

GODZILLA 7.3L Stand-Alone Harness

6R140 6 Speed HD Automatic Transmission

This harness was designed by Mars Auto for easy installation for hot-rod builders. Meant for "plug-and-play" use with factory donor vehicle engine, transmission, and battery cable harnesses. This specific harness is utilized only with 6R140 7.3L transmissions. This harness will run and operate the Godzilla 7.3L and 6R140 in your hotrod project!

Works with PATS deleted factory ECM. We can program your donor ECM or supply you with one. (Not Included)

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

OFF ROAD USE ONLY

Your kit will include the following



А	FB	Fuse Block	D	INTAKE	Air Filter & Intake Assembly
В	HARNESS	Control Pack Body Wiring Harness	—		
С	ACC	Accelerator Pedal	_		



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

• Engine/Transmission Harness—LU5Z-12A581-F

These harnesses are required for our stand-alone harness to be plugged in. Many times these harnesses are already included in used donor vehicle take outs.

Parts Included

Control Pack Body Wiring Harness: This harness plugs on to the above mentioned engine/transmission harness(LU5Z-12A581-F) to provide power, ground, and necessary inputs and outputs to run/operate the drivetrain.

Planning and Preparation—We recommend laying the harness out on the engine and your project to get an idea of how you will route and install it during your final installation. We recommend the Black Ground Lead going directly to the ground on the battery.



А	FUEL PUMP	Fuel Pump Power Supply (Yellow)	Т	C1168	Engine Harness Inline Connector
В	I/O	Inputs and Outputs	J	START	Starter Solenoid Lead (BRN/GRN)
С	DLC	Data Link Connector/ OBD2 Port	К	GROUND	Ground Lead (Black)
D	BRAKE	Brake Switch Leads	L	ECM	Engine Computer Connector
Е	ACC	Accelerator Pedal	М	ALT	Alternator Connector
F		Fuse Block	Ν	MAF	Mass Air Flow Connector
G		Fuse Block Connectors			
н	FAN	Electric Fan Power Supply (Green & Blue)			



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Control Pack Wiring Harness Plugs and Leads:

A— Fuel Pump(Yellow Lead): This is a relay controlled 12v+ power feed for your fuel pump. Route this to the positive terminal for your fuel pump and ground the other side. Fuel Pump will prime for 2 seconds and then turn on when engine is started. RETURN STYLE FUEL SYSTEM IS REQUIRED; 175LPH REGULATED AT 58 psi.



B— 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.



Shift UP(GRY): Apply a momentary switch through this wire and the Shift RTN wire to activate manual shifting of the 6R140.

Shift DOWN(GRY/VIO): Apply a momentary switch through this wire and the Shift RTN wire to activate manual shifting of the 6R140.

Shift RTN(BLU): Apply a momentary switch through this wire and either the Shift UP/DOWN wires to activate manual shifting of the 6R140.

C— 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.

D-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".





Control Pack Wiring Harness Plugs and Leads:

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

F— **Fuse Block:** This is where all power controls and relay functions begin. Supply a good battery supply to the red wire— WE RECOMMEND CONNECTING DIRECTLY TO BATTERY.



G— Fuse Block Connectors: This Brown connector will only plug into the Brown Control Pack harness connector.

H—**Fan Supply Leads:** These two wires (BLUE & GREEN) supply a relay controlled 12v+ to your choice of electric fans. They are both set to come on simultaneously.

I— **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.

J— **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)

K—**Ground Lead(Black):** This ground lead should go directly to the negative battery post. Make sure this lead is grounded well.

L— ECM Connector: This connector plugs into the ECM's "VEH" plug to supply the ECM with necessary power and relay functions.



Control Pack Wiring Harness Plugs and Leads:

M— **Alternator Plug:** This plugs directly onto the alternator to control the regulator to maintain a stable charge and Voltage throughout the electrical system.

N— 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.

Parts Included Continued...

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 or filter WILL REQUIRE ECM TO BE RECALIBRATED.

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.

D— 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.

E— 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.

F- Fuse Block: Our fuseblock has several relays and fuses for the many inputs and outputs we provide.



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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 pining with a continuity test.
- Make sure all connectors are fully connected and locks are locked.
- Call 866-321-6277 for support