



SHORT RAM INTAKE SYSTEM

Installation Instructions for:
Part Number 22-484
2003-2004 Mazda 6 i
4 Cylinder A/T Only

ADVANCED ENGINE MANAGEMENT INC.
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Instruction Part Number: 10-7017

2003 Mazda 6 i 2.3L C.A.R.B. E.O. #Pending

Short Ram Intake Systems that are pending CARB approval are illegal in California except on racing vehicles which may never be used on public highways.

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Congratulations! You have just purchased the finest Air Induction & Filtration system for your car at any price!

The **AEM Short Ram Air Intake System** is the result of extensive development on a wide variety of cars. It is the most advanced short pipe air intake system on the market. Each system is specifically engineered for its particular application. All **AEM Short Ram Air Intake Systems** deliver maximum performance gains through lightweight, all-aluminum, mandrel-bent tubing that is tuned in both length and diameter. The aluminum will not crack in extended use like plastic. The tube length and diameter are matched for each specific engine to give power over a broad RPM range. Unlike plastic systems that use a continually diverging cross-section, we take advantage of the acoustical energy in the inlet duct to promote cylinder filling during the intake valve opening event. Every intake is coated with a high-gloss, heat-reducing Zirconia based powder coating. This special blend of powder coating helps reduce heat penetration, which in turn reduces the temperature of the inlet air charge. The cooler inlet air temperature translates to more power during the combustion process because cool air is denser than warm air. The *air mass* flow to the engine is increased because of the increased airflow and reduced inlet temperature, which translates to more power.

Bill of Materials for: 22-484

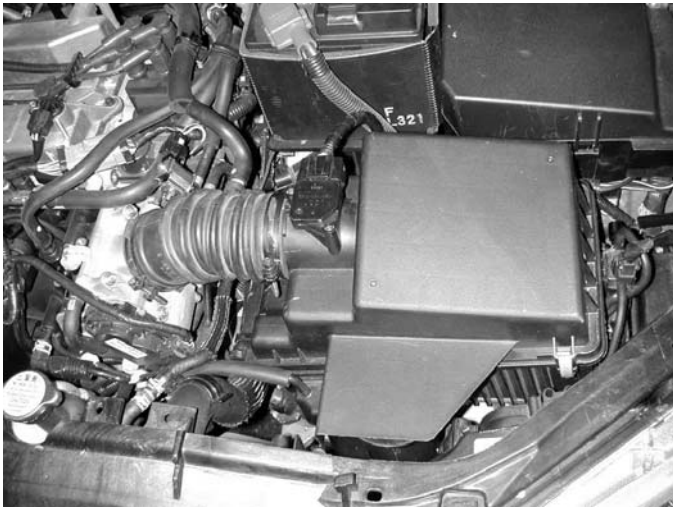
Quantity	Part Number	Description
1	21-202	Air filter 2.75 5" & Clamp
1	2-4841	Mazda 6i SRS Inlet Pipe
1	1228560	Mount, Rubber 1" X 8MM
1	444.460.08	Nut, Nylok 8MM
1	559960	Washer, Flat M8X30
2	1-2028	Socket Bolt 8-32 x 1/2"
1	5-272	Hose, Silicone 2.75X2" AEM Black
1	1-2095	Hex Head Bolt M6X1X65
1	7-7222	Mazda6 Solenoid Bracket
2	103-BLO-4420	Hose clamp, 2.31-3.25"
1	4093-5	Hose clamp, 3/4"
1	8-131	Cap, Vacuum 1/4"
1	10-7017	Instructions
2	10-922S	AEM Silver Decal
1	10-400W	White License Plate Frame
1	1-113	Zip tie, 6"
1	559999	Washer, Fender 1/4-9/32 X 1"

Read and understand these instructions **BEFORE** attempting to install this product.

1) Getting started

- a) Make sure vehicle is parked on a level surface.
- b) Set parking brake.
- c) **Disconnect both battery terminals.**
- d) If engine has run within the past two hours let it cool down.
- e) Chock rear wheels, jack up front of vehicle and place on properly rated jack stands.
- f) Remove front left wheel and plastic engine cover.

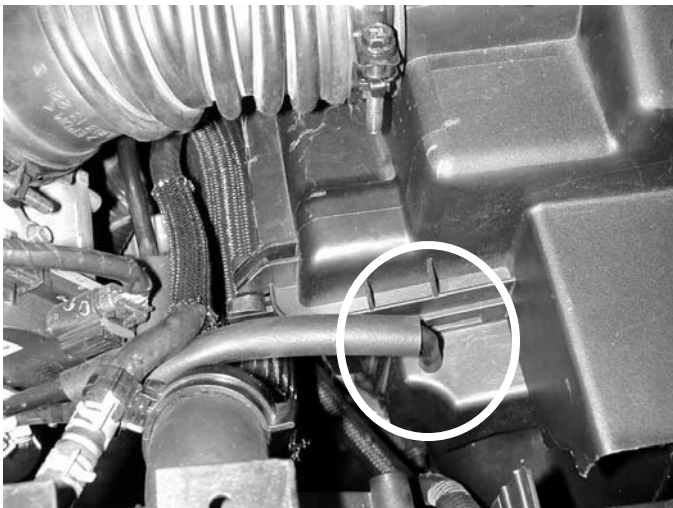
2) Removing the stock air inlet system



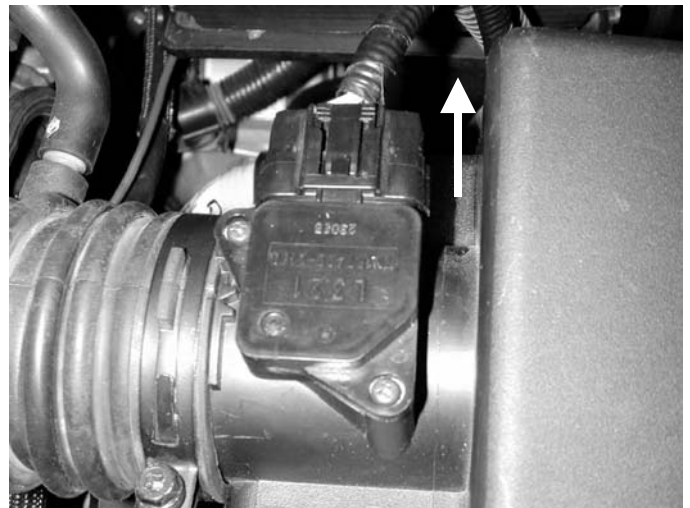
a) Stock air intake system.



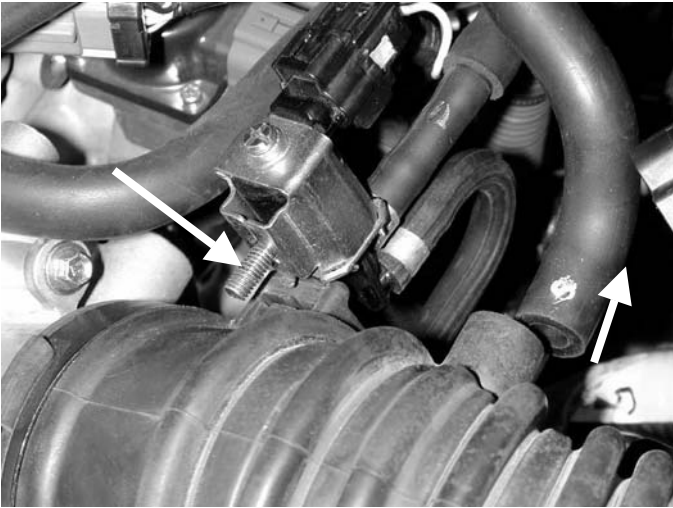
b) Release the green plug on the vacuum solenoid located next to the air box.



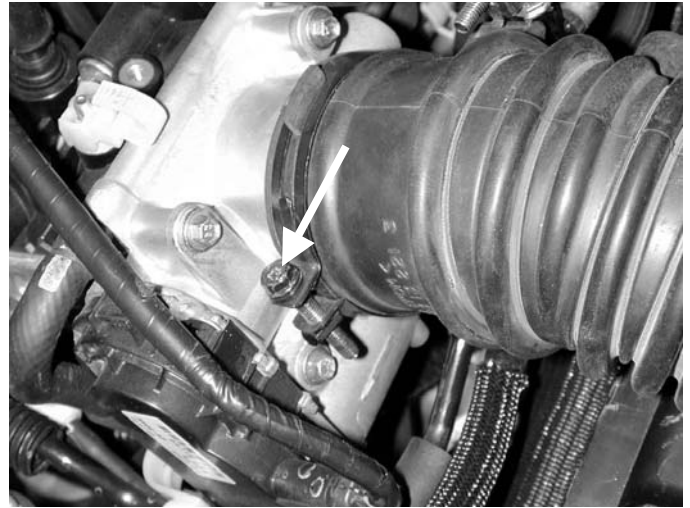
c) Pull the vacuum hose off of the air box nipple.



d) Unplug the mass air flow (MAF) sensor. Remove MAF sensor from air box.



e) Pull the crankcase breather hose off of the inlet tubing. Remove the nut that secures the vacuum solenoid to the metal bracket and save it for later use.



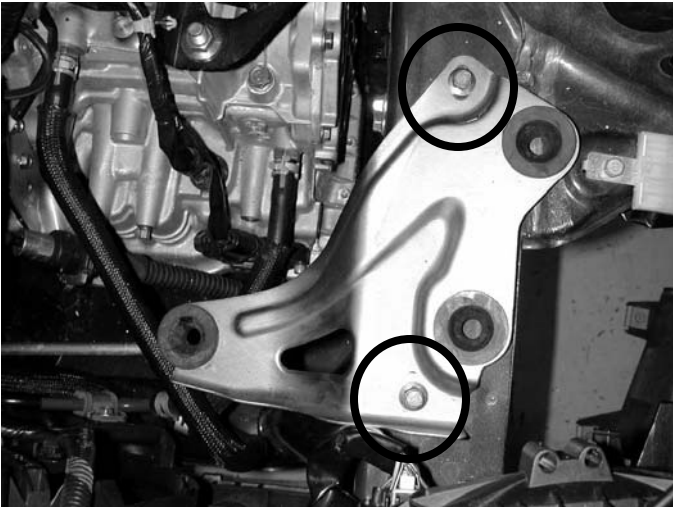
f) Loosen the hose clamp at the throttle body. Pull the inlet hose off of the throttle body.



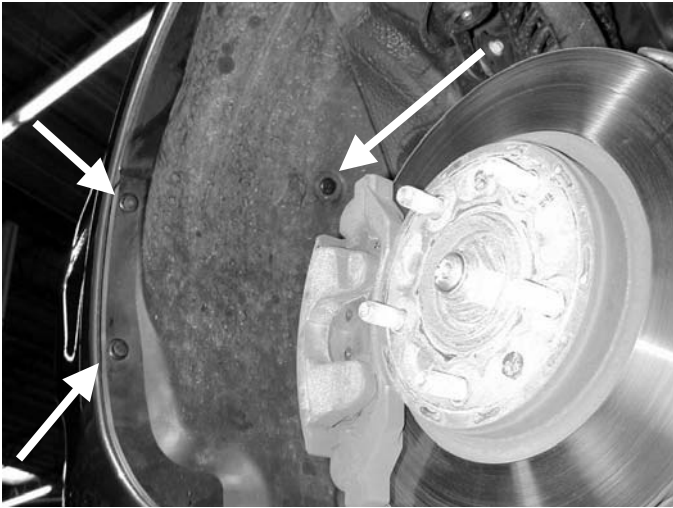
g) Pull the air box up and out of the engine bay.



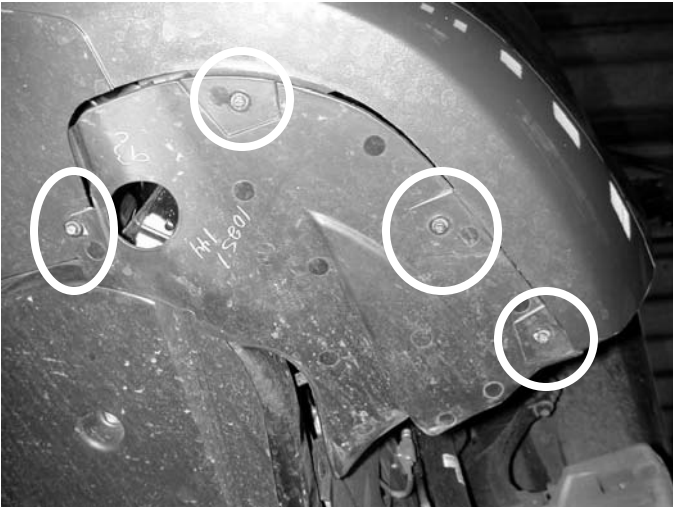
h) Remove the vacuum solenoid from the air box. Remove all vacuum lines from the solenoid. **Plug green connector back** into solenoid and secure it to a wiring harness utilizing the supplied zip tie.



i) Remove the air box support plate.



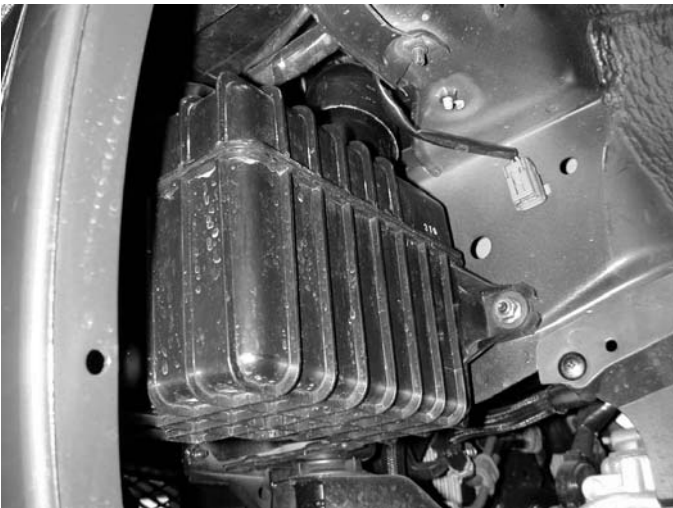
j) Release the three plastic rivets securing the fender liner.



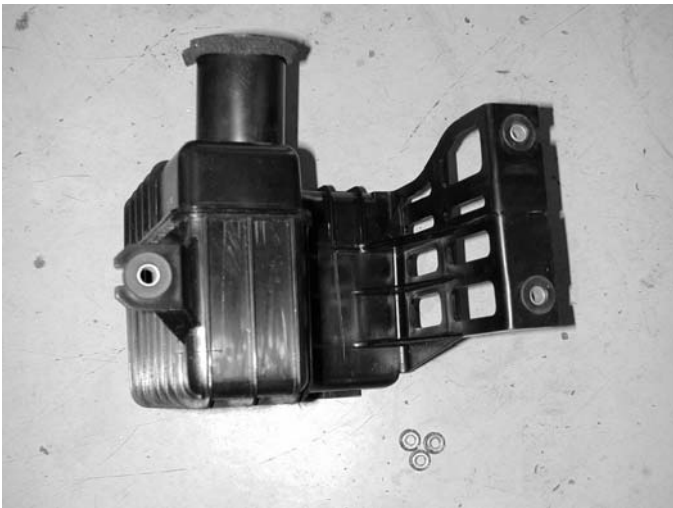
k) Remove the four screws on the bottom of the fender liner.



l) Place the fender liner as shown.



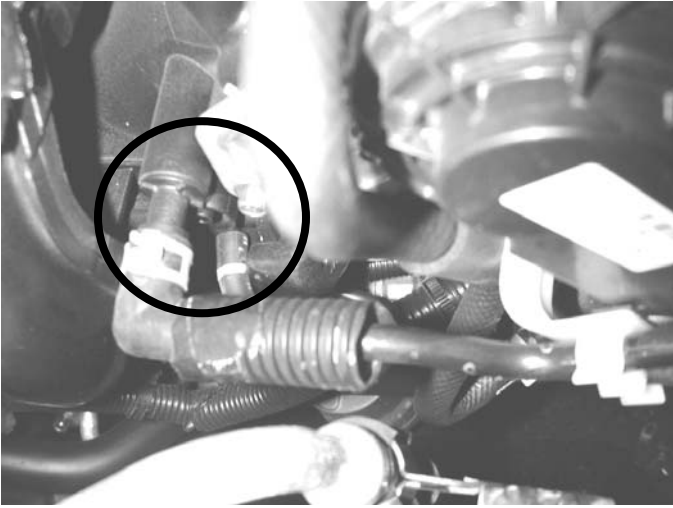
m) Remove the three nuts that secure the lower air box to the vehicle.



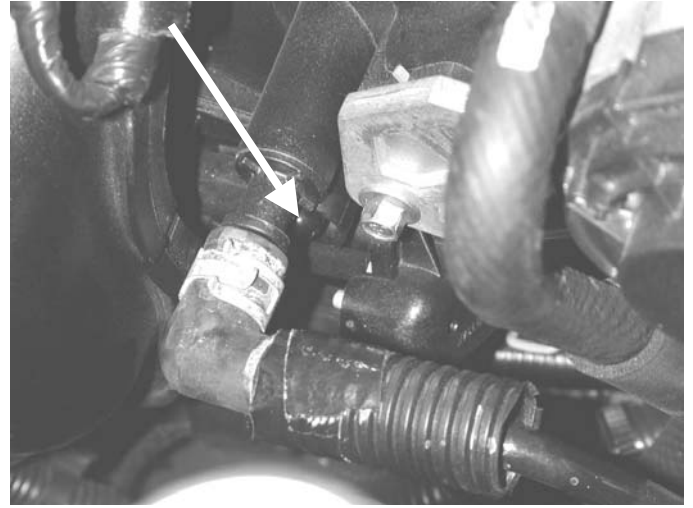
n) Remove the lower air box from the vehicle.

3) Installation of the AEM Short Ram Air Intake System

When installing the Short Ram Intake System, DO NOT completely tighten the hose clamps or mounting tab hardware until instructed to do so later in these instructions.



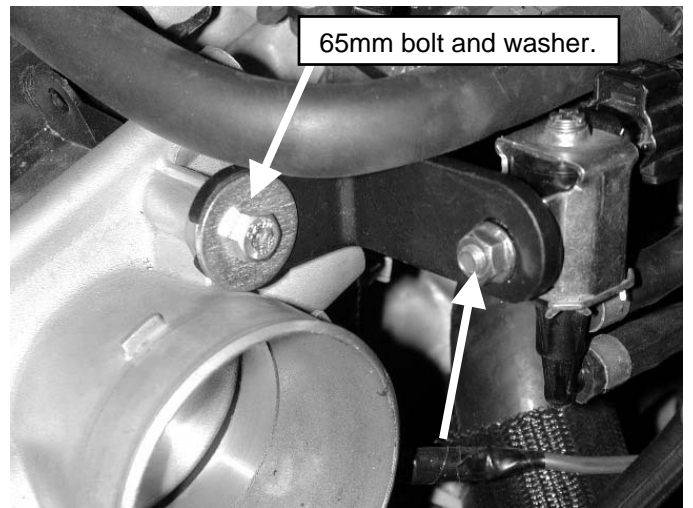
a) Follow the vacuum hose (that was earlier pulled off of the air box) up to the intake manifold. Pull vacuum hose off nipple on the intake manifold.



b) Cover the open nipple with the supplied vacuum cap.



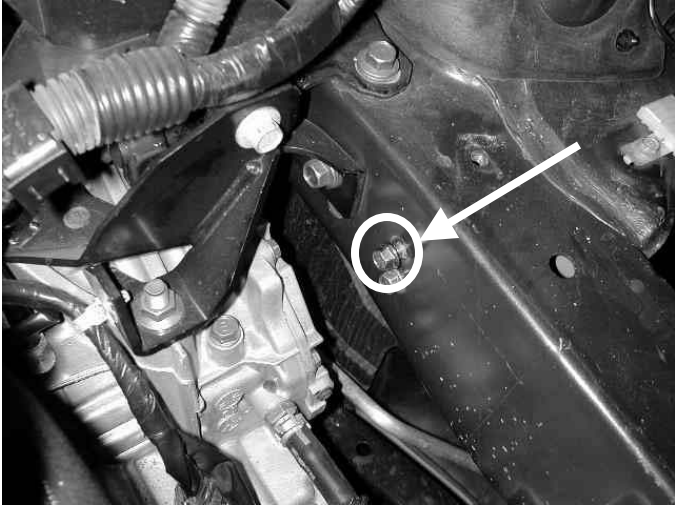
c) Remove the upper, rear bolt on the throttle body.



d) Use the supplied 65mm bolt and washer to secure the bracket to the throttle body. Install vacuum solenoid utilizing the stock nut as shown.



e) Install the supplied silicone hose onto throttle body.



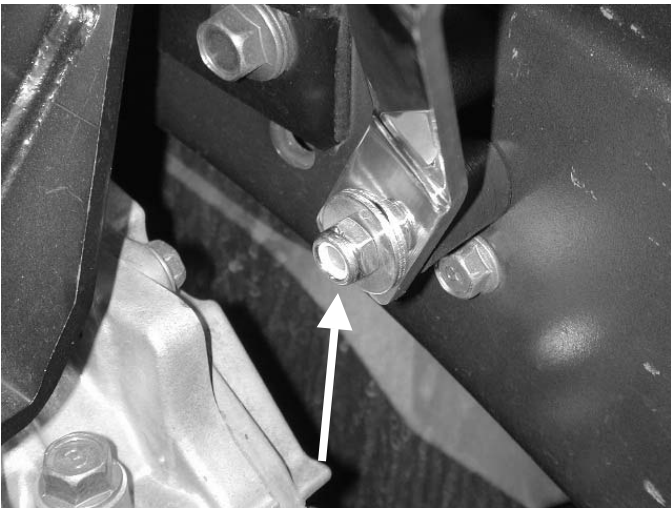
f) Remove the upper bolt in the frame rail.



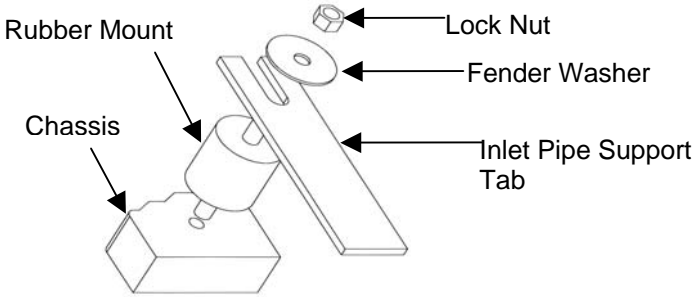
g) Install supplied rubber mount as shown.



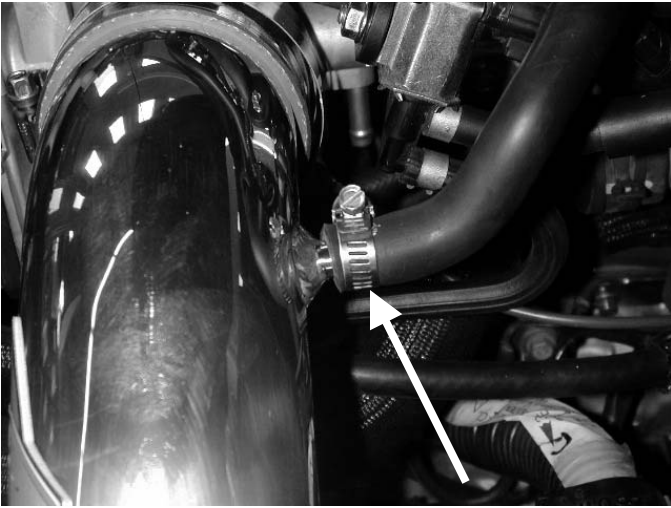
h) Install pipe as shown. Do not tighten hose clamps!



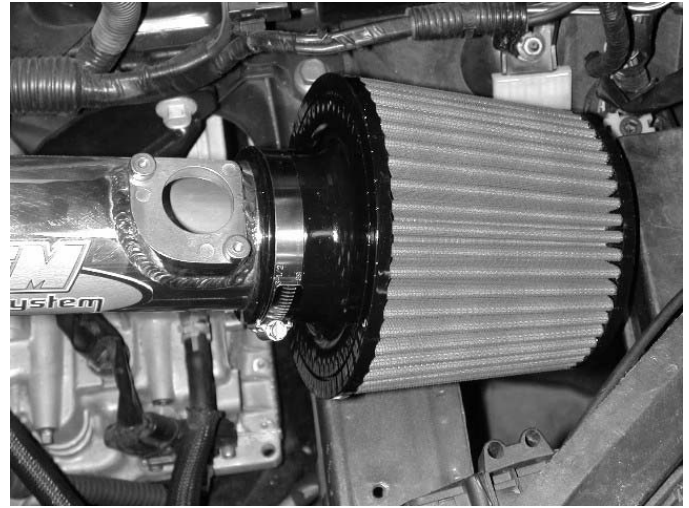
i) Place the support bracket behind the rubber mount washer as shown.



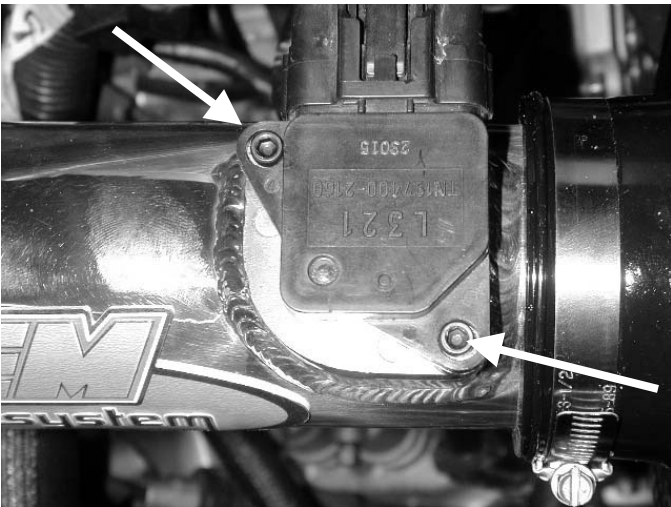
j) Proper rubber mount installation



k) Install crankcase breather hose onto nipple. Secure hose with the supplied 3/4" hose clamp.



l) Install air filter onto the end of the pipe.



m) Install MAF sensor into inlet pipe. Secure it with the supplied screws. Plug in the MAF sensor.



n) Reinstall engine cover. AEM SRS kit installed.

4) Reassemble the vehicle

- a) Inspect the engine bay for any loose tools and check that all fasteners that were moved or removed are properly tightened, including the wheel and fender liner. Torque lug nuts to 90 lb-ft.
- b) Position the pipes and air filter so that they do not touch any other surfaces and tighten all bolts, nuts and hose clamps.
- c) Reconnect battery terminals.
- d) Start engine and perform a final inspection before driving the vehicle.

For Technical Inquiries
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