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NAMZ Custom Cycle Products, Inc

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Part Number: N-EFI-02



N-EFI-02: NAMZ Complete Stand Alone M8 EFI System with exclusive, plug-n-play engine management harness, proprietary twist grip assembly and Thundermax ECM for M8 engines equipped with OEM (throttle-by-wire) throttle body part # 27300122 or aftermarket equivalent ONLY.

What this kit will provide:

- This kit is intended to provide a complete stand-alone, Electronic Fuel Injection engine management system with throttle-by-wire for an M8 engine without using the BCM.

What this system will NOT do:

- This system is **ONLY** for engine management! If you are building a custom bike, you will to purchase a complete bike wiring harness for all other normal functions like lighting, switches, gauges, etc.
- This system **WILL NOT** provide cruise control whatsoever.

What you will need:

- This system is designed to work on an OEM throttle body, part # 27300122 or aftermarket equivalent on an M8 engine with crank position sensor ONLY.
- A fuel tank with a Big Twin or XL fuel pump.
- An after-market speedometer, designed for 2005-2010 Softail, 2005-2011 Dyna, Touring/Sportster, 2005-2013 with a fuel gauge or low fuel light.
- OEM style ignition coil, (HD# 31600017) & speed sensor, (HD# 74402-05B).
- There are (6) wires that need to be connected, 12+ power, ground, fuel pump, kill switch, fuel sending & serial data.
- Once you are ready to tune your ECM, direct all calls or emails directly to Thunderheart as they will service the ECM as they do for any of there other ECM kits.

NOTE: Every harness is handmade here in Pennsylvania & tested before it leaves our building.

What is included in this kit?

- Engine management harness
- Twist grip sensor
- Thundermax ECM

Recommended tools:

- Wire cutter & universal crimp tool
- 10mm open end wrench
- 7/8" - 20mm open end wrench
- P1 phillips head screwdriver

WARNING!

This product should be installed by a professional motorcycle technician or reputable shop/ dealership.

Improper installation may result in chatengine damage or an electrical short.

Installation instructions:

- Start by finding a good spot to mount the Thundermax ECM. This will help you with how/where to route the wiring harness once connected to the ECM.

NOTE: Keep in mind that the O2 sensors included in the Thundermax ECM kit connect directly into the ECM using so you need to make the O2 sensor wiring is long enough.

- Once the wiring harness is connected to the ECM, route the wiring up towards the throttle body. This is where most of the connections will be made.
- Start by connecting the engine temp sensor on the rear side of the front cylinder, the TMAP sensor on the throttle body, the front & rear ACR or automatic compression releases (if you have them, disregard if you do not) front injector connector (white/yellow stripe wire) & rear injector connector (green/gray stripe wire), ignition coil and TCA or throttle control actuator.

NOTE: Use supplied cable ties to keep wiring away from the engine as best as possible even though we use fiberglass insulation on the harness.

- Install the supplied twist grip sensor by routing wires into the right side end of the handlebar, sliding TGS into the notches on the bar and being careful to protect the male terminals that are installed on the end of the harness.

NOTE: Before you install the male connector onto the twist grip sensor wiring harness, be sure to locate the (red, white, black) wiring bundle with BLUE tape around it, this is sensor #1. (See wiring diagram on page 2)

- Since there are so many gas tank/fuel pump options available, we only supply the fuel pump power wire in our kit. (labeled **orange/gray stripe** wire) This wire supplies POWER for the pump but you will also need to add a ground wire for proper pump operation and the included fuel sending wire for fuel gauge operation. (consult an OEM service manual for the pump you are using)

NOTE: If you use a Sportster fuel pump, you will also need to use a gauge and resistor-pack designed to operate on a 2007 through 2013 Sportster model. Also, Sportster fuel pumps only provide a low-fuel light, not a "traditional style" gauge but, 2018-Up Softails use the same compact pump like the Sportster and will allow the use of a traditional style gauge.

6. We recommend using a single-gauge speedometer, that includes a fuel gauge and/or optional tachometer from Dakota Digital or Koso that are intended for use with serial data technology, which is pre-can/bus. Examples of fitment would be, Sportster fuel must use a Sportster gauge from 2007-2013, Dyna fuel pump use a Dyna speedometer from 2005-2011, Softail fuel pump use a Softail gauge 2005-2010, Dresser fuel pump would use gauge for 2005-2013. If the gauge is labeled universal and shows these years for fitment, it will work with our system.
7. The (labeled **white/black stripe** wire) should be hooked up to your engine stop switch. When the switch is turned off, the bike stops running. When turned on, the fuel pump will prime.
8. The (labeled **green/violet stripe** wire) Serial Data should be connected to your speedometer. This will provide speed, tach and fuel data to your gauge. *(Be sure to follow a Harley service manual based on the year of the gauge)*
9. The (labeled **red & black** wires) come with terminated ring terminals and should be connected to the battery, red going to 12-volt (+) positive and black to 12-volt (-) negative.
10. Once all of the wires are connected as described in the instructions, the battery is connected to the bike and there is enough fuel in the tank, you can press the on/off button or turn on the key switch to see if the fuel pump primes.
11. If the pump primes and shuts off on its own, you are all set to move onto the Thundermax instructions that come with this kit.

NOTE: Please do not contact us with ECM or tuning questions as we will only refer you to contact Thundermax directly, we only make the wiring harness and twist grip assembly.

NOTE: We **STRONGLY recommend having an OEM service manual to do this job properly, it is not for the faint of heart and should be done by a qualified mechanic or technician with the proper tools.**

NOTE: Though this kit is virtually 100% plug-n-play with the exception of the engine stop switch wire, fuel pump power wire and installing the connector onto the twist grip harness, it still requires the proper connections and the use of a fuel gauge to be complete.

