



SHORT RAM INTAKE SYSTEM

Installation Instructions for:
Part Number 22-435
2003-2005 Mitsubishi Lancer Evolution VIII
RS/GSR/MR

ADVANCED ENGINE MANAGEMENT INC.
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Instruction Part Number: 10-7008

2003 Mitsubishi Lancer Evolution 2.0L Turbo C.A.R.B. E.O. #D-392-21

2004-2005 Mitsubishi Lancer Evolution 2.0L Turbo C.A.R.B. E.O. #Pending

Short Ram Air 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** Performance Air Induction 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 tube length and diameter are matched for each specific engine to give power over a broad RPM range. Unlike 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: 22-435

1	2-4351	Inlet Pipe
1	20-435	Heat Shield
1	5-273-45	Turbo Inlet Coupler
1	5-302	Hose, Silicone 3.00X2" AEM
1	21-209	6"x5" Filter Element & Clamp
1	10-7008	Instructions
1	2-681	MAF Sensor Adapter Assembly
16.5"	8-111	Rubber Edge Trim
2	103-BLO-4820	Hose, Clamp ,2.56-3.50"
1	103-BLO-4420	Hose Clamp,2.31-3.25"
1	103-BLO-5220	Hose Clamp,2.81-3.75"
1	103-BLO-2420	Hose Clamp 1.5"
5	444.460.04	Nut, Nylok 6MM
4	1-3018	Washer, Flat M6X12
1.5"	65005*	Nitrile/SBR Coolant Hose 1-1/4" ID, 1-7/8" OD, 49 Psi, Black, 3' Length
5	1-2038	Bolt, Hex/Flange M6 X 20
1	784631	1/8" Grommet
1	4093-5	3/4" Hose Clamp
1	8-103	Straight vacuum connector
2	559999	Washer, Flat M6X25
1	1228599	Mount, Rubber 1" X 6MM
2	10-922S	AEM Silver Decal
2	10-400W	White License Plate Frame
1	10-922EV	CAS/SRS Emblem
1	10-50	Box, CAS 31X12x8

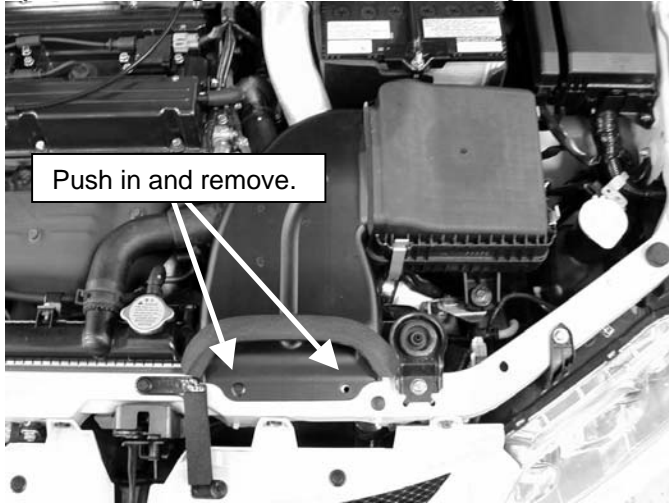
Read and understand these instructions **BEFORE** attempting to install this product.

Note: This inlet pipe kit requires the removal and reinstallation of emissions related components. If you are not familiar with the installation and/or the operation of these components then please refer this installation to a qualified professional.

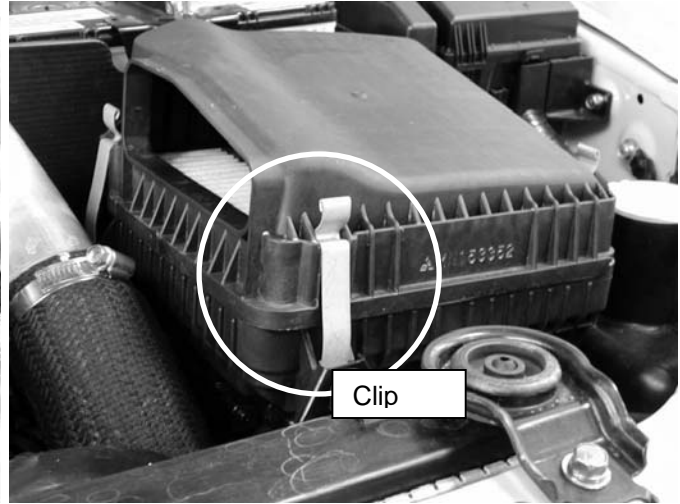
1) Getting started

- a) Make sure vehicle is parked on a level surface.
- b) Set parking brake.
- c) **Disconnect negative battery terminal.**
- d) If engine has run within the past two hours let it cool down.

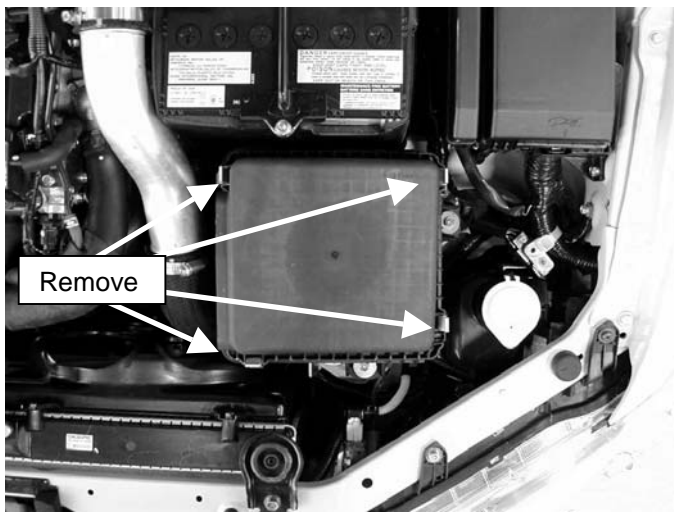
2) Removing the stock air inlet system



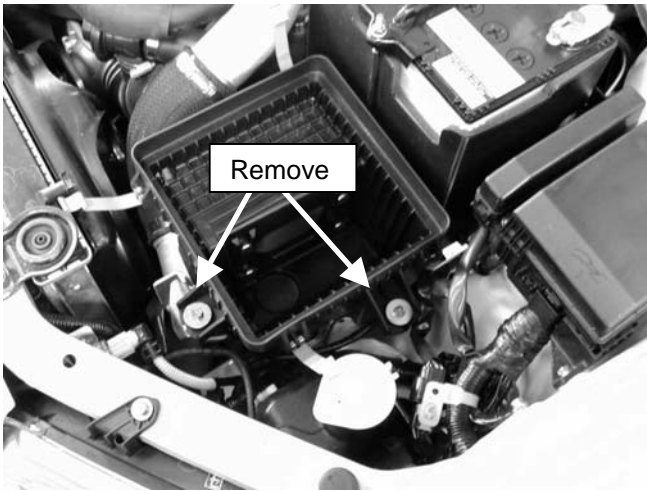
a) Push in clip on the center circle to remove. Remove both clips. Remove inlet duct to air box.



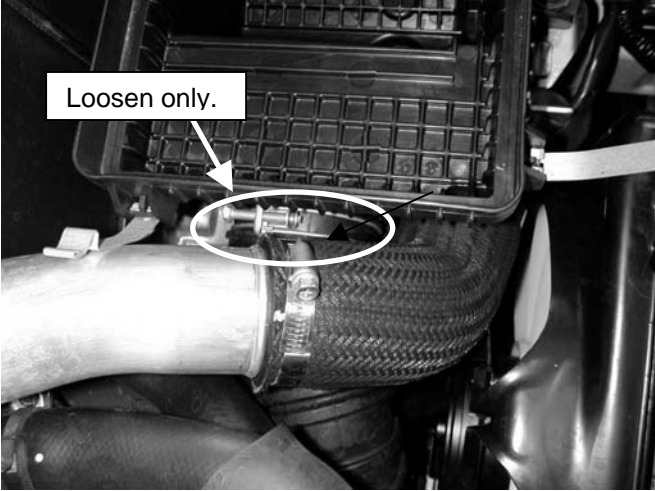
b) Locate the 4 clips on each corner of the air box.



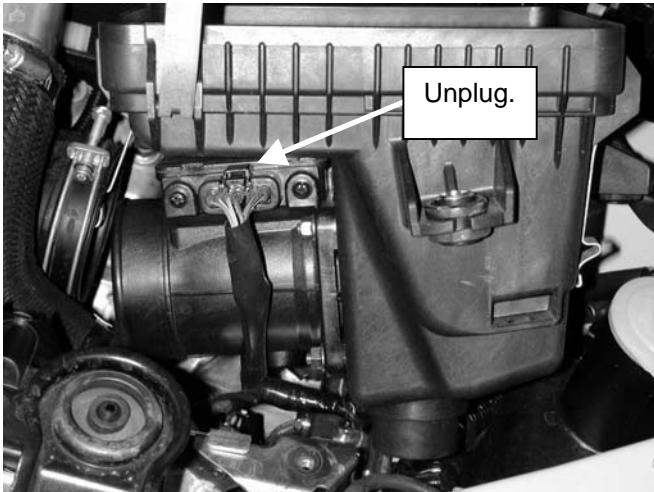
c) Unfasten the 4 clips that hold down the top to the air box. Remove top.



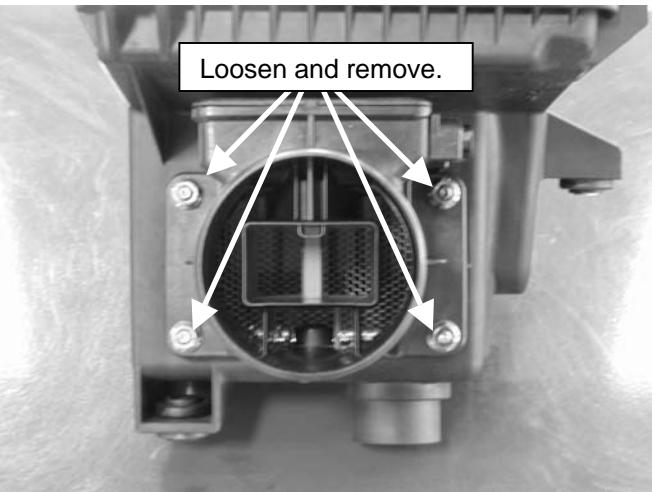
e) Remove the filter element. Remove the bolts holding down the bottom portion of the air box.



f) Loosen the hose clamp connected to the bottom portion of the air box. **NOTE: Do not loosen the worm gear type hose clamp located on the charge pipe.**

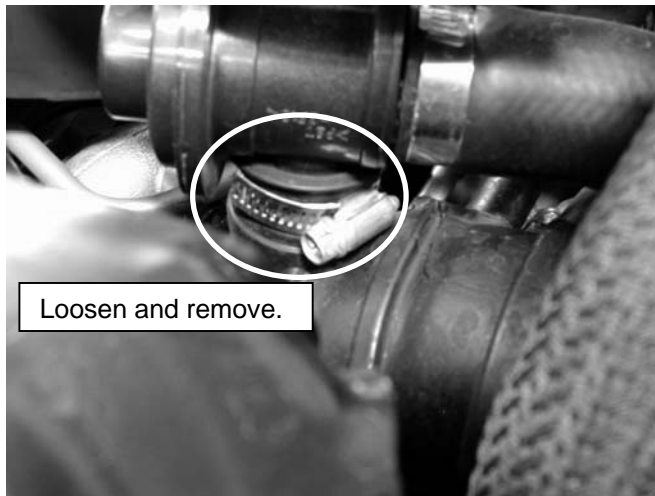


g) Disconnect the MAF sensor harness from the bottom portion of the air box. **Carefully** remove the bottom portion of the air box. *The honeycombs in the MAF sensor are sensitive, take note not to damage during removal.*

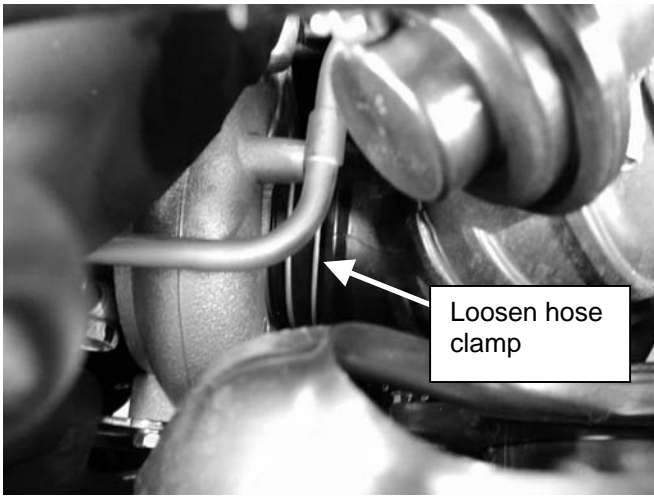


h) Carefully remove the 4 bolts holding the MAF sensor to the bottom portion of the air box. Check the MAF sensor gasket for tears or cracks. Replace as necessary.

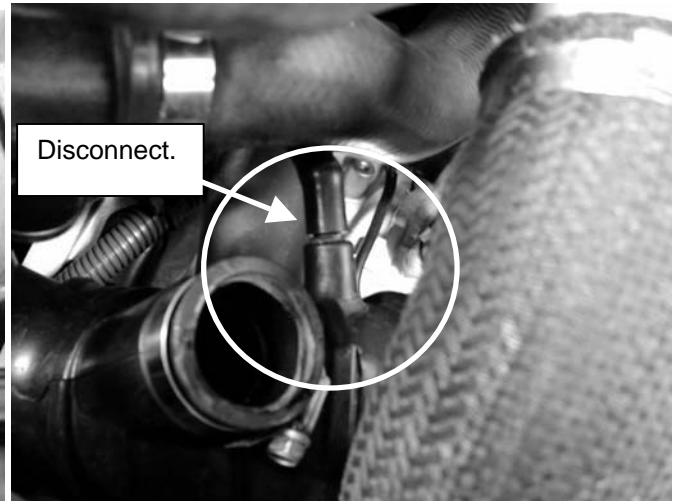
i) Loosen the hose clamp connecting the blow off valve to the turbo inlet hose. Disconnect the blow off valve from the inlet hose. Remove hose clamp from the inlet hose.



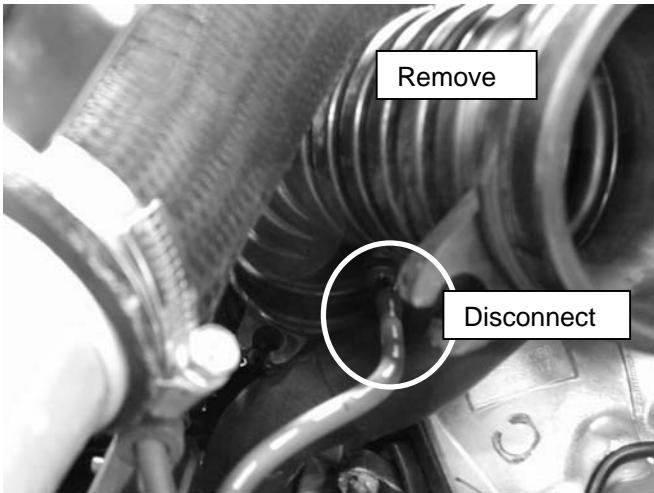
Loosen and remove.



j) Loosen the hose clamp on the turbo inlet hose at the turbo. This double ring clamp is similar to the clamp in **step f**.



k) Disconnect the crankcase breather tube at the turbo inlet hose.



l) Disconnect vacuum line from the boost solenoid to the turbo inlet hose. The vacuum line is located underneath the turbo inlet hose. Remove the turbo inlet hose.

3) Installation of the AEM Short Ram Intake System.

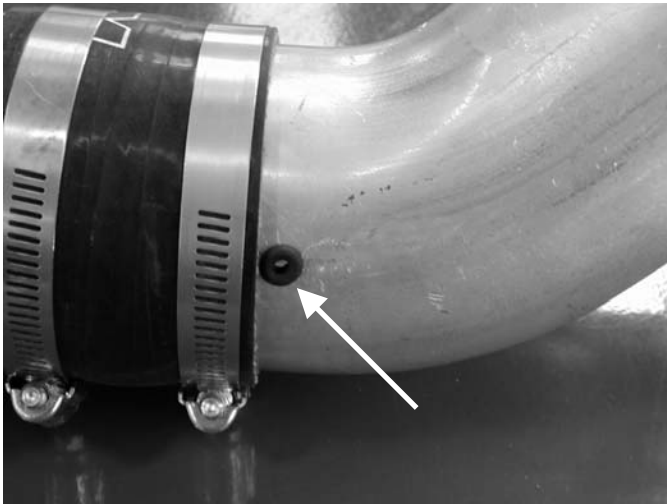
When installing the Short Ram Intake System, DO NOT completely tighten the hose clamps or mounting tab hardware until instructed to do so later in these instructions.



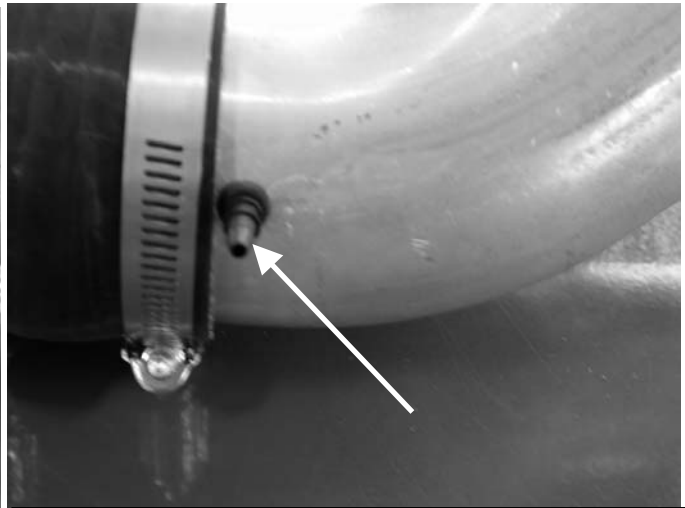
a) Assemble the 45 degree coupler as shown with hose clamps attached loosely.



b) Attached assembled coupler to the turbo inlet as shown.



c) Insert rubber grommet to the underside of the inlet pipe.



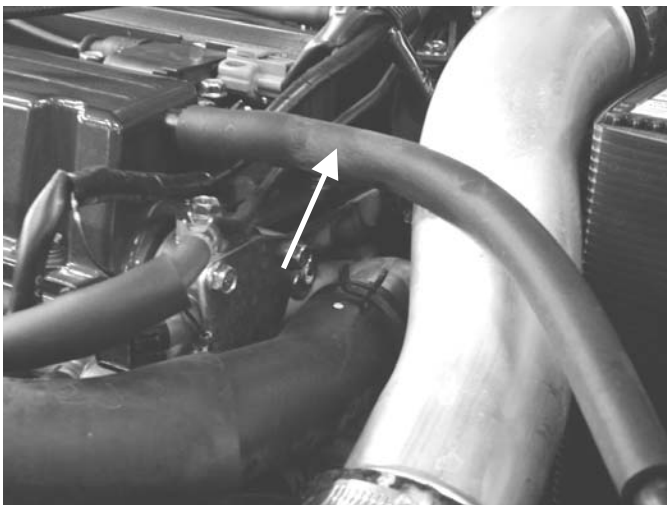
d) Insert vacuum adapter into the rubber grommet.



e) Trim hose to 1.5" Attach Blow Off Valve (BOV) hose to inlet pipe and rotate as necessary for proper fit. Secure with hose clamp.



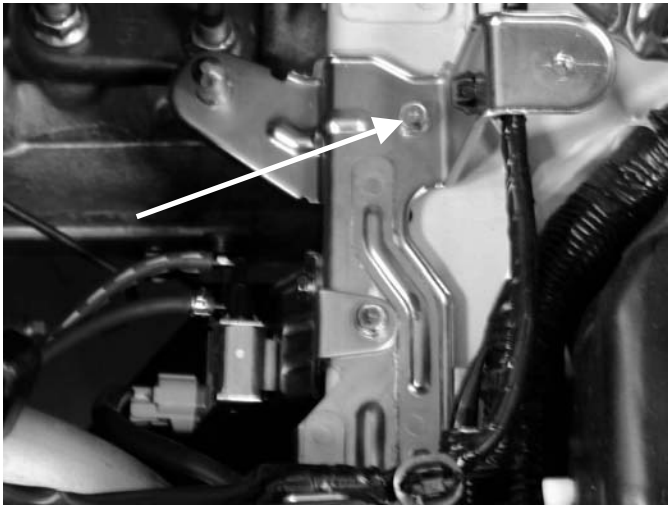
f) Insert BOV outlet into the BOV hose. Make sure you rotate the BOV toward the firewall, so that it clears the coolant hose.



g) Locate crankcase breather hose.



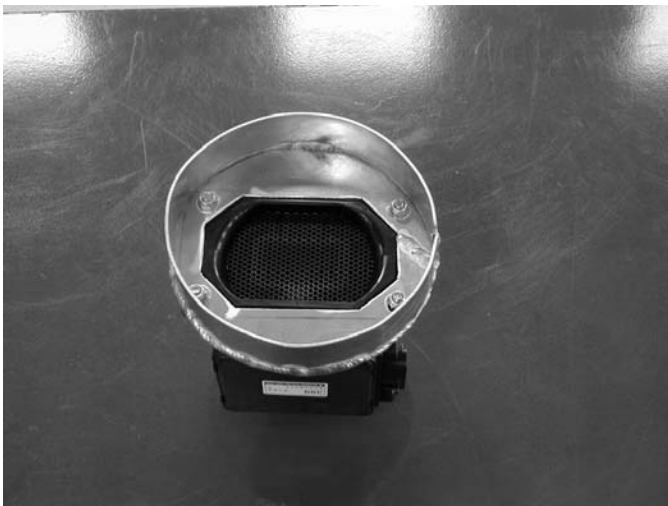
h) Secure factory breather hose to nipple with provided hose clamp.



i) Replace this bolt with the rubber mount.



j) Attach vacuum line from the boost solenoid to the vacuum nipple underside of the pipe.



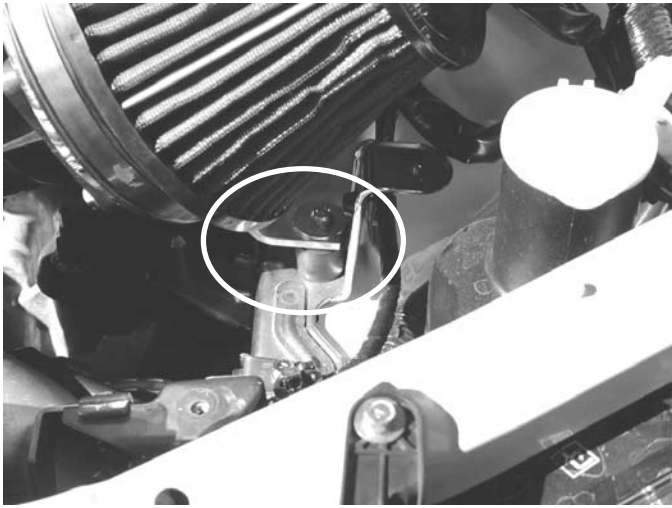
k) Assemble the MAF sensor adapter to the MAF sensor with the provided nylok nut and zinc plated bolts.



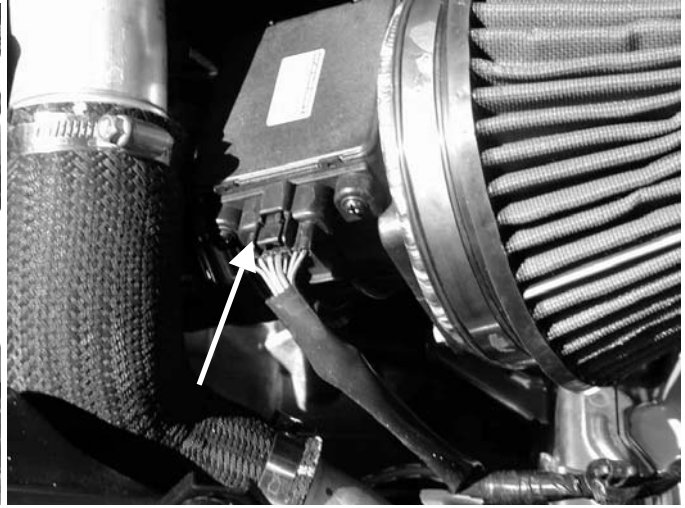
l) Attach filter element to the MAF sensor and secure with provided hose clamp.



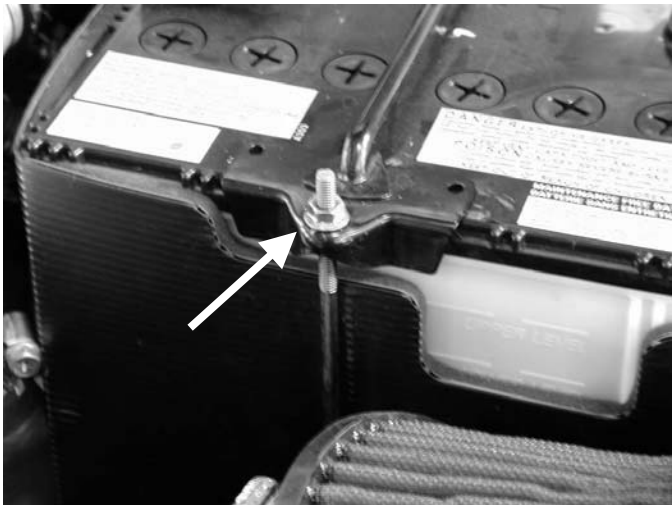
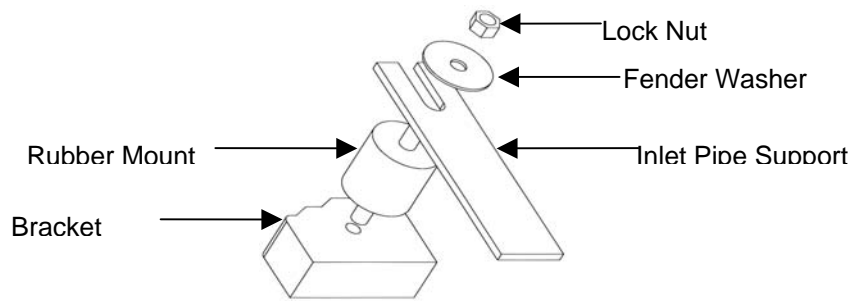
m) Attach coupler to the MAF sensor. Attach the provided hose clamps to the coupler as shown. Do not fully tighten. You may need to add a very small amount of lubricant to slide the coupler over the sensor for easier installation.



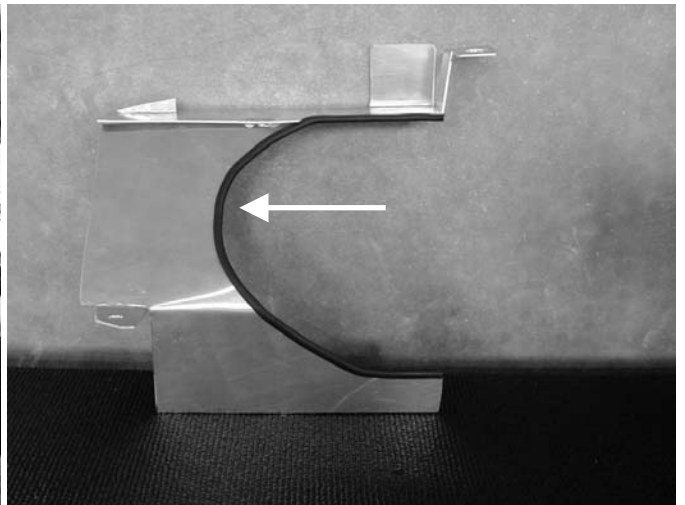
n) Attach filter and MAF sensor assembly to the inlet pipe. Line up the bracket to the rubber mount. Refer to diagram.



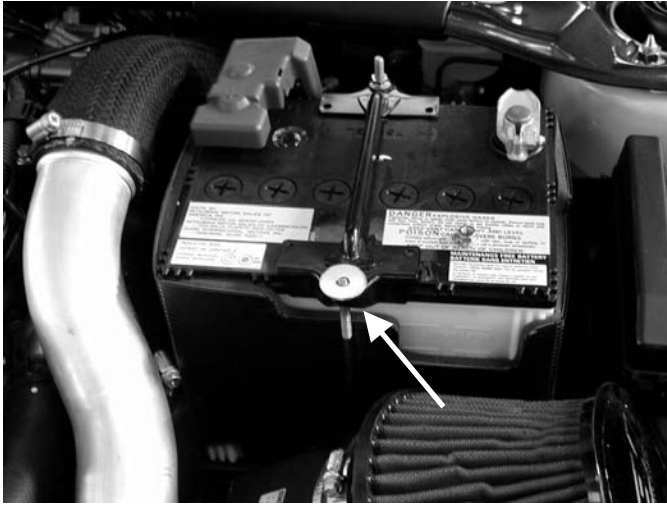
o) Reattach MAF sensor harness.



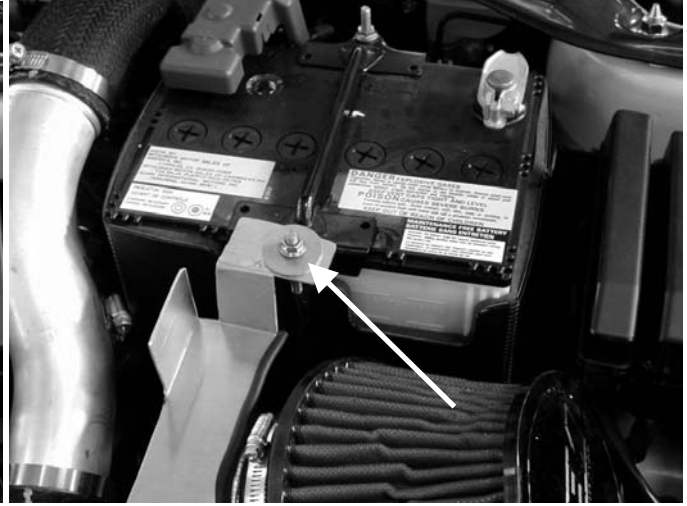
p) Unbolt nut to the battery bracket.



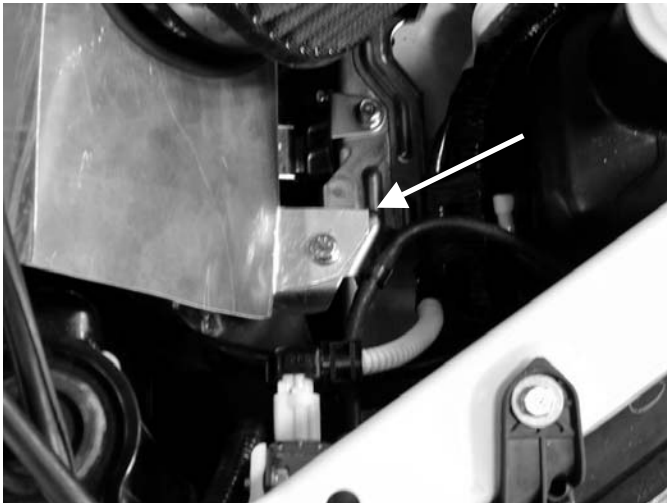
q) Attach rubber liner to the heat shield.



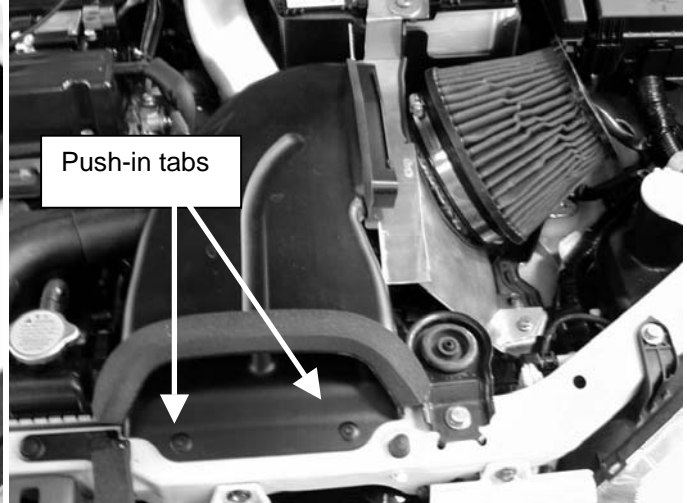
r) Align washer to the battery bracket.



s) Insert heat shield. Secure to battery bracket with washer and factory nut.



t) Secure the other mounting point of the heat shield with provided bolt.



u) Re-attach the factory inlet scoop and secure with the original push-in tabs.

4) Re-Assemble the vehicle.

- (a) Inspect the engine bay for any loose tools and check that all fasteners that were moved or removed are properly tight, including the fuse box and fender liner.
- (b) Position the pipes so that they do not touch any other surfaces and tighten hose clamps.
- (c) Reconnect battery terminal.
- (d) Start engine and perform a final inspection before driving the vehicle.

**For Technical Inquiries
E-Mail Us At
tech@aempower.com**