



INSTALLATION INSTRUCTIONS FOR 2001-2006 BMW E46 M3

**These instructions are applicable to vehicles equipped
with either manual or SMG transmissions**

Thank you for choosing to purchase a Carbonio Intake System. Please take the time to fully read over these instructions before attempting to install the kit. This will greatly speed up the installation process and minimize any difficulties you may encounter.

Tools Required:

- Socket wrench with extensions & 10mm socket head
- 1/8" , 3/32" , & 5/32" Allen head wrenches
- 11mm open-ended wrench
- Flat headed (slot) screwdriver
- Sharp utility knife

Kit includes:

- 1 – Carbon fiber filter housing
- 1 – Carbon fiber intake scoop
- 1 – Air filter (pre-oiled) with clamp
- 1 – Velocity horn with integral HFM housing
- 1 – Stainless steel HFM screen bracket
- 1 – Stainless steel perforated band
- 1 – Stainless steel notched band end
- 1 – Stainless steel screw band end
- 1 – Length of rubber channel
- 2 – ¼-20 Machine bolts with nuts
- 2 – ¼ x 5/8 Rubber backed washers
- 2 – 10-32 Machine bolts
- 4 – 10-32 Rubber backed washers
- 2 – 8-32 Machine bolts
- 2 – Pieces of foam tape
- 1 – Tamper resistant torx tip

LABOUR ESTIMATE GUIDE

0.5 – 0.75 Hours

Note: Before attempting this install make sure you have fully read and understand these instructions. Also, ensure that the install is performed on a car that has had the opportunity to cool off after driving. Failure to do so could result in burns from touching hot engine components.

Step 1

Remove the 4 plastic clips that hold the airbox inlet scoop in place. This is best achieved by pulling up on their center pin with pliers and then removing the entire fastener once this pin has slid off of the clip. The position of these 4 clips is shown by the arrows right.



Step 2

Lift the airbox scoop out of the car. Also be sure to remove the piece of ductwork that connected the airbox to the scoop (shown right).



Step 3

On the airbox inlet there is a wire leading to the HFM sensor. Disconnect the wire by depressing its fixing tabs and pulling it apart. This should come off easily so if you find yourself pulling hard, chances are that the fixing tabs are not depressed.

On the side of the airbox lid are two metal clips. Loosen them by placing a flat headed screwdriver between the clip and lid and twisting. This clip will come off with very little force.

Fully loosen the hose clamp that goes between the inlet pipe and the airbox lid. Once this is done, pull the inlet pipe away from the airbox lid.

At this time, you may lift the entire airbox lid and filter out of the car. This may seem like a lot of steps but the entire procedure should take considerably less than 1 minute.



Step 4

Disconnect the 2 wires that lead to the xenon light ballast (this is located between the airbox and drivers side fender). Make sure to depress the plastic fixing tabs on these connectors before pulling.

Once these connectors are off, remove the black plastic cover that is over the xenon light ballast. This is snapped in place so be aware of this when pulling the cover off.



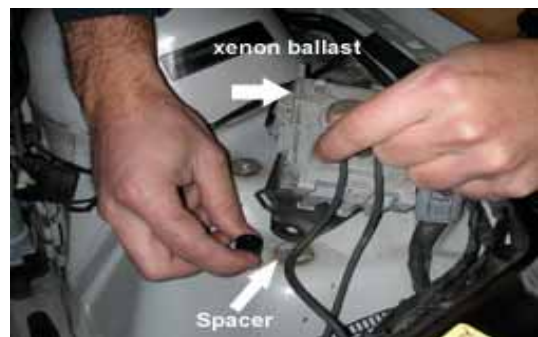
Step 5

Using a 10mm socket wrench, loosen the 2 bolts that hold the airbox to the body of the car and the single nut that holds the xenon light ballast in. Once this is done, lift the airbox out of the car. It may require a little bit of rocking back and forth to free it from its fixings.



Step 6

Where the airbox mounted to under the xenon ballast (on the rubber grommet on the airbox) there is a short metal tube that acts as a spacer. Slide this spacer out of the grommet and place it between the ballast and body (see picture right). Re-install one of the bolts removed in Step 5 to hold the xenon ballast in place. Also tighten the nut that holds the ballast in place (loosened in Step 5). Once the ballast is secured, re-install its cover and re-connect its 2 cables (removed in Step 4).



Step 7

Loosen the 90 degree elbow that goes between the airbox and intake plenum.

Remove the elbow.

Note: There is a rubber ring that might come out when you remove this elbow. Make sure that this rubber ring STAYS ON THE INTAKE PLENUM.



Step 8

Using the included tamper resistant torx tip (you can hold it using an 8mm socket), remove the 2 screws that hold the HFM sensor to the airbox lid. Be careful with this sensor because it is quite fragile once removed from the airbox.



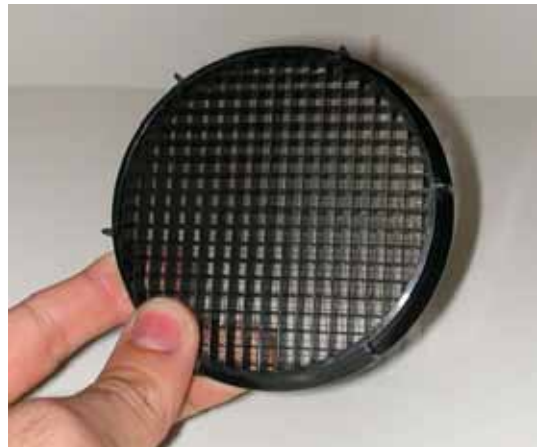
Step 9

Using the included screws, install the HFM sensor into the intake velocity horn. Use the included rubber backed washers ensuring that the rubber side of the washer is against the HFM sensor.



Step 10

On the underside of the factory airbox lid there are 2 screws that hold a circular meshed plastic piece in place. Remove these screws and lift out the mesh piece. It will look like the component pictured on the right.



Step 11

On the perimeter of this mesh is one small rectangular tab. Using a sharp knife, cut off this tab.

Step 12

Lay the mesh on the filter side of the included intake velocity horn. Make sure that it is placed with the plastic mesh side facing up, as pictured.



Step 13

Included in the kit is a stainless steel fixing ring for the mesh. Place this ring over the assembly prepared in the previous step. Make sure that the six tabs on the mesh slide into the six grooves on the stainless steel fixing ring. The final assembly should look like the picture on the right.



Step 14

Slide the included air filter over the intake side of the velocity horn and tighten its hose clamp.

Note: The filter is shipped pre-oiled and does not require any oil.



Step 15

Install the elbow removed in Step 7 on the velocity horn. This may be a little tight fit and its install can be eased by warming the end of the elbow in some hot water. Be sure to tighten the hose clamp around the elbow.

Note: The orientation of the HFM sensor is at approximately the 10 o'clock position (assuming the elbow is laying flat on a table).



Note: Perform the next 5 steps seated with the parts on your lap. It will make assembly MUCH easier.

Step 16

Line up the large circular face of intake assembly to the circular opening of the carbon fiber filter housing.

Make sure that the HFM sensor is at the 10 o'clock in line with the flat on top of the filter housing.



Step 17

Take the included length of rubber channel and join the intake assembly to the filter housing.

Take your time making sure that the rubber is seated all the way around BOTH SIDES of the perimeter of the large round flange.



Step 18

With the rubber channel installed, place the perforated stainless steel band around the outer perimeter of the rubber channel.



Step 19

Fit the notched and screw ends to the ends of the perforated band. This is done by fitting the end into one of the rectangular openings of the bands at 90 degrees to one another and then rotating the end straight so that it keys into place. Refer to images below for guidance.



Step 20

Fasten the screw end to the perforated end and tighten the whole band assembly.

Make sure that the band is seated evenly on the rubber channel below and do not over tighten. Also make sure that the HFM sensor remains in the 10 o'clock position as outlined in Step 16.



Step 21

Install the entire intake assembly. This is best done by sliding the 90 degree intake elbow PAST the inlet on the intake plenum. This action will give the assembly the room it requires to clear the front of the car and drop into position.

Once the assembly has dropped into position (making sure the lower inlet pipe lines up with the factory duct from the driver's side brake duct), you may then fit the intake elbow to the intake plenum (DO NOT TIGHTEN ITS CLAMP YET).

Note: There are 2 small alignment marks for the elbow. Once installed these marks will NOT line up as it is necessary to have the elbow installed a little counterclockwise of its original position.



Step 22 (Optional)

Included in the kit is some foam tape. You may place this tape between body and carbon intake to keep it from rattling. Make sure that the surface you stick the tape to is clean and free of any oils or dirt.

Step 23

Re-connect the HFM wire removed in Step 3.

Step 24

Using a sharp knife, cut the factory kidney grilles in the 3 places shown. Be sure to leave a tab in the center section. Two more pictures are included to show this procedure



Close up of side cut



Close up of center cut

Step 25

There is a small triangular shaped plastic tab left behind once the center grille is removed. Using a sharp knife, cut this tab off.



Step 26

Install the carbon fiber inlet scoop to the front of the car making sure that the tab cut in Step 16 slides into the groove on the scoop.

Fix the assembly together using the included bolts, washers and nuts. **Make sure that the carbon is resting right against the metal radiator support and that the washers have their rubber side against the carbon.**

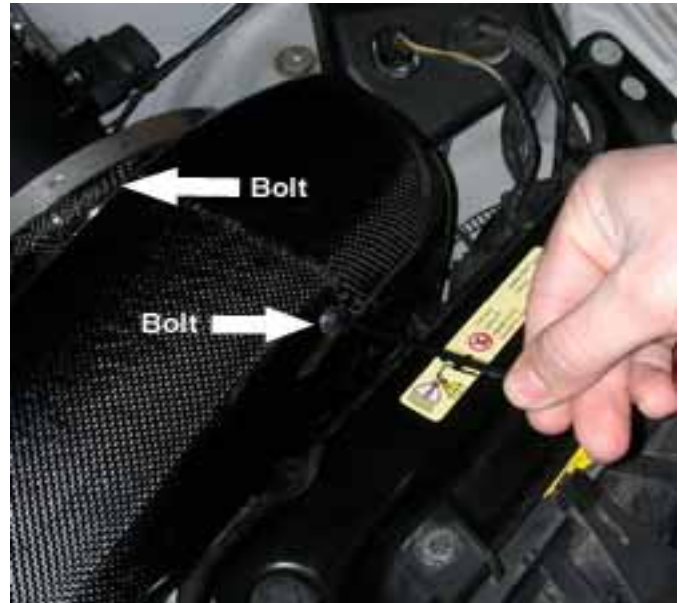
DO NOT FULLY TIGHTEN THE BOLTS AT THIS TIME.



Step 27

Install the last 2 bolts that join the intake scoop to the air filter housing. Once again **make sure that the washers have their rubber side against the carbon.**

Be sure to put a small amount of foam tape between the carbon pieces before joining them.



Step 28

Make sure that the entire system is well fitted ensuring that it is not forced anywhere. Once this is done, tighten:

- The bolts that connect the 2 carbon pieces
- The bolts that connect the front scoop to the radiator support
- The hose clamp between the intake elbow and intake plenum

Step 29

Start the car and let it idle for 5-10 minutes. During this time **DO NOT ACCELERATE THE ENGINE AT ALL.** This will allow the computer a chance to re-calibrate itself to the increased airflow offered by the intake. The install is now complete. Be sure to double check the tightness of all connections, bolts, and clamps before driving the vehicle.

A NOTE ON FILTER MAINTENANCE

The filter on your Carbonio Intake is washable and will last for many years if cleaned periodically. The best way to clean the filter is to remove it and service it with a commercially available cleaning kit. These kits are very inexpensive and require that you wash the filter and oil it after it has had the opportunity to dry. **DO NOT OVER-OIL THE FILTER. BE SPARING WITH THE OIL AS EXCESSIVE OILING CAN LEAD TO DAMAGE TO THE HFM.**