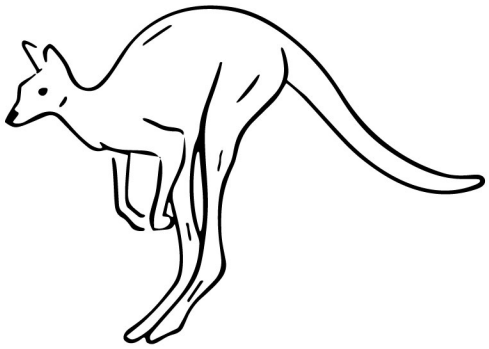
FIREPUNK ENGINEERING

THE ROO

Thank you for purchasing the “The Roo”, we hope it helps you jump off the line ahead of the competition! The installation is simple, but it does require custom tuning for it to work correctly. Here are basic install instructions along with tuning details to give your tuner, or if needed we would be glad to help you with custom tuning here at Firepunk Diesel LLC



INSTALLATION INSTRUCTIONS

1. Locate your ECM on the Driver’s side of the engine block, there are two ECM plugs (C1 and C2), the plug you are going to add a pin to is C2, which is the plug closest to the firewall (see **Figure 1** to help identify the correct plug)
2. Disconnect your battery’s ground cables to prevent any chance of power surging your ECM
3. Using a 5mm allen wrench, remove the bolt in the center of the C2 plug to loosen and remove the connector from the ECM
4. Using the numbers on the side of the C2 plug, identify Pin 16 (see **Figure 2** for example)
5. Use a Depinning tool (a paperclip works too) to push the red rubber plug out of Pin 16 (See **Figure 3**)
6. After the red rubber plug is removed, insert the Deutsch connector on the end of the orange wire into Pin 16 (where you just removed the red plug from), push it in securely until it locks in place. Tug gently on wire to confirm its latched into the connector (See **Figure 4**)
7. Now that your ECM is pinned, you can secure the C2 plug back into the ECM *(be careful not to overtighten the 5mm allen bolt!)*
8. Now remove the ECM bolt (or nut) directly beside the C2 connector and fasten the ground wire to your ECM mounting location

9. Next step is routing the button end of the harness through your firewall. If you need to unplug your button to get the wires through a rubber grommet, its best to take a picture of the switch/wires to make sure you can reconnect them in the correct order. Be sure to route the harness away from your steering shaft

10. The supplied button bracket is designed to install over your brake pedal arm so you can hold the button with your toe during staging for a hands-free racing experience. Adjust the height of the button above the brake pedal where it does not interfere with your day to day braking operation but where its easily accessible for race day

11. See **Figure 5** for brake pedal mounted switch example

12. Contact your tuner for a revision to activate the staging limiter for your specific truck, it's helpful to send your tuner a datalog that records you brake boosting your truck to your desired launch RPM

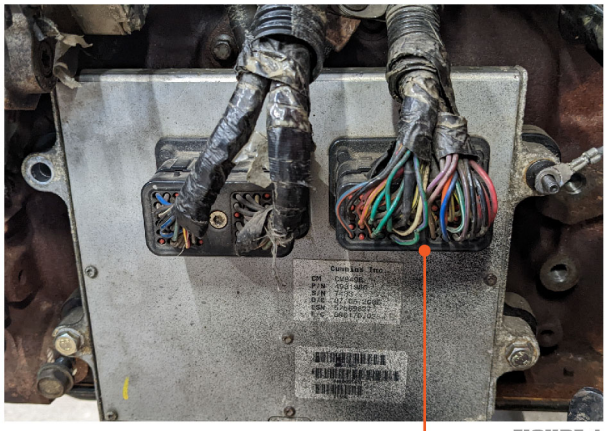


FIGURE 1

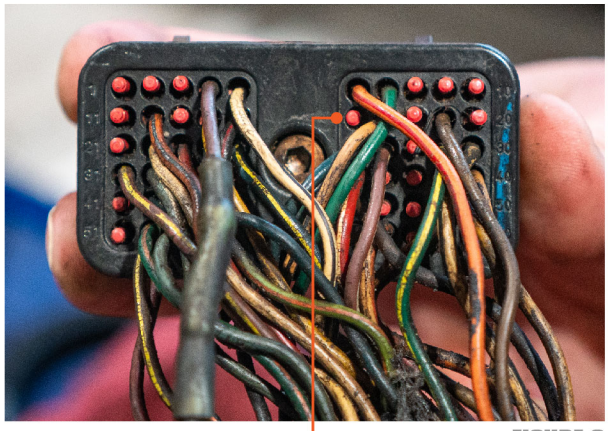


FIGURE 2


FIGURE 3

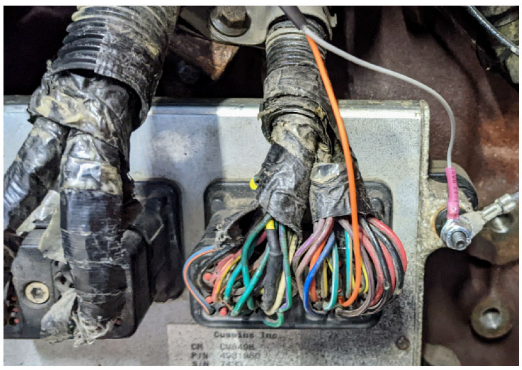


FIGURE 4

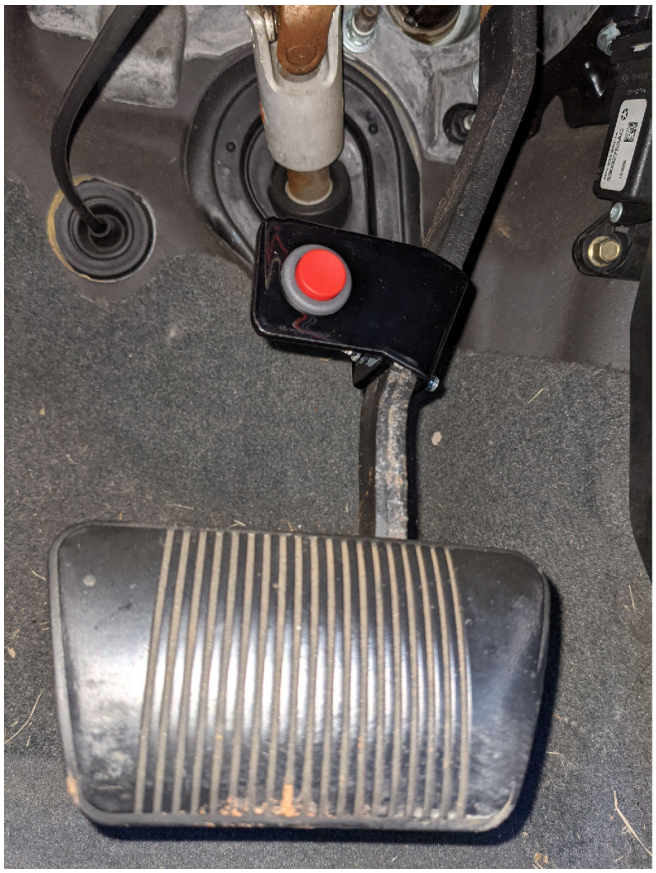


FIGURE 5

	0.0	25.0	50.0	100.0
600	0.0	48.3	96.7	145.0
650	0.0	48.3	96.7	145.0
750	0.0	48.3	96.7	145.0
800	0.0	48.3	96.7	145.0
900	0.0	48.3	96.7	145.0
1000	0.0	48.3	96.7	145.0
1200	0.0	48.3	96.7	145.0
1380	0.0	48.3	96.7	145.0
1600	0.0	48.3	96.7	145.0
1800	0.0	48.3	96.7	145.0
2000	0.0	48.3	96.7	145.0
2200	0.0	33.4	66.6	100.0
2400	0.0	29.1	58.4	87.5
2600	0.0	25.0	50.0	75.0
2700	0.0	20.9	41.6	62.5
2800	0.0	16.6	33.4	50.0
2900	0.0	0.0	0.0	0.0
3000	0.0	0.0	0.0	0.0
3220	0.0	0.0	0.0	0.0
3600	0.0	0.0	0.0	0.0
4000	0.0	0.0	0.0	0.0

FIGURE 6

TUNING INSTRUCTIONS FOR EFI LIVE

The RPM limiter is done in the EFIlive calibration table “Pedal Position to Desired Fuel” (A9601 & A9602) The ECM will reference the Program Switched/CSP6 calibration anytime a Ground signal is present on Pin 38 of the C2 connector. Most trucks will take 75-80mm3 fuel quantity to hold the target RPM, but different fuel systems will respond differently as most injector maps in EFILive don’t match the Injector fuel quantity perfectly. For a smooth staging limiter, we set “75mm3” as the target fuel quantity at the desired launch RPM (See **Figure 6** for a 2600RPM limiter). This is a good starting point until you take a datalog of it on the staging limiter. After reviewing the log, you can adjust the rpm up/down accordingly until the final boost/RPM level is achieved. Boost is directly related to engine RPM and adjusting in increments of 100RPM often changes boost 3psi (turbo/engine combos will vary results) Tapering off the fuel quantity like shown in **Figure 6** allows the limiter to be smooth in RPM and boost will be consistent