Miller Mass Air Flow Conversion System

Troubleshooting Guide

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1. General Information

1.1 Introduction

The Miller Performance MAF System™ has been carefully developed to provide optimum performance without compromising dependability. We have always used a factory correct formula in the development of Miller Performance products and custom built ground up, super cars.

This MAF System troubleshooting guide has been written to help walk you through some common mistakes users can have. The performance of this application may be altered if you have done or will do other modifications to your car. You can contact our technical department if you have any questions regarding other modifications after troubleshooting the MAF conversion.

1.2 Getting Started

You must have read and followed your instruction manual for your MAF conversion for this guide to be of any use to you. If you failed to read the installation manual then please read it over to make sure you have followed all the steps.

All you really need to troubleshoot your MAF conversion is a multi-meter.

Figure 1 – Multi-meter

2.0 Checking for Proper Signals

2.1 AFM Connector

There is a small rubber boot on the BMW factory AFM plug, pull that back to expose the pins. You will see on the connector pin labels. There are 4 wires coming out you will see the pins labeled, 1 2 3 4 & 5 (5 is empty)

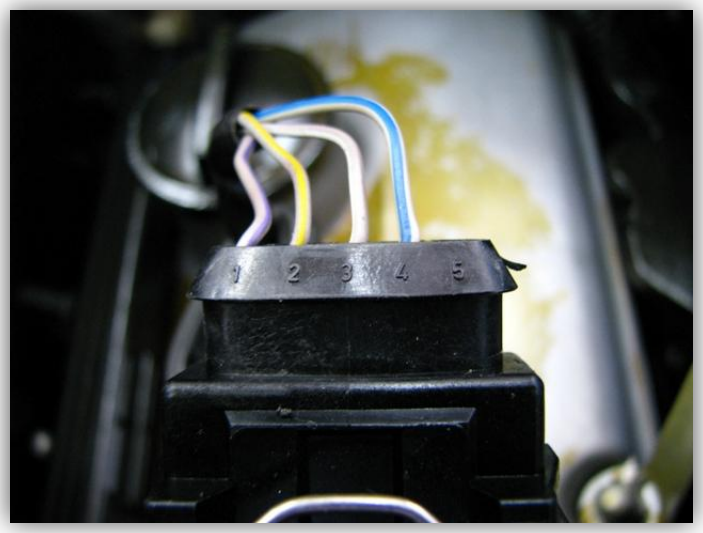

Figure 2 - BMW AFM Plug

The next steps all involve the key to be in the ON position. Don't start your car, but make sure all the power is on.

2.2 Checking for 12v Supply and Ground

Using your multi-meter set the device to measure at least 12V. Insert the black probe into the back of pin 4, and the red probe into the back of pin 3.

Figure 3 - Checking for 12v

Remember to have the key in the "ON" position, if your wiring is correct, you should see a voltage number in the 12V range as pictured above. If you do, you completed the steps in the manual properly in the section "Acquiring a 12v Signal"

If you do not have a 12v signal you may see a 5V signal. If you see 5 volts, then you probably missed the portion of the manual directing you to splice one wire to acquire 12 volts.

If you don't have any voltage, make sure you turned your key into the On position, if the key is in the ON position, go back and check your solder joint between the two pins you should have modified.

2.3 Checking for the Air Flow Signal

Again, with you multi-meter set to read 12v, leave your black probe inserted into pin 4. Take the red probe and insert it into the back of pin 2.

Figure 4 - Type 1 Sensor

Figure 5 - Type 2 Sensor

Part 1: Check for signal with Key "ON"

With the key in the on position and the probes in the locations described above (pin 2 and 4) you should see

AROUND 1 volt for the GEN III Type 1 Sensors

AROUND 0.1 volt for the GEN III Type 2 and PSIK sensors

If you see anything other than the above, please contact us.

Figure 6 - Checking for Air Flow signal

Part 2: Check for signal with car idling

With the car at idle, your air flow signal voltage should be:

AROUND 1.5 Volts for for the GEN III Type 1 Sensor

AROUND 0.8 Volts for the GEN III Type 2 and PSIK sensor

If your voltage is off by a little that is fine, but if it is a lot higher or lower please calls us.

Figure 4 - Checking Air Flow voltage at idle

After you have checked voltage at idle, rev the car up, you should see the voltage increase as the engine revs up.

Make sure your MAF is reading the air flow path properly. There is a marking on the side of the plastic housing that should be pointing towards the throttle body. If you have the MAF installed backwards, you will not be reading the air flow.

If you cannot resolve the problem please phone us and we will help with a solution. You can reach us at our toll free number, 855.BMW.TUNER. We will not let you go unsatisfied.