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Los Angeles, CA
2716 Dawson Ave.
Signal Hill, CA 90755
562-981-6800

Austin, TX
22108 State HW 71 W
Spicewood, TX 78669
512-982-9393

2015-Current Jeep Renegade 1.4L MultiAir Turbo MADNESS Autoworks MAXPower PRO ECM Module Installation Instructions & Manual



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MADNESS Autoworks LLC

SAFETY INFORMATION

The MADNESS product you have purchased is a high performance product. As such, it does present some risks of which you should be fully aware. Do not use this product until you have carefully read all the following safety information.

SAFETY GUIDELINES:

1. Do not exceed legal speed limits on public streets. Use any performance speed capabilities of this product only in legally sanctioned racing environments expressly for this purpose.
2. Do not operate the device while driving. Perform all adjustments while stopped. Changing a setting while driving can interfere with your attention to roadway conditions.
3. Some features may not function on all vehicle models. Check a newly installed device for all features you intend to use. Do not rely on their working without checking first.

All MADNESS MAXPower PRO modules are built to operate with OEM ECU tunes. MADNESS Autoworks updates its active products (i.e. those currently being manufactured) to work effectively with updated OEM tunes. However, this process can take some time, as MADNESS Autoworks is not always aware of calibration changes made by OEM manufacturers.

If you have used another tuner/programmer on your vehicle, you will need to revert back to stock and remove the device before using the MADNESS Autoworks MAXPower PRO.

Failure to return to stock may result in PCM failure or engine damage.

Programming your vehicle may expose existing defects in your vehicle's PCM that could disable your vehicle.

Introduction:

Thank you for purchasing the MADNESS Autoworks MAXPower PRO ECM. The MAXPower Pro ECM has been developed and produced to ensure the best performance for the life of your vehicle. If you have any questions please contact MADNESS Autoworks. We will be happy to answer your questions about our complete product line.

The MAXPower PRO is a “piggy-back” Engine Control Module (ECM) that offers additional features not available on a stock engine. Since it is a “piggy-back” ECM, it uses all the factory data, and then enhances the factory settings to optimize your vehicles performance.

The MAXPower PRO offers a power increase over stock throughout the RPM range, but the power is most noticeable in midrange RPM's. This greatly improves drivability and performance.

Following adaptation between the MAXPower PRO and the OEM PCM, you will notice improved performance. Especially if this is your first time driving a turbo vehicle with a performance module. You will experience more power, better throttle response, better passing and acceleration.



IMPORTANT:

Read all Safety, Warranty, and Installation Instructions before installing this product. Read through these instructions completely so that you understand each step prior to installation.

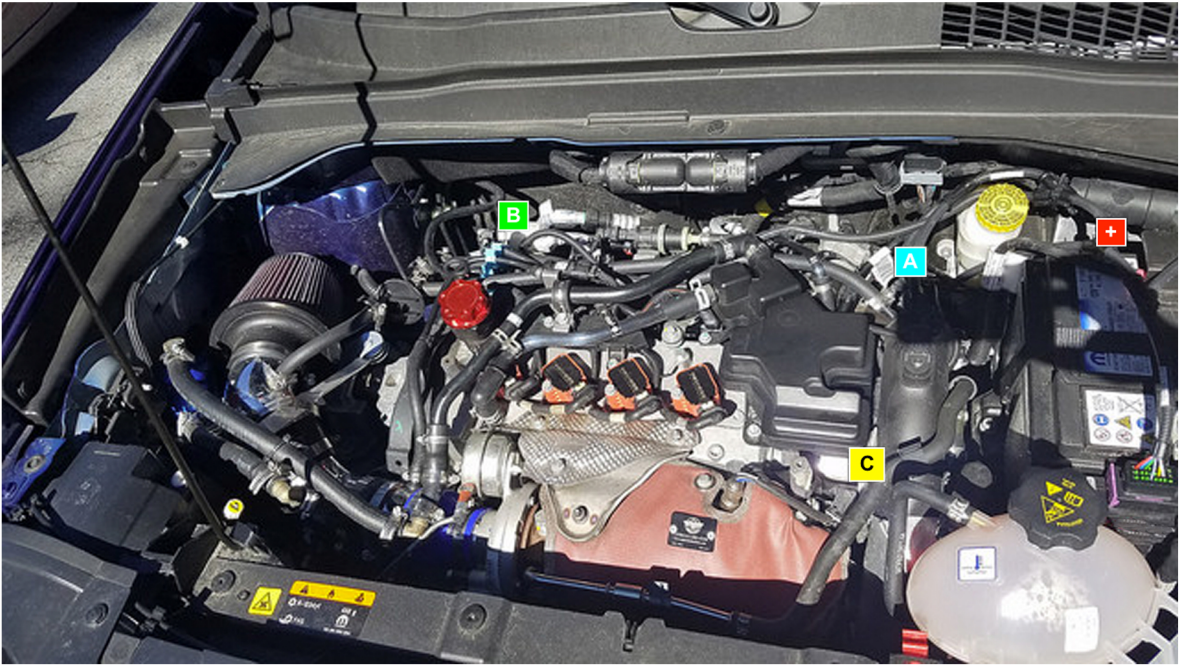
Tools Required:

10mm Open Ended Wrench
13mm socket
10mm socket
6" extension
Pliers and/or fastener pry tool
O-ring picks

Supplied Items:

1. MADNESS Autoworks MAXPower PRO Module
2. MAXPower Wiring Harness
3. Bypass Plug

JEEP RENEGADE 1.4L MAXPower PRO ECM Installation



Module Installation:

The MAXPower PRO can be mounted to the top of the battery located on the driver's side of the engine compartment. Adhere the module using Velcro or double-sided tape, allowing enough harness movement for removal (if/when required.)

Harness Connections:

Your MAXPower PRO is equipped with a harness that can be disconnected at the module itself. It is important to make sure that your MAXPower ECM and/or the bypass plug are always connected to the harness when the wiring harness is installed on the vehicle. Not doing so may cause the vehicle to run improperly, and/or may trigger a Check Engine Light (CEL).

Remove Engine Cover:

Remove two 10mm screws holding down engine cover. Pull up gently on engine cover to remove.



Remove Battery:

Remove negative battery cable



Remove positive cable with 10mm wrench



Remove 13mm nut on battery hold down



Remove battery



Boost Pressure Sensor Connection:

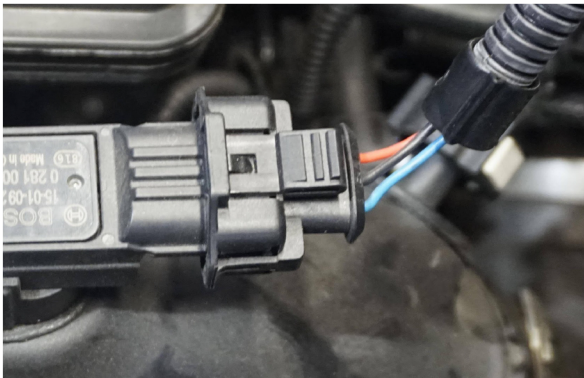


Connect the supplied Boost Pressure sensor wiring harness to the main wiring harness in the engine compartment. To do this you must disconnect the stock wiring harness at the Boost Pressure sensor located under the battery tray on the main charge pipe. This will require removing the battery from the vehicle as well as the battery tray. Plug the supplied Boost Pressure sensor connector into the stock Boost Pressure sensor and the stock engine wiring harness connector into the supplied Boost Pressure sensor connector.

Unplug factory boost pressure sensor



Connect MAXPower boost pressure sensor harness



Manifold Pressure Sensor Connection:

B

Connect the supplied Manifold Pressure sensor wiring harness to the main wiring harness in the engine compartment. To do this you must disconnect the stock wiring harness at the Manifold Pressure sensor located on top of the engine (passengers side near firewall). Plug the supplied Manifold Pressure sensor connector into the stock Manifold Pressure sensor and the stock engine wiring harness connector into the supplied Manifold Pressure sensor connector.

Remove factory MAP sensor connection



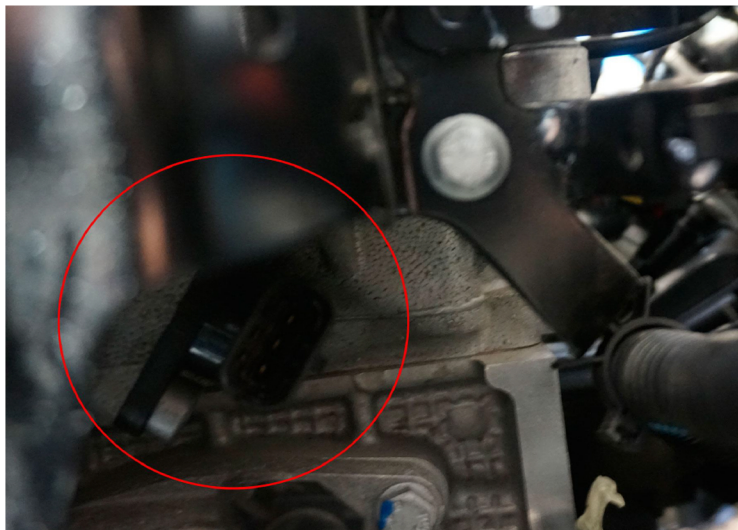
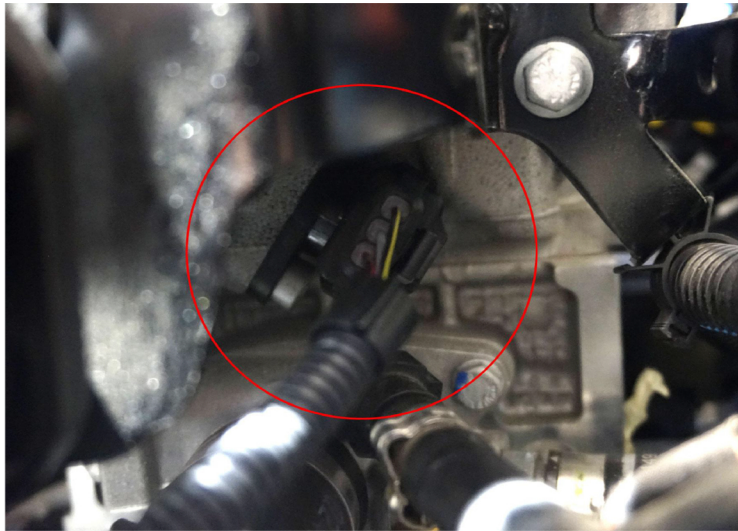
Connect MAP sensor from MAXPower harness



Camshaft Sensor Connection:

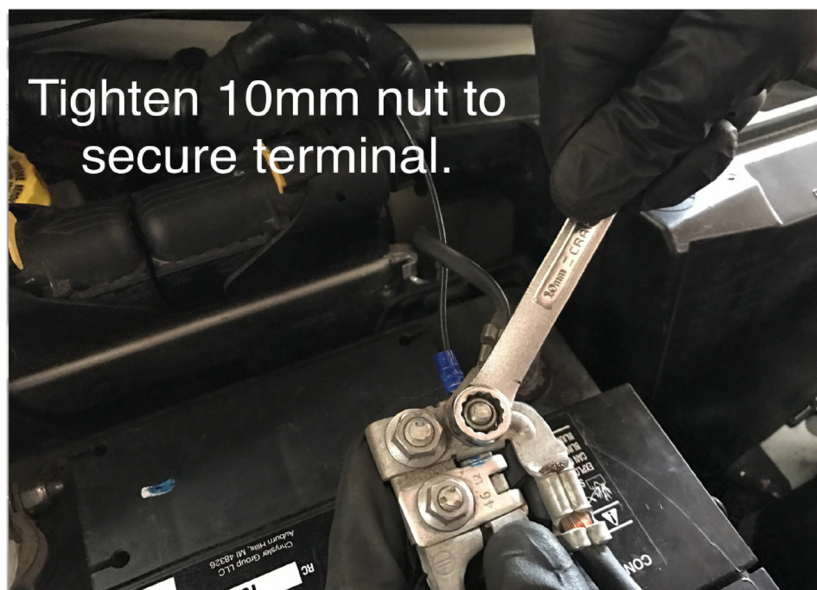
C

Connect the supplied Camshaft sensor wiring harness to the main wiring harness in the engine compartment. To do this you must disconnect the stock wiring harness at the Camshaft sensor located on the drivers side of the block under the round vacuum canister on the head. Plug the supplied Camshaft sensor connector into the stock Camshaft sensor and the stock engine wiring harness connector into the supplied Camshaft sensor connector.



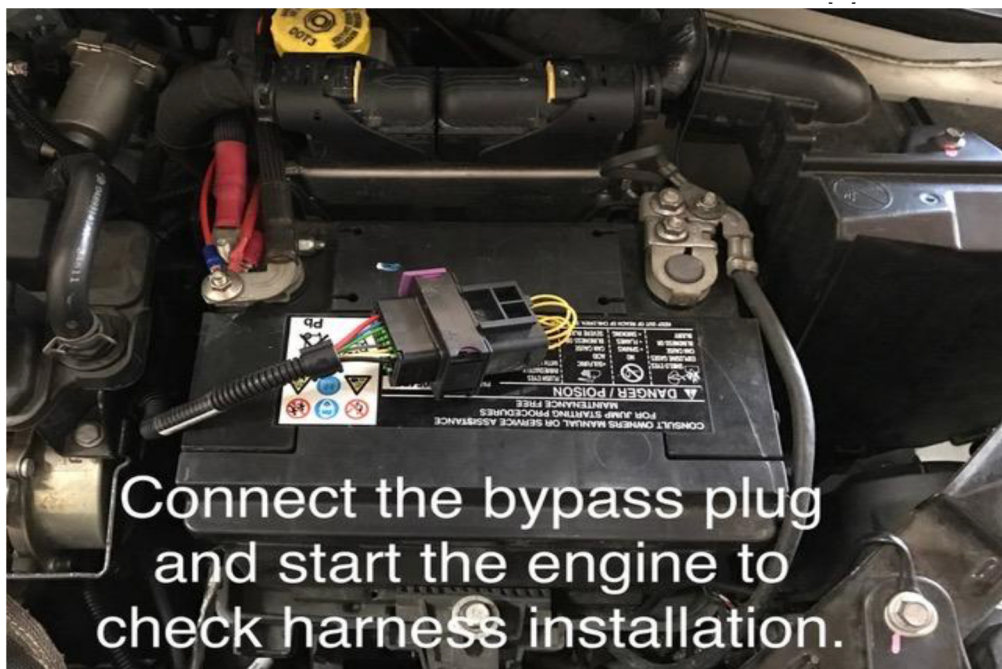
Battery Power Supply Connections:

Connect the supplied 12-volt power connections to the positive (red) and negative (black) battery terminals when reinstalling the battery in the vehicle.



Final Inspection and Operation:

1. Recheck all connections, fittings and fasteners for a properly secure installation.
2. Before initial startup install the included bypass plug to test the wiring harness installation. Start the engine with the bypass connector installed on the harness and check for and CEL lights. If the car starts and drives normally proceed to next step. Should a CEL light illuminate begin troubleshooting harness installation.
3. If step 2 is successful remove bypass plug and install MAXPower PRO ECM
4. The factory ECU will go through an adaptation phase with the MAXPower PRO. In general this process will take approximately 70 miles to complete, after completion the factory ECU and MAXPower ECM will be optimized to run together for maximum performance.



Warranty Information

LIMITED 2-YEAR WARRANTY:

MADNESS Autoworks LLC, (hereafter "**SELLER**") gives Limited Warranty as to description for any product's purpose, productiveness, or any other matter of **SELLER's** product sold herewith. The **SELLER** shall be in no way responsible for the product's open use and service and the **BUYER** hereby waives all rights other than those expressly written herein. This Warranty shall not be extended or varied except by a written instrument signed by **SELLER** and **BUYER**.

The Warranty is Limited to 2 Years from the date of sale and limited solely to the parts contained within the product's kit. All products that are in question of Warranty must be returned shipping prepaid to the **SELLER** and must be accompanied by a dated proof of purchase receipt. All Warranty claims are subject to approval by MADNESS Autoworks.

Under no circumstances shall the **SELLER** be liable for any labor charged or travel time incurred in diagnosis for defects, removal, or reinstallation of this product, or any other contingent expenses. If the **BUYER** sends back a failed unit that is out of warranty and chooses to buy a refurbished unit, the refurbished unit will only carry a 90-day warranty. If the **BUYER** purchases a new unit at a predetermined discounted rate, it will have the standard 1-year warranty.

Under no circumstances will the **SELLER** be liable for any damage or expenses insured by reason of the use or sale of any such equipment.

THE INSTALLATION OF THIS PRODUCT INDICATES THAT THE **BUYER** HAS READ AND UNDERSTANDS THIS AGREEMENT AND ACCEPTS ITS TERMS AND CONDITIONS.

IN THE EVENT THAT THE BUYER DOES NOT AGREE WITH THIS AGREEMENT, THE BUYER MAY PROMPTLY RETURN THIS

PRODUCT, IN A NEW AND UNUSED CONDITION, WITH A DATED PROOF OF PURCHASE, TO THE PLACE OF PURCHASE WITHIN THIRTY (30) DAYS FROM DATE OF PURCHASE FOR A FULL REFUND.

Technical Support

CA 562.981.6800 TX 512.982.9393

To expedite your support call please have your Vehicle Information, Part Number, Serial Number, ready prior to calling Technical Support.

TROUBLESHOOTING GUIDE

The MAXPower Pro is designed for easy, trouble free installation. Please make sure to read all the directions prior to installing this product.

The Troubleshooting Guide we have put together will help to identify most issues that can happen during the installation process. Following the guide below should resolve 99% of most common installation errors. Please review all the information below and carefully check every step mentioned prior to contacting us directly for assistance.

The majority of the time something was missed during the installation process and this guide should help resolve the challenge.

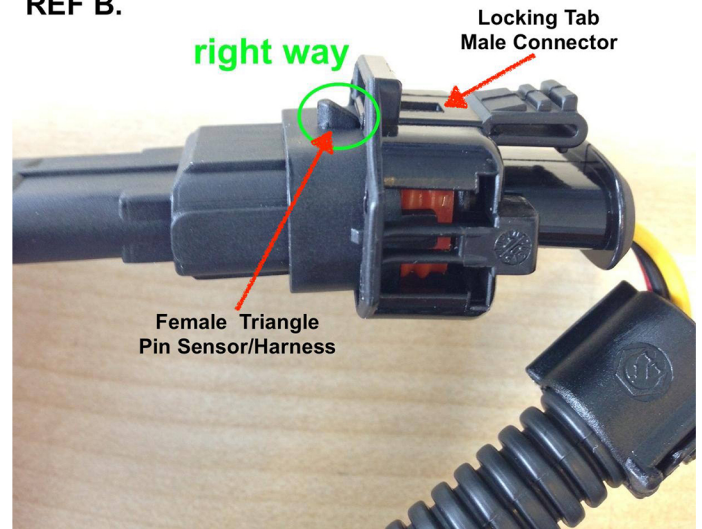
Please note that most of the time the cause of a Check Engine Light (CEL) or drivability problem can be traced back to a faulty harness connection or a connection that is plugged in upside down. **REF A.**

If you are running into these issues we ask that you check the connection integrity and verify that all connections are seated and plugged in the correct orientation. **REF B.**

REF A.

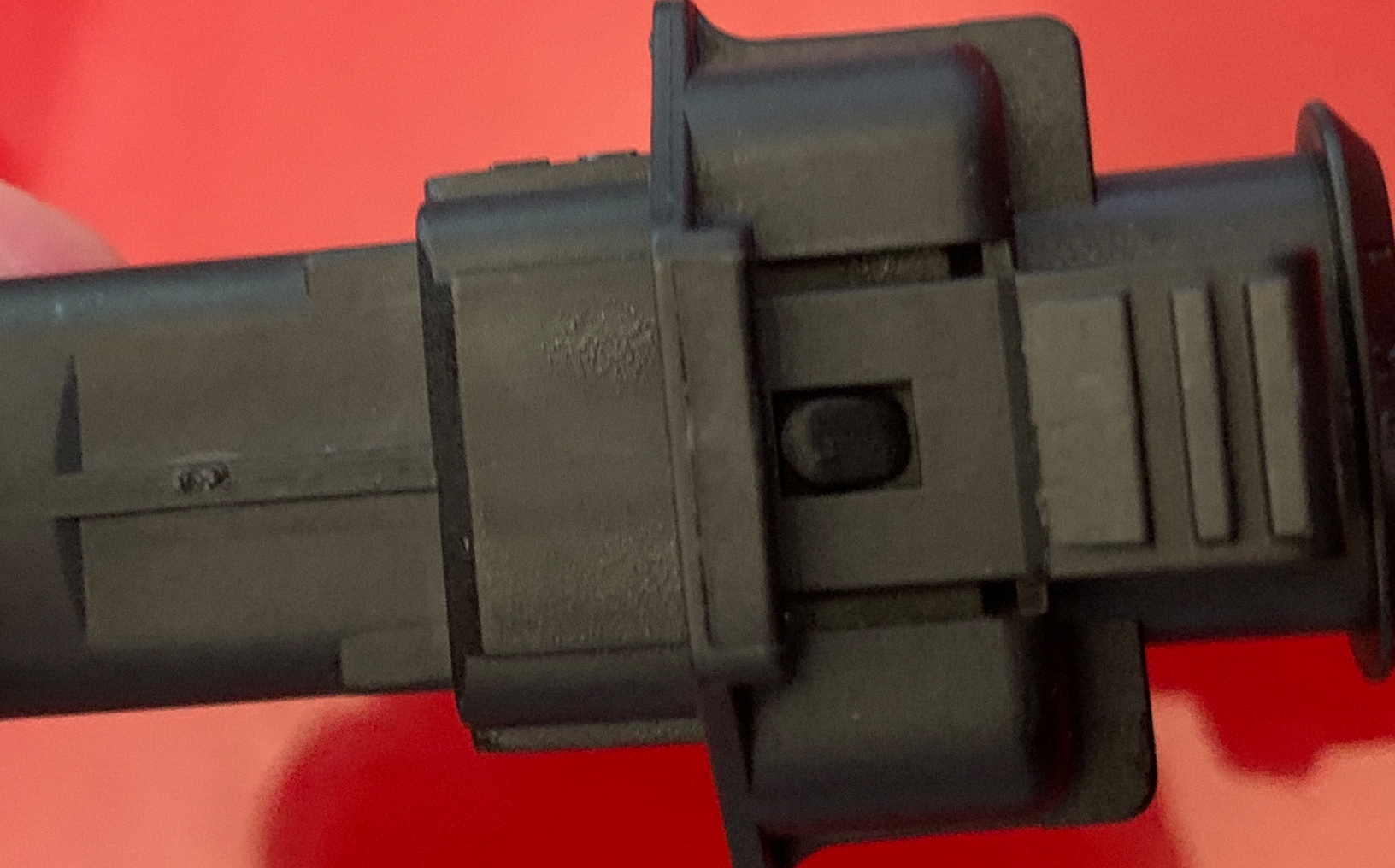


REF B.

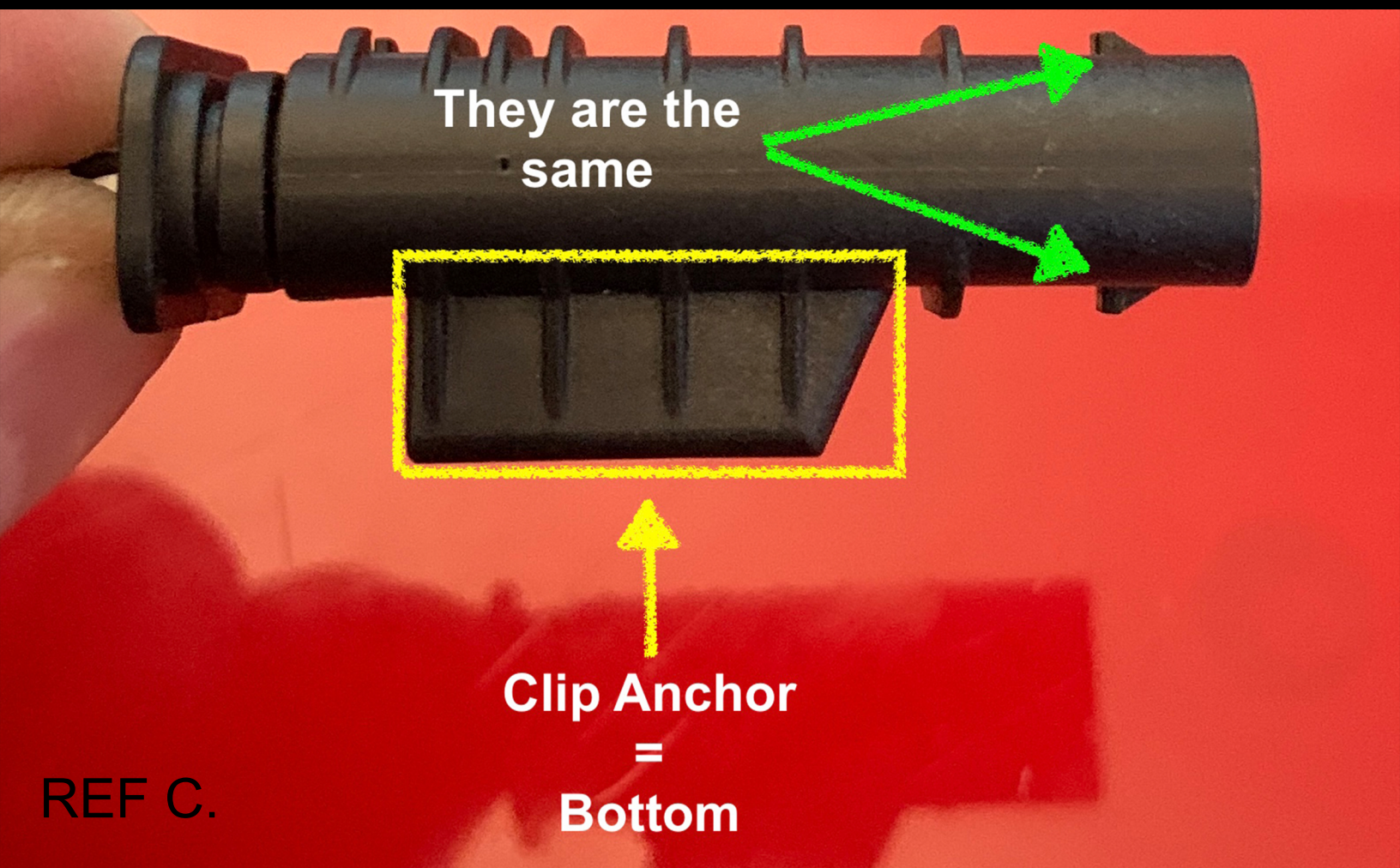


A connection is fully seated when the locking tab on the male connector clicks over the female triangle pin on the sensor/harness connection.

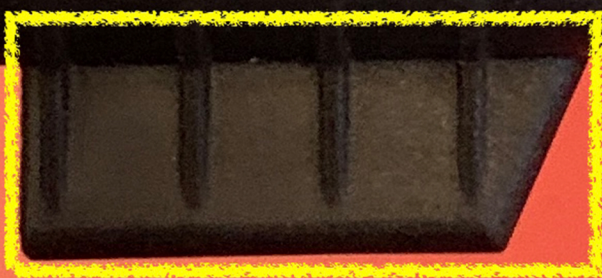
See the photo below.



NOTE: On some applications, the "pin" is shaped the same on both sides. REF C.



They are the
same

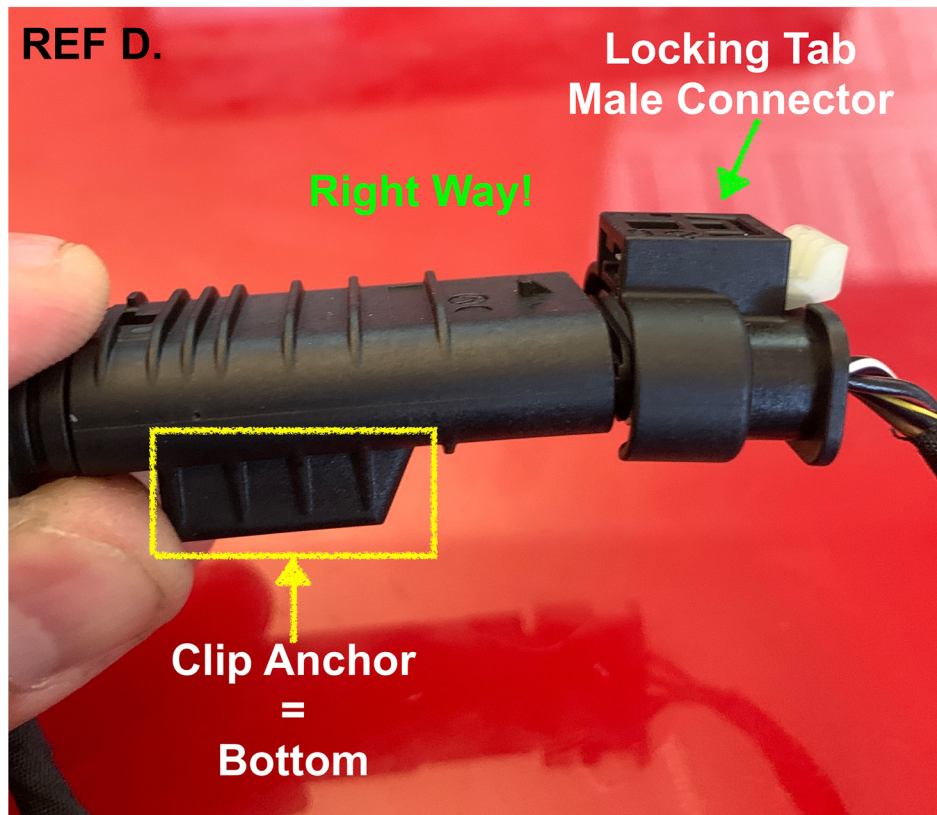


Clip Anchor
=
Bottom

REF C.

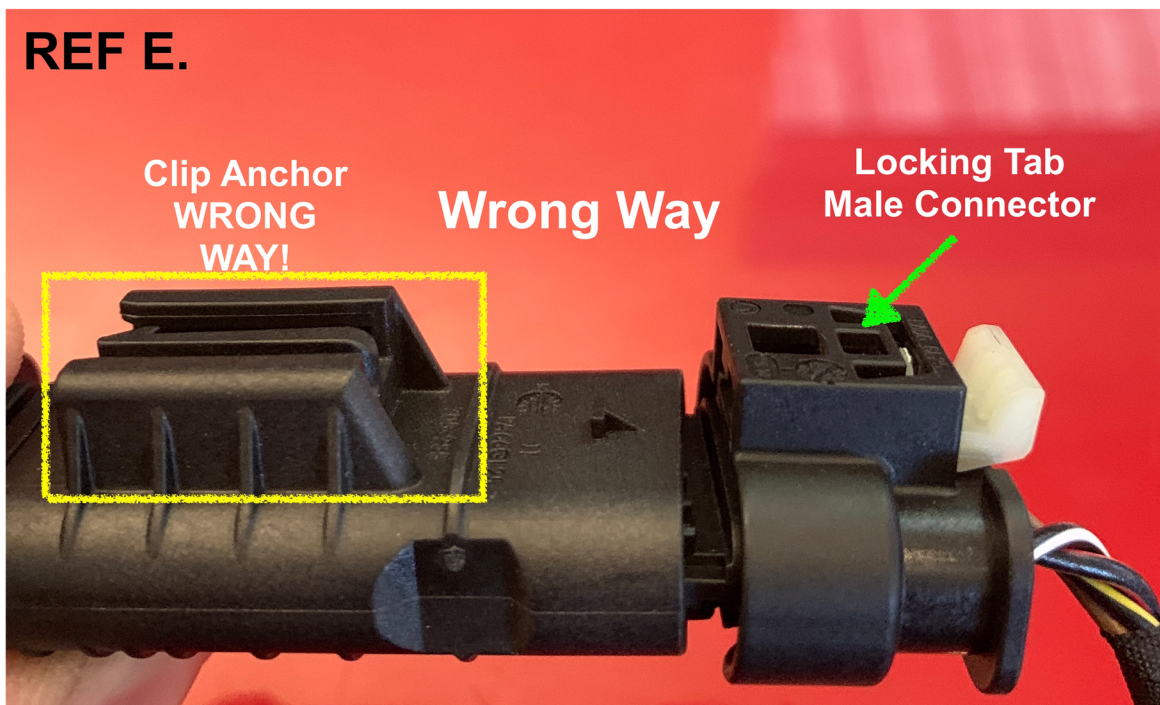
In those cases, you must determine the correct orientation of the connection. As a general rule, the clip anchor that is molded into the female connections always denotes the bottom connection. **REF C.**

Below is an example of the CORRECT orientation. **REF D.**



NOTE: If you have a Jeep Renegade and get a warning light on the cluster that states "Service Throttle Control" you most likely have plugged in the Boost Pressure Sensor upside down. See the photo below of the INCORRECT orientation that caused the problem. **REF E.**

To fix this issue plug the connection in so it looks like **REF D.**



If you get a CEL and several trouble codes upon first start with the bypass plug installed you most likely have a bad 12v or ground connection.

All MAXPower Pro units use a 12v power supply.

The red 12v cable at the main connector must have a permanent 12v source, **(IT CANNOT HAVE A SWITCHED 12V SOURCE)**. The best place to connect this is direct to the battery + terminal or power distribution block located under the hood of most vehicles that have trunk-mounted batteries.

The ground comes from the camshaft plug on all harnesses. If you test the black wire at the main connector of your MAXPower Pro and have no ground signal you most likely have an issue with the camshaft plug connection, please check the orientation of this connector.

Occasionally vehicle manufacturers offer software updates to the vehicle that can make changes to tolerances in the engine, this can cause the tuning box to start throwing trouble codes for boost pressure or throttle. If you start to get errors, limp mode, or faults' appearing after your vehicle has been to the dealer, then it may have had a software update. Please notify us so that we can find a vehicle with the update done to test and make a new mapping file that works with the new update.

- Make sure all connections are in the correct orientation with the sloped locking pin on the female connection/ sensor corresponding to the locking tab on male connection.
- Send clear photos of the all wiring harness connections where you can clearly see the male locking tab and female/ sensor connection.
- If applicable, send a photo of the 12v battery connection.
- Send a photo of the decal located at the main module connection. **REF F.**
- Send a photo of the decal located on the back of the module. **REF G.**
- Send a wide shot of the engine bay and circle the connection locations.
- Use a code scanner and list all trouble code(s) that you have encountered.
- Besides the Check Engine Light are there any other warning lights or messages illuminated on the instrument cluster?
Example: Service Throttle Control, ESC Unavailable, Hill Assist Unavailable, Lightning Bolt Symbol Illuminated, ETC.



If none of the tips above remedied your issue we ask that you please provide us with the information below. Email info@madnessautoworks.com and one of our customer service representatives will get back to you within 24-48 hours.



NOTE: Manufacturer software updates to vehicles do not qualify as a reason to return the product as being faulty, the unit is not faulty, it simply needs to have the mapping changed to work with the update. It may take us some time to located a vehicle with the new software version and alter the mapping to work with it.