

Equipped with AEM<sup>®</sup> Dryflow<sup>™</sup> Filter No Oil Required!

# INSTALLATION INSTRUCTIONS PART NUMBER: 21-681

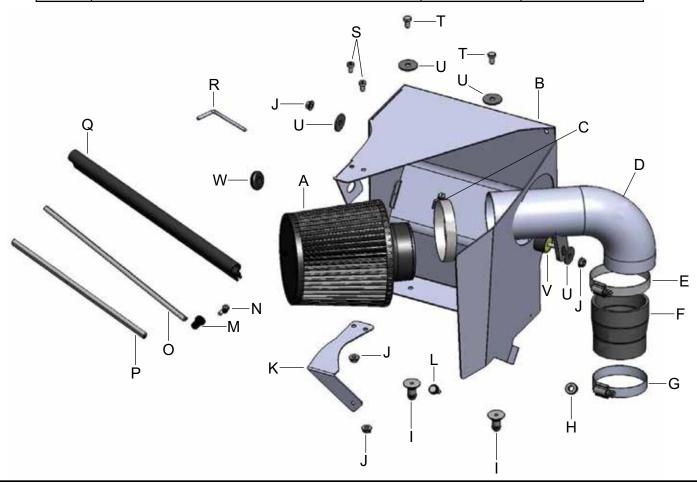
2005.5-2008 AUDI A4 L4-2.0L

C.A.R.B. E.O. # D-670-2

\* NOTE: Legal in California <u>only</u> for racing vehicles which may <u>never</u> be used upon a highway

## PARTS LIST

	Description	Qty.	Part Number
А	Element Parts Kit 2.75 X 5" Dry Ele.	1	21-202DK
В	Heat Shield	1	20-681
С	1/2" Bnd. Hose Clamp, 2.56"-3.50"	1	9448
D	Inlet Pipe	1	2-6811
Е	1/2" Bndhose Clamp, 2.31-3.25"	1	9444
F	Hose, Adapter 2.50/2.75 X 2" Bl.	1	5-256
G	1/2' Bnd. Hose Clamp, 2.15-3.00"	1	9440
Н	Spacer, .625 OD X .295 ID X .1	1	2-125
I	Nipple, Heat Shield Mount	2	8-186
J	Nut, M6 Hex Serrated	4	444.460.04
К	Bracket, Heat Shield	1	32-3060
L	Bolt, Hex/Flange M6-1 X 20	1	1-2038
М	Wellnut, 10-32 X 3/4"	1	1-2114
Ν	Machine Screw, 10-32 X 3/4"	1	1-2542
0	Edge Trim; 1/16" Gap, 12"L	1	102466
Р	Rubber Edge Trim 11"	1	8-3011
Q	Edge Trim, 12"	1	8-4012
R	L-key, T20 Tamper Resistant	1	69801
S	Bolt, Socket M6-1 X 14mm	2	1-2041
Т	Bolt, Hex/Flange M6-1.0 X 12	2	1-2110
U	Washer; 1"D X 1/4 Hole Fender	4	08160
V	Mount, Rubber 5/8" X 6mm	1	1228598
W	Grommet, 1/2"	1	784634



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 negative battery terminal.
- e. Do not discard stock components after removal of the factory system.

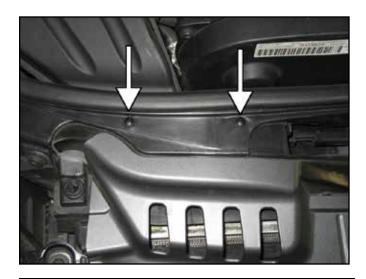
## 2. Removal of stock system



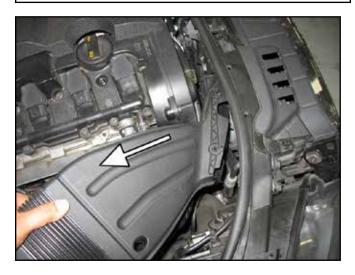
a. Factory air box system.



c. Carefully lift the back side of the fresh air duct away from the air box.



b. Remove the two screws located on the front of the fresh air duct.



d. Slide the fresh air duct toward the firewall. Remove the fresh air duct from the fresh air scoop.



e. Remove the prefilter from the stock air box. This may still be in the fresh air duct.



g. Disconnect the metal clips securing the MAF harness to the stock air box. There are 3 clips, 2 are shown in this picture and the third one is in the next step.



i. Pull the MAF wire harness carefully away from the stock air box.



f. Disconnect the mass aiflow (MAF) sensor harness from the MAF sensor.



h. The third clip is located on the firewall side of the air box.



j. Remove the plastic rivet securing the air box to the passenger side fender by using a flat screwdriver to pry it off.



k. **WARNING!** (The hose clamp securing the inlet tube to the turbo inlet is under high compression). Carefully use a pair of pliers to decompress the hose clamp securing the rubber inlet tube to the turbo inlet. Move the clamp up toward you and let it compress on a higher location on the rubber inlet tube.



m. Firmly grip the rubber inlet using two hands to pull the rubber inlet away from the turbo inlet.



o. Grab the stock air box in the locations shown and move it toward the engine by two inches. Pull the assembly straight out of the engine bay (keep a firm grip and pull hard).



I. This is a good location for the hose clamp to be located once you have moved it away from the rubber inlet tube and turbo inlet joint.



n. Carefully decompress the hose clamp again and remove it from the rubber inlet tube.



p. Using a small flat screwdriver, remove the plastic receiver off of the plastic rivet removed in step 2j.



q. Remove the bolt securing the brace located beneath the passenger side headlight.



s. Factory air box system removed from the vehicle.

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

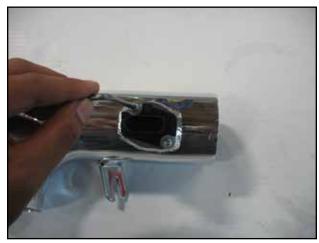
a. When installing the intake system, do not completely tighten the hose clamps or mounting hardware until instructed to do so.



b. Use the stock MAF sensor screws and the supplied tamper-proof torx tool to secure the MAF sensor to the inlet pipe.



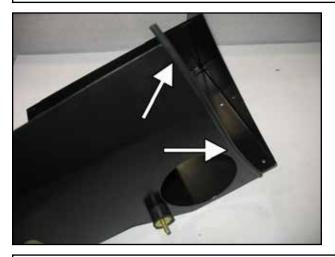
r. Carefully remove the MAF sensor from the stock housing using the supplied tamper-proof torx tool.



c. Insert the MAF sensor into the inlet pipe and secure with the stock screws.



d. Insert the two M6X12 bolts and washers into the two holes on the bottom of the heat shield. Screw the heat shield mounts onto the bolts holding the heat shield mount with your hand. Then tighten the bolts with a 10mm wrench or socket.



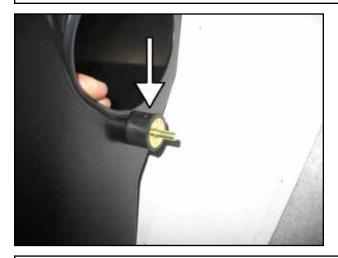
f. Install the edge trim on the edge shown and cut off excess.



h. There will be a gap right where the rubber mount is located that is intentional.



e. Insert the rubber mount into the hole located just below the pipe inlet hole and secure the rubber mount with a washer and an M6 nut.



g. Install the shorter piece of rubber edge trim on the pipe inlet hole. Start right next to the rubber mount and work your way around.



i. Install the rubber gasket trim on the upper curved edge of the heat shield.



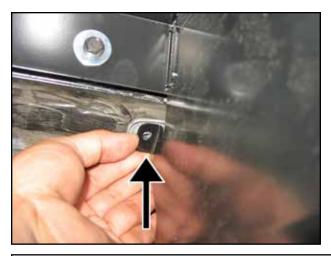
j. Install the heat shield in the vehicle by aligning the two heat shield mounts with the stock grommets. Push the mounts into the grommets to secure.



I. Install the supplied M6-1.0X20 bolt through the heatshield and the spacer. Thread it into the hole exposed in step 2q.



n. Place the supplied bracket on a table as shown with the side that has two holes facing downward.



k. Insert the supplied spacer between the hole on the lower part of the heat shield and the threaded hole exposed in step 2q.



m. Install the 1/2" grommet supplied in kit, into the small oval hole located on the tab on the back of the heat shield.



o. Fasten the supplied machine screw and wellnut to the bracket as shown. Hand tighten the machine screw into the wellnut.



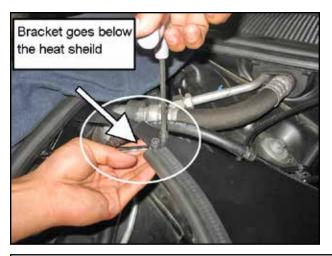
p. Align the wellnut with the hole exposed in step 2p and put it through the hole. Then align the two holes on the other end of the bracket with the two holes on the heat shield.



r. Apply pressure with your hand on the bracket toward the passenger side fender and tighten the machine screw with a phillips head screwdriver until it feels secure.



t. Insert the inlet pipe into the heat shield as shown with the bracket facing up and MAF sensor facing toward the passenger side of the car.



q. Align the M6- 1.0X14 socket bolts with the two holes on the heat shield and bracket. Secure the M6 bolts with the supplied M6 nuts.



s. Put the transition coupler on the turbo inlet. The #40 hose clamp goes on the turbo inlet side and the #44 hose clamp goes on the inlet pipe side.



u. Once the sensor has passed through the inlet hole, rotate the pipe 180 degrees clockwise to align it with the coupler on the turbo inlet.



v. Plug the MAF sensor harness into the MAF sensor.



x. Install the Dryflow  ${}^{\rm TM}$  air filter and secure it to the end of the inlet pipe with the #48 hose clamp.



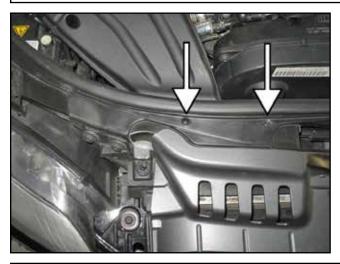
z. Slide the stock fresh air duct back into the fresh air scoop.



w. Insert the pipe into the coupler and align the bracket with the rubber mount on the heat shield. Secure the bracket with the supplied M6 washer and nut.



y. Secure the three metal clips located on the MAF harness wire to the heat shield. There are three holes located on the sides near the top.



aa. Slide the plastic arm located on the fresh air duct into the grommet installed in step 3m.



Factory air box system installed



AEM<sup>®</sup> intake system installed

#### 4. Reassemble Vehicle

- a. 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.
- b. Check for proper hood clearance. Re-adjust pipes if necessary and re-tighten them.
- c. Inspect the engine bay for any loose tools and check that all fasteners that were moved or removed are properly tightened.
- d. Reconnect negative battery terminals and start engine. Let the vehicle idle for 3 minutes. Perform a final inspection before driving the vehicle.

### 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<sup>®</sup> Dryflow<sup>™</sup> 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<sup>®</sup> 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<sup>®</sup> 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.