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HIGH VOLTAGE

Bullet Proof Diesel's Upgraded FICM Power Supply

Text: Kevin Wilson
Photography: Courtesy of Bullet Proof Diesel

Anyone who owns or has owned a 6.0L Power Stroke is probably familiar with the Fuel Injection Control Module or FICM. Riding on top of the valve cover on the driver's side, the FICM's job is to convert 12 volts into 48 volts and to trigger the fuel injectors. FICM power supply failures are common, and the repair is expensive. Plus, when the FICM dies, it's time to call the tow truck.

Until recently, the only option Power Stroke owners had was replacing the unit with another stocker. But, the 6.0L Power Stroke experts at Bullet Proof Diesel in Mesa, Arizona, have developed a new and improved FICM: a brand new, upgraded power supply that's available in both a four-phase or six-phase version.

The company also says the original FICMs installed in the Power Strokes were of the seven-pin format. Today, they only use a four-pin setup. If your seven-pin power supply fails, Bullet Proof Diesel says Ford does not offer new/rebuilt versions but rather forces you to buy a new four-pin power supply and a new four-pin logic board, and will charge you another \$100 to reprogram the new logic board. Bullet Proof Diesel, at this point, is the only place to get a new seven-pin power supply FICM.

Essentially, the stock FICM converts power from 12 to 48 volts to electronically open and close the fuel injectors. It features two internal circuit boards, a logic board and power supply board, both of which are contained in a cast aluminum housing. According to Bullet Proof, over time, the power supply side gets weak and the circuit board connections can crack or fail, causing the power supply output voltage to drop. Also, as the fuel injectors wear, the voltage to open and close them becomes more critical and if there's a drop in voltage from the FICM, the vehicle can have drivability issues, especially on cold start.

To alleviate the problem, and to offer Power Stroke owners more consistent voltage, Bullet Proof Diesel has developed both a four-phase and six-phase replacement FICM that is housed in a billet aluminum case. This new billet case works as a much better heat sink for the power supply, preventing damage from overheating. Besides offering an upgraded outer case, the Bullet Proof FICM features military-grade electrical components and a fully redesigned circuit board. The six-phase version features two additional built-in redundant circuits for added insurance against failures along with the ability to change the output voltage from the standard 48 to either 53 or 58 volts.

According to Bullet Proof, their FICM provides more stable current output than a factory FICM, which translates into better cold starts and better performance. Their customers have also cited increased fuel economy and the end to any sticky-injector issues, not to mention the billet aluminum housing not only looks cool (since it's available in anodized colors) it also offers better heat transfer.

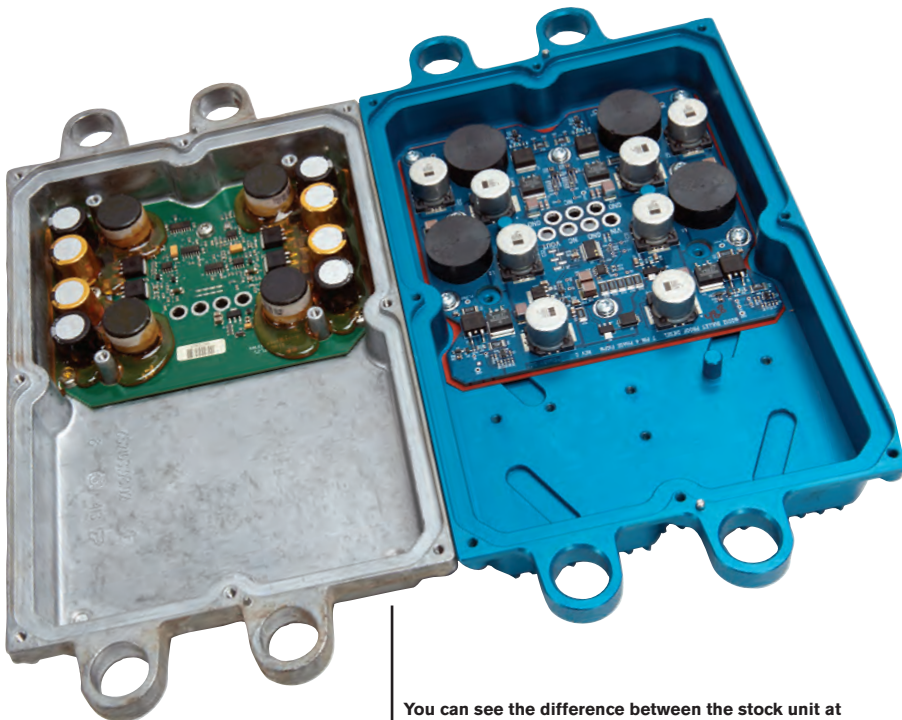
If you own a 6.0L and are lucky enough to haven't experienced a FICM failure yet, or you're looking for an upgrade to the stock unit, take a look at Bullet Proof Diesel's new FICM unit.

UDBG

"To alleviate the problem, and to offer Power Stroke owners more consistent voltage, Bullet Proof Diesel has developed both a **four-phase and six-phase** replacement FICM that is housed in a billet aluminum case."

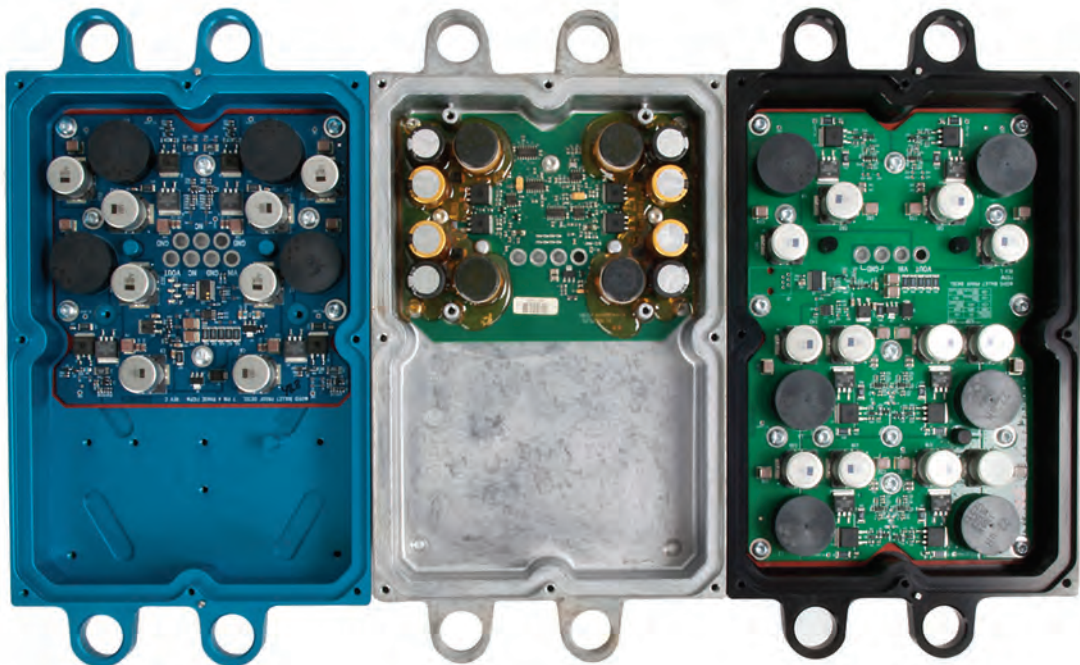


When you remove the FICM and crack it open, you'll see two circuit boards. The logic board is the one above while the power supply board is the lower one, which is where failures are prone to happen. The two boards are housed in a cast aluminum housing separated by this gasket.



You can see the difference between the stock unit at left, and the four-phase Bullet Proof Diesel upgrade at the right. Besides having a cool billet housing, the Bullet Proof Diesel FICM utilizes military-grade components for reliability.

HIGH VOLTAGE



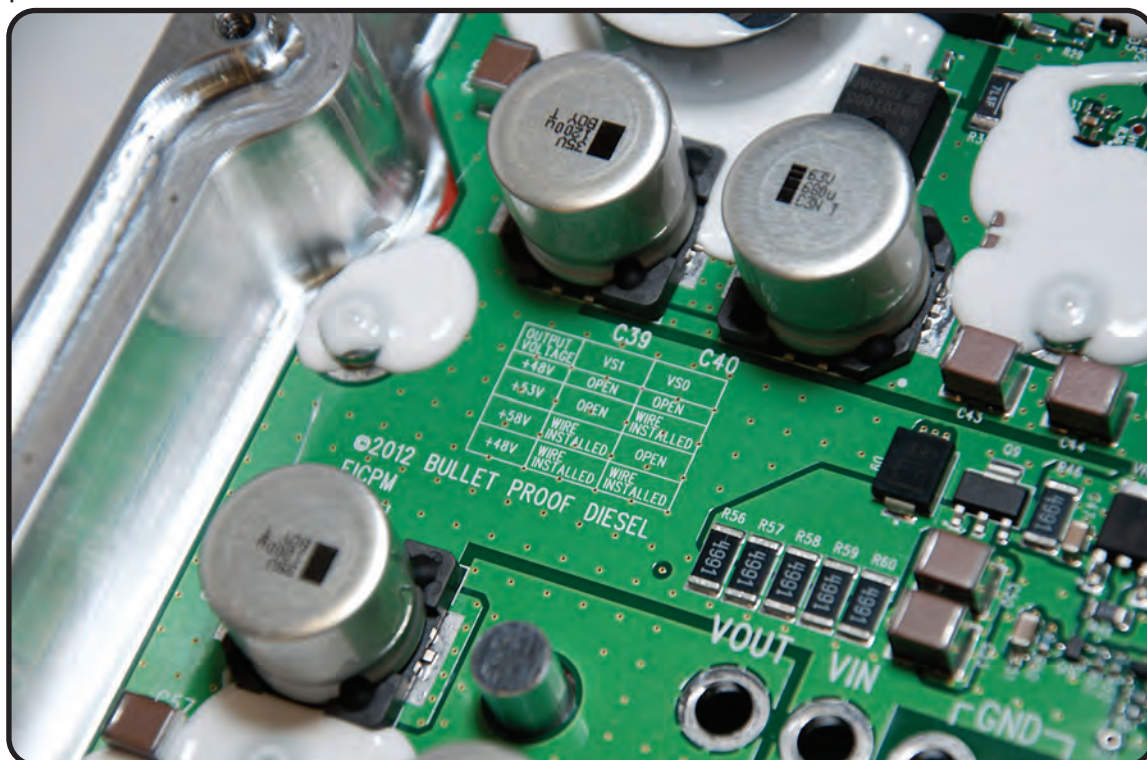
Here are more comparison shots with the stock FICM in the center. At left is a Bullet Proof four-phase FICM (blue) while the unit to the right is their six-phase unit (black). The company offers their FICMs in anodized billet housings along with a polished billet aluminum unit as well.





All Bullet Proof Diesel FICM's feature a military-grade heat sink lining which is used between the circuit board and the case.

The six-phase unit offers you several voltage output levels. The instructions clearly spell out how to select the voltage output level.



SOURCE:  Neal Technologies, Inc./Bullet Proof Diesel 888-967-6653 BulletProofDiesel.com