

# MSD INSTALLATION INSTRUCTIONS

## Atomic MAP Sensor PN 2933

**ONLINE PRODUCT REGISTRATION:** Register your MSD product online. Registering your product will help if there is ever a warranty issue with your product and helps the MSD R&D team create new products that you ask for! Go to [www.msperformance.com/registration](http://www.msperformance.com/registration).

### Parts Included:

1 - MAP Sensor	2 - Oval O-rings
1 - O-Ring	1 - Foam gasket
1 - Spacer	

It is best to remove throttle body from the engine when installing replacement parts.

### REMOVAL

- Disconnect the battery (-) cable.
- Remove the Air Cleaner assembly.
- Disconnect the throttle cable assembly, vacuum hoses, electrical connections, and fuel lines from the throttle body. Be prepared to catch fuel when removing fuel lines.
- Caution should be taken when disassembling the throttle body.

Remove the eight bolts that secure the fuel rails from the throttle body (Figure 1).

Disconnect the electrical connectors from the idle air control motor (IAC), injectors, fuel pressure sensor (FPS), and pull the rails away from the throttle body (Figure 2).

**Note:** The fuel rails are sealed with an O-Ring on each side of the throttle body fuel rail mounting surface. Remove the o-rings (Figure 3). Take caution not to score the machined surfaces.

### ⚠ WARNING

Installation of this product requires detailed knowledge of automotive systems and repair procedures. Installation of fuel system parts and any fuel tank modifications must be carried out by a qualified automotive technician. Installation of fuel system parts requires handling of gasoline. Ensure that work is performed in a well ventilated area with an approved fire extinguisher nearby. Extinguish all open flames, prohibit smoking and eliminate all sources of ignition in the area of the vehicle before beginning the installation.

When working with fuel systems, eye goggles and other safety apparel should be worn to protect against debris and sprayed gasoline. The finished work must be thoroughly checked to ensure there are no fuel leaks.



Figure 1

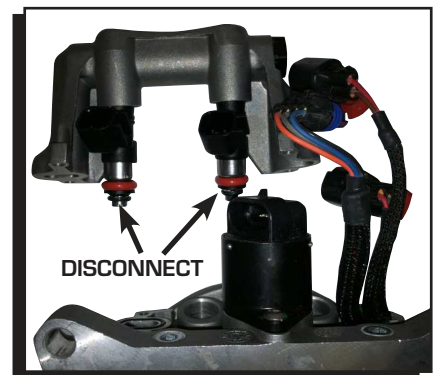


Figure 2

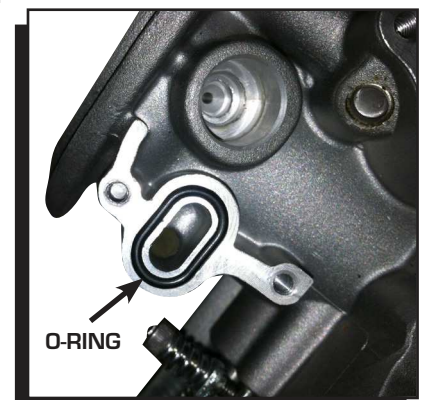


Figure 3

Remove the four screws that hold the ECU (Block with MSD cast into it) to the throttle body (Figure 4).

Carefully lift the block straight up away from the throttle body. There are four pins and an intake air temperature (IAT) sensor under the ECU block that can easily be damaged from mishandling (Figure 5). The IAT element sits in a plastic tube that may or may not lift out when the ECU is removed from the throttle body. Be careful not to lose the IAT tube (Figure 6).

Remove the two Torx screws retaining the Manifold Absolute Pressure (MAP) sensor (Figure 7).

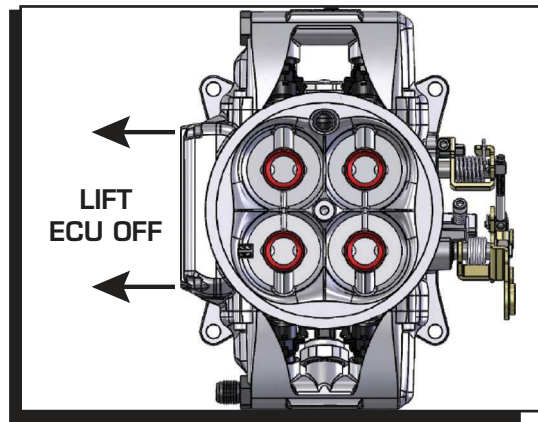


Figure 4

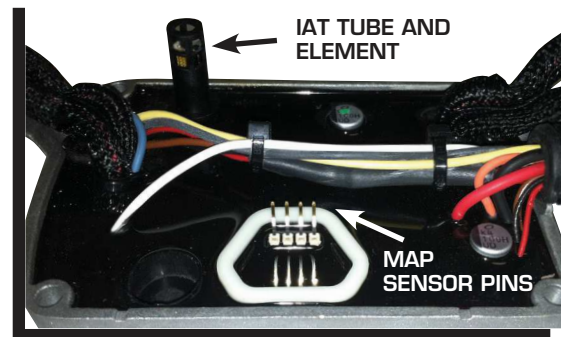


Figure 5

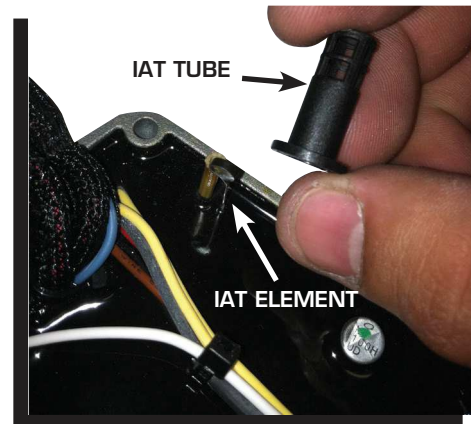


Figure 6

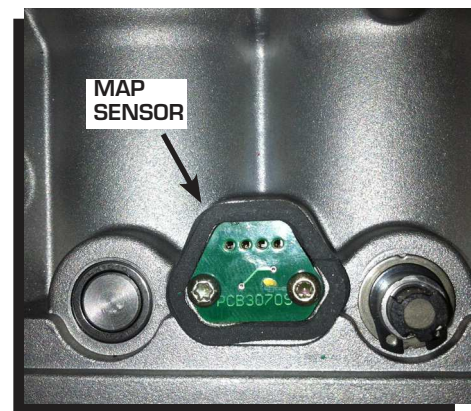


Figure 7

Using a pick or a fine flatblade screw driver, carefully pry the MAP sensor, MAP sensor spigot O-ring and spacer out of the throttle body (Figure 8).

**INSTALLATION**

Place the plastic spacer on the MAP sensor spigot. Place the MAP sensor O-ring on top of the spacer. Lightly apply white grease to the O-ring for ease of installation (Figure 9).

Place the O-ring on the MAP sensor spigot and push the spigot into the throttle body. Secure the MAP sensor with the torx screws. **Do not over-tighten the screws.**

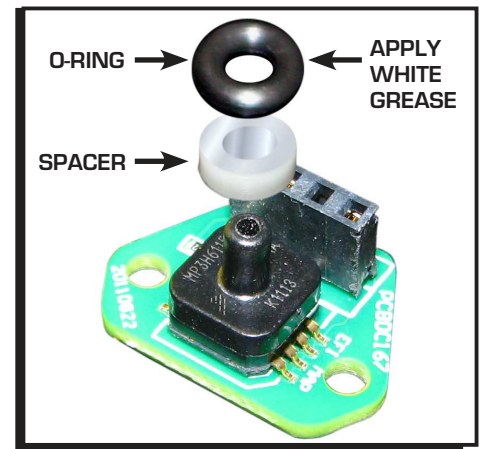
Remove the foam gasket from the throttle body and replace with the supplied gasket. Place the IAT tube into the orifice on the throttle body (Figure 10).

Carefully lower the ECU assembly onto the throttle body. Avoid forcing the ECU assembly as the IAT sensor and four pins for the MAP sensor are delicate. Double check the four map sensor pins and IAT sensor have lined up. Route the wire harnesses in a manner that they do not pinch when the ECU is bolted down (Figure 11).

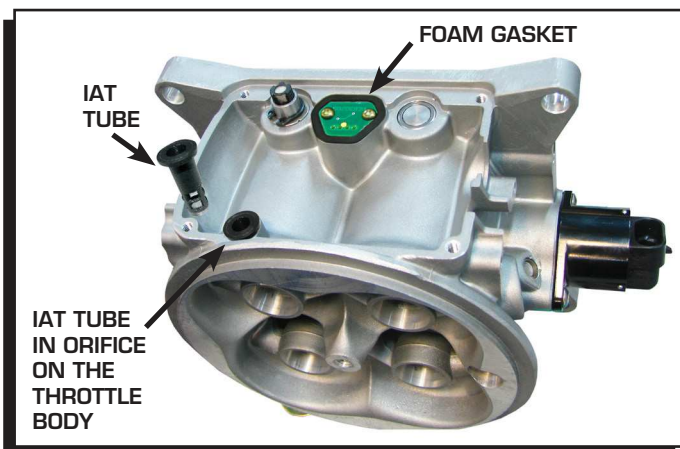
Assembly of the fuel rails is reverse order of the disassembly.



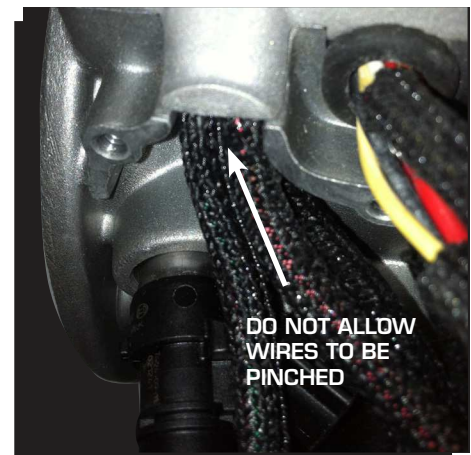
**Figure 8**



**Figure 9**



**Figure 10**



**Figure 11**



# INSTALLATION INSTRUCTIONS

## TECH NOTES

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### Service

In case of malfunction, this MSD component will be repaired free of charge according to the terms of the warranty. When returning MSD components for warranty service, **Proof of Purchase** must be supplied for verification. After the warranty period has expired, repair service is based on a minimum and maximum fee.

**All returns must have a Return Material Authorization (RMA) number** issued to them before being returned. To obtain an RMA number please contact MSD Customer Service at 1 (888) MSD-7859 or visit our website at [www.msdpowerperformance.com/rma](http://www.msdpowerperformance.com/rma) to automatically obtain a number and shipping information.

When returning the unit for repair, leave all wires at the length in which you have them installed. Be sure to include a detailed account of any problems experienced, and what components and accessories are installed on the vehicle. The repaired unit will be returned as soon as possible using Ground shipping methods (ground shipping is covered by warranty). For more information, call MSD at (915) 855-7123. MSD technicians are available from 7:00 a.m. to 5:00 p.m. Monday - Friday (mountain time).

### Limited Warranty

MSD warrants this product to be free from defects in material and workmanship under its intended normal use\*, when properly installed and purchased from an authorized MSD dealer, for a period of one year from the date of the original purchase. This warranty is void for any products purchased through auction websites. If found to be defective as mentioned above, it will be repaired or replaced at the option of MSD. Any item that is covered under this warranty will be returned free of charge using Ground shipping methods.

This shall constitute the sole remedy of the purchaser and the sole liability of MSD. To the extent permitted by law, the foregoing is exclusive and in lieu of all other warranties or representation whether expressed or implied, including any implied warranty of merchantability or fitness. In no event shall MSD or its suppliers be liable for special or consequential damages.

\*Intended normal use means that this item is being used as was originally intended and for the original application as sold by MSD. Any modifications to this item or if it is used on an application other than what MSD markets the product, the warranty will be void. It is the sole responsibility of the customer to determine that this item will work for the application they are intending. MSD will accept no liability for custom applications.