



**INSTALLATION INSTRUCTIONS FOR 1999-2003 BMW 3-Series E46 Cars**  
These instructions are applicable to all E46 3-Series models\* equipped with either manual or automatic transmissions, xenon or bi-xenon headlights.

\*Individual kits will contain pieces specific to the model listed on the box label.

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, 8mm, & 1/4" socket heads
- 10mm open-ended wrench
- Flat headed (slot) screwdriver
- Phillips head (star) screwdriver
- Factory jack and wheel bolt wrench

**Kit includes:**

- 1 – Carbon fiber main intake section
- 1 – Air filter (pre-oiled) with clamp
- 1 – Lower air filter bracket
- 1 – HFM bracket w/ integral Xenon bracket
- 1 – Phillips head screwdriver tip
- 2 – Stainless steel hose clamps
- 1 – HFM coupling
- 1 – 3M Surface prep packet
- High Temperature Double Sided 3M Tape

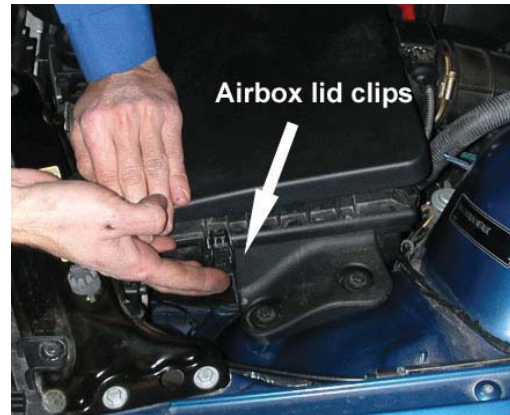
**LABOUR ESTIMATE GUIDE**

**0.5 – 0.75 Hours**

Note: Throughout the instructions the term 'HFM' is used. It refers to the Air Flow Meter which is located between the engine and factory airbox.

### Step 1

Loosen the clips that hold the airbox lid to the airbox. These clips require no tools and only need to have their plastic ends lifted by hand.



### Step 2

Using a flat-head screwdriver, loosen the 2 metal clips that connect the airbox to the HFM. Placing the tip of the screwdriver between the clip and HFM and twisting is all that is required to loosen these clips.



### Step 3

Lift the airbox lid out of the car. Be sure to disconnect the plastic air inlet tube that goes between the area around the top of the radiator and the airbox lid.

Note: There is a rubber ring that goes between the airbox and the HFM. If this ring remains on the HFM, remove it and set it aside; it will not be needed.

### Step 4

Remove the two 10mm bolts that hold the airbox to the car (marked with arrows in picture right). Hold on to these bolts as they will be required later. Once the bolts are removed, lift the airbox out of the car and set it aside.

Note: On some cars there are some cables that are attached to the airbox. Be aware of these cables and unclip them from the airbox when removing it.



### Step 5

Jack the drivers side front corner of the car and remove the left front wheel.

Note: If you are not sure, refer to your vehicles owners manual for the correct jacking and wheel removal procedure.

### Step 6

Remove all of the nuts holding the lower plastic splash shield located in the left front wheel well.

Note: The arrows indicate the location of only some of the fasteners. Be sure to remove ALL of the fasteners (some of them are on the bottom side of the front bumper)



### Step 7

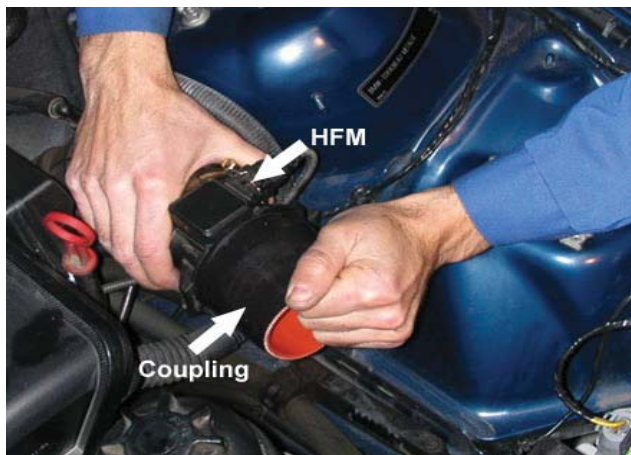
Remove the lower plastic shield and set it aside. Be sure to disconnect the wire that leads to the temperature sensor which is connected to the splash shield. The location of this wire is shown by the arrow in the picture right.



### Step 8

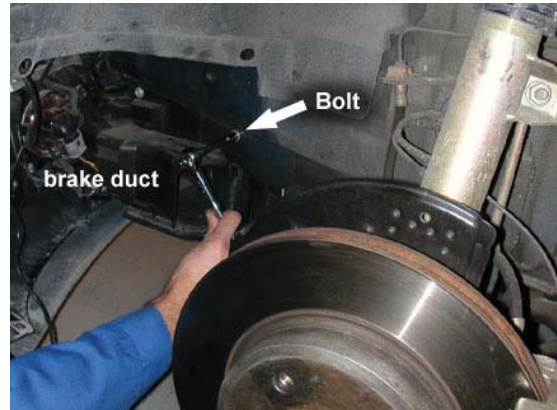
Install the rubber HFM adapter by slipping it over the open end of the HFM. Make sure that it is on as far as it will go.

Slip the two included stainless steel hose clamps over the rubber coupling. Do not tighten these yet.



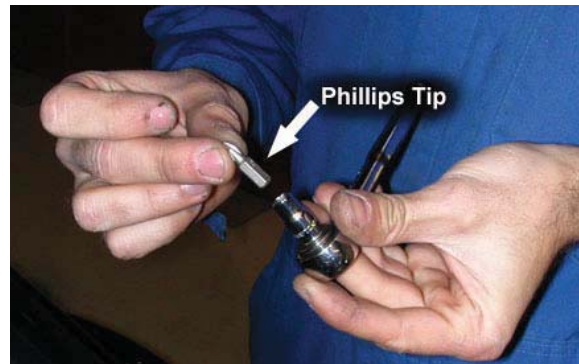
### Step 9

Remove the rear-most bolt that fixes the brake duct to the chassis of the car. Set this bolt aside as it will be used later.



### Step 10

Take the Phillips screwdriver head included in the kit and insert its blunt end into a 1/4 inch socket mounted to a ratchet handle as shown right



### Step 11

Using the tool prepared in the previous remove the Phillips screw that is holding the drivers side Xenon ballast to the headlight. The Xenon ballast can be identified as the light gray plastic unit that is attached to the headlight.

Note: Removing this screw can be a little tough however this approach is much easier and faster than removing the entire headlight assembly



### Step 12

The second screw holding the xenon ballast on can be accessed from the left front wheel well with an ordinary Phillips screwdriver. The picture right was shot from the ground looking up at the bottom of the headlight. Once the screws are removed, the Xenon ballast can be pulled out. This is done by sliding the ballast towards the rear of the car to separate it from the headlight assembly.



## STEP 13 APPEARS AFTER THE FOLLOWING XENON BALLAST RE-LOCATION INSTRUCTIONS

The following step is for vehicles equipped with regular xenon headlights. For bi-xenon cars, skip this step.

On the bottom of the xenon ballast there is a Phillips screw. Remove this screw and line up the HFM bracket against the bottom of the ballast. Use the original screw to hold the bracket to the ballast.

Note: The hole used on the HFM bracket is the one that is under the bent up portion of the bracket.



The following steps are for vehicles equipped with bi-xenon headlights.

### Step 1

To the right of the drivers side headlight (when viewed from the driver's perspective). There is a decal on a rectangular plastic tank. Remove this decal.

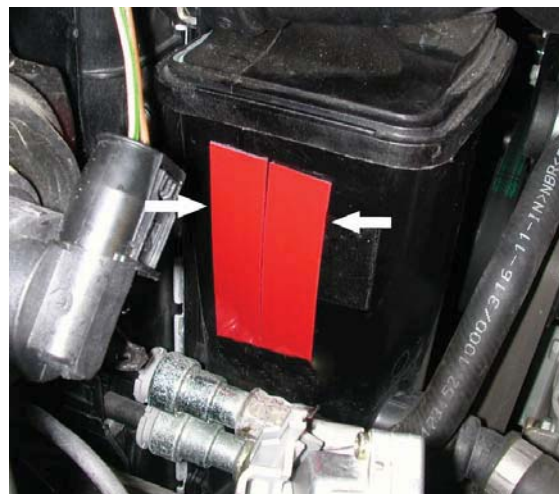


### IMPORTANT STEP!

Open the included 3M surface prep packet. Inside you will find a wet cloth which is used to clean both the surface of the previously mentioned plastic tank and the flat metal face of the xenon ballast (removed previously). Allow to dry for 30 seconds – 1 minute

### Step 2

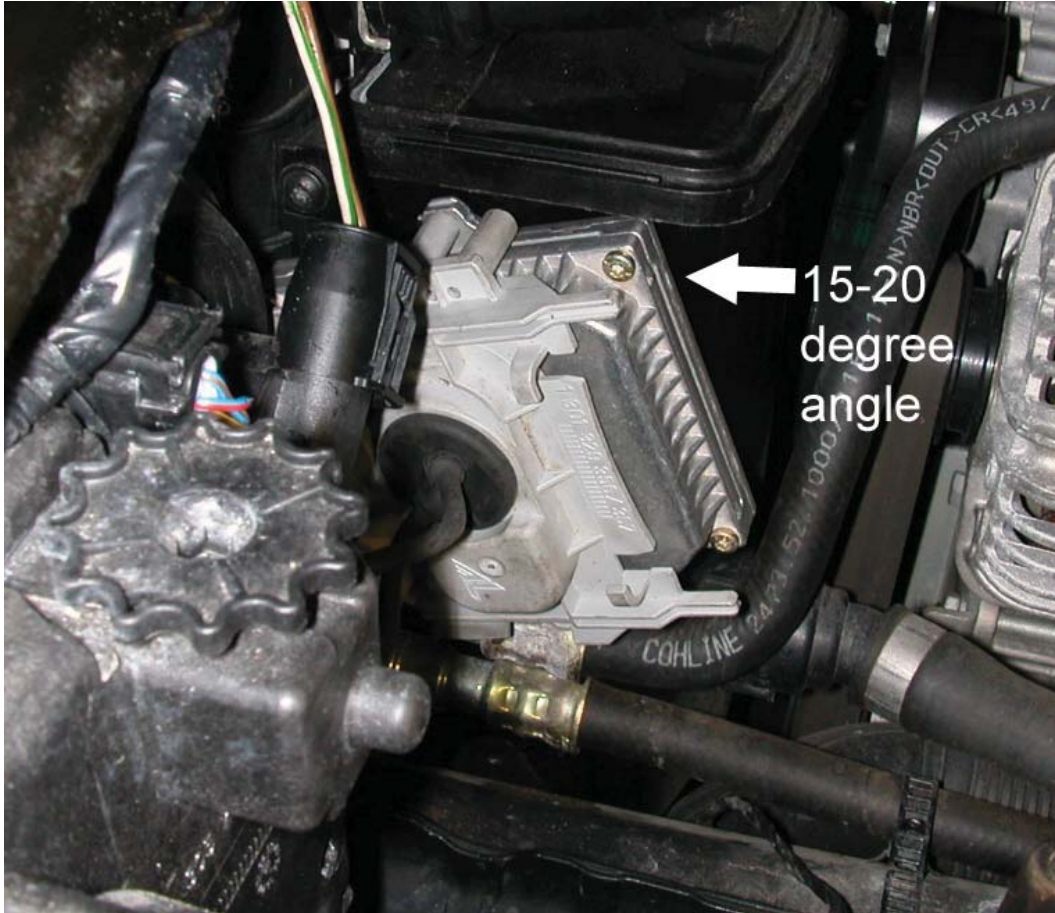
Included in the kit are 2 strips of high temperature double sided tape. Peel the backing off of one side and lay the strips next to one another against the black plastic tank that was cleaned in the previous step.



### Step 3

Peel the other side of backing from the previously installed double sided tape and stick the ballast to the plastic tank. Be sure to press the two pieces firmly together to ensure a good bond.

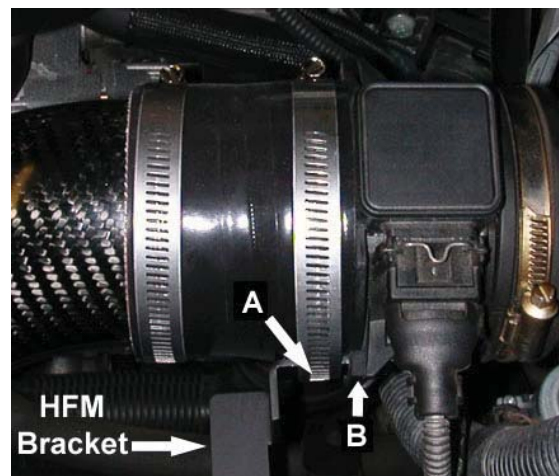
**Note the orientation and angle of the ballast as pictured below. It is important to stick the ballast on in this fashion to avoid interference with the carbon pipe.**



### Step 13

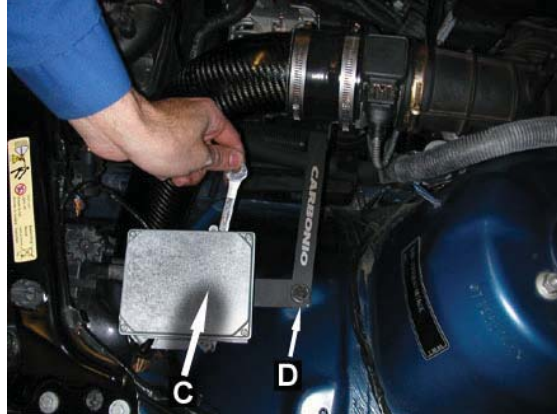
Slip the loose end of the HFM bracket **over** the rubber coupling and **under** the hose clamp 'A'. Make sure the end of the bracket slips **into** the rectangular plastic groove on the HFM (Marked 'B' to the right)

Position the two hose clamps but do not tighten them yet.



### Step 14

Using the two bolts removed in Step 4, install the HFM bracket to the body using the original airbox mounting holes. Bolt 'C' will require an open ended wrench to access while bolt 'D' can be accessed with a socket wrench.



### Step 15

Slip the long end of the carbon intake pipe into the filter. **MAKE SURE THAT IT IS AT LEAST 1 INCH INTO THE FILTER.**

Once this is done, slip a hose clamp over the carbon pipe and leave it loose



### Step 16

Grab the filter by the base and feed the open end of the carbon pipe up the front of the drivers side wheel well and into the engine compartment.

Slide the open end of the carbon pipe into the adapter that was installed over the HFM in Step 8.

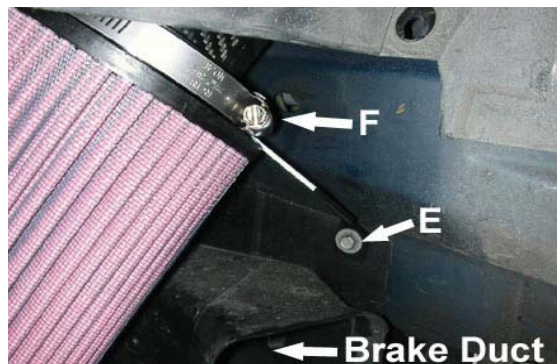


### Step 18

Install the air filter bracket using the bolt removed in Step 9. This bolt goes in its original hole 'E'

Make sure the hose clamp from Step 10 fits over the filter bracket leaving the bracket between the clamp and rubber air filter flange.

Tighten both the clamp 'F' and bolt 'E'



### Step 19

Tighten both hose clamps seen in the Step 13 picture.

### Step 20

Re-install the lower plastic shield removed in Steps 6 & 7. Remember to reconnect the wire that goes to the temperature sensor.

Note: If the fit is very tight against the filter, loosen the hose clamps and re-position the carbon tube slightly. Remember to re-tighten the clamps before re-assembling.

### Step 21

Re-install the wheel and lower the car .

### Step 22:

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.**