# LLY STANDALONE
## HARNESS CONNECTION INSTRUCTIONS

**An OBD Scanner with Live Data capability is needed to verify sensor function and to read Fuel Rail Pressure prior to attempting to start the engine for the first time.**

**Ground – This is the most important connection in the harness.** It must be connected to a perfect ground path to the battery. If it cannot be connected directly to the ENGINE BLOCK (not the Valve Cover) and you choose to ground it to the body you must ensure that ground straps go from the battery to engine to frame and from frame to body. Do not attach to Valve Cover or rely on Engine or Body Mounts to complete your ground circuit.

**12V Batt** – 12v+ Constant Battery Power Source.

**Pink –** 12V+ Key On source to turn on the ECM, TCM, and MAF. The Keyed power source must be hot in both the Run and Crank positions. If it does not receive 12V+ in the Cranking position your engine will not start.

**ALDL/OBD Data** - This is the Class 2 Serial Data that goes to the diagnostic port (OBD2). An OBDII connector has been attached to the harness.

**Pedal** – Connects to the Accelerator Pedal Extension Harness.

**TCC** – Torque Convertor Control. Needs to be connected to a 4 pin Brake Switch. Needs a constant 12V+ signal that drops to 0 Volts when the brake pedal is depressed. If your brake switch only has 2 prongs (normally open) the AC Delco #D850A or GM #25524845 brake switch will provide both circuit connections needed.

**4WD LOW** – Connected to the Transfer Case 4X4 Low Switch. Needs a ground signal when in low range so the transmission will shift properly.

**PNP** – Park Neutral Position. Used for park signals and for starter interrupt relays if needed. Contact us for schematics.

**Tach** - Tach signal wire. In most cases this will not drive an older tachometer due to the fact it is a low voltage square wave digital signal. In order to use an older Analog Tach you will need to purchase an adapter such as one available from Dakota Digital part # SGI-8. If you are using a new aftermarket Digital **Programmable** Tach follow their directions for hookup.

**CEL (aka MIL) Control** - "Check Engine" light control wire. PCM will supply a GROUND on this wire when the light should be ON. You must install a Bulb and complete the circuit to a positive 12v source or a fault code will be set.

**WTS Control** - "Wait to Start" light control wire. PCM will supply a GROUND on this wire when the light should be ON. You must install a Bulb and complete the circuit to a positive 12v source or a fault code will be set.

**Speedo** – This is a signal generated by the PCM, based on information it receives from the vehicle speed sensor located in/on the transmission. The PCM takes the sensor signal, and calculates the tire size, gear ratio programmed into it, and makes a 4k pulse per mile signal when using the stock GM transmissions. Some speedometers will use this as an input, others, like Autometer's may hook directly to the speed sensor on the transmission. If using an older transmission with a cable driven speedometer output an 8K signal generator from Dakota Digital can be used to generate a VSS signal. However keep in mind this signal is double the normal 4k so the PCM will need to be programmed accordingly.

**Cruise Control** – See "Resources" in the main menu at dmaxswap.com.

Please do not open the harness for any reason. There is nothing user serviceable inside the loom. Just like an iPhone, if you open up the harness for any reason the warranty is void.