

AEM

BRUTE

FORCE AIR

INTAKE

SYSTEM

Equipped with AEM DRYFLOW Filter. No oil required!

Installation Instructions for:
Part Number 21-8306
2005 Jeep Grand Cherokee
2006 Jeep Commander
5.7L V8 HEMI

ADVANCED ENGINE MANAGEMENT INC.
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Instruction Part Number: 10-8306
2005 Jeep Grand Cherokee 5.7L HEMI
C.A.R.B. E.O. #Pending

Brute Force 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 vehicle at any price!

The **AEM** Brute Force Intake System is the result of extensive development on a wide variety of vehicles. It is the most advanced short pipe air intake system on the market. Each system is specifically engineered for its particular application. All **AEM** Brute Force Intake Systems deliver maximum performance gains through the 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. 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: 21-8306

Quantity	Part Number	Description
1	2-83061	Inlet Pipe
1	20-8306	Heat Shield
1	1-3027	Washer, 1/4 x 1 1/4 Fender
1	1-3028	Washer, 1/4 SAE Flat
1	21-2049D	3.5x9.0" Filter Element
1	1-2072	Bolt, 1/4-20-UNC x 1 3/4
1	1-2074	Lock Nut, '1/4-20
1	1-2073	Nut, '1/4-20
1	2-670	Heat Shield Spacer
1	10-8306	Instructions
13"	8-119	Gasket, Rubber Sponge
1	444.460.04	M6 Nylok Nut
1	784634	Grommet
1	5-351	Hose, Silicone Blk 3.50X2.0
1	1-113	Zip Tie, 6"
2	103-BLO-5620	Hose Clamp 3.5"
22"	65116	1/2" ID Hose
2	99024.032	1" Hose Clamps
6"	8-143	Helical Bundle Wrap
2	444.460.08	M8 Nylok Nut
2	559960	M8 Washers
1	1228560	Rubber Mount 8MM

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

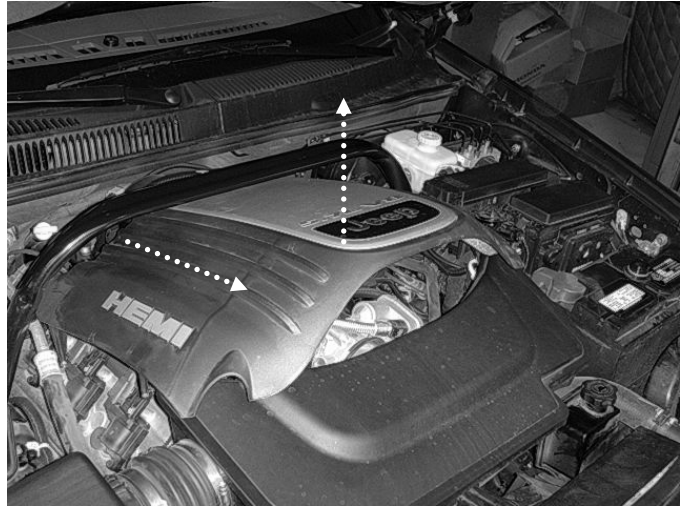
1) Getting started

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

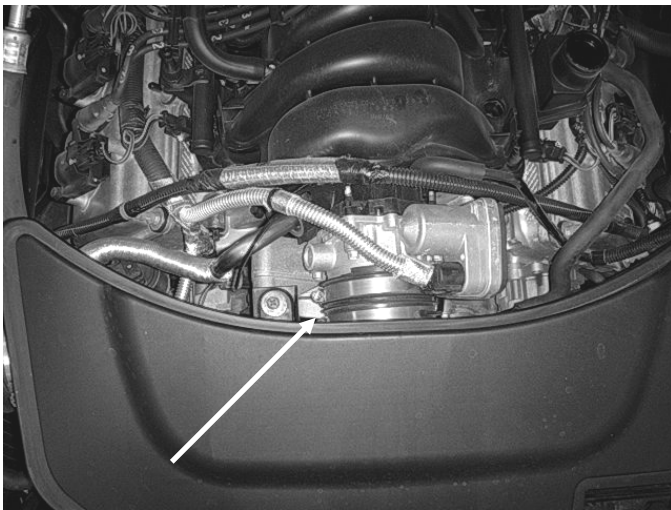
2) Removing the stock air inlet system



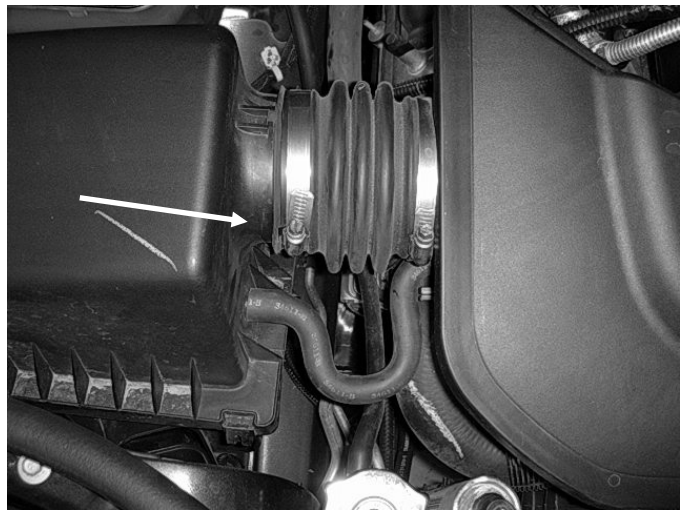
a) Start by making sure the area around and on the oil filler cap is clear of debris. Remove oil filler cap.



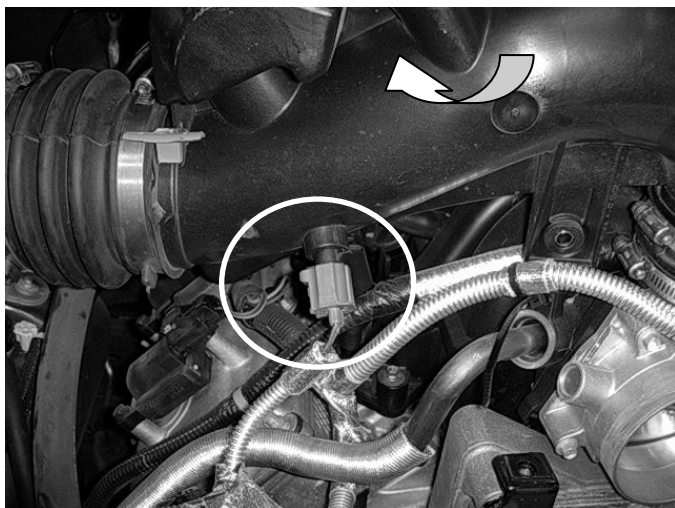
b) With the oil filler cap removed, remove the plastic engine cover. Pull up on the front and then out of the engine bay. **Replace oil filler cap.**



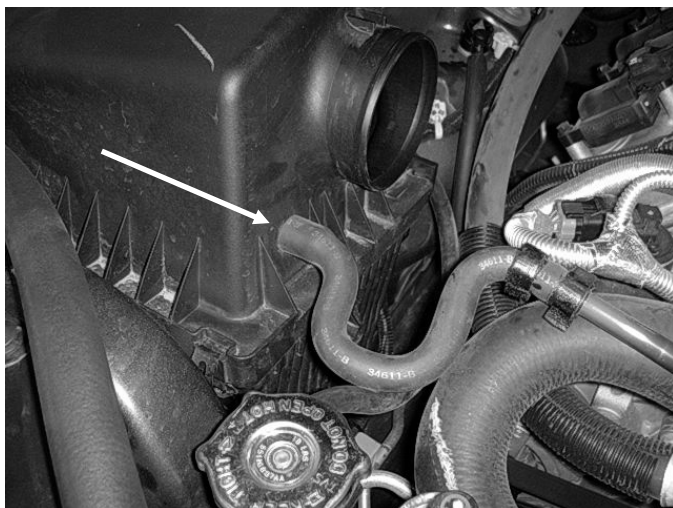
c) Loosen hose clamp at the throttle body.



d) Loosen hose clamp at the air box.



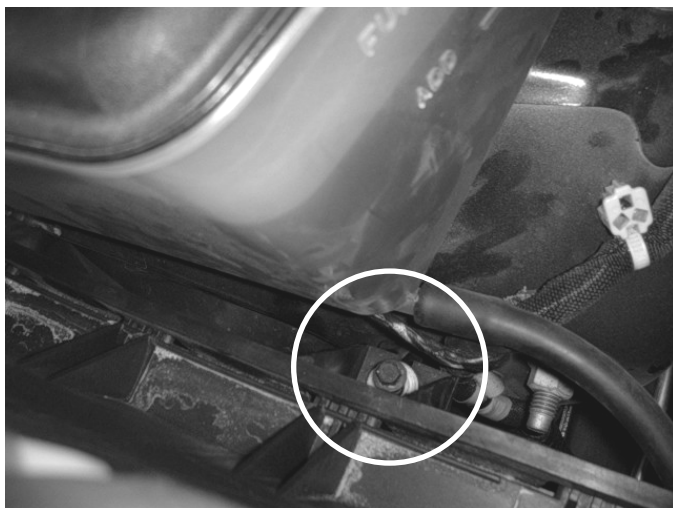
e) Rotate the inlet pipe up and away from the front side of the vehicle to access the IAT Sensor. Unplug the IAT sensor.



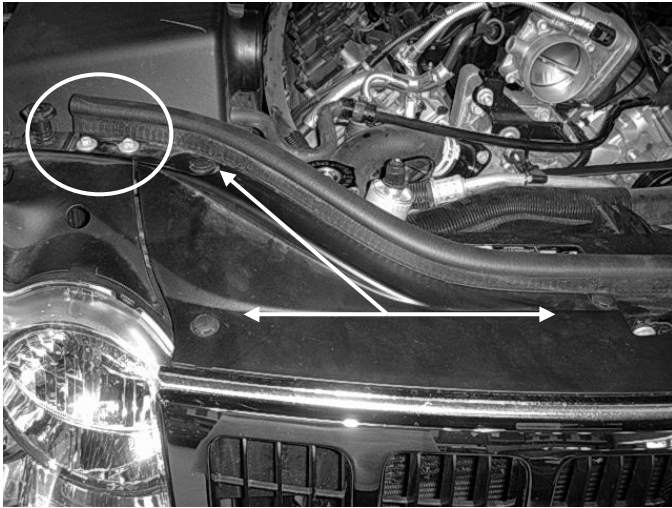
f) Disconnect the breather hose at the air box.



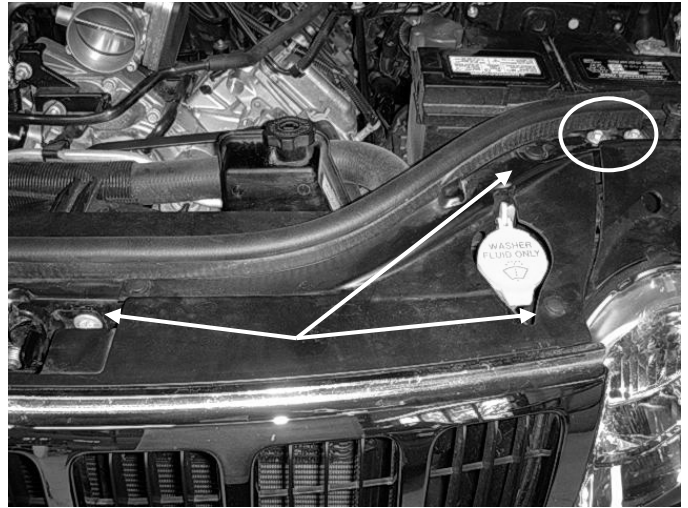
g) Disconnect the other end of the breather hose at the crankcase. This hose will not be reused.



h) There is a bolt located between the coolant reservoir and the air box. Loosen and remove this bolt in order to remove the air box.



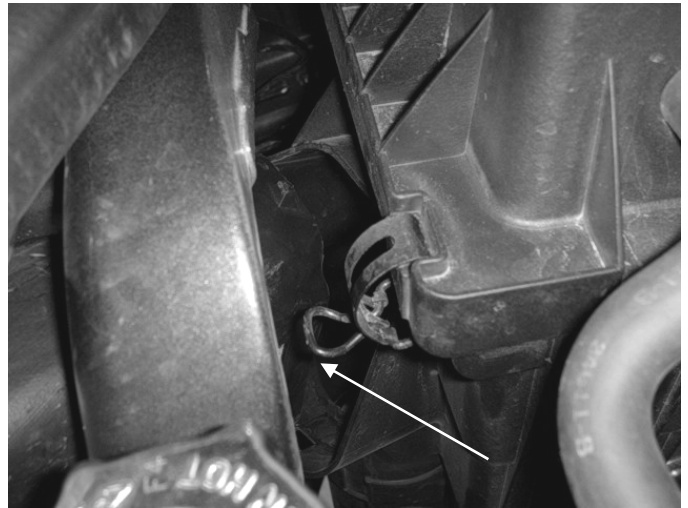
i) Remove tabs from the front the grill. Loosen and remove the grill mounting bolts.



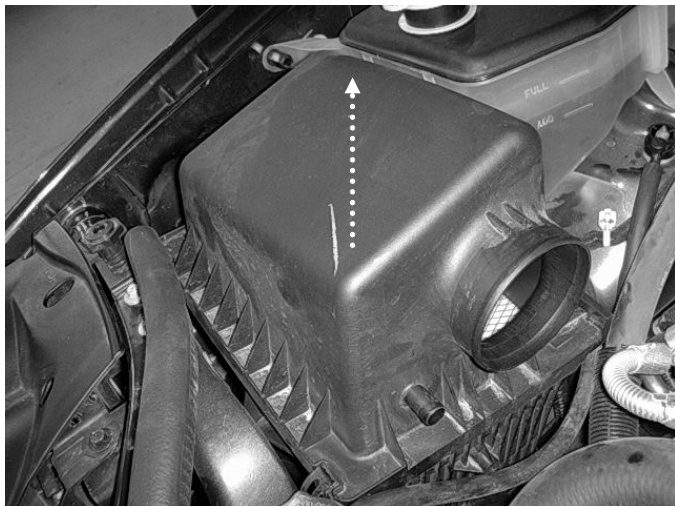
j) Remove tabs on the grill on the opposite side. Loosen and remove the grill mounting bolts.



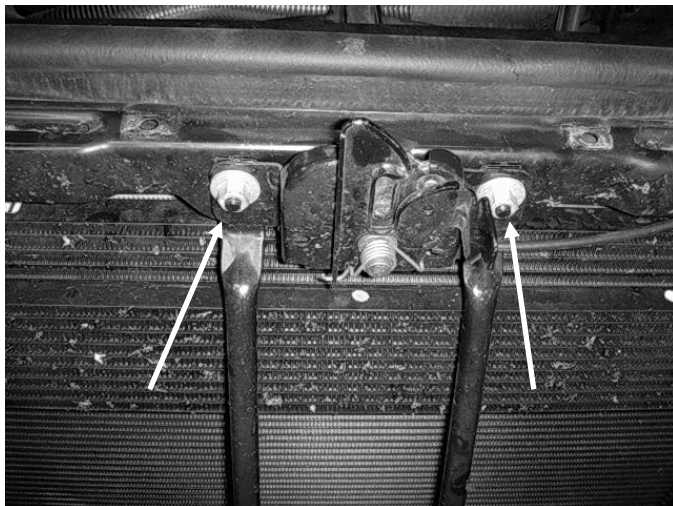
k) With the tabs and remaining mounting hardware removed, pull forward on the grill. Then pull up to remove.



l) Disconnect the air tube on the lower half of the air box by pulling towards the front of the vehicle.



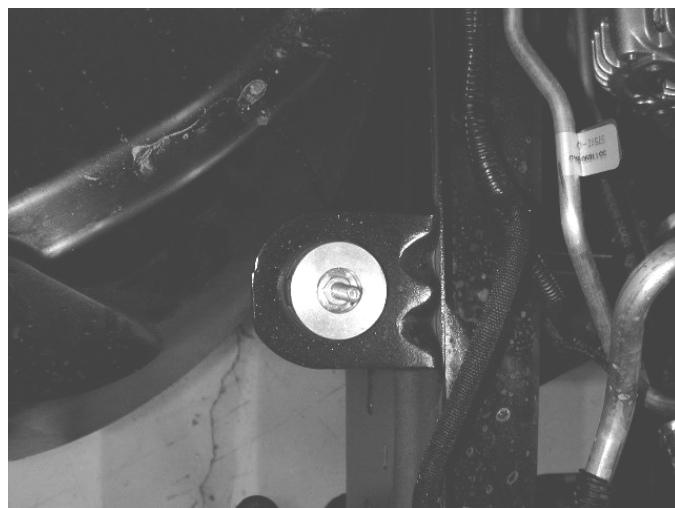
m) Remove air box by pulling straight up.



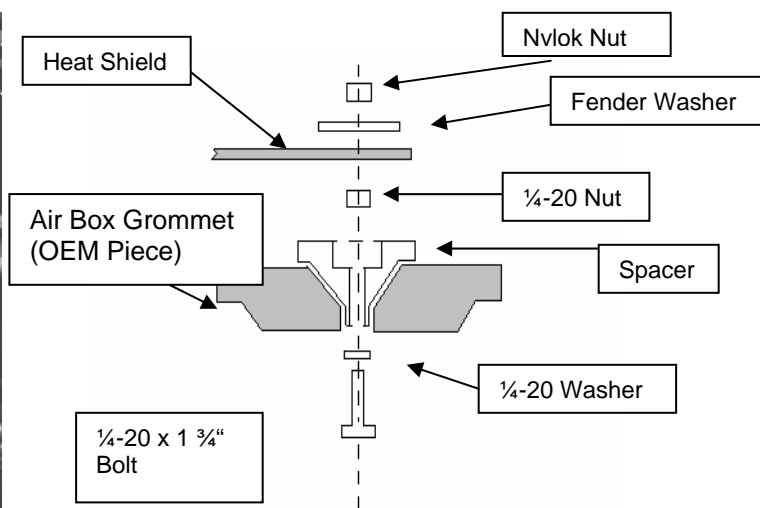
n) Loosen nuts on the hood latch. Do not remove.

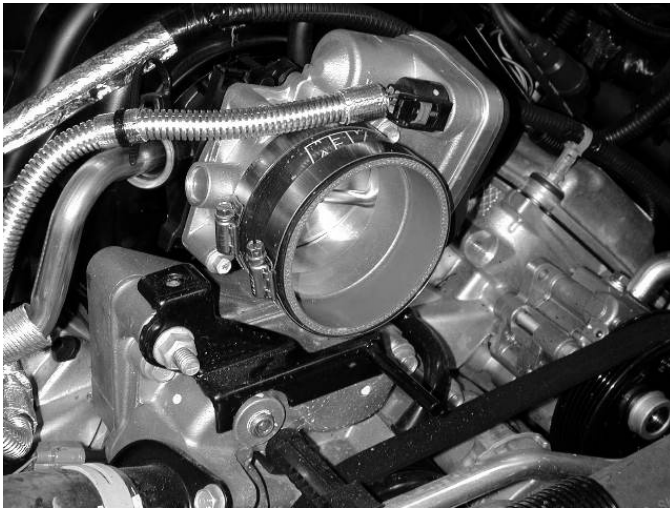
3) Installation of AEM Brute Force Intake System

Do not tighten the hose clamps or mounting hardware until instructed to do so later in these instructions.

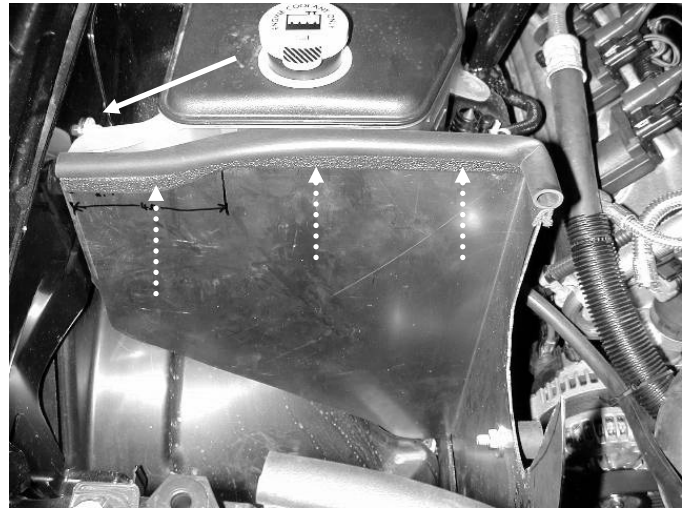


a) Assemble the heat shield mount to the air box mounting tab. Refer to the following diagram, using the 1/4-20 bolt, washer, spacer, and nut. Reuse the rubber grommet from the air box mounting tab.

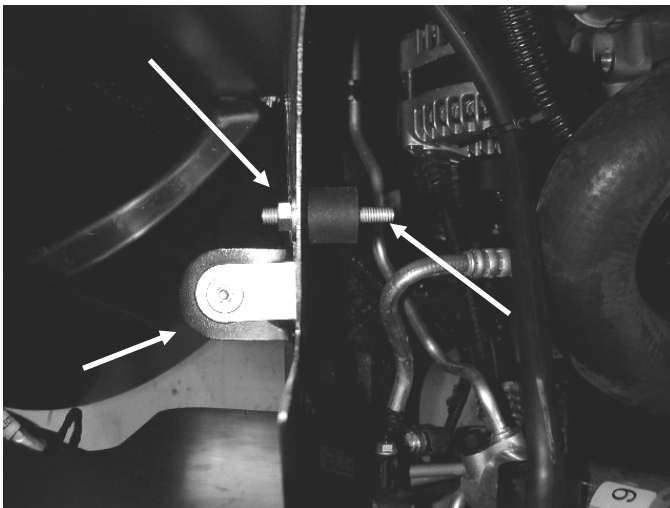




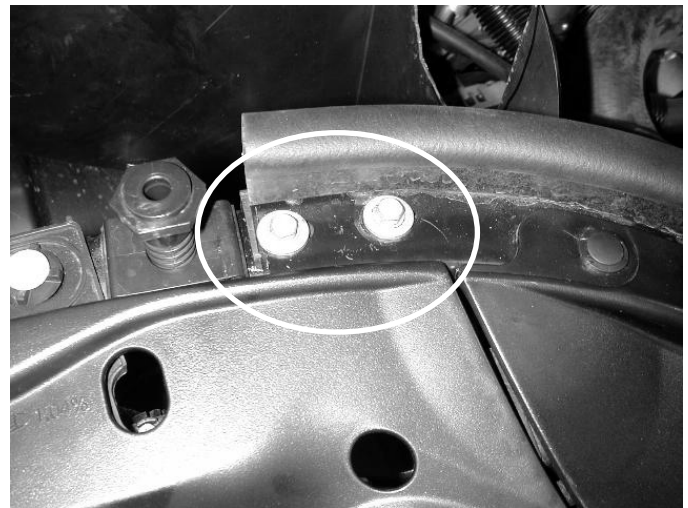
b) Secure the coupler to the throttle body with supplied hose clamps. Tighten hose clamp at the throttle body only.



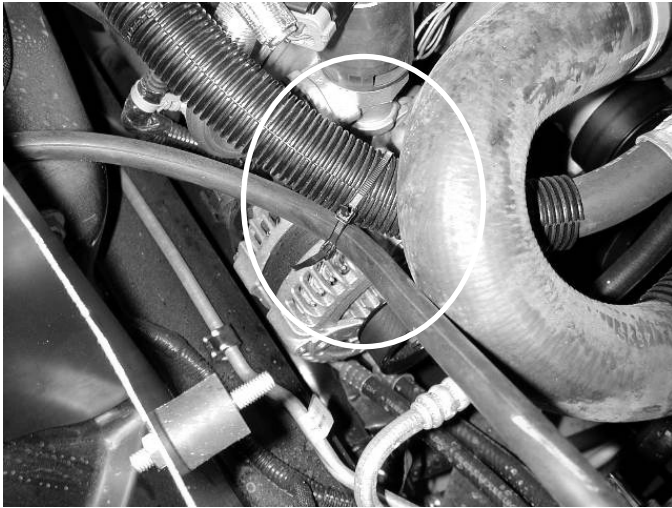
c) Insert heat shield as shown. Line up mounting hole at the coolant reservoir and tighten with M6 Nylok nut. Attach rubber foam gasket.



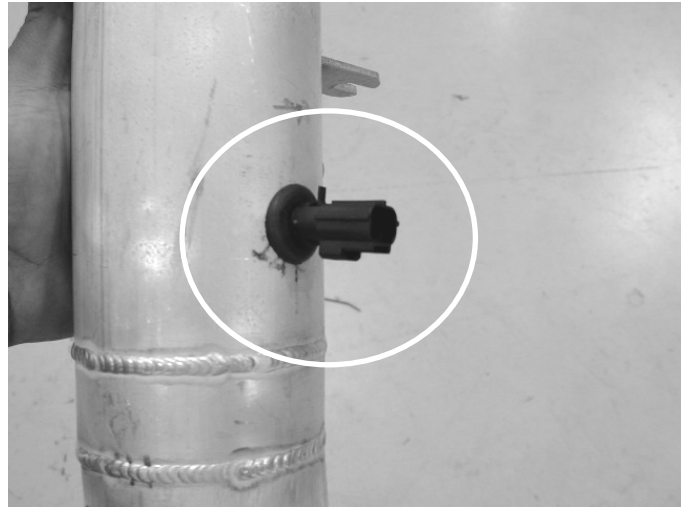
d) Secure the heat shield to the mount installed in step A with provided washer and Nylok nut. Insert rubber mount into the heat shield and secure with washer and M8 Nylok nut.



e) Secure the heat shield tab to the factory mounting point with the factory hardware. The heat shield should be tucked between the body and the latch support. **Tighten hood latch nuts loosened in step 2n.**



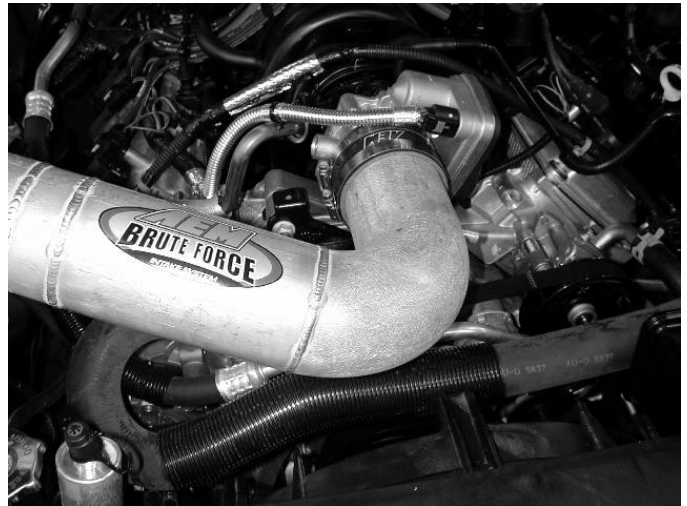
g) Zip tie the A/C line to the coolant overflow return line. Make sure not to pinch the hose.



h) Insert grommet into the inlet pipe. Remove O-ring from the IAT Sensor. Carefully insert IAT Sensor into the grommet.



i) Attach the filter element and secure.



j) Insert inlet pipe as shown into the coupler at the throttle body.



k) Rotate the inlet pipe counter clockwise. Align mounting bracket to the installed rubber mount.



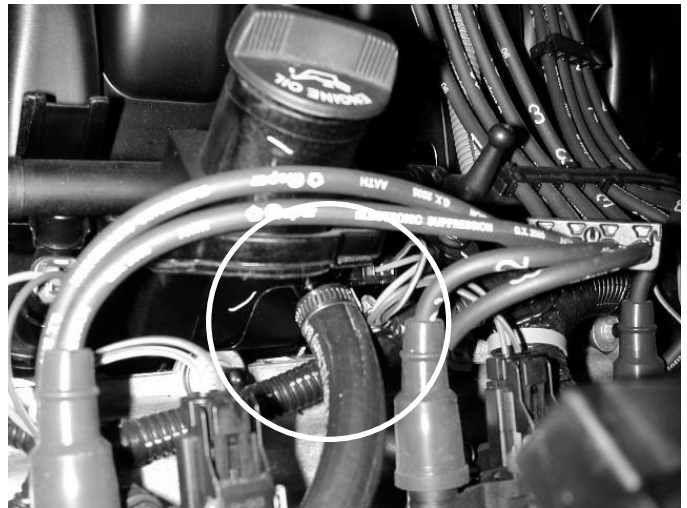
l) Check pipe clearance at the heat shield. Check clearance around the filter. Secure the inlet pipe with the supplied washer and M8 Nylok nut.



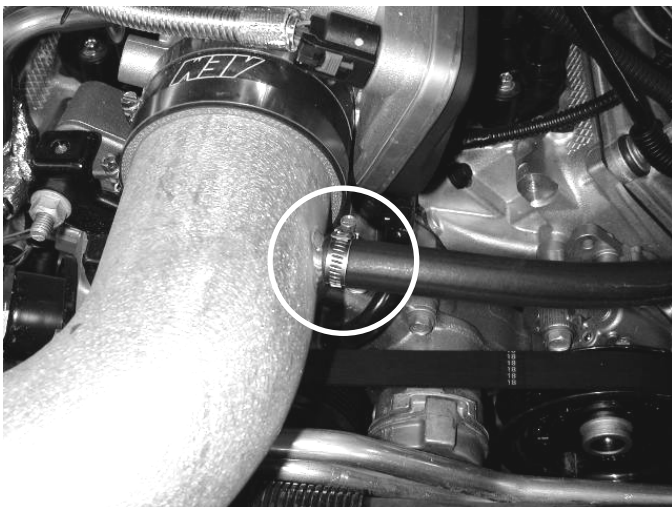
m) Wrap the provided breather hose with the helical bundle wrap.



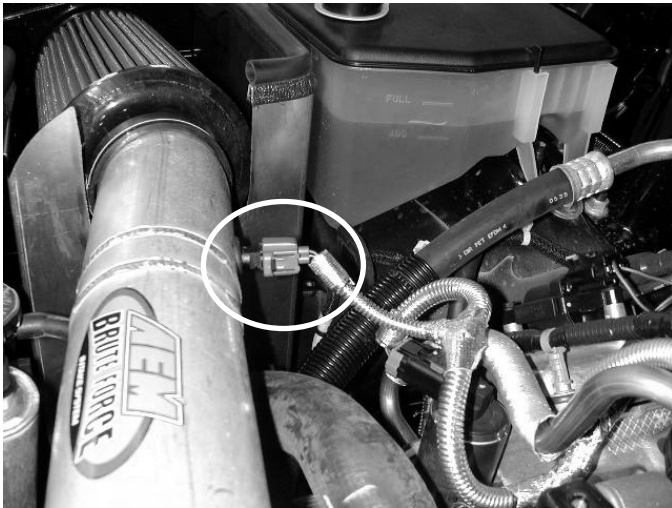
n) Insert breather hose close to the dipstick to provide clearance for the plastic engine cover.



o) Attach breather hose to the factory nipple and secure with provided hose clamp.



p) Attach the other end of the breather hose to the inlet pipe. Secure with provided hose clamp.



q) Reattach IAT Sensor wire harness connector.



r) Remove oil cap. Reinsert plastic engine cover and reinstall oil cap.



s) Your AEM Brute Force Air Intake System should look like this.

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.
- a) Position the pipe so that it does not touch any other surface and tighten hose clamps and lock nuts.
- b) Reconnect negative battery terminal.
- c) Start engine and perform a final inspection before driving the vehicle.