

3 relays - 1 fuel - 2 MAF

#910-08589 TPI (MAF) Fuel Injection Wiring Harness Installation

Technical Questions?

Please send email to FuelInjectionconnection@gmail.com or go online at fuelinjectionconnection.com if you have any technical questions.

Quality of Construction

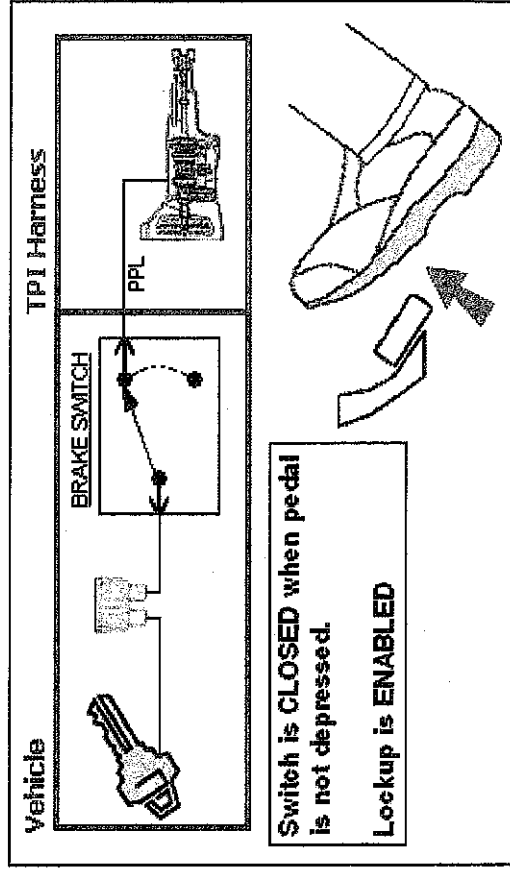
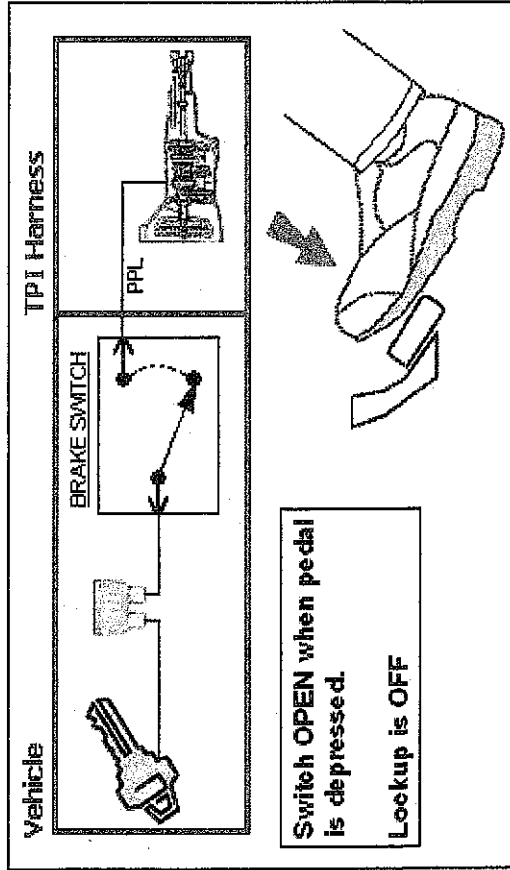
This harness is constructed using OEM quality wire. The wire colors match the factory wire colors for a 1985-1989 Camaro, Firebird, Corvette TPI harness. Delphi terminals and connectors are used for connecting to the engine's sensors, injectors, electronic control module (ECM), and other components. Delphi connectors are standard on GM original wiring harnesses. All necessary solder connections are covered with heat shrink tubing. This is a street-rod or retrofit type of harness and the emission equipment is not included, however all of the sensors and controls that are needed will have connectors for them. It may be required that the ESC module be relocated to the passenger compartment, the fuel pump relay has also been relocated to the passenger compartment for cosmetic reasons.

What You Need

This harness is designed to work with a 1986-1988 style TPI engine and accessory configuration. The 1986-1988 style engine is equipped with the following specific items that may not be found on other TPI engines:

- Small HEI Distributor with Externally Mounted Coil or
- Large cap with internal coil (Either one needs to be a feed back type)
- MAF Sensor (located on intake ductwork)
- Two Terminal Oil Pressure Switch (Part number PS206 or PS168 for Corvette at Autozone)
- Speed Density ECM (GM# 1227165)
- Knock Sensor needs to be specific to 85 to 89 MAF TPI

Brake Switch



The PURPLE wire on the 700R4 transmission plug must be connected to the Brake Switch in your vehicle for proper Torque Converter Lockup operation. The PURPLE wire provides 12v ignition power to the Lockup Solenoid inside the 700R4. When the brake pedal is depressed, the brake switch cuts power to the Lockup Solenoid. Power is restored when the brake pedal is not depressed.

Park/Neutral Safety Switch

A Neutral Safety Switch is a switch that prevents the vehicle from starting unless it is in Park or Neutral. You are responsible for the safety of your vehicle by installing a means of a neutral safety switch.

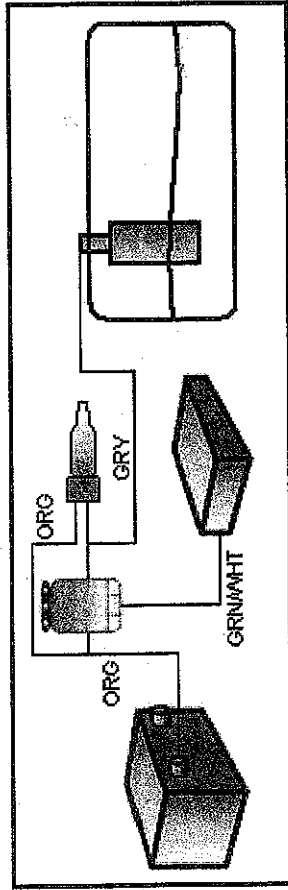
Vehicle Speed Sensor

The Vehicle Speed Sensor connector is included in this harness. However if it doesn't match then you will need to use an existing connector and splice the PURPLE and the YELLOW wires from the ECM labeled "VSS" to a Vehicle Speed Sensor connector. With this style of ECM there is a speed buffer or "DRAQ Module" that is the speed sensor converter for the ECM to know how fast the vehicle is moving. The speed buffer is usually located behind the dash instrument cluster of the donor vehicle. The speed sensor is not needed for operating the engine.

Ground Wires

All the ground wires are terminated with two ring terminals and can be bolted to the back of the passenger side head. Also be sure to connect a Ground Strap (not included) from the Negative Battery Terminal to the Vehicle's Frame, a Ground Strap from the Vehicle's Frame to the Engine, and a Ground Strap from the Engine to the Vehicle's Body. If your vehicle is not properly grounded in this way, you will have electrical problems. There is a small eyelet connector near the ECM that is marked "GROUND", this is to ground the ECM if needed.

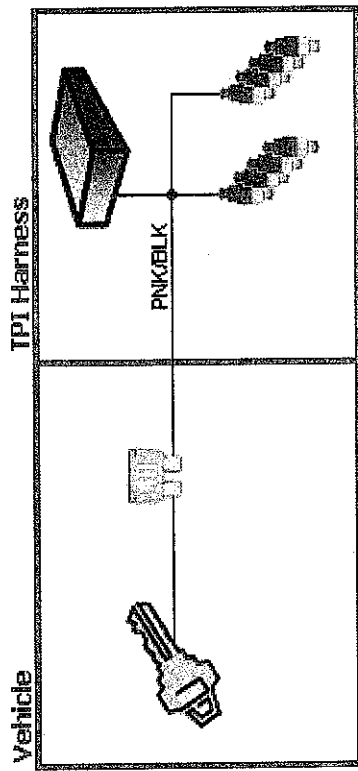
Fuel Pump



The ECM sends a signal to the Fuel Pump Relay to turn on the fuel pump. The GRAY wire labeled "Fuel pump Feed+" must be connected to the positive fuel pump power wire to energize the fuel pump.

Installing the Harness

Connecting Ignition Power

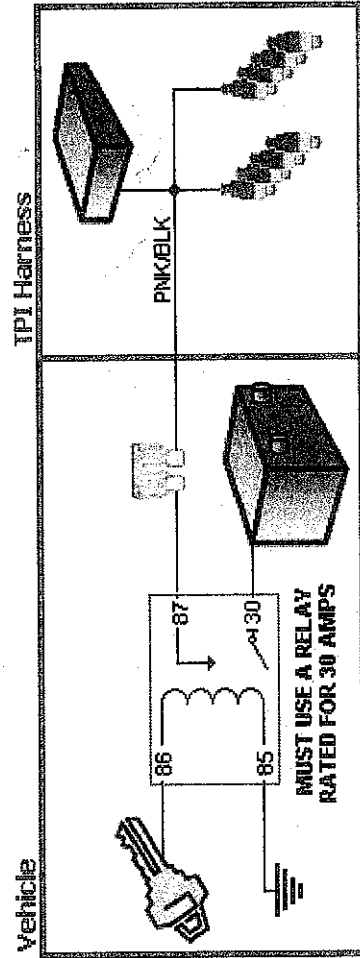


8 Fuel Injectors shown TBI uses 2

Connect the big PINK wire labeled, "Ignition on in run and crank", to an ignition power source that has power with the key in the ON position and in the CRANK position. Be sure your ignition power source can handle 20 amps. If it does not handle 20 amps, you may use a relay (see diagram below).

If Using a Relay

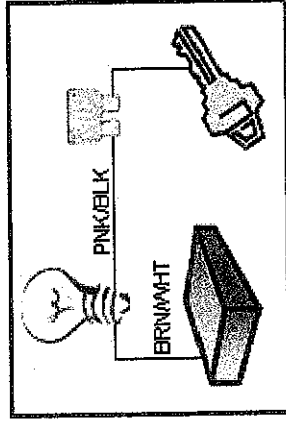
Connect the ignition power from your vehicle (this must supply power with the key in the ON and CRANK position) to the relay's coil high (86), a vehicle ground source to coil low (85), and a battery power source to the relay switch (30). Be sure that the battery power wire can handle 30 amps. If you are unsure, you can run a wire directly from the battery to the relay. Finally, connect the PINK ignition wire in the TPI harness to the relay contact (87). When the relay receives a signal from your vehicle's ignition source, the coil will switch power from the battery to energize the injectors and ECM ignition power.



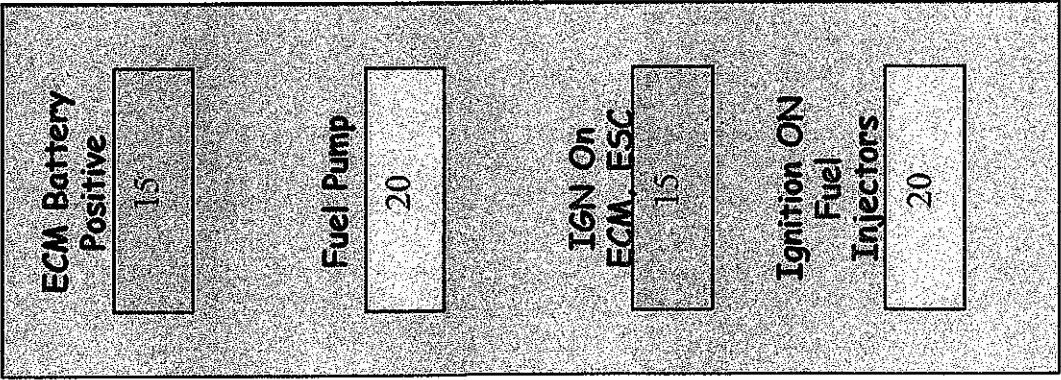
Air Conditioning

The input signal wire for the A/C is included in this harness. This DARK GREEN wire lets the ECM know that the A/C is ON by sending 12v when the A/C is ON. If you are not using A/C, you can ignore this wire.

Service Engine Soon



The BROWN wire from the ECM comes out at the ALDL connector and is labeled, "Service Engine Soon" it may be connected to the Service Engine Soon Telltale light in the vehicle's Instrument Cluster. The light is turned ON when the ECM grounds the circuit and the PINK wire is the ignition on power source so you do not need to fuse it.



MAF TPI Panel Fuse Locations