



Granatelli Motor Sports, Inc. • 1000 Yarnell Place • Oxnard, CA 93033-2454  
 805-486-6644 (Phone) • 805-486-6684 (Fax) • Hours: M-F 8AM-5PM (PST)  
[www.GranatelliMotorSports.com/techsupport.htm](http://www.GranatelliMotorSports.com/techsupport.htm)  
[TechSupport@GranatelliMotorSports.com](mailto:TechSupport@GranatelliMotorSports.com)

## Ford 1997-Current 4.6L/5.4L Full Size Truck/SUV Mass Airflow Sensor Installation Instructions (Read Carefully Before Starting Project)

### Tools Required:

8mm or 5/16" socket, flat head screwdriver, 10mm wrench

### Introduction:

This product is the first of its kind. It is an inexpensive replacement mass airflow sensor to improve the performance potential of the 4.6/5.4 modular engines Ford Motor Company trucks without sacrificing drivability. With the gain in horsepower from performance camshafts, high flow cylinder heads and tuned exhaust systems, production mass airflow sensors become too restrictive. This led to the Granatelli Mass Airflow Sensor. This unit is sure to enhance the effectiveness of other performance equipment already installed or of future installations.

### Overview:

The mass airflow system measures airflow directly with an electronic sensor. A sensing element in the air stream of the intake provides an output voltage reading that is proportional to the mass airflow and ignition spark advance. It reacts quickly and accurately to the changes in airflow, while improving overall vehicle performance. The smooth design of the inlet tube improves airflow to the intake system in the most economical way.

### System Features

Improved Airflow

No electrical modifications

Less pressure drop than  
production models

Expanded dynamic range with high  
measurement accuracy

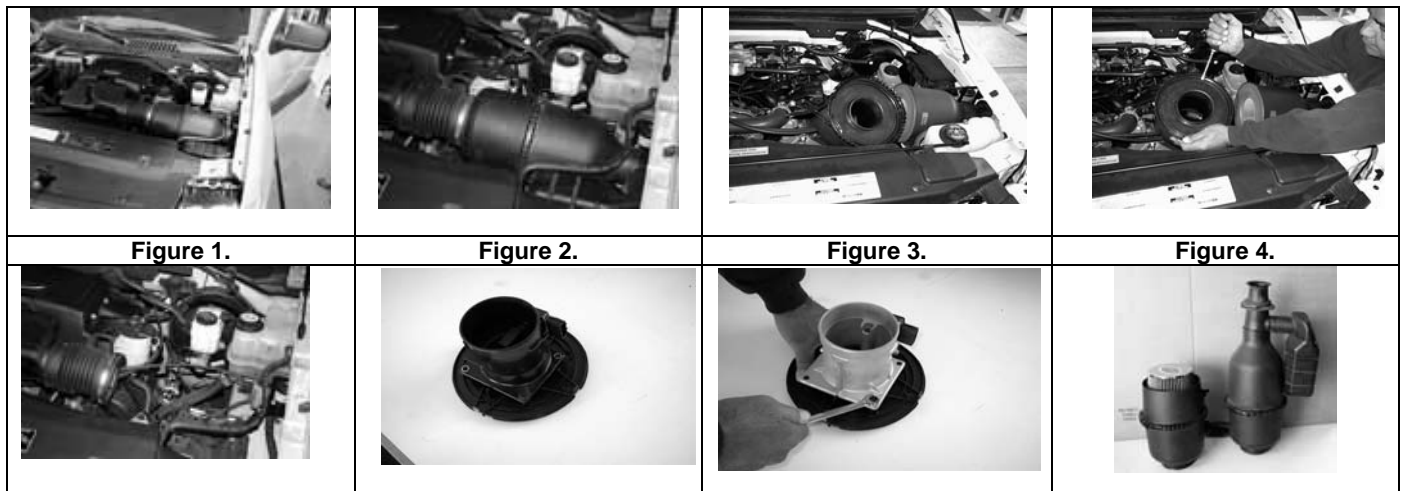
Real calibration of elements for  
Proper emissions and performance

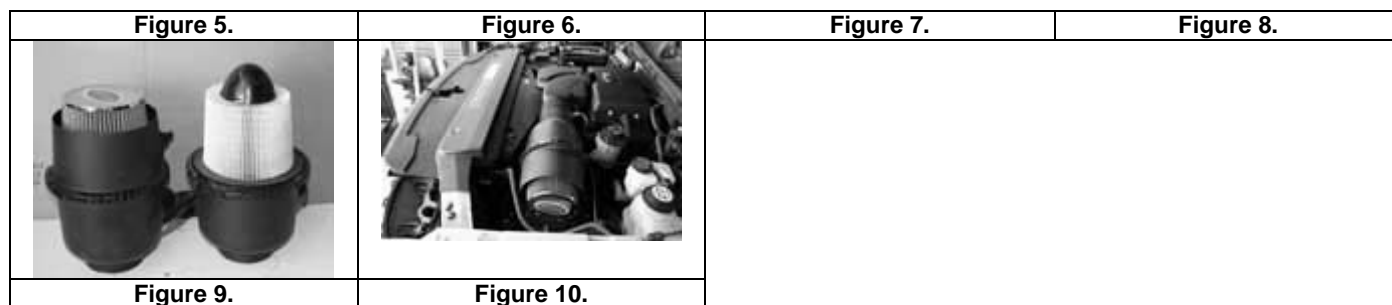
Simple bolt-in design

### Installation Steps:

1. Disconnect the Battery (**negative side first**).
2. Using a flat blade screwdriver or an 8mm (5/16) socket, loosen the hose clamps that attached the existing air intake ducting from the throttle body and the air filter housing. (**See figures 1&2**). Remove the air inlet tube from the mass air meter by grasping the meter in one hand and the tube in the other. Using a twist pull motion, separate the two parts.
3. Remove factory airbox from it's location. This is accomplished by gently pulling up on the can itself. The plastic air can is handled in place by a press fit (loose feet that snap into 3 grommets). Next open the element can as if you were replacing the filter. Remove filter momentarily (See Figure 3)

**NOTE: DO NOT USE A SCREWDRIVER TO PRY THE HOSE OFF THE MASS AIR SENSOR. DAMAGE TO THE AIR BOX OR PERSONAL INJURY MAY RESULT.**





4. Unlatch the large clamp that holds the two air filter housing halves together. **(See Figure 6).**
5. Using a flat blade screwdriver, pry the center mass air housing plate away from the open filter housing half. **(See Figure 7).** Disconnect the wiring harness connector to the mass air sensor. This can be done easily by grasping the connector and pulling while holding the bottom tab away from the connector.

**NOTE: THE CONNECTOR MAY STICK TO THE SENSOR CONNECTIONS. IF THIS OCCURS, CAREFULLY PRY AWAY THE CONNECTION WITH A SMALL FLAT HEAD SCREWDRIVER.**

6. Figure 6 shows the stock mass airflow sensor attached to the plate as it came out of the truck. Using a 10mm wrench, simply remove two of the 10mm bolts that connect the mass airflow sensor to the plate. Now re-install the Granatelli sensor in the same orientation. **(See Figure 7).** Reverse steps 1 through 5 for installation of the new Mass Airflow Sensor.

#### **LIMITED WARRANTY:**

Granatelli Motor Sports warrants that all products shall be free from defects in materials and/or workmanship for ninety days from the date of purchase (except in-tank and in-line fuel pumps purchased at dealer or wd prices as these items have no warranty and roller rocker arms which have a 12-month limited warranty). The following requirements and exclusions apply: (1) You must be the original purchaser and must complete the warranty registration form (located at [www.GranatelliMotorSports.com/warranty.asp](http://www.GranatelliMotorSports.com/warranty.asp)) and return the defective product within 10 days after the expiration of the product warranty. Failure to do so voids all warranty, either express or implied set forth herein. (2) You must reside in the United States or Canada and use the product as described in the warranty registration. (3) The product must not have been altered, disassembled, modified, or converted for any other use than intended by Granatelli Motor Sports. (4) The product, or any part thereof, is not used in accordance with the operating parameters specified by Granatelli Motor Sports (5) The product or any part thereof is damaged or rendered unserviceable due to negligence, vandalism, theft, fire, debris, flood, Act of God, or other peril, malfunction of equipment, or by any cause within the Customer's control. (6) The serial number (if applicable) must not have been altered or removed. The extent of Granatelli Motor Sports' liability under this warranty shall be limited to the prompt correction or replacement, at Granatelli Motor Sports' option and at no cost to the customer other than return shipment, of any defective part of the product determined to be necessary by Granatelli Motor Sports. This only applies if written Granatelli Motor Sports received notice of the claimed defect prior to expiration of the warranty period. All warranties of merchantability and fitness for a particular purpose are expressly excluded. The duration of any and all implied warranties is limited to the duration of this express warranty. All incidental and consequential damages including but not limited to loss profits even if it has been advised of the possibility of such damages are hereby excluded. Regardless of the form of the claim, Granatelli Motor Sports liability for any damages to the customer for such product is limited to the guidelines herein. This stated, expressed warranty is in lieu of all liabilities or obligations of Granatelli Motor Sports for damages arising out of or in connection with delivery, use or performance of the product. This warranty cannot be amended or changed by any Granatelli Motor Sports representative, employee, or agent and any promises inconsistent with this warranty are void and unenforceable against Granatelli Motor Sports. Some states do not allow limitations of incidental or consequential damages, so the above limitations or exclusions may not apply to you. This warranty gives you specific legal rights and you may have other rights that vary from state to state. Your sole remedy for the above warranties is the repair or replacement of the defective product only, at Granatelli Motor Sports' sole discretion.

#### **RETURN POLICY:**

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#### **PERFORMANCE CONSUMER'S BILL OF RIGHTS:**

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