



# GODZILLA 7.3L Stand-Alone Harness

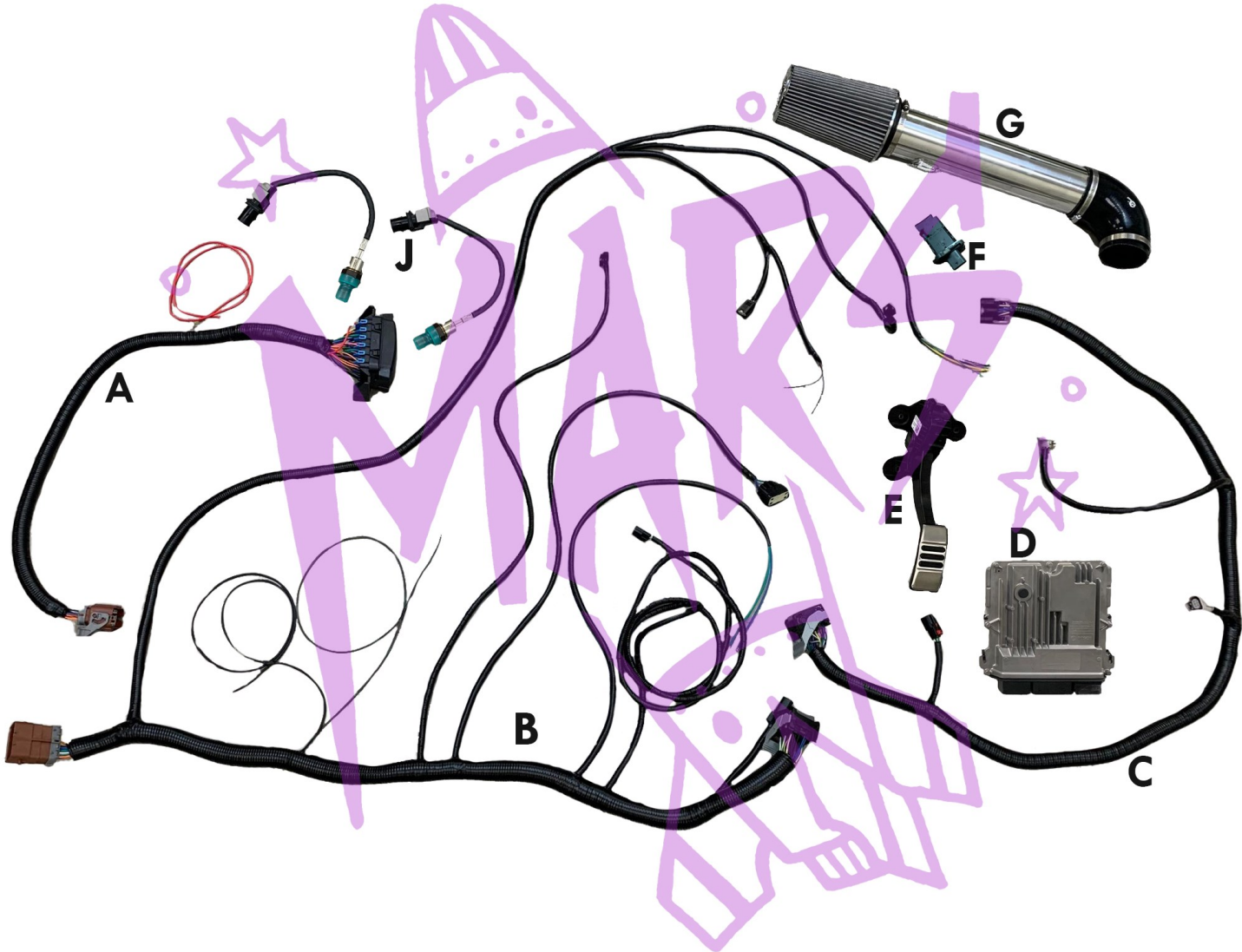
## 10R140 10-Speed Automatic Transmission

This harness was designed by Mars Auto for easy installation for hot-rod builders. Meant for “plug-and-play” use with Ford Performance Crate engine (PN: M-6007-73) harness. This specific harness is utilized only with Ford 2020+ 10R140 transmissions. This harness will run and operate the Godzilla 7.3L and 10R140 in your hotrod project!

**Cruise control, Emissions, and A/C functions not included.**

**OFF ROAD USE ONLY**

### Your kit will include the following



A	Fuseblock	Power Supply	E	APP	Accelerator Pedal
B	Control Pack	Control Pack Harness	F	MAF	Mass Air Flow Meter
C	Trans	10R140 Godzilla 7.3L Transmission Harness	G	INT	Air Intake Tube
D	ECM	Engine Computer Module	J	HO2S	Heated Oxygen Sensors (Upstream Pair)



# Godzilla 7.3L 10R140 Control Pack Installation Instructions

## Parts Included

A—**Fuseblock:** We include the power distribution fuseblock. This is water tight and can be mounted under-hood. It has a single red positive battery power lead.

B—**Main Control Pack Harness:** This is the main control pack harness. It integrates the engine, transmission, and sensor harnesses together.

C—**10R140 Transmission Harness:** Included is the 10R140 transmission harness necessary for operation of a 2 or 4-wheel drive 10R140 from 2020+.

D—**ECM:** Our provided ECM is pre-loaded with the Godzilla 7.3L and 10R140 calibration. This calibration is tunable with HP Tuners VCM Editor Suite. (Make sure you are using latest BETA version)

E— **Accelerator Pedal:** This accelerator pedal is calibrated in conjunction with our ECM tuning to provide smooth running of your engine. Changing to a different accelerator pedal may require ECM calibration to be updated.

F— **Mass Air Flow Sensor:** This MAF Sensor is the sensor required for our harness and ECM's calibration. It measures the volume of air entering the engine and the ECM calculates the correct fuel required in conjunction with the HO2S sensors to provide the best driveability, horsepower, and fuel mileage.

B— **Air Filter and Intake Tube:** This specific intake tube and filter is what our ECM's calibration is tuned for. Changing this intake tube **WILL REQUIRE ECM TO BE RECALIBRATED**. \*\*Tunable with HP Tuners VCM Editor\*\*

C— **Heated Oxygen Sensors:** These factory HO2S sensors are wideband sensors which supply the ECM data to make correct fueling changes to keep engine running properly. They do this by measuring the amount of Oxygen still present in the exhaust as it leaves the cylinder.

Heated Oxygen Sensor Placement: It would be recommended to place the HO2S sensors roughly 6 inches from where all primary cylinders merge together in the exhaust. This will give the ECM the best data to sample as it corrects fueling changes. Placing these HO2S sensors in just a single primary will limit the ECM's data and it will only be correcting the fueling based off of one cylinder's Air Fuel Ratio.

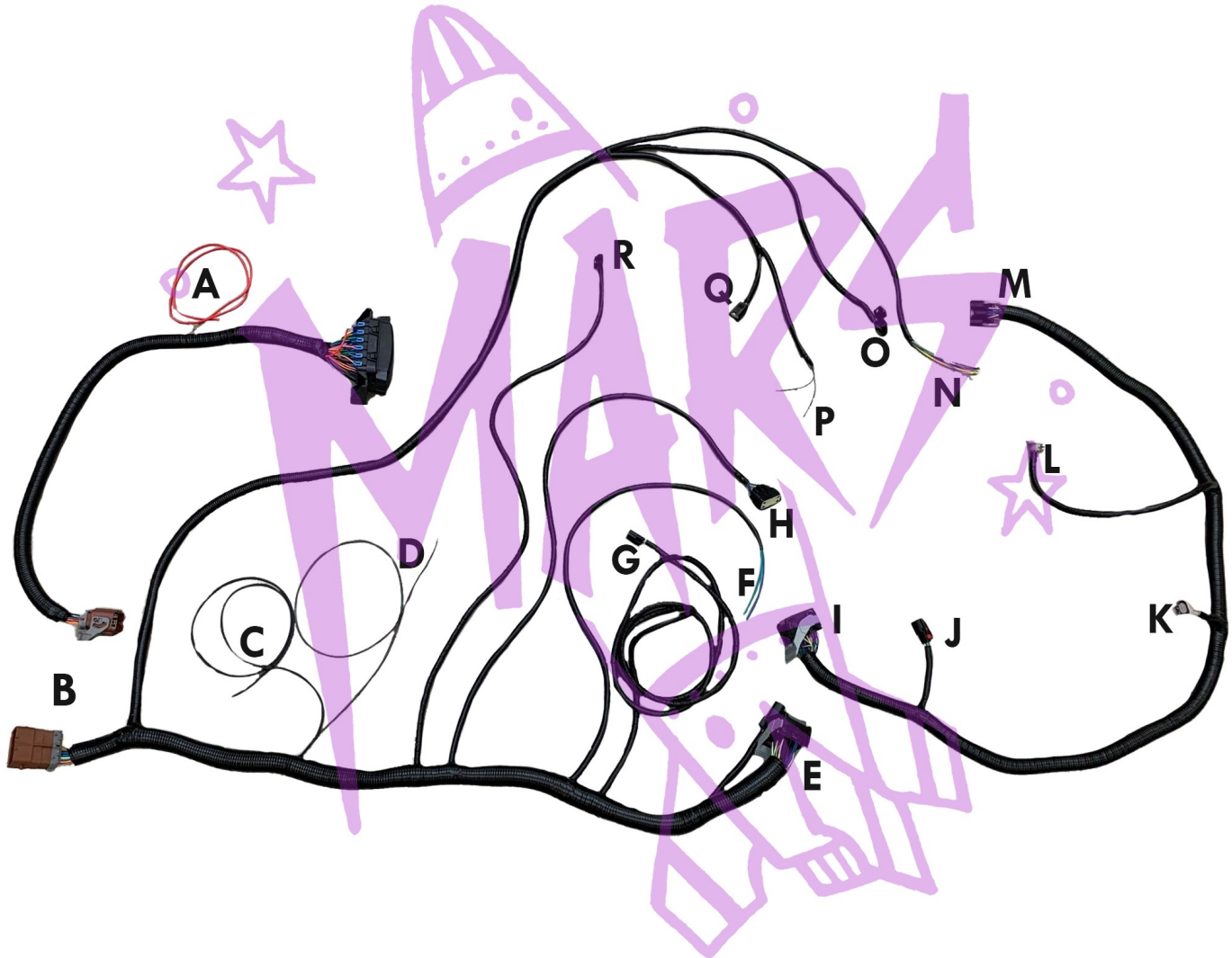
**DO NOT CUT/SPLICE/LENGTHEN THE HO2S SENSOR PIGTAIL. IF NEED BE, ONLY LENGTHEN THE ENGINE HARNESS SIDE. CUTTING THE HO2S SENSOR PIGTAIL WILL LESSEN THE RELIABILITY OF DATA THIS CRUCIAL SENSOR PROVIDES.**

# MARS Godzilla 7.3L 10R140 Control Pack Installation Instructions

Required harnesses **NOT** included with this kit:

- Engine Harness—LC3Z-12A581-Q (Ford Performance 7.3L Godzilla Crate engine harness or 2020+ F250/350 7.3L Engine Harness.

These harnesses are required for our stand-alone harness to be plugged in. This harness is included with brand-new Ford Racing Crate Engines.



A	BAT	Fuse Block Battery Supply (Put on + Battery)		J	C211	Inline Transmission Harness Connector
B	C-36	Fuseblock to Control Pack Inline Connector		K	HO2 1-1	Passenger Upstream Oxygen Sensor
C	GRD	Main Ground (Put on Battery Neg) [BLACK]		L	HO2 1-2	Driver Upstream Oxygen Sensor
D	SOL	Starter Solenoid Lead [BRN/GRN]		M	TCM	Transmission 10R140 Connector
E	C175B	Engine Computer Module Connector		N	I/O	User Inputs & Outputs
F	FAN	Fan HI (GREEN) & Fan LOW (BLUE) 12v+ Leads		O	OBD2	Data Link Connector (OBD2 Port)
G	AAT	Ambient Air Temperature Sensor		P	BPP	Brake Pedal Switch Lead
H	C1168	Inline Connector to Engine Harness		Q	APP	Accelerator Pedal Connector
I	C175T	Transmission Harness to ECM Connector		R	MAF	Mass Air Flow Meter Connector

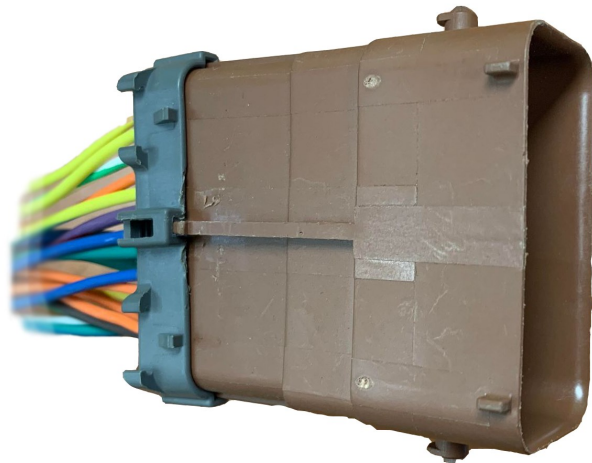


# Godzilla 7.3L 10R140 Control Pack Installation Instructions

## A—Fuseblock Installation Instruction



- The red power lead will need connected directly battery Positive power. We recommend this connection going directly to the battery itself.



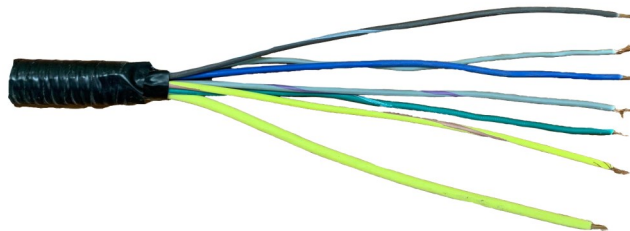
**B—C-36 Connector:** The brown in-line connector plugs into the main control pack harness. This will provide the necessary power signals needed for engine operation.



# Godzilla 7.3L 10R140 Control Pack Installation Instructions

## Control Pack Wiring Harness Plugs and Leads:

- C— Ground Lead(Black):** This ground lead should go directly to the negative battery post. Make sure this lead is grounded well.
- D— Start Solenoid Lead(BRN/GRN):** Connect this lead to your starter solenoid trigger stud(smallest stud on the starter solenoid). This wire will give a 12v+ feeds to the starter solenoid when the ECM is recognizing a start request signal from the Inputs and Outputs Start Request wire. (Transmission must be in Park or Neutral)
- E— C175B ECM Connector:** This connector plugs into the ECM's "VEH" plug to supply the ECM with necessary power and relay functions.
- F—Fan Supply Leads:** These two wires (BLUE & GREEN) supply a fused & relay controlled 12v+ to your choice of electric fans. They are both set to come on simultaneously.
- G—Ambient Air Temperature:** This sensor should be installed where it can collect outside ambient air temperature not affected by under-hood heat sources.
- H— C1168 Inline Engine Connector:** This connector supplies a few necessary power inputs to the main engine harness. The engine harness connector is located near the passenger side of the water pump.
- I— C175T Transmission ECM Connector:** Connect this plug onto the ECM in the "TRA" plug. This provides necessary power and data signals to the transmission for operation.
- J—C211 In-line Transmission Connector:** This plugs into the Control Pack harness plug right next to C175B ECM plug.
- K—HO2S B1S1 Oxygen Sensor (Passenger Side):** This should be between 6-12 inches downstream of any primary merge collection.
- L—HO2S B2S1 Oxygen Sensor (Drivers Side):** This should be between 6-12 inches downstream of any primary merge collection.
- M— 10R140 Transmission Connector:** Connect this plug onto the transmission.
- 



## N— Inputs and Outputs:

- Ignition Power(YEL/VIO):** Apply 12v+ to this wire to energize the ECM and fuseblock to turn on the system.
- Start Request(GRN/WHT):** Apply 12v+ to this wire to activate the starter to run the engine.
- Tow/Haul(BRN/WHT):** Apply 12v+ to this wire to engage tow/haul transmission function.

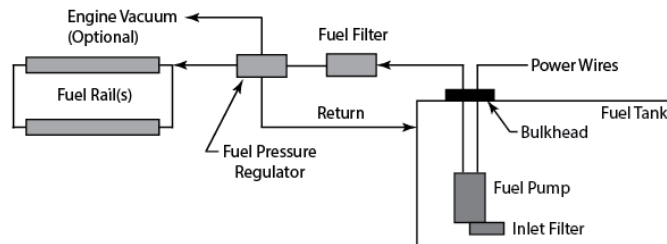


# Godzilla 7.3L 10R140 Control Pack Installation Instructions

## N— Inputs and Outputs \*Continued\*

**Fuel Pump Control—(YEL)** : This provides a fused & relay control 12v+ power supply to your fuel pump.

**RETURN STYLE FUEL SYSTEM IS REQUIRED; 175LPH REGULATED AT 58 psi.**



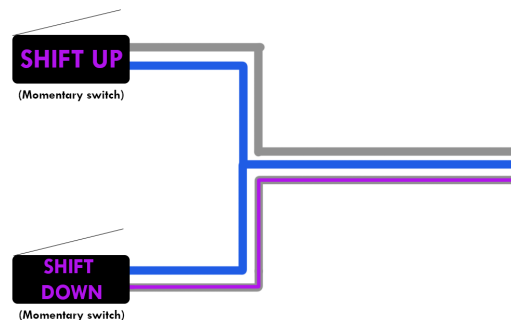
## Paddle Shift / Select Shift Wiring

**Shift UP(GRY)**: Apply a momentary switch through this wire and the Shift RTN wire to activate manual shifting of the 10R140.

**Shift DOWN(GRY/VIO)**: Apply a momentary switch through this wire and the Shift RTN wire to activate manual shifting of the 10R140.

**Shift RTN(BLU)**: Apply a momentary switch through this wire and either the Shift UP/DOWN wires to activate manual shifting of the 10R140.

### OPTIONAL PADDLE SHIFTER WIRING



**O— Data Link Connector**: This is where you can scan for trouble codes and also access your ECM for custom calibration. Our ECM calibration can be tuned with HP Tuners.

**P—Brake Switch Leads**: These signals control functions for unlocking and locking torque converter among other functions.

**BPP = VIO/WHT**: Supply a 12v+ signal to this wire when the brake pedal is pressed.

**BPS = VIO/ORG**: This wire is constantly grounded **UNTIL** the brake pedal is pressed; during which it is “open”.

**Q— Accelerator Plug**: Connect this to your Accelerator plug to have throttle control functions.

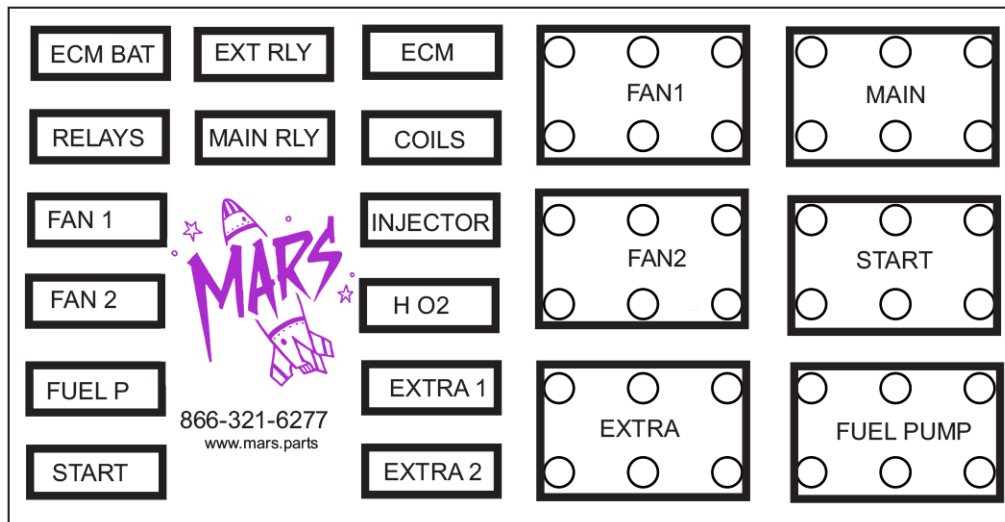
**R—Mass Air Flow Sensor Connector**: This connector plugs onto the provided Mass Air Flow Sensor plug which should be located in the Air Intake Tube.



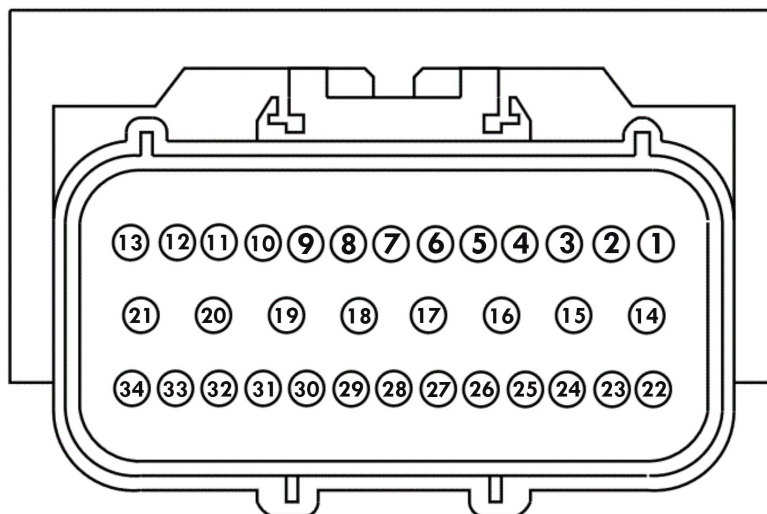


# Godzilla 7.3L 10R140 Control Pack Installation Instructions

## Fuseblock Fuses and Relay Layout



## C36 In-Line Connector Pinout



1	NOT USED	13	Fuel Pump Relay Control
2	OBD2 Port 12v Power	14	Starter Solenoid Supply
3	NOT USED	15	Fuel Pump Power Supply
4	Fuseblock 12v Power	16	Fan 1 Power Supply
5	Injectors & MAF Ignition Power	17	Fan 2 Power Supply
6	Oil Press., HO2S, & VCT Ign Pwr	18	NOT USED
7	ECM Ignition Power	19	NOT USED
8	Coil Ignition Power	20	NOT USED
9	Main Relay Control	21	NOT USED
10	Fuseblock 12v Power	22	Fuseblock 12v Power
11	Starter Relay Control	23	Fan 1 Relay Control
12	Starter Relay Control	24	Fan 2 Relay Control



# Godzilla 7.3L 10R140 Control Pack Installation Instructions

## Troubleshooting Tips:

- ♦ **Grounds**—Make sure all grounds have nice contact and are securely fastened. May try even cleaning up area with sandpaper for premium connection. Test with multimeter for true continuity.
- ♦ **Use DLC/OBD2 Port** for reading Diagnostic Trouble Codes. Use factory guides for diagnosing issues.
- ♦ **Check all sensor reference voltage** for +5v. Use multimeter for checking volts or back pinning with a continuity test.
- ♦ **Make sure all connectors are fully connected and locks are locked.**
- ♦ **Call 866-321-6277 for support**