

INSTALLATION INSTRUCTIONS

MSD Coil Power Booster for Ford 4.6L/5.4L Mod Motors '99-On PN 8740

ONLINE PRODUCT REGISTRATION: Register your MSD product online. Registering your product will help if there is ever a warranty issued with your product and helps the MSD R&D team create new products that you ask for!

Parts Included:

1 - Coil Power Boost ECU
1 - Harness (2-Pin Coil)

Parts Bag:

4 - Vibration Mounts
4 - Mounting Screws
4 - Lock Washers
4 - Nuts

Note: The **Coil Power Booster** is equipped with a low-RPM rev limiter for staging purposes. This limiter does not modify or override the stock high-RPM rev limiter.

FEATURES

The **Coil Power Booster** is designed for Ford Modular Engines with Coil-on-Plug ignitions. It increases the peak current at the ignition coil and it also increases the spark energy at the plug gap. Increased spark energy reduces cycle-to-cycle variability under high cylinder pressures - such as those encountered when using a power adder. The **Coil Power Booster** has a built-in Two-Step which can help achieve consistent launches and quick 60-foot times. The Launch rev-limiter RPM adjustments are made via two rotary switches. The adjustment range is from 1,000 - 10,900 rpm, in 100 and 1000 rpm increments, an LED will illuminate when the launch rev limit is not active and will blink when the launch rev limiter is active.

Note: It is recommended to have the service manual for your vehicle.

Caution:

Prolonged use of the low RPM limiter may cause the Check Engine Light to turn on and can cause damage to catalytic converters.

MOUNTING

The **Coil Power Booster** should be mounted in a position where the rotary dials are accessible for adjustments. Hardware is supplied to mount the unit, but first confirm the wiring harnesses reach their intended connection points before securing it into place.

WIRING	
8-WIRE CONNECTOR	
TAN (8)	Signal Connections
8-WIRE CONNECTOR	
RED	Common 12V power connection for all eight coils.
4-WIRE CONNECTOR	
BLACK	Connect to a good engine ground or the negative terminal of the battery.
BLUE	Activation Wire. When grounded, the launch RPM limit feature will be active and the LED on the unit will blink.
WHITE/BLUE	Activation Wire. When switched to 12 volts, the launch RPM limit feature will be active and the LED on the unit will blink.
GREEN	Coil Power Boost Activation wire. Connect to a good engine ground for continuous operation or switched ground for on-demand operation.

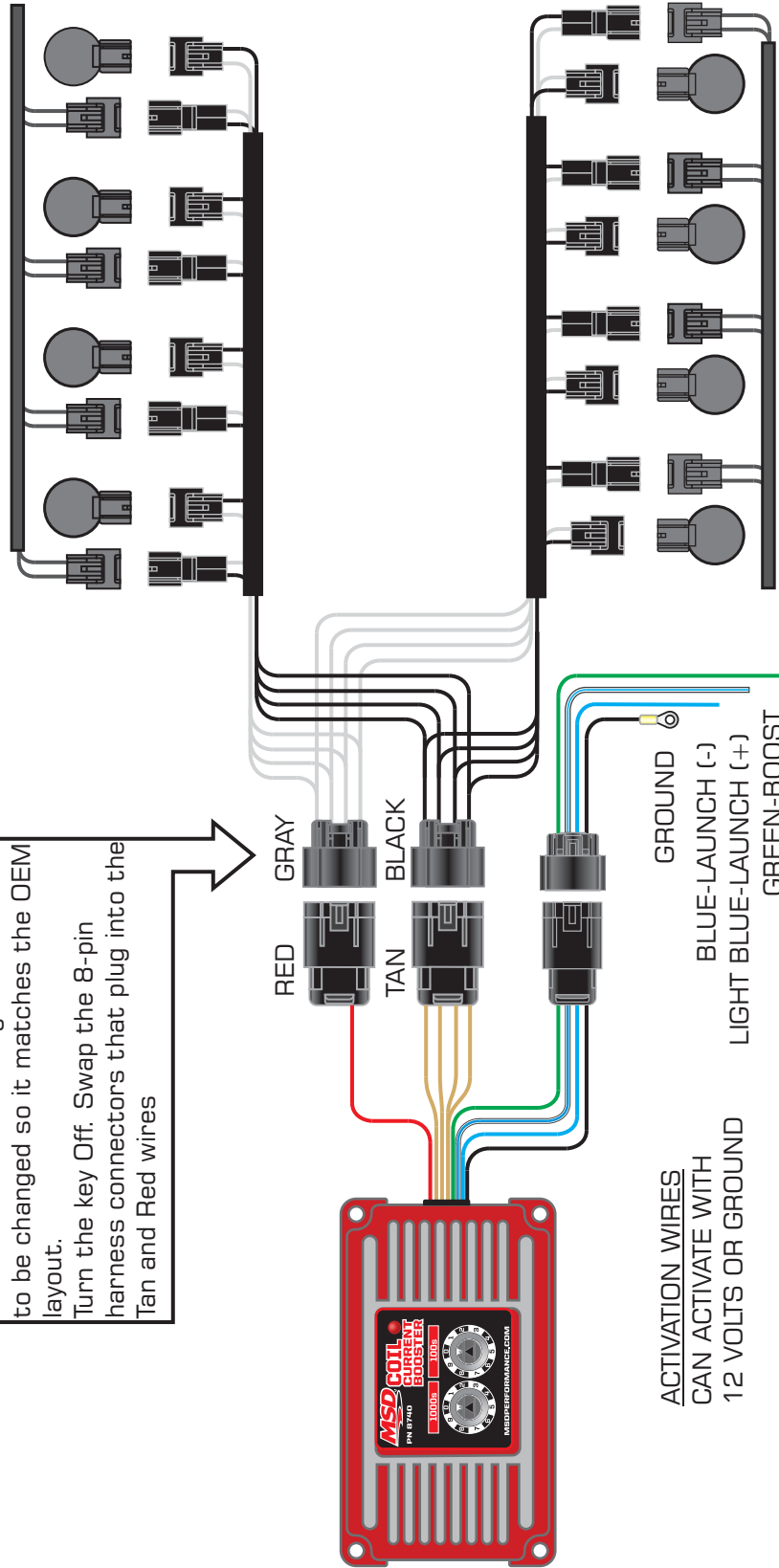
WIRING

1. Connect the 4-pin harness to the MSD **Coil Power Booster**.
2. Connect the Black wire to a good engine or chassis ground, or to the negative terminal of the battery.
3. Disconnect the 2-pin connectors from each of the eight ignition coils.
4. Connect all eight of the 2-pin male connectors, from the MSD harness, into the factory coil harness female connectors.
5. **Leave the 8 coils disconnected.**
6. On the MSD unit, connect the 8-pin connector, with the single Red wire, to the MSD coil harness connector that has eight Black wires.

Note: Ensure that all 8 coils remain disconnected prior to performing the next step.

7. Turn the key to the On position - DO NOT START THE ENGINE. Check the LED on the MSD unit:
 LED On - This confirms that the MSD harness configuration is correct and you can move to step 8 (Figure 1).
 LED Off - The MSD harness connection needs to be changed in order to match the OEM layout. Turn the key Off and swap both 8-pin harness connectors relative to their current positions. (See note in Figure 1).
9. Connect all eight of the female 2-pin connectors, from the MSD harness, to the ignition coils.

NOTE: IF the LED is Off in Step 7, the MSD harness configuration needs to be changed so it matches the OEM layout. Turn the key Off. Swap the 8-pin harness connectors that plug into the Tan and Red wires

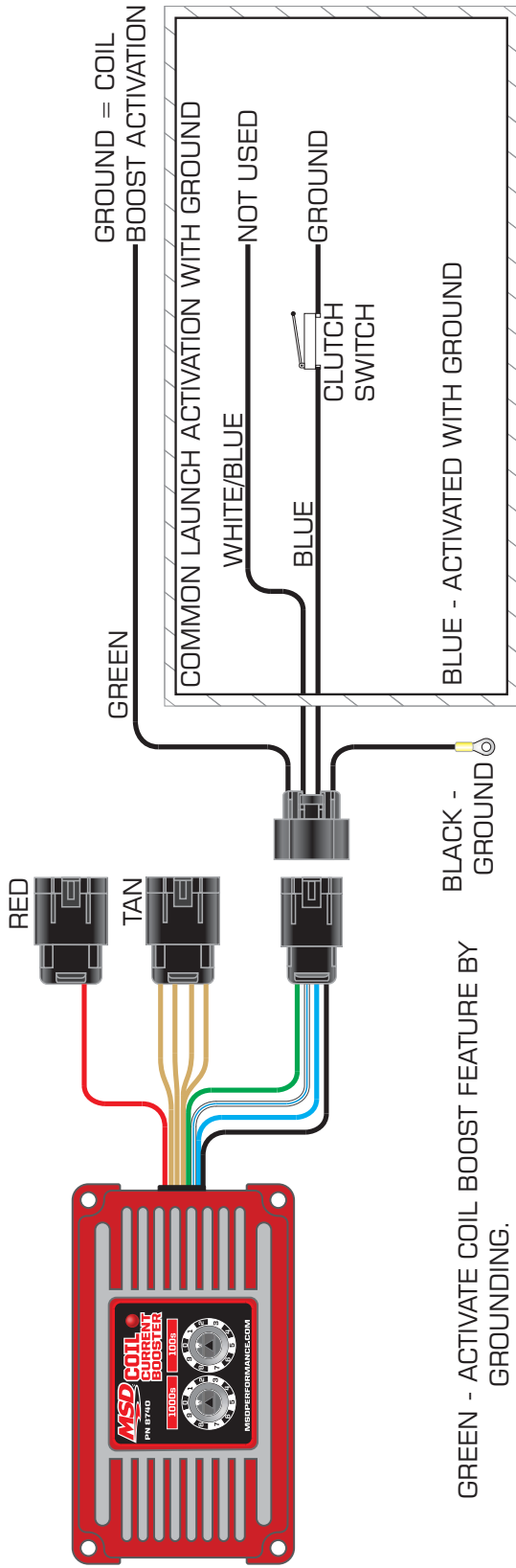


ACTIVATION WIRES
CAN ACTIVATE WITH
12 VOLTS OR GROUND

GROUND
BLUE-LAUNCH (-)
LIGHT BLUE-LAUNCH (+)
GREEN-BOOST

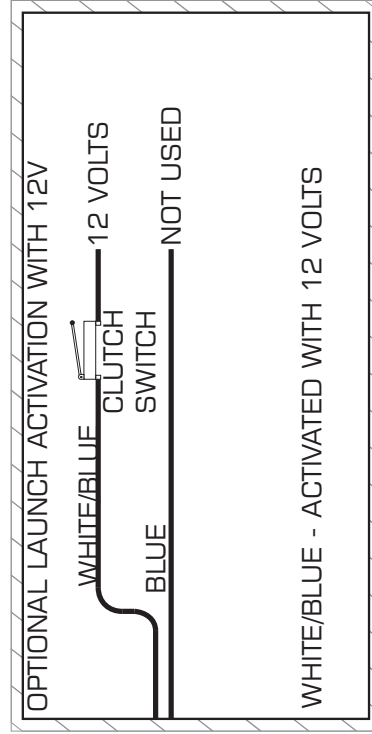
BOOST ACTIVATION WIRE
CONNECT TO A GOOD GROUND
TO KEEP FEATURE ON.
CONNECT TO SWITCH/TRIGGER
FOR ON DEMAND ACTIVATION

Figure 1 Coil Boost Control Wiring



GREEN - ACTIVATE COIL BOOST FEATURE BY GROUNDING.

OR



NOTE: DO NOT USE THE BLUE AND WHITE/BLUE WIRES FOR ACTIVATION AT THE SAME TIME

Figure 2 Connecting the Launch RPM Limiter and Coil Power Boost Activation Wires

VERIFY LAUNCH RPM LIMITER OPERATION

With the engine running, activate the clutch switch or momentary limiter activation switch. If connected correctly, the LED will blink when the switch is activated and remains on when it is not activated. To verify RPM Limiter operation, set the limit at a lower rpm, such as 3,000, and test the system by gradually opening the throttle until the limiter becomes active.

TROUBLE SHOOTING:

MODE	LED STATUS
Normal	Solid ON
Launch Mode	Blink slow, 4 times per second (4 Hz)
Fault	Blink fast, 8 times per second (8 Hz), and OFF for a second. Potential cause: One or more of the coil wires are not connected properly to the Coil Power Booster.

ACTIVATION

Launch Mode: Engine speed is at least 7/8 below the rev-limiter setting and the Blue wire is grounded or the White/Blue wire is powered with 12 Volts.

Normal Mode: Both Blue and White/Blue wires are disconnected.

Power Boost Mode: The Green wire is grounded and the unit is not in Launch Mode.

If the engine has trouble starting or running, check the following:

- Ground
- Coil connections
- The two 8-pin connectors may be in the wrong position and should be swapped and tested again.