



Equipped with AEM® Dryflow™ Filter  
No Oil Required!

## INSTALLATION INSTRUCTIONS

### PART NUMBER: 22-481

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2002-2003	Mazda	Protégé 5	Manual Trans. Only	L4-2.0L	C.A.R.B. E.O. # D-670
2001-2003	Mazda	Protégé	Manual Trans. Only	L4-2.0L	C.A.R.B. E.O. # D-670

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

## PARTS LIST

Description	Qty.	Part Number
Element Parts Kit 3.00 X 5" Dry Ele.	1	21-203DK
Upper Pipe	1	2-4801
Lower Pipe	1	2-4811
Hose, Silicone 2.50x2" Black	1	5-252
Hose, Adapter 2.50/2.75 X 3" Bl.	1	5-257
Hose, Adapter 2.75/3.00 X 3" Bl.	1	5-273
Mount, Rubber 5/8" X 6mm	1	1228598
Zip Tie, 6 Long	2	1-113
Washer, 6mm Soft Mount	1	559999
Nut, M6 Hex Serrated	1	444.460.04
1/2' Bnd. Hose Clamp, 2.15-3.00"	3	9440
1/2" Bnd Hose Clamp, 2.31-3.25"	2	9444
1/2" Bnd. Hose Clamp, 2.56"-3.50"	1	9448
1/2" Bnd. Hose Clamp, 2.90"-3.75"	1	9452

**Read and understand these instructions BEFORE 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.**

**The AEM<sup>®</sup> intake system is a performance product that can be used safely during mild weather conditions. During harsh and inclement weather conditions, you must return your vehicle to stock OEM air box and intake tract configuration. Failure to follow these instructions will void your warranty.**

## **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. Make note of where the following components are located: ventilation hose, intake air temperature sensor, purge solenoid valve, and a mass air flow sensor (MAF). Refer to the **(Fig. 1)** diagram for the identification of these components.
- b. Disconnect the ventilation hose from the air hose.
- c. Remove the purge solenoid valve from the air hose.
- d. Loosen the two clamps that secure the air hose to the throttle body and the MAF sensor, and then remove the air hose.
- e. Disconnect the MAF sensor and intake air temp sensor wires.
- f. Loosen the 2 air cleaner clips. Then remove the air cleaner cap, MAF sensor, and intake air temp sensor.
- g. Separate the MAF sensor from the air cleaner cap by loosening the two 10 mm bolts.  
**NOTE: Make note of which end of the MAF sensor is the inlet side. (Fig. 2)**
- h. Separate the air temp sensor and its rubber grommet from the air cleaner cap. The rubber grommet will be used during the installation process in a later step.
- i. Loosen the two 10mm bolts holding the lower air cleaner assembly, then remove it.
- j. Remove the fresh air duct by loosening the two 10mm nuts on either side of the radiator.
- k. Remove the resonance chamber by loosening the two 10mm bolts.

## **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. Check to see that the inside of the AEM<sup>®</sup> inlet pipe and air filter are clean and free from any obstructions.
- c. Install the 2.50" coupler onto the throttle body using a No. 40 hose clamp.
- d. Install one No. 40 hose clamp onto the other end of the coupler.
- e. Slide the 2.50" curved inlet pipe onto the coupler with the nipple facing upwards. **(Fig. 5)**
- f. Bolt the purge solenoid valve to the bracket on the curved inlet pipe with a bolt and flat washer. **(Fig. 5)**
- g. Install the 2.50"/2.75" adapter coupler onto the exposed end of the short curved inlet pipe, secure with a No. 40 clamp.
- h. Slide the outlet end of the MAF sensor into the reducer coupler, and secure it with a No. 44 hose clamp.
- i. Install the factory rubber grommet removed from the air cleaner cap into the 3/4" hole of the inlet pipe.
- j. Install the included rubber isolator mount onto the exposed bracket, as shown. **(Fig. 3)**
- k. Pull the air filter into the engine compartment, by passing it under the front of the car, and pulling it through

the opening between the transmission and front under tray. **(Fig. 4)**

- l. Using the 2.75"/3.0" reducer coupler, a No. 44 and a No. 48 clamp, install the second inlet pipe onto the inlet side of the MAF sensor. Secure the bracket to the rubber isolator mount with a flat washer and nylock nut as shown. **(Fig. 5)**
- m. Install the air filter onto the end of the inlet pipe and secure it with a No. 48 hose clamp.
- n. Install the air temp sensor in the rubber grommet installed in step 3i.
- o. Install the valve cover breather hose onto the nipple of the curved inlet pipe.

#### **4. Reassemble Vehicle**

- a. **MAF and Air Temp Sensor:** Re-connect the wiring harness to the MAF sensor and air temp sensor.
- b. 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.
- c. Check for proper hood clearance. Re-adjust pipes if necessary and re-tighten them.
- d. Inspect the engine bay for any loose tools and check that all fasteners that were moved or removed are properly tightened.
- e. 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<sup>®</sup> 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).**

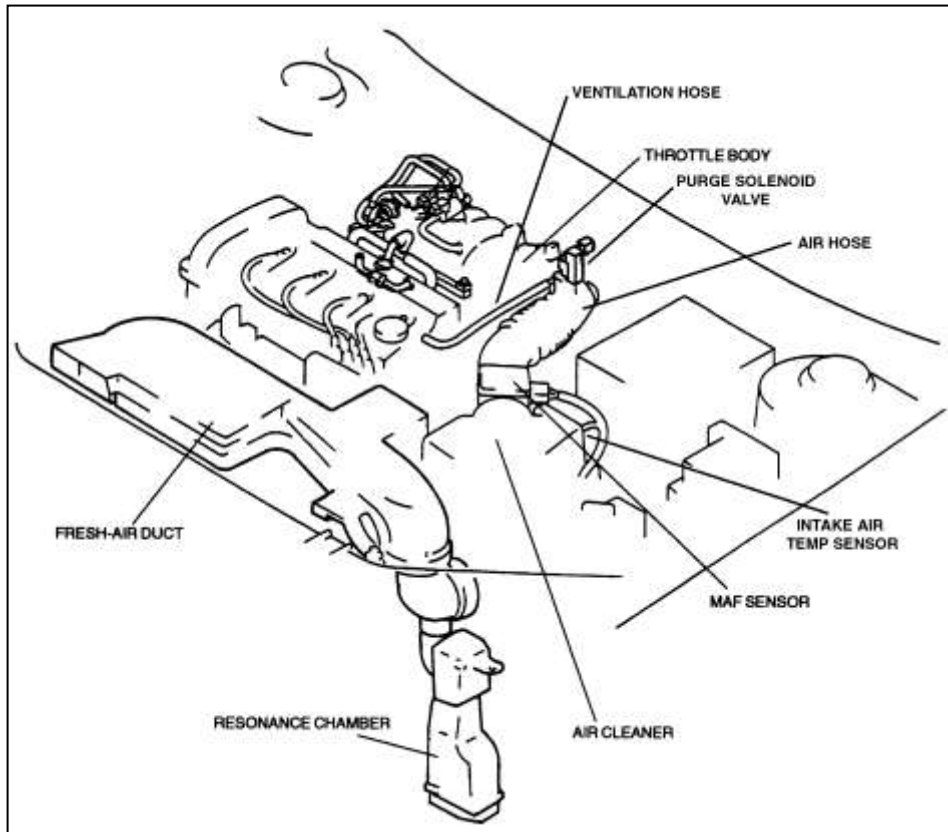


Fig. 1



Fig. 2

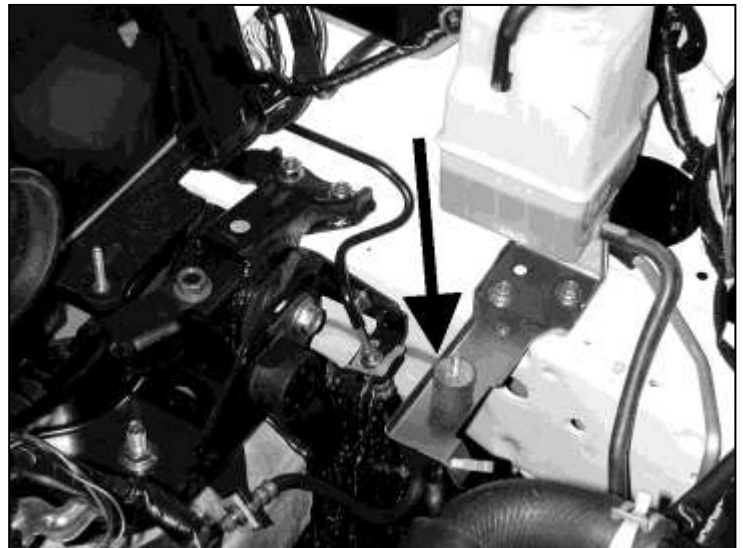


Fig. 3

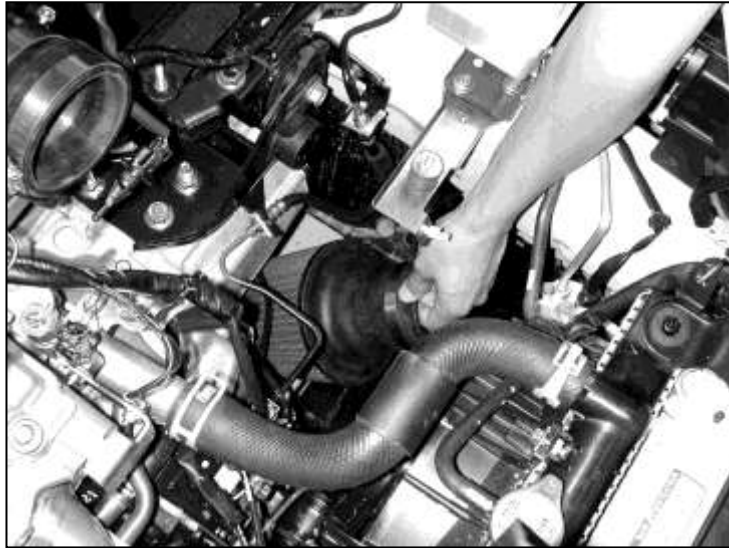


Fig. 4



Fig. 5

For technical inquiries  
e-mail us at  
sales@aemintakes.com  
or  
call us at  
800.992.3000

## **AEM Air Intake System Warranty Policy**

AEM® 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.