



Servicing a ThunderMax Equipped Motorcycle

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This document is intended for new ThunderMax dealers and for service providers who are encountering a ThunderMax-equipped motorcycle for the first time. This document features the factory recommended steps for diagnosing a problem on a ThunderMax-equipped motorcycle. These steps have been developed as a guide to help you trouble-shoot a problem, and should be followed before contacting ThunderMax for additional aid.

The ThunderMax AutoSupport function can be used to compile the learned data in the module map and stored diagnostic trouble codes, sending them directly to ThunderMax product support. ThunderMax product support specialists can provide additional aid and, with the information from the module, assist in finding a resolution. When using the automated support feature, *be sure to include a detailed description of the motorcycle's symptoms.*

In most cases, operational problems associated with ThunderMax-equipped motorcycles are damaged wiring, corroded connectors or other abnormal conditions on the motorcycle – *not a malfunctioning ThunderMax.*

In the ThunderMax software, product support documents and bulletins are available which will help when diagnosing problems. Go to "Help" on the main tool bar to view these PDFs. *The PDF labeled "Improving Conductivity" is extremely helpful when solving electrical anomalies typically found in the field. In Addition, ThunderMax Tech Support videos can be found on-line at www.YouTube/ThunderMaxAV.*

Trouble-Shooting a ThunderMax-Equipped Motorcycle

- 1) Make sure your service order accurately defines the condition as described by your customer.
- 2) Make sure the service writer has determine if this is a "New Problem" or if the condition "Was Present" since ThunderMax installation.
- 3) Do you have updated software on your shop computer? If not, download the latest software from the ThunderMax website:
<http://thunder-max.com/Support/Instructions/FuelInjectionSoftware.aspx>
- 4) Open the ThunderMax software on your shop computer and link to the ThunderMax module on the bike. The "Basic Set Up" tech video on You Tube is helpful for first time users. The video demonstrates how to link to the module, and can be found here:
<http://www.youtube.com/watch?v=5nr3akoWt6w>
- 5) In the software, go to "Map Editing" in the main tool bar. Then, select "Read Module Map & Settings". Finally, select "Read Learned Fuel Adjustments".

- 6) Under the Tuning Maps tree in the software, select "Module Configuration" and "Diagnostic Codes". Look for current or historic codes. It is a good idea to record this data for future reference. Do the codes match the customer's complaints? Find the cause and repair.
- 7) On the main tool bar, select "TMax Control Center" and read additional information about condition of bike's tune as recorded by the ThunderMax.
- 8) If further assistance is required, select "TMax Auto Support" on the main tool bar to collect and send your map data to our support team. You can, also, collect and save the map data for your records.
- 9) If the condition or complaint has been present since module installation, the base map may not be a good match to the engine. Check to see if additional or newer map options are available in your software. Go to "EFI Maps" in the main tool bar, then "EFI Map Listings and Definitions" to open the map library. For further assistance on special maps, contact ThunderMax product support.
- 10) Before sorting and selecting a new base map, we strongly suggest you view the YouTube video titled "Basic Set Up". This video demonstrates the process of sorting and selecting a base map, this is helpful for first time service providers. The video can be found here: <http://www.youtube.com/watch?v=5nr3akoWt6w>

Please Note: Your shop computer must have an internet connection to download the ThunderMax software, use the automated support email function, access map updates and watch tech support videos on YouTube.

In addition to the steps above, it is a good idea to check the overall condition of the motorcycle. Be sure to check the following service related items:

Fuel System

- 1) Fuel filter requires service every 25-30k miles.
- 2) Verify fuel pressure, H-D spec is 55-62 lbs - If pressure is low or not holding to spec, remedy this condition before making any adjustments to the map.

Ignition

- 1) How old are the spark plug wires? Inspect area on the wire that may be rubbed through causing a leak.
- 2) Wires should be replaced every 3 years regardless of mileage. We *only* recommend the factory OE plug wire.
- 3) Perform a compression test.

ThunderMax Product Support is available to help you when working with the ThunderMax for the first time. Contact Zipper's Performance Products during regular business hours, MON - FRI, from 9 AM to 6 PM, E.S.T. by dialing (410) 579-2828. Product Support is available by email at ProductSupport@ZippersPerformance.com. Videos are available on-line at: www.YouTube.com/ThunderMaxAV.