



**THUNDERMAX**  
*EFI made simple.*

## **Diagnostic Trouble Codes**

### **ThunderMax High Resolution ECM For 2008-2010 Delphi®-Based Air Cooled Touring Motorcycles**

The ThunderMax EFI controller is not legal for use or installation on motor vehicles operated on public highways in the State of California or other States where similar emission control laws may apply. A 50 state ARB legal version, the ThunderMax 50, is now available.

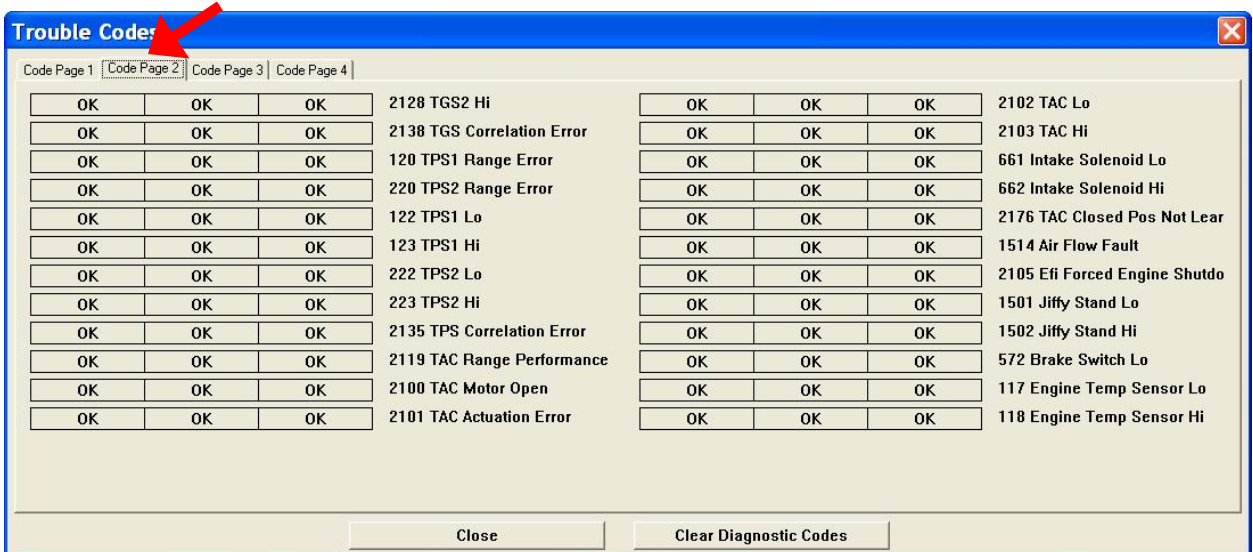
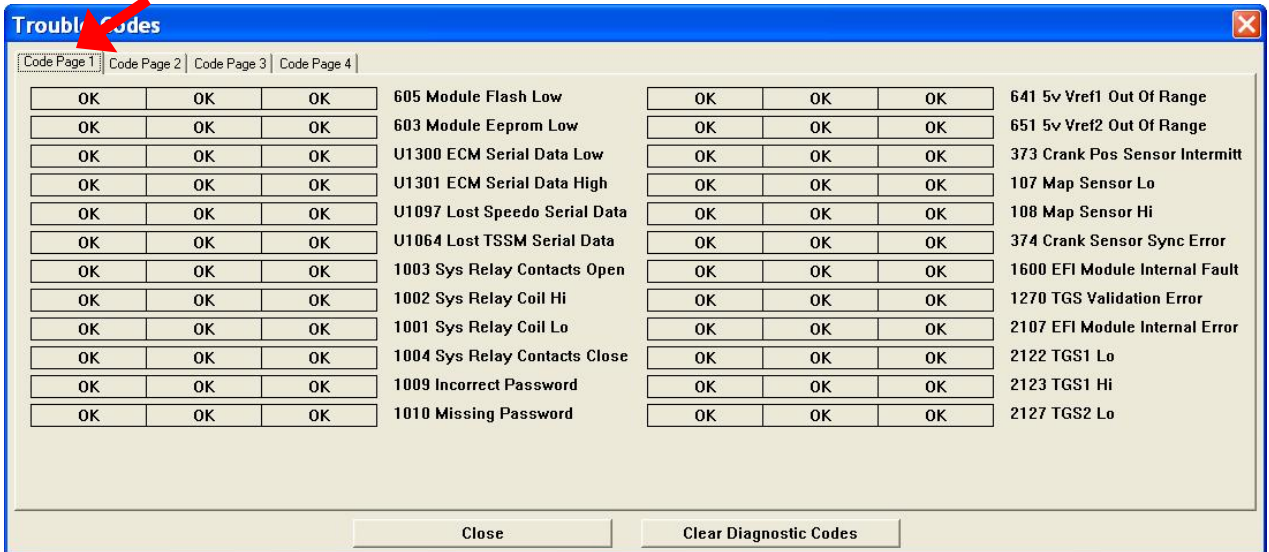
The user shall determine suitability of the product for his or her use. The user shall assume all risk and liability in violation of regulations and any incurred financial obligations due to vehicle inspections or emissions tests.

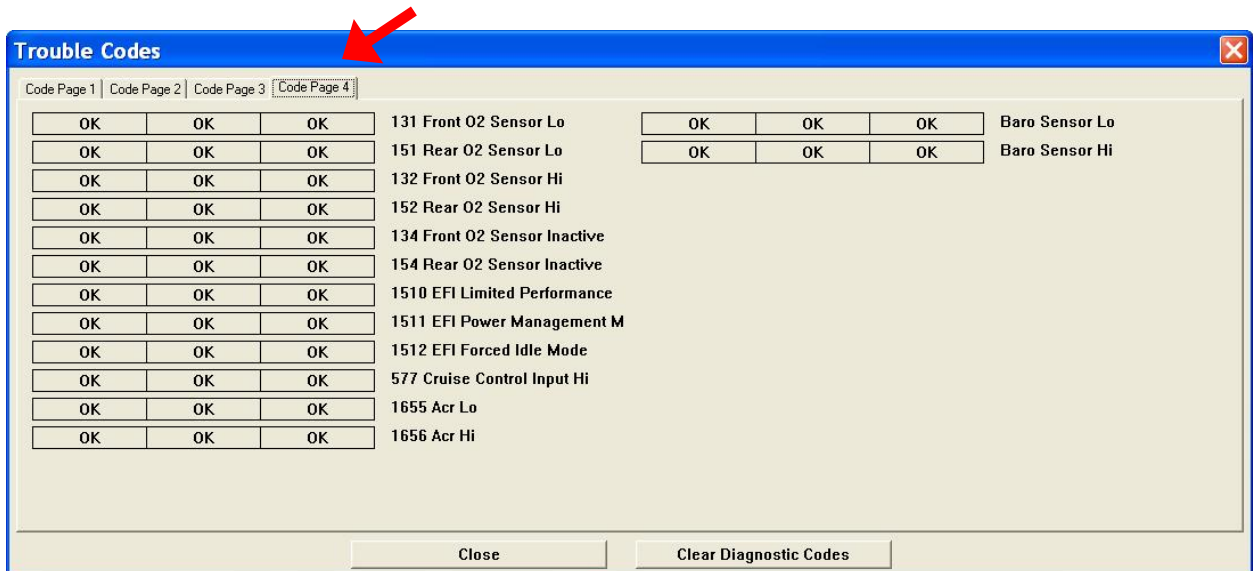
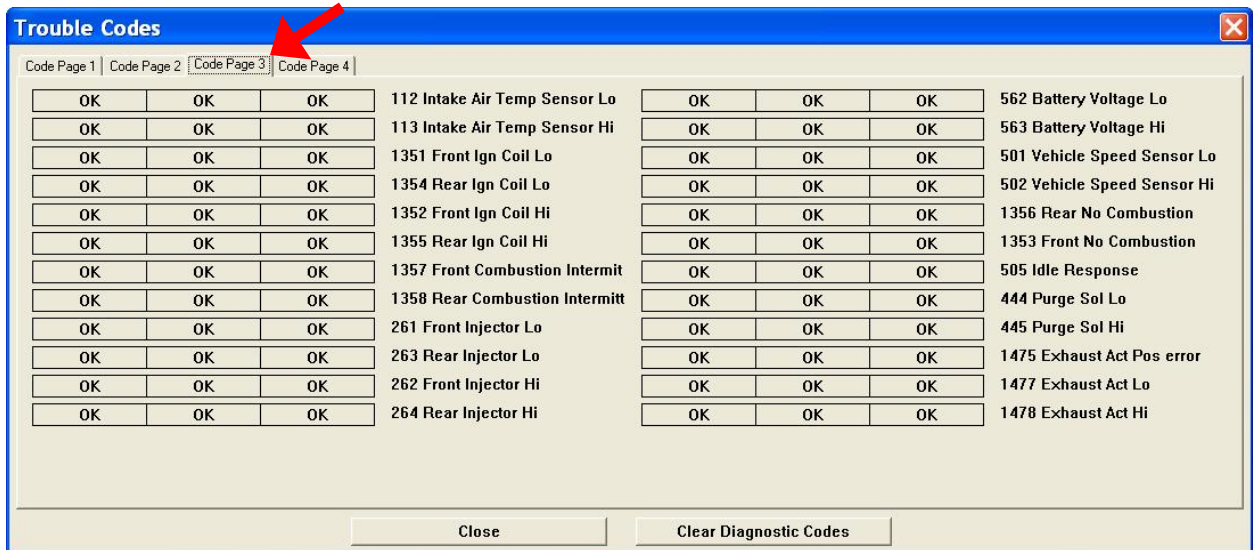
**Email Technical Questions to:  
[ProductSupport@ZippersPerformance.com](mailto:ProductSupport@ZippersPerformance.com)**

**[www.Thunder-Max.com](http://www.Thunder-Max.com)**

# DIAGNOSTIC TROUBLE CODES

When the Diagnostic Codes option is selected from the Tuning Maps Tree (Subcategory of Module Configuration), the following window will appear:





**Open the Diagnostic Trouble Codes window when linked to your ThunderMax ECM to view the Diagnostic Trouble Codes status.**

The Diagnostic Trouble Codes window displays **counts, current and historical errors** for all of the sensors and devices that are necessary for the proper operation of your motorcycle. These windows eliminate the need for the factory scan tool for reading trouble codes. Instead of outputting a trouble code, this window will display the status of the electronic system.

Three types of messages are given in the DTC window, **(1) Counts** which are not a DTC fault code, **(2) Current errors**, **(3) Historic Errors**

## Trouble Codes

Code Page 1

Code Page 2

Code Page 3

Code Page 4

OK	OK	Historic Fault	605 Module Flash Low
OK	OK	OK	603 Module Eeprom Low
OK	OK	OK	U1300 ECM Serial Data Low

**Counts** – This is the test mode counting - scanning system integrity.

A low numeric value listed within the left column (counts) is not a DTC fault code.

A large number in the counts window should reflect a current fault in the next column

**Current Fault**

– A fault is occurring with the sensor in question.

Example: A 2122 TGS1 Low “Current Fault” simply means that the sensor voltage is currently too low to operate correctly. Inspect TGS - wiring required

**Historic Fault** – A fault has previously occurred in the past; if “Current Fault” is displayed there are electrical issues that need to be addressed. If **only** the Historic Fault is shown, and no issues are found with the motorcycle, clear the DTC.

Low battery voltage will result in a Fault Code as well due to low return voltage from the sensors. With an extended session of linking without the engine running, a charger may be properly connected to the battery before prolonged link sessions, but only with the engine off. Otherwise you may have a weak battery when you try to crank the engine over. Removal of the headlight fuse will greatly reduce battery drain while linked.

The Diagnostic Trouble Codes are useful when troubleshooting electrical issues with your motorcycle. Most all problems we have encountered thru development are related to ECM connector problems, faulty wiring, adding incompatible electrical accessories, faulty TSSM. If an error is occurring with a sensor, but you only see a Historic Code, use the “Clear Diagnostic Codes” button to clear the historic codes. If the code is current and it re-appears after you clear it, start your inspection of new devices added to the cycle or work thru the factory manual to locate the problem in the system.

If you find stored DTC in the module we recommend you perform the following on your ECM connector. Remove it from the ECM then before re-installing the connector, lightly spread some dielectric grease on harness connector terminals, and on the inside lip of the connector port opening of the ECM to allow the rubber weather seal in the connector plug to slide into place without binding. Review connector procedure in the current installation manual.

See H-D Electronic Diagnostic Manual for more information about DTC's