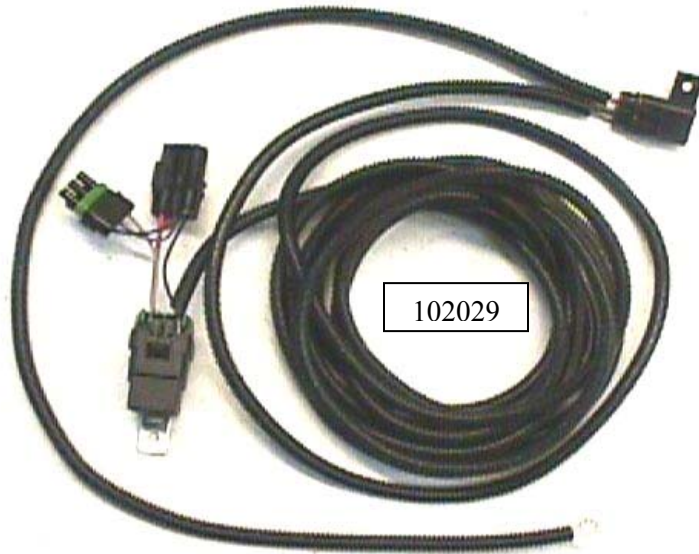




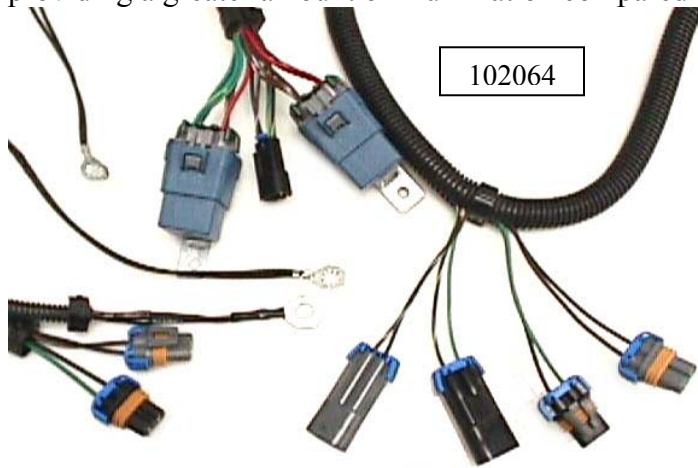
Casper's Electronics, Inc. is a manufacturer and distributor of electrical and electronic wiring products catering to a specialty segment of the automotive aftermarket. Located north of Chicago since 1988, Casper's has produced custom products for the Buick Grand National and many other performance-related products and wiring upgrades for other GM and Ford cars and trucks.

Casper's Electronics pioneered the first "thumbwheel" performance EPROM chip, named the Ultrachip, designed to provide the operator of the turbocharged vehicle with a selection of performance programs which can be chosen instantly. This "Mild-To-Wild" concept led to many other performance products designed to increase horsepower and improve electrical system control in a vehicle. One example is the fuel pump wiring upgrade, or "hotwire" kit designed to increase voltage to the fuel pump of the vehicle, resulting in more fuel volume when needed due to injector or induction upgrades.



This "hotwire" kit is designed to plug in to existing wiring, and utilizes a sealed relay and OEM connectors, wiring, and conduit. High reliability is the key to these products.

This "Plug-And-Play" concept is a guideline that Casper's uses for virtually all of its designs, making it easy for the novice to install, and electrically reliable for heavy-duty use. Applying this concept to other parts of the vehicle such as the headlight system, provides extra current and voltage to the headlamps, providing a greater amount of illumination compared to the factory "borderline" wiring.



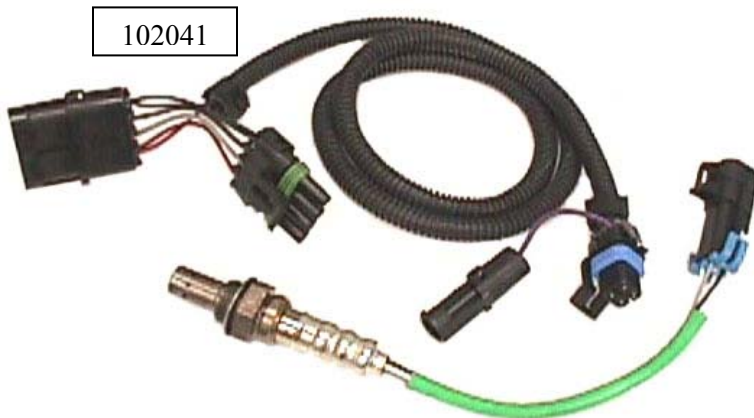
Low and high beam headlamps will illuminate considerably brighter with this wiring upgrade. Using a direct connection to the battery, sealed relays and larger gage wiring, this system will provide up to 30% more light from the vehicle's headlights.

Performance applications require greater cooling to the engine and components. Off-road drag racing, for example, can benefit from cooler and denser air, and less heat buildup in the engine compartment. Casper's offers several "Plug-And-Play" kits which are designed to give the vehicle operator manual control of the engine cooling fan.



This wiring kit, designed for a GM vehicle, permits complete manual override control for the high speed coolant fan. Using a miniature switch, the vehicle operator can switch from "normal" computer commanded fan control to "manual" fan control.

Off-road racing puts a greater stress on components in an engine, and engine sensors such as oxygen sensors, are pushed to the limit and prone to damage with fuel additives. The early oxygen sensors found on pre-1990 engines were usually single wire sensors. Technology has caught up with the oxygen sensor, and present-day vehicles use heated oxygen sensors for better control. They also have the advantage of the internal heater, which serves to make the sensor respond faster and be less prone to damage from fuel additives. Casper's has developed a "retrofit" kit using the heated oxygen sensor and a wiring harness that addresses the heater circuit, designed to be fit into vehicles which didn't have the technology available.



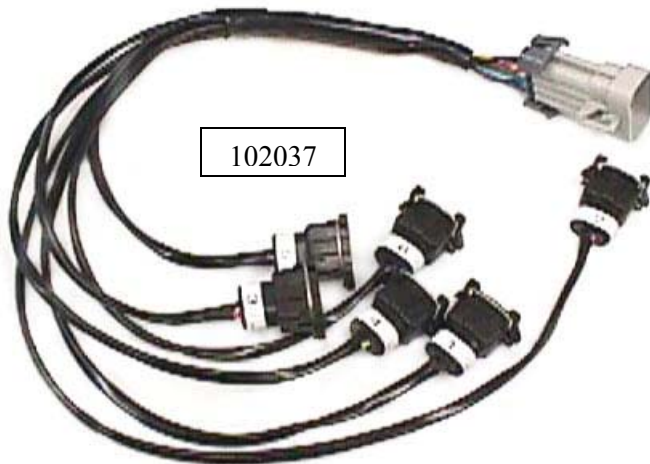
Using a specially designed "Plug-And-Play" wiring harness, this kit adapts an early one-wire oxygen sensor equipped vehicle to the modern, four-wire heated oxygen sensor. The heated sensor is less prone to contaminants in the fuel, and operates more efficiently.

Greater demands on the electrical system of a vehicle require heavy-duty alternators, batteries and cables. Casper's develops specific battery cable assemblies and systems that utilize larger-gage cables, fuselinks, and terminals to suit the application. Weight balance on a vehicle sometimes requires that the battery be mounted in the rear of the vehicle, so larger wire gage issues are addressed with specially designed systems using junction blocks and heavier cable.



This battery relocation kit extends the positive post of the battery to a heavy junction box. From there, heavier cable is centrally located to supply the alternator, starter, fuse links, and ECM memory. This kit allows aftermarket connections to the battery without overloading the battery post with cables and wiring.

More horsepower is always the goal for the race engine builder. Using factory OEM engine wiring along with aftermarket fuel-related items such as high flow injectors places an increased electrical burden on the wiring. To correct the problem, Casper's has developed injector harnesses which utilize larger gage wire, and can replace the factory harness.



High flow fuel injectors are commonly fitted with low impedance, low ohm coils which induce a greater load on the wiring. This high performance fuel injector harness uses 14 gage high temperature wire throughout, providing less voltage drop across the wiring, resulting in better control of the injectors and less electrical losses. All injectors are clearly marked and numbered.

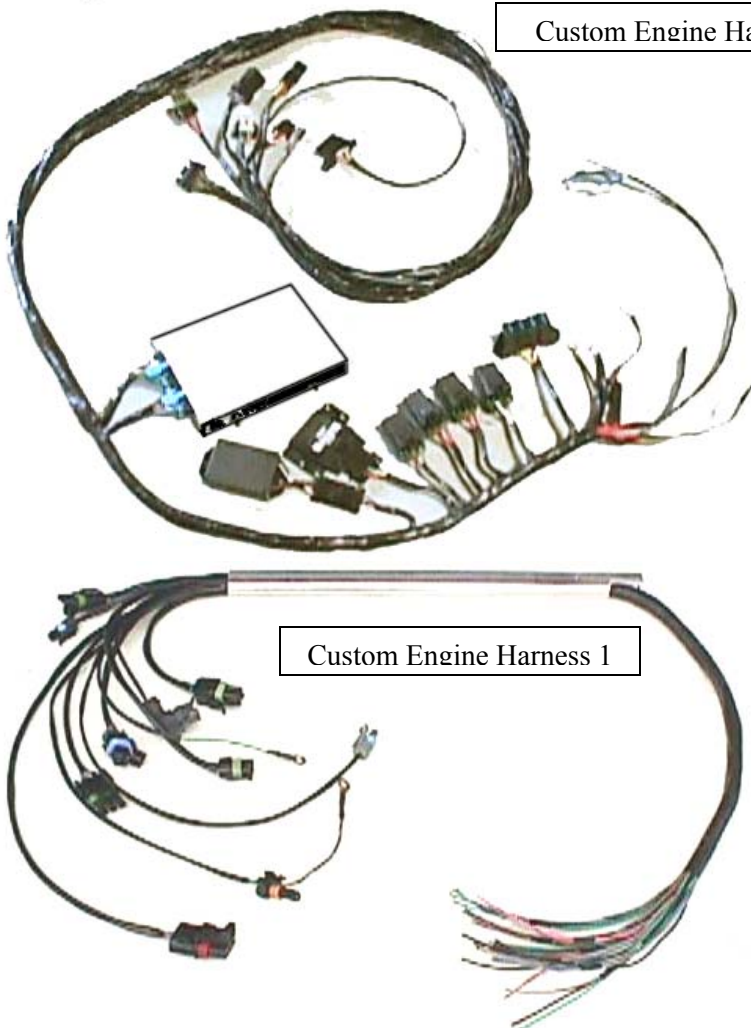
Engine wiring is put to the test in performance applications. Too often, connector integrity and proper wiring techniques are overlooked, resulting in less than adequate performance and down time. Casper's Electronics builds custom engine wiring harnesses, "race" harnesses, and accessory harnesses for specific applications. Using OEM color-coded wiring, sealed connectors and high reliability switching relays, these wiring harnesses not only perform to specification, but look good too, and have made their way into many show cars and trucks.





109030

This OEM replacement engine harness incorporates improvements in wire gage, connector length, ground integrity and other issues addressed by inadequacies which were prevalent in the original wiring harness. Custom engine harnesses are built to order for specific vehicles.

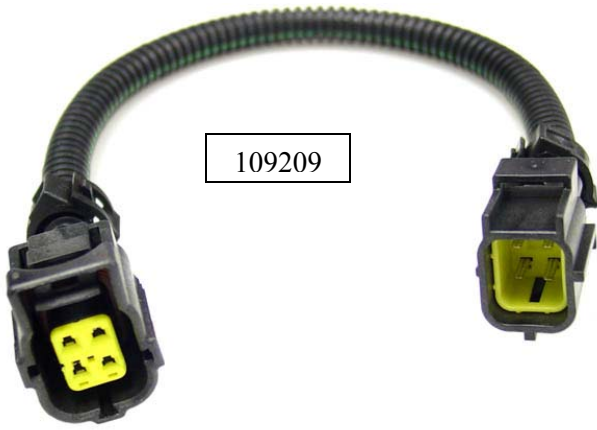


Custom Engine Harness 2

Custom Engine Harness 1

Two examples of custom built engine harnesses. Harnesses can be designed as a stand-alone engine control, quick disconnect race harnesses, or mating harnesses for existing engine applications. Items found in Casper's harnesses include fuse panels, "Check Engine" lamps, VSS conversion modules, ALDL ports, junction blocks for grounds and positive feeds, sealed relays and fuel feed systems, and even vacuum hoses thru the harness for "stealth" MAP connections or gauge connections.

Extending electrical connections, particularly for high sensitivity sensors such as air temperature, coolant temperature and oxygen, require specific wiring and electrical properties. Casper's has developed a line of sensor extensions, "Plug-And-Play" design, to extend sensor connections when installing aftermarket headers and induction systems.



109209



109018



109008

These are just a few of the many sensor extensions produced by Casper's. Sealed connectors, specially tooled connectors, tapeless conduit and high temperature wiring are some of the features in these products. Extensions are stocked in standard lengths and also available in lengths made to order.

Wiring systems on vehicles require special sealed connectors and crimp terminals designed by automakers for reliability under adverse conditions. Unsealed connectors are not used in modern production vehicles because of the reliability issue. When wiring a vehicle, the technician needs the special connectors and hardware required to perform the task. Casper's supplies many specific splice ends with color-coded wire which can be grafted onto a damaged connection, maintaining a proper fit to the vehicles' sensor. Hundreds of different splice ends are available.



103005

OEM sealed "Weatherpack" connectors are included in this kit furnished by Casper's Electronics. This particular kit includes single to multiple connections, male and female, with terminals, seals and a terminal removal tool. Having the right part for the job is necessary to maintain connector integrity.