

Wiring Specialties

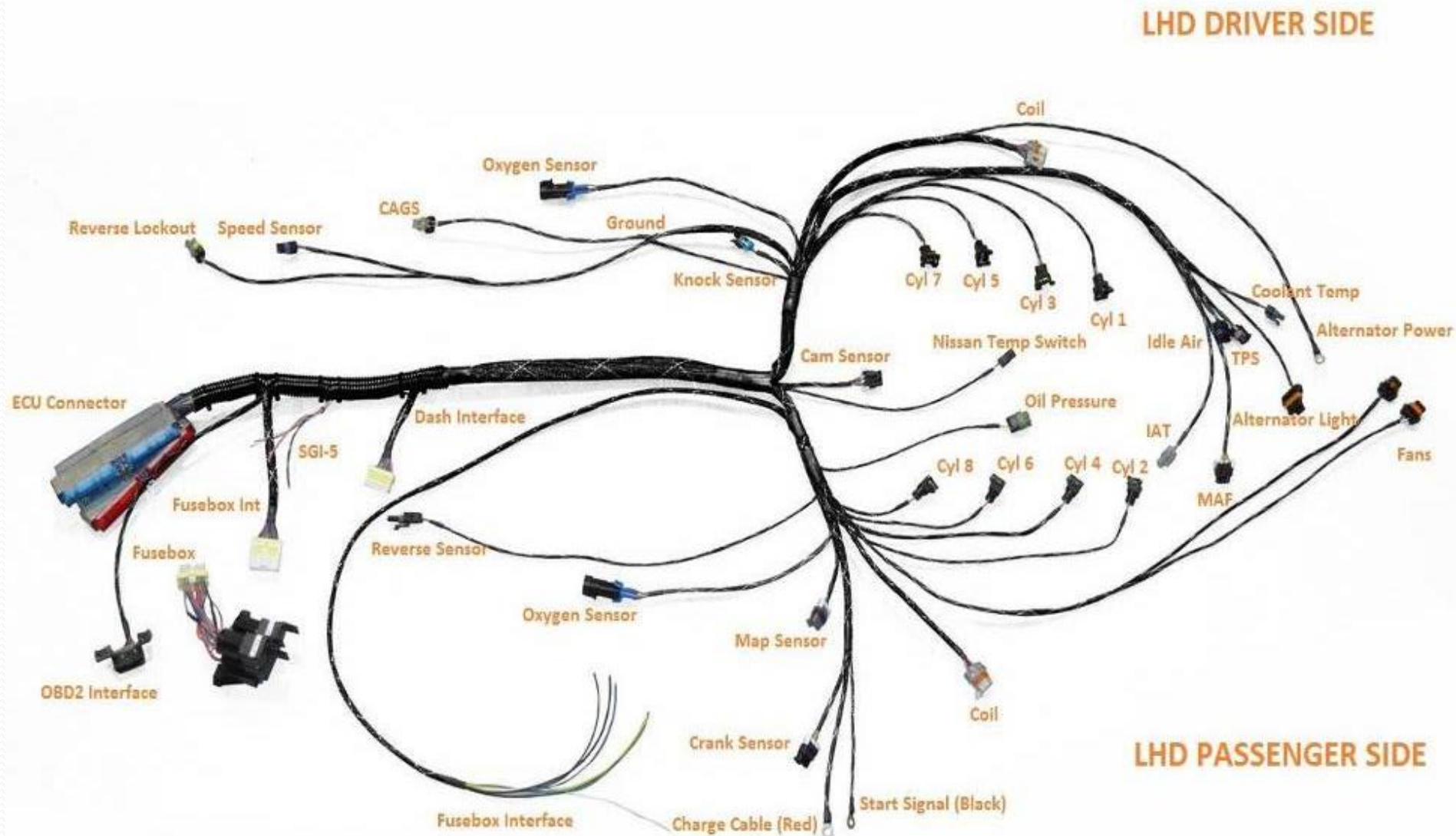
LS1-PRO HARNESS INSTRUCTIONS



Preliminaries

- **Your battery MUST be disconnected from the vehicles electronic system to ensure safety to both you and your new wiring harness. DO NOT CONNECT UNTIL COMPLETE!**
- Confirm contents of Wiring Specialties product based upon the list of included contents
- Connect all sub-harnesses including the chassis interface harness to the main engine harness provided. (the universal fuse block may need to be installed after the ecu has been pulled through the firewall)
- *Please* take the time to thoroughly read the instructions while installing your engine harness

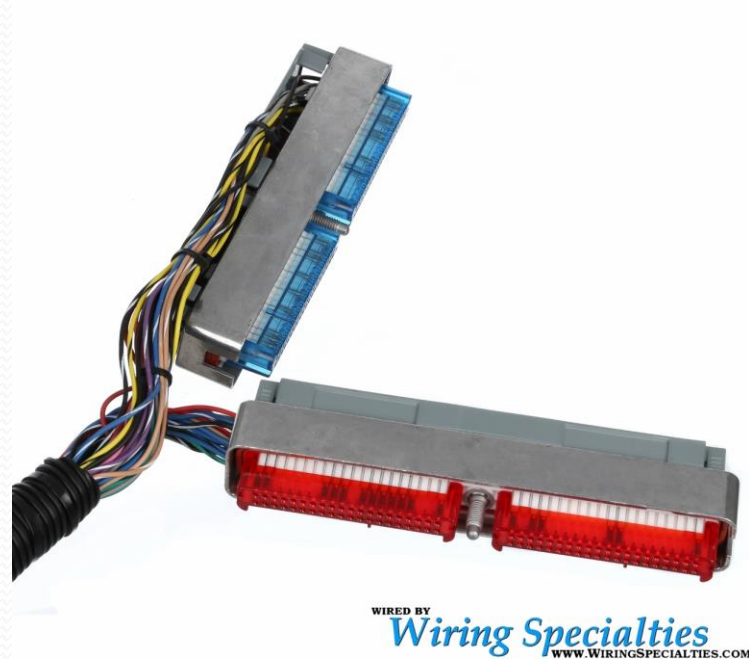
What's inside



Step 1: *Feeding the harness in*

Remove the PCM covers and feed the harness through the firewall with the ECU (PCM) and the interior interface plugs leading the way.

On the S13/S14 chassis the diameter of the firewall opening is small and will likely require the fan box to be unbolted to create more space for the PCM to slide through.



Step 2: *Driver's Side Install*

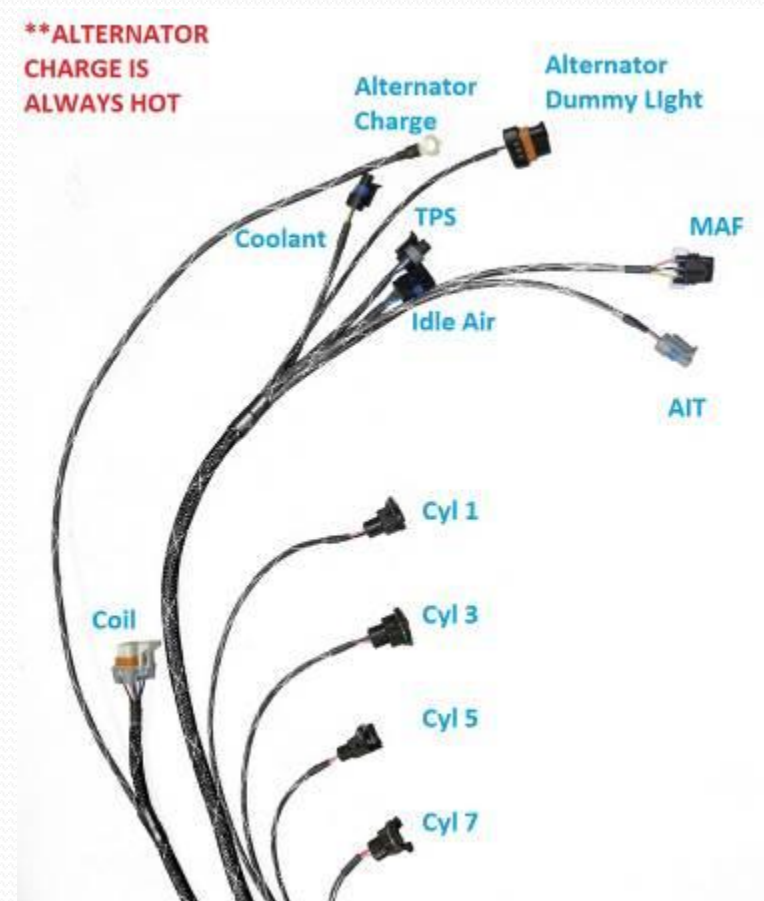
Starting at the front of the engine, drape the harness over the EFI parts.

Refer to the last page for complete connector identification.

TIP- It is easier to lay out the LHD Driver side connectors first (this side contains the Alternator and TPS, MAF wiring connectors), followed by the passenger side, and finally the transmission drop, which should be dropped behind the V of the heads and down to the bottom of the firewall.

This is a picture of the LHD Driver side section.

When installing the injector connectors, use the longest branches for front injectors and the shortest ones for the rear injectors.



Step 3: *Coolant Temperature Sensor*

This engine harness is designed to work with the 99+ 2-pin F-Body/GTO coolant temperature sensor. The picture shows a sample of the correct sensor required.



Step 4: *Harness Ground*

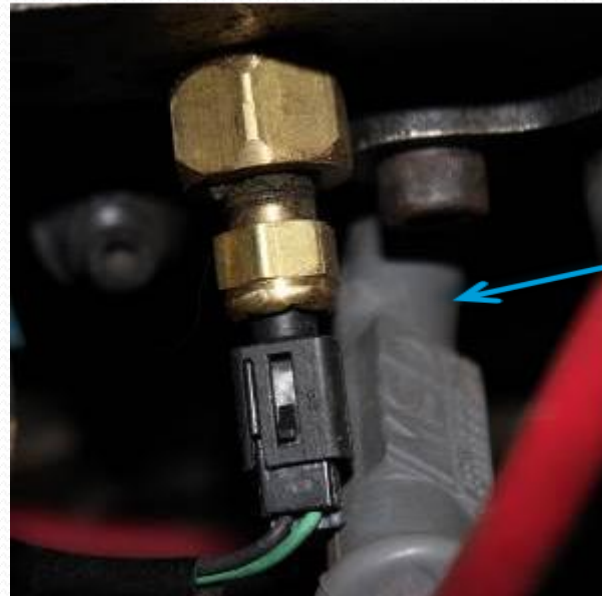
The main engine EFI ground is located at the factory GM location on the back of the LHD Driver-side head. Use the stock bolt to secure the ground.



Step 5: *Coolant/ Oil Gauge Adapter*

The Nissan coolant and oil pressure sensors are required for factory gauge cluster operation.

The adapter kit offered by WIRING SPECIALTIES allows the OEM S13/14 coolant temp sensor to thread into the rear passenger head, and the OEM S13/14 oil pressure sensor into the block in the factory GM oil sensor location. The Nissan oil and coolant sensors can be found on your Nissan engine.



Coolant Temp



Oil Pressure

Step 6: *Fans*

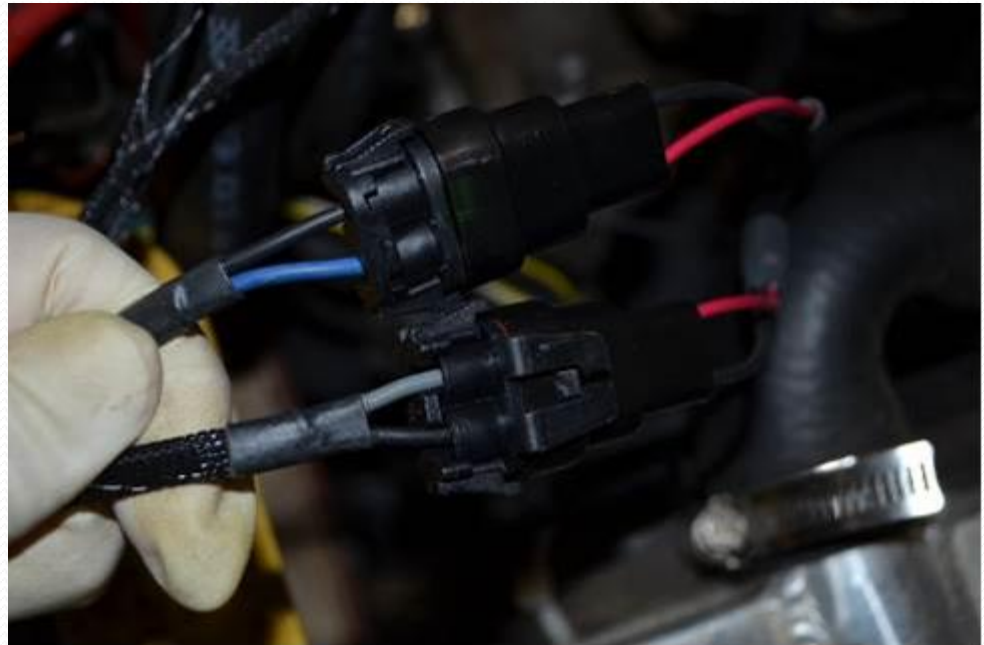
The Wiring Specialties harness includes relays, fuses and wiring for two electric fans and is designed to work with any factory or aftermarket style fans. The harness side connectors can be found in the front of the passenger head. The male mating connectors and terminals have been supplied along with the harness, and should be wired to the fans using the following wire layout.

BLUE - Fan 1 Signal +12v

GREY - Fan 2 Signal +12v

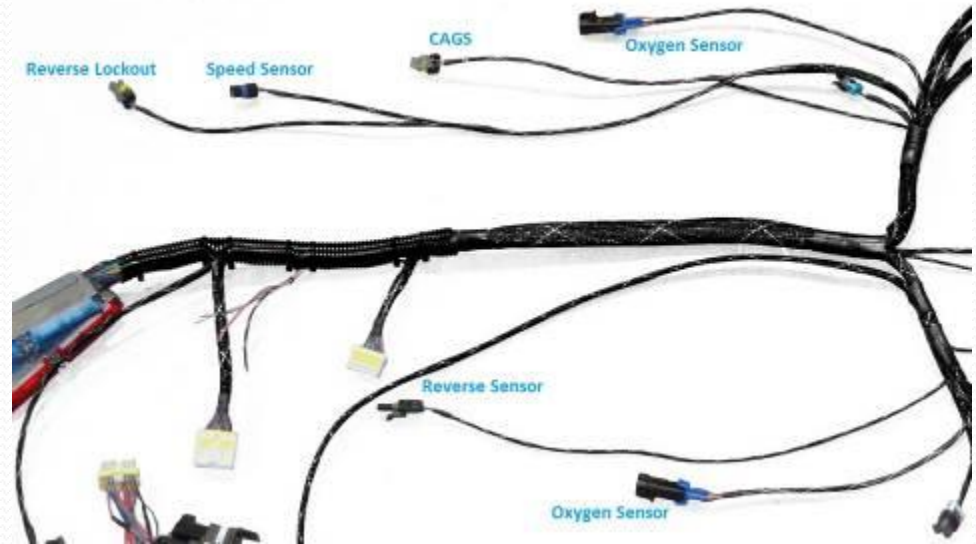
BLACK - GROUND

***Make sure to test fans for airflow. Air must be pushed or pulled towards the engine. If needed, reverse polarity on the fans by reversing the fan side wires.



Step 7: T-56 Transmission Sensors

To avoid improper installation on the transmission sensors, a diagram has been provided. Again, note that laying out the harness in the early stages is crucial for proper fitment.



Step 8: 4L60E Automatic Transmission

Included with the automatic version of the LS Harness are two subharnesses for Park/Neutral Safety Switch and the Reverse Switch. Each has a mating end on the fusebox and must be wired into either an aftermarket gear selector switch, or directly to the transmission. (Setup may vary based on donor vehicle)

Park/Neutral Safety Switch- This subharness must be wired into a gear selector switch to provide a signal to the starter in the park position



Reverse Switch- This subharness must be wired into an automatic gear selector for the use of reverse lights

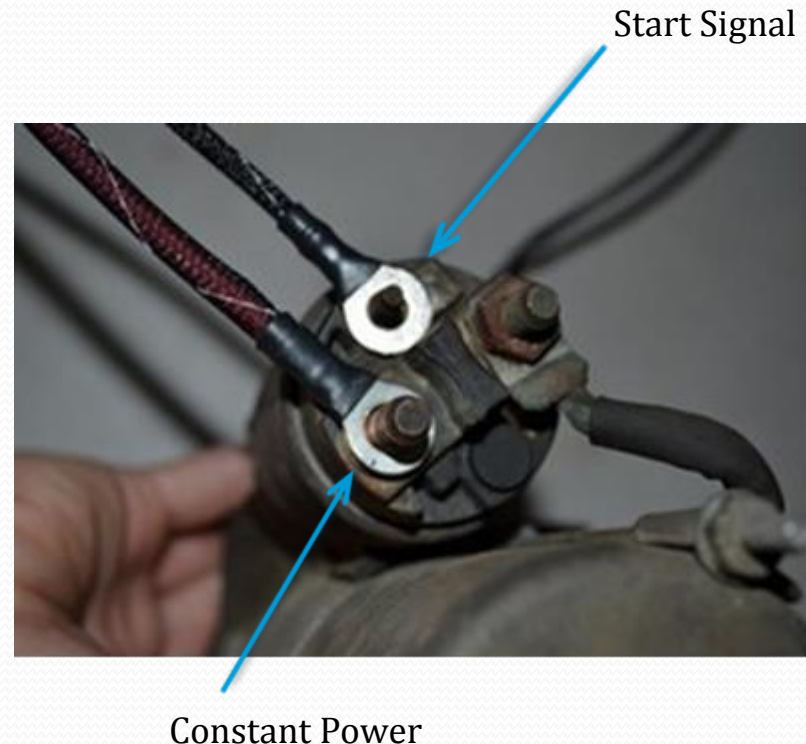


Step 9: Starter Setup

Some engine mounting kits have the headers close to the block and will require the starter to be lowered to reach the crank sensor connector.

Two ring terminals are found on the passenger side of the harness.

The Start Signal is the smaller, polished ring with the black wire. The Larger silver ring terminal is the Alternator power wire (red) and should be installed on the MAIN power terminal of the starter. A battery cable should be installed on the same terminals of the starter. MAKE ABSOLUTELY SURE that the two terminals do not come in contact with each other. Some GM factory battery cables will need to be filed for correct fitment. OEM 240sx battery cable can be used as well.

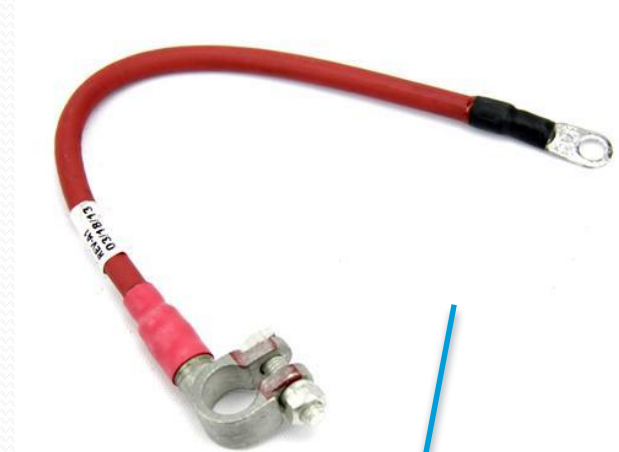


Step 10: *Battery Constant Power*

You will need to supply power directly from the battery to power the starter, and electronic system for the harness.

We recommend using a 2 Gauge wire for the **main** power supply directly to the starter.

The ring terminal next to the start signal connector has to be installed on the positive terminal, similar to the alternator charge cable. This will provide the +12v constant power to the engine harness.



Step 11: A/C Option

When the A/C option is selected you will receive a 3 pin connector wired from the ECU, which connects to the GM A/C Pressure Sensor. This pressure sensor does NOT exist on the 240sx. We recommend welding on a fitting on the high-pressure A/C line, near the firewall opening. Connect the 3-pin connector to the standard GM sensor.

The second sub harness connects directly to the LS1 A/C compressor. The ground ring is connected to the front of the LHD passenger side head. Last, the blue signal wire is tapped into the factory 240sx A/C signal wire on the US driver's side.



Step 12: *SGI-5 Speedo Calibration*

The loose wires are for the SGI-5 Speedo Conversion unit and should be wired as the following:

Power- Pink Wire

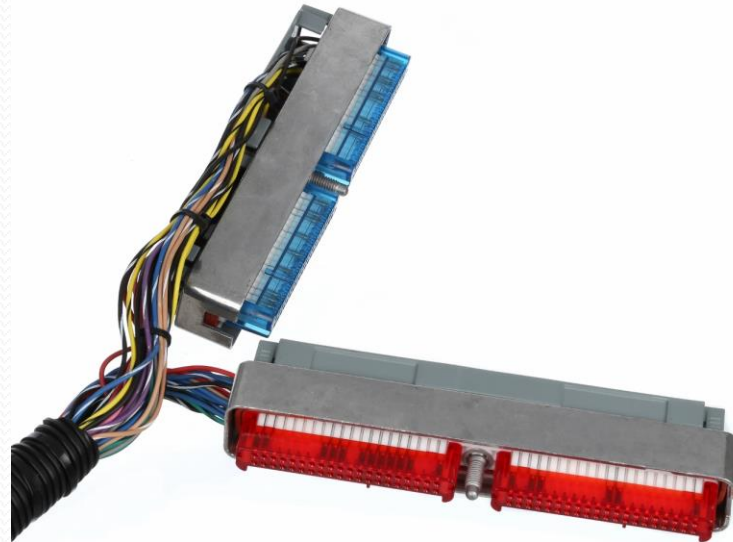
Ground- Black w/ White Stripe

Input- Green w/ White Stripe

Output 3- White



At this point, we can move back into the car and connect the dash interface harness and ECU connector. Ensure that the connector bolt is lightly tightened to avoid stripping of threads or causing damage to the ECU. For any more instruction on the interface harness, simply click on the hyperlink below and you will be redirected to our website for further information.



WIRED BY
Wiring Specialties
WWW.WIRINGSPECIALTIES.COM

[Follow this link to interface details](#)

Your Harness is in!

Once again, congratulations and thank you for purchasing the LS1-PRO series harness! Get out and show off your new tucked harness and take to the track for some fun! If you have any more questions / concerns, contact one of our technical representatives at **860-799-6579**

