

GMR Inductive RPM Pickup
PN: 680-SN-GMR

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Installation of the GMR Inductive RPM Pickup

Items required for installation:

1. GMR Inductive RPM Pickup: PN: 680-SN-GMR
2. PWR / RPM cable: PN: 680-CA-PWR-4P

The GMR pickup enables the user to easily obtain a tach signal that is compatible with the G2X, from vehicles that typically provide no method of acquiring such a signal. The GMR pickup is designed for the following type of ignition/coil systems:

- Capacitive Discharge Ignition
- Inductive Coil Per Cylinder Ignition
- Distributorless Coil Pack Ignition
- Points Style Ignition
- Diesel Injector

We will first review how to connect the GMR pickup to each of the above type of systems. Following that, we will review how to connect the GMR pickup to the G2X.

Before starting installation, insure power to the G2X and the vehicle is off.

The MSD GMR pickup can be used with inductive or capacitive ignition types to provide an rpm signal of 30% duration when the ignition coil fires. Two washers are provided with the pickup and must be installed in one of two positions depending on the type of ignition driving the coil.

Note: For late model applications, it is recommended to have a wiring schematic of the vehicle's ignition system.

Capacitive Discharge Ignitions

For a CD Ignition such as an MSD, the two washers should be installed under the metal tab to provide a small air gap between the metal tab and the pickup sensor (Figure 1). Refer to note on Figure 2 for RPM Device programming.

Inductive Coil Per Cylinder Ignition

For an inductive ignition (mostly stock applications) the metal tabs must make contact, therefore no washer is required. There should be no air gap between the metal tab and the pickup sensor (Figure 2). Refer to note on Figure 3 for RPM Device programming.

Distributor Less Coil Packs

On distributorless applications, the GMR pickup must be installed on the primary lead going to one of the coils. If the pickup is installed on the main ignition +12v wire feeding more than one coil, the pickup may not operate correctly at high speeds because of overlapping coil dwell current failing to fall to zero current between coil operating cycles (Figure 3). Refer to note on Figure 3 for RPM Device programming.

Diesel Injector

The GMR Pickup can easily be clipped to power fed wire of a Diesel Injector to provide a tach signal. On a diesel, the washer must be installed under the screw head on top of the metal tab so there is no air gap between the metal tab and the pickup sensor (Figure 4).

Note: If the GMR Pickup is attached directly to the individual injector the RPM device that is being used must be programmed for single cylinder application. If the GMR Pickup is attached to the main 12 volt feed to the injector harness, the RPM device must be programmed for 4, 6 or 8 cylinder depending on application.

INSTALLATION INSTRUCTIONS

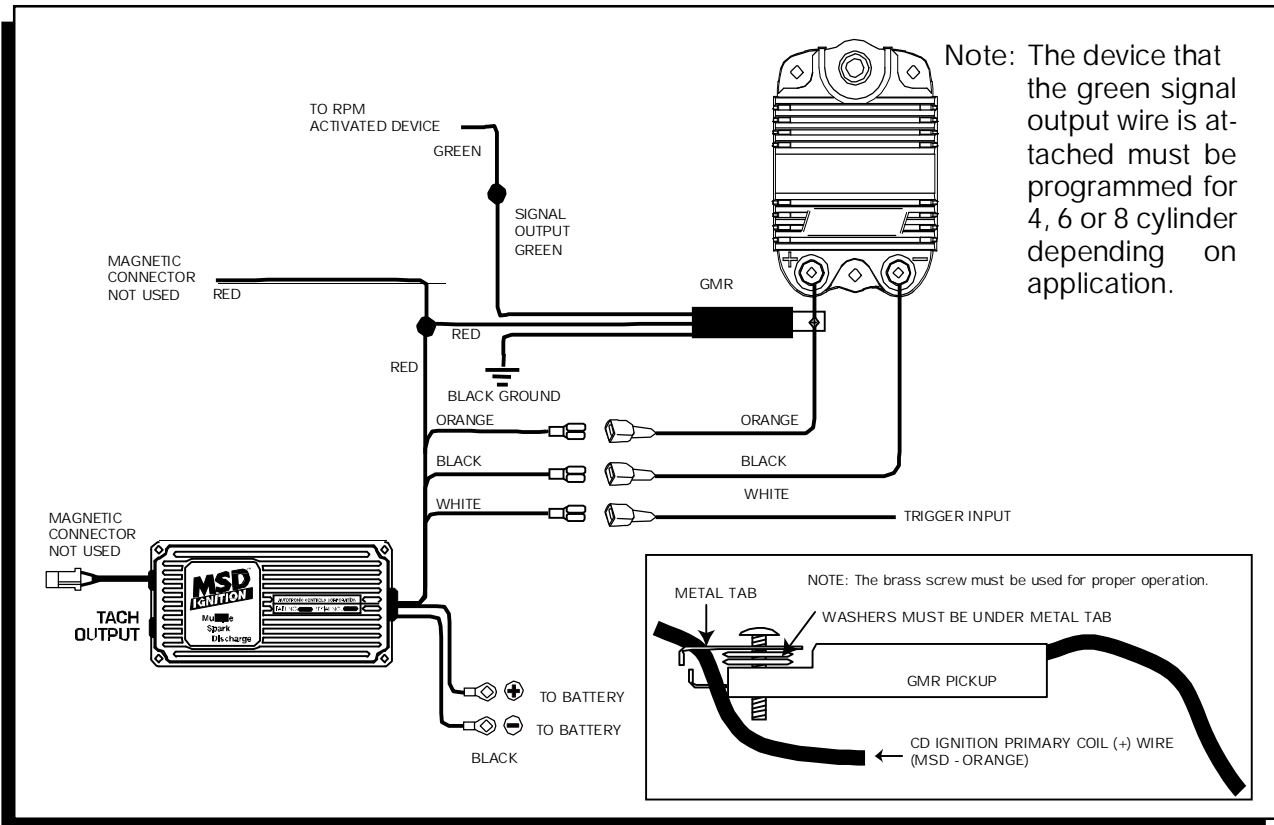


Figure 1 Installation with a Capacitive Discharge Ignition Control.

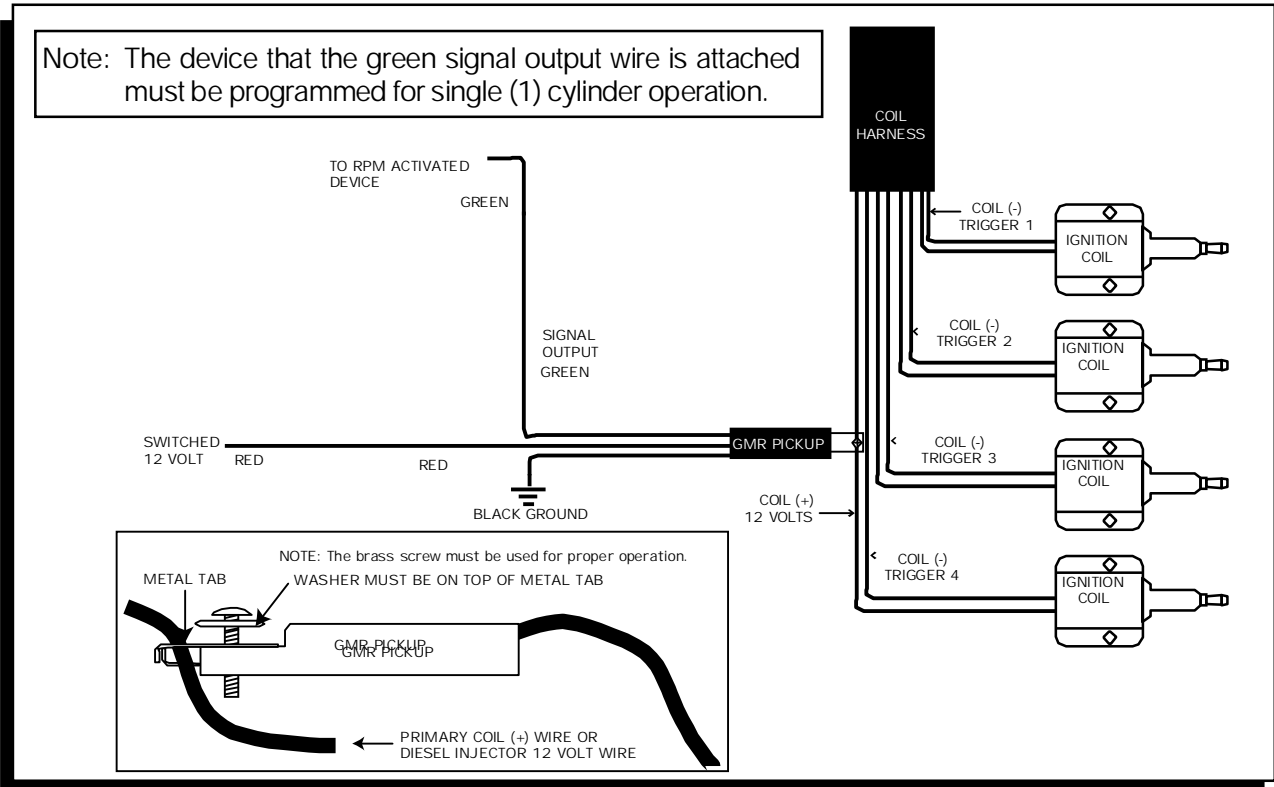


Figure 2 Installation on an Inductive Ignition System.

INSTALLATION INSTRUCTIONS

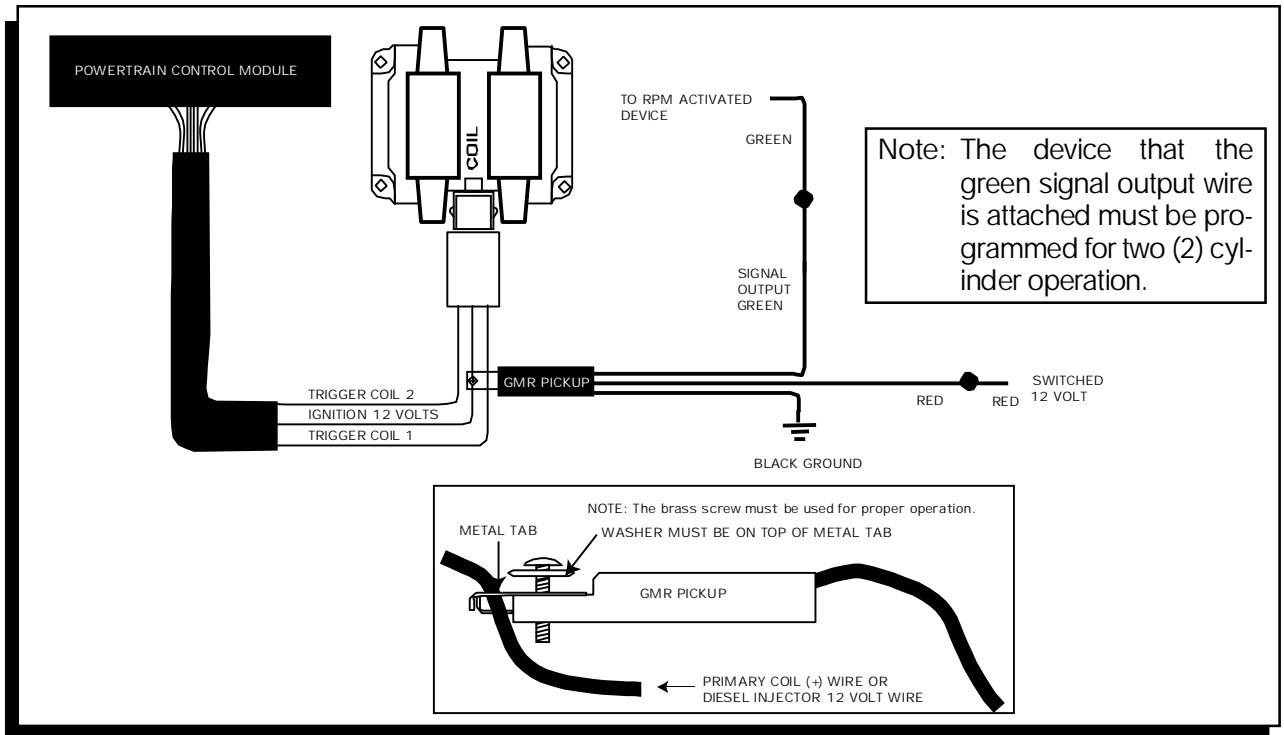


Figure 3 Installation on a Distributorless Coil Pack.

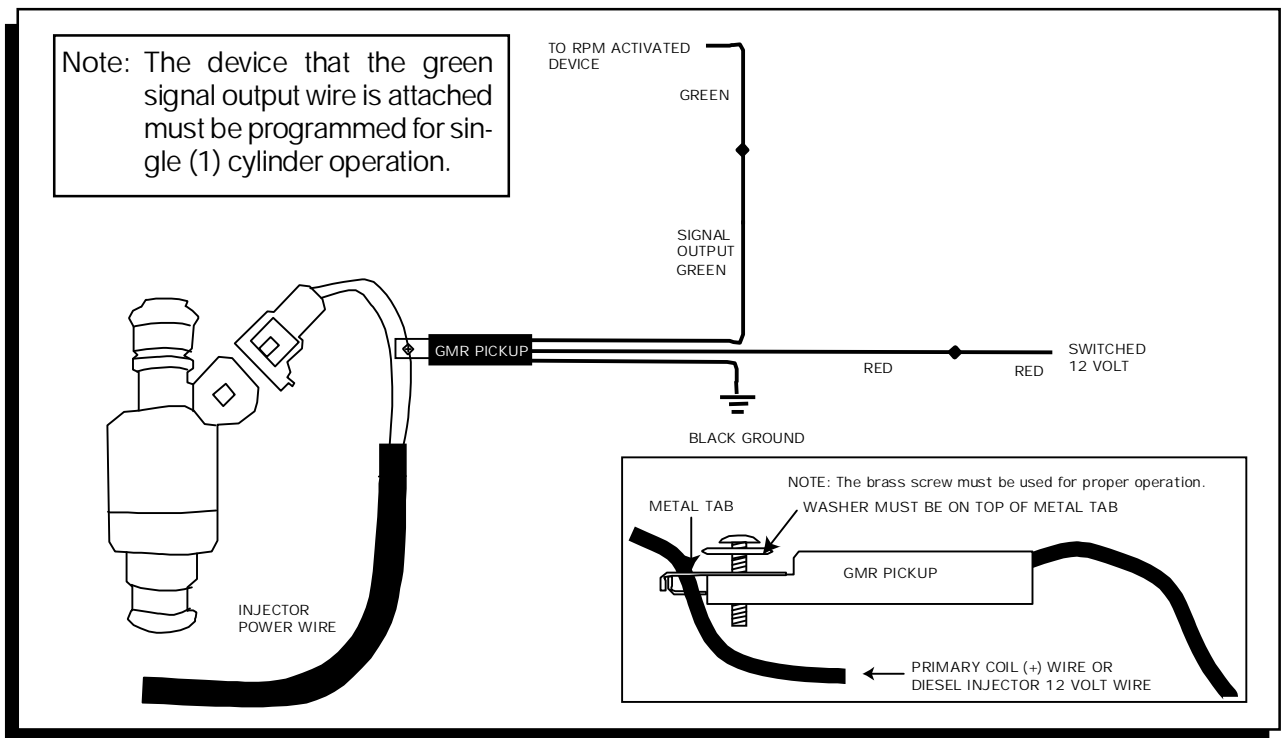


Figure 4 Installation to a Diesel Injector.

INSTALLATION INSTRUCTIONS

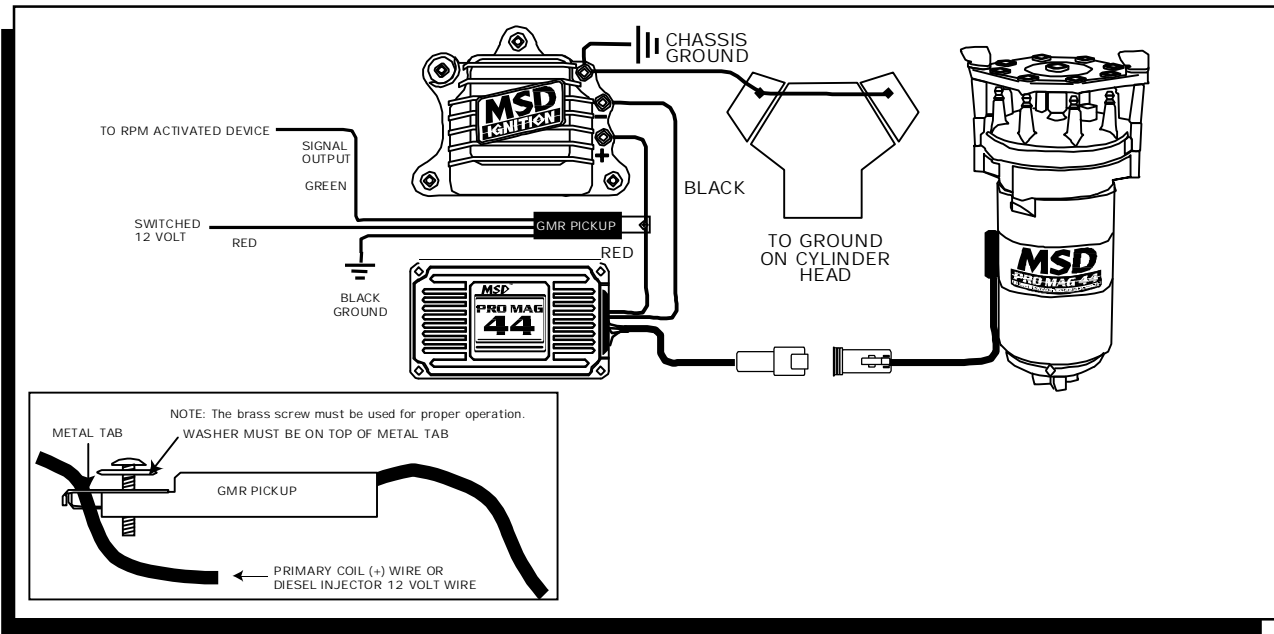


Figure 5 GMR to PN8963 Shift Light on Pro Mag 44 Electronic Points Box.

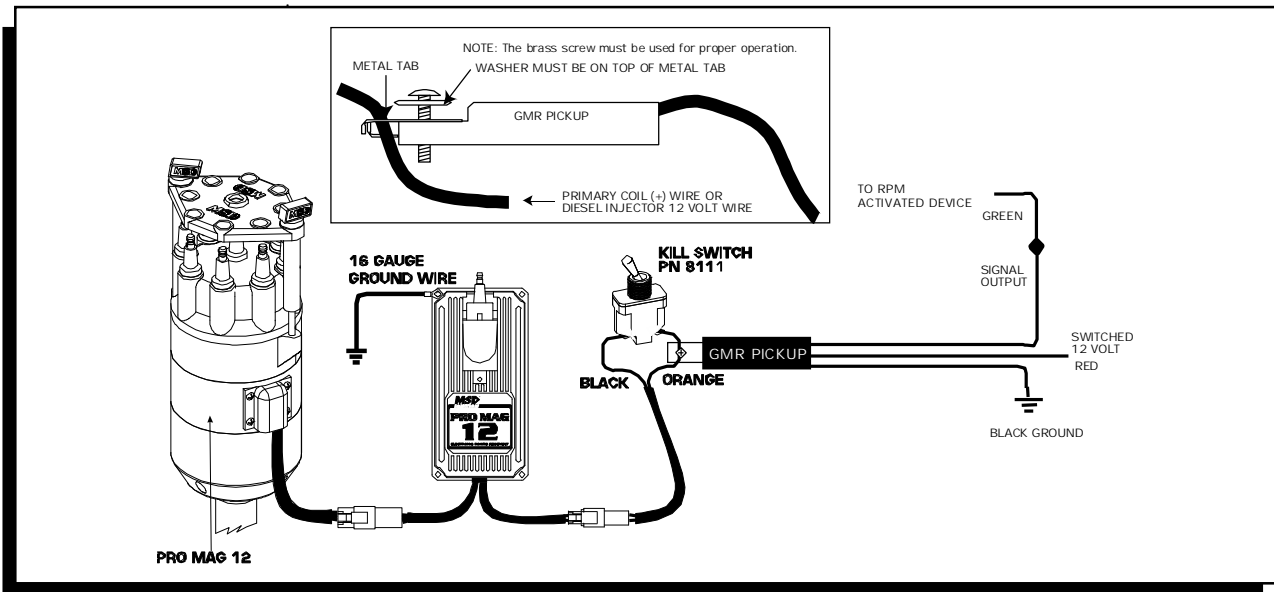


Figure 6 Wiring the 12 Amp Pro Mag with GMR and PN8963 Shift Light.

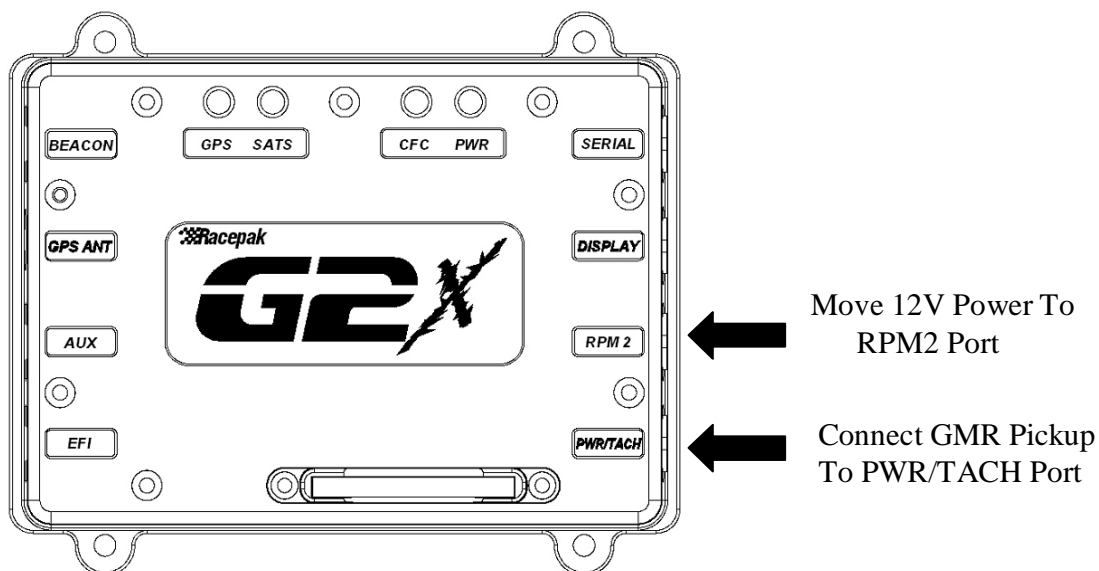
Connecting the GMR Pickup to the G2X

Following the simple connection of the GMR pickup to the appropriate coil wire or diesel injector wire, the final step is to connect the pickup to the G2X. As noted in the previous section, the GRM pickup requires the use of a PWR/RPM cable. At this time, locate the PWR/RPM cable. Following this:

1. Connect the PWR/RPM cable to the GRM pickup, by means of the three pin Molex connector.
2. Route the PWR/RPM cable back to the G2X, insuring the mounting location of the cable avoids contact with hot objects and is not located near any part of the ignition system, such as plug wires, coil, ignitions boxes, etc.

If your G2X is currently in use, there should be a PWR/RPM cable connected to the PWR/RPM port of the G2X. This is the how the G2X obtains power. In order to connect the GMR pickup to the G2X, it will be necessary to move the existing PWR/RPM cable that provides power to the G2X to the RPM2 port.

Following this move, simply connect the PWR/RPM cable utilized by the GRM pickup, to the PWR/RPM port of the G2X. Installation is complete



Programming the Display Dash for Correct Pluse Count

By connecting the GMR pickup to the PWR/RPM port of the G2X, this allows for the use of the pre-defined Engine RPM channel found in the G2X_Config setup file. From the factory, the G2X is pre-programmed to allow the correct display of Engine RPM from a V-8 motor.

Referring back to the previous installation section, note there are instructions that indicate must be programmed for single (1) cylinder or the appropriate cylinder number according to the type of ignition/coil system in use.

To program the display dash for the correct pulse count:

1. Determine the correct cylinder (pulse) settings per the previous instructions.
2. Power up the G2X
3. Enter Setup Mode #1 by holding down the left dash button for two flashes of the red shift light LED s.
4. Advance the dash to the PULSE r1 programming mode by pressing the left dash button for one flash of the red LED s and releasing. This should be repeated 3 times.
5. Using the right dash button, increase or decrease the pulse settings, as indicated on the right portion of the display, until the appropriate number is in view.
6. Using the left dash button, hold it down for three flashes of the red LED s to save programming and exit setup.

At this time, the G2X programming should be complete. Insure the PWR/RPM cable is not installed in a location that can interfere with the operation of the engine. Start the vehicle and verify the dash RMP display is correct.