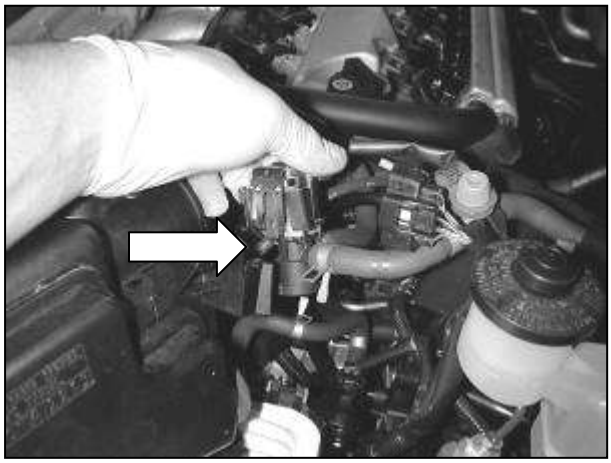


e. Remove the air flow meter connector from the sensor. Remove the two small screws and remove the sensor from the air box. Use care when removing this component, as it can be easily damaged. Set the air flow meter aside in a safe place.



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

g. Remove the other side of the large vacuum line from the VSV mounted to the air box. Keep both vacuum line spring clamps; they will be reused with the AEM® intake system.

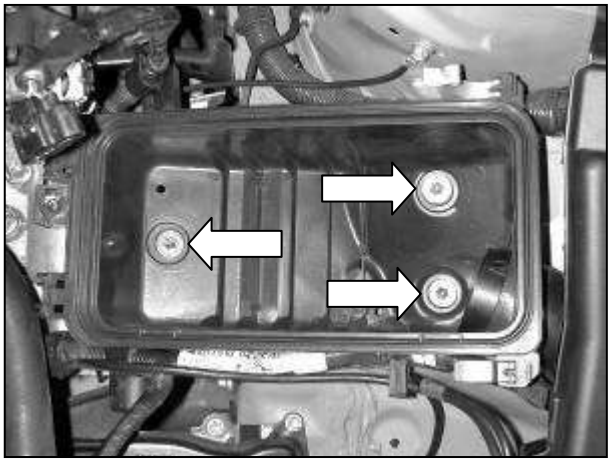


h. Release the two air box cover clips and lift the air box cover to gain access to the VSV with the blue connector on the back side of the cover. Press the tab on the VSV and slide upwards to release the VSV from the air box cover.

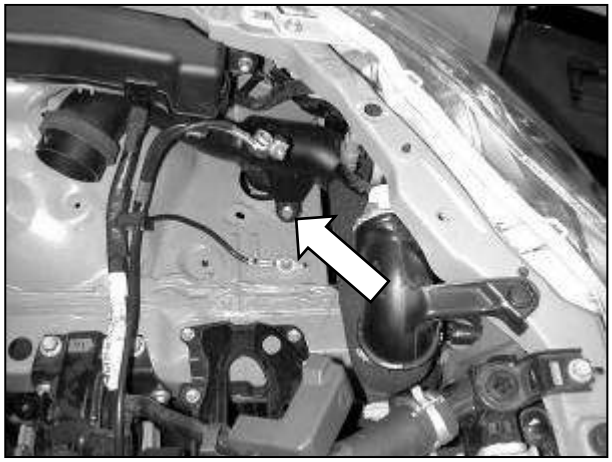
i. Remove the air box lid from the vehicle.

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

k. Remove the phillips head screw that secures 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.

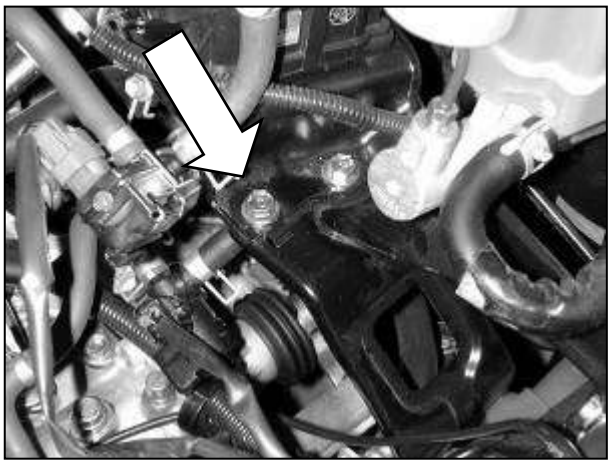


m. Remove the stock intake air duct from the engine bay. The duct is retained by one bolt and one plastic rivet. Pry the center of the plastic rivet up with a small screwdriver; the entire rivet should pull out.

3. Installation of AEM® intake system.

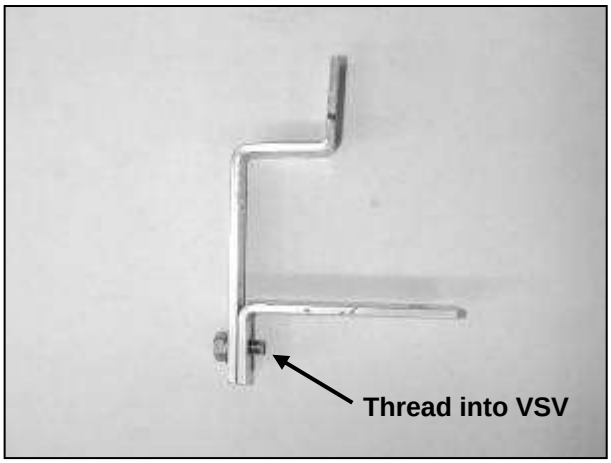
a. When installing the intake system, do not completely tighten the hose clamps or mounting hardware until instructed to do so.

b. Check to see that the inside of the AEM® inlet pipe and air filter are clean and free from any foreign objects and/or obstructions.



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

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



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

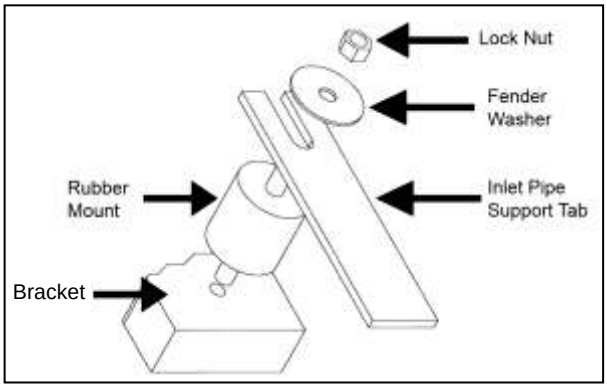
f. Use the supplied M8 bolt to secure the assembly to the bracket beneath the master cylinder. Be sure that the spacer remains in place. Rest the upper VSV on the bracket as shown. The rear vacuum line may need to be pulled back slightly to clear the bracket.

g. 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.

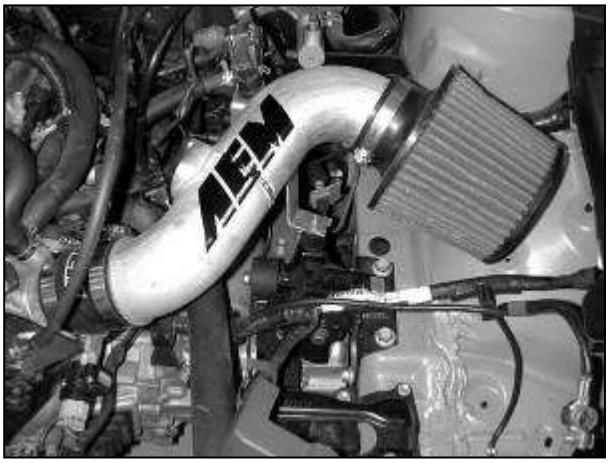
h. Mount the MAF sensor to the adaptor on the underside of the AEM® intake pipe using the two supplied 8-32 cap screws.

i. Place the supplied silicone hose on the throttle body. Loosely secure the hose with the two supplied 2.75” hose clamps.

j. Install the supplied rubber mount onto the metal lower air box bracket. See diagram below for proper rubber mount installation.



k. Install the AEM® intake pipe into the engine bay with the air filter already installed. The intake bracket should line up with the rubber mount. Loosely secure the bracket to the rubber mount with the supplied M6 washer and lock nut. Refer to the diagram above for proper rubber mount installation.



l. Install the throttle body end of the pipe into the silicone coupler. 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.

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

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

Factory air box system installed

AEM® intake system installed

4. Reassemble Vehicle

a. Install the battery in the reverse order of removal. Reconnect the positive battery terminal. Refer to the owner's manual for specific details regarding battery installation.
b. Install the engine cover and hardware removed during step 2b.
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.

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 unconnected VSV or air flow sensor. Reconnect the battery and restart the engine.

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)**