

DRIVE SHAFT RPM SENSOR INSTRUCTIONS

Overview:

The drive shaft RPM will tell you how many revolutions per minute your drive shaft is spinning. Typically each drive shaft kit will come with a 2 magnet collar—although 1, 4 and 8 magnet collars are available for special order. Note that the threads are 5/16”.

Part Numbers:

#8010	9” Ford Small Pinion Drive shaft RPM Monitor Kit	1.878”
#8015	9” Ford Large Pinion Drive shaft RPM Monitor Kit	2.190”
#8020	Universal Drive shaft RPM Monitor Kit	

Installation:

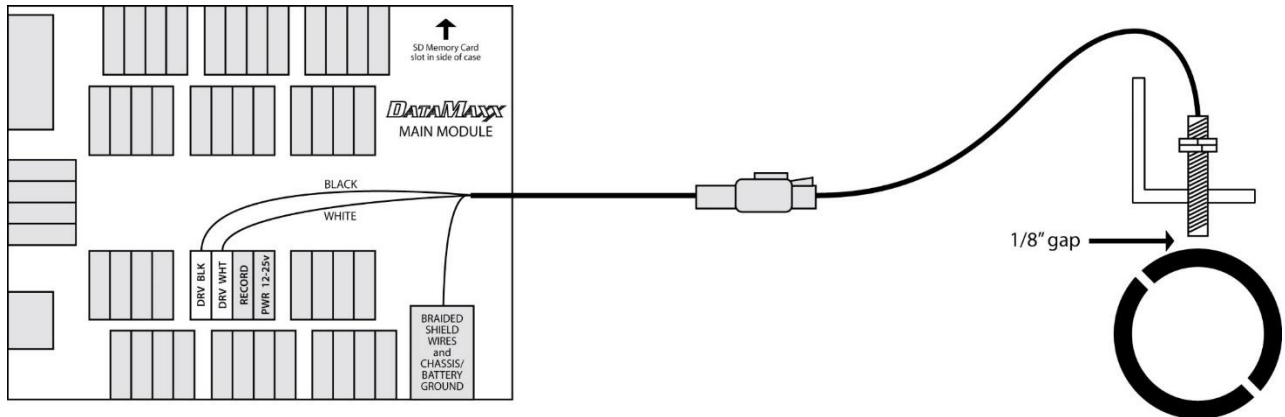
First, verify that the collar (if ordered) fits your drive shaft. When installing the collar, you want to make sure that it is located in a position that the sensor can look directly down upon. You also want to make sure that the magnets are completely opposite of each other (180 degrees) and not right next to each other (90 degrees). Doing this will result in a constantly fast, then slow signal, that will look very spiky. If your collar does not tighten down enough, remove it, and shave down the 4 spots where each half of the collar meets each other. Be sure to shave an equal amount off of all 4 edges so the magnets will stay a true 180 degrees apart.

The drive shaft sensor is to be passed through the hole in the bracket and then held in position by the two plastic jam nuts. The sensor should be pointed directly toward the center of the rotating shaft. The exact position of the sensor in the bracket should be adjusted to achieve a gap of approximately 1/8”. Using a 1/8” drill bit in between the collar and the sensor will give you a quick and easy gap placement.

Connect the white wire to the Main module “DRV WHT” terminal (id #34) and the black wire to “GND BLK” terminal (id #33).

Dip Switch:

N/A



Calibration:

The *DATAMAXX* drive shaft RPM channel is pre-configured for use with a 2 magnet collar. You have the option of a 1, 2, and 4 magnet configuration, as well as, the ability to use this channel for Engine RPM and switch events.

To Calibrate:

- Record a 5 second test log file, and download the log file correctly using the SD button.
- Select Edit, then Properties. You are now in the Channel Properties area.
- Find the “Drvshf” line, follow it to the right and click on the finger pushing a red button
- Change the “Type of Sensor” and change the “Channel Name” to what you want.
 - Note that changing the channel name anything besides “Drvshf” will disable your calculated channels.
- When you are done, select OK, and then “Send Config to DataMaxx”.

For more information, please see “Initial Calibration” in the Software section.

Testing:

Testing the drive shaft input can be dangerous. The safest method is to wait until you’re on the track. Nevertheless, it is possible to test this input by putting the car on stands. Again for the sake of safety, it is not recommended that you run the engine in order to turn the drive shaft and tires. Instead, spin the tires by hand as fast as you can while the transmission is in neutral. The drive shaft should turn fast enough to get a very small reading. If you can’t get a reading, you may not be able to turn the tires fast enough, and should wait until you get to the track.

Troubleshooting:

- Adjust The Gap: If you are not getting any signal after going down the track, the first step is to adjust the gap between your driveshaft sensor and the collar. It's recommended to first move the sensor closer, incrementally until you cannot move it any closer. If that does not work then start backing it out. Once you find a spot where it works well, you should be good to go. If adjusting the gap does not change anything you need to perform the "Tap Test".
- Tap Test: If adjusting the gap does not work, the next step is to perform a Tap Test. Please refer to "Testing RPM Channels" in the Troubleshooting section on instructions on how to do the Tap test properly. If the tap test fails, please call Computech Tech Support for more information. If you get a signal from the Tap test then that tells us that the Module and sensor channel are working correctly and the issue is either the wiring, extension cable, the sensor itself or the gap and you need to perform the "Magnet Test".
- Magnet Test: The next step after confirming the Tap test works is to remove the sensor from where it is mounted, leaving it wired up to the entire system. We now want to record a log file while waving a magnet in front of the tip of the sensor. To do this properly, you want to get the magnet as close to the tip as possible and move it back and forth rather quickly, and steadily. Doing so should result in at least some random spikes on the graph and if done consistently will result in a steady RPM. If the magnet waving test works and you see an RPM signal on your graph, then you now know that the wiring, extension cable and sensor itself are working correctly and the issue must be your gap. At this point, go back to the 1/8" gap and incrementally move closer. If you still cannot get it after adjusting the gap again, call Computech Tech Support. If the magnet test fails, then we need to "Check the Extension Cable".
- Check the Extension Cable: The first step is to make sure your extension cable is making a good connection at the Module. To do this, it's recommended to physically remove the wires from the terminal, visually inspect them to make sure the insulation was not being crimped down on, and then re-install the wires back into the terminals. Do the Magnet Test again. If the Magnet Test fails again then the final step is to check continuity between the end of the extension cable and the terminals the wire is connected to. To do this, you may have to remove the orange cover off of the extension cable plug—take a pair of needle nose pliers and pull it out. Then check the continuity between the plug and the terminal it is connected to. If you have continuity, your extension cable is fine, and the issue is your driveshaft sensor itself. Contact Computech Tech Support. If the continuity test fails, the issue is your extension cable and you need to replace it with a new one.