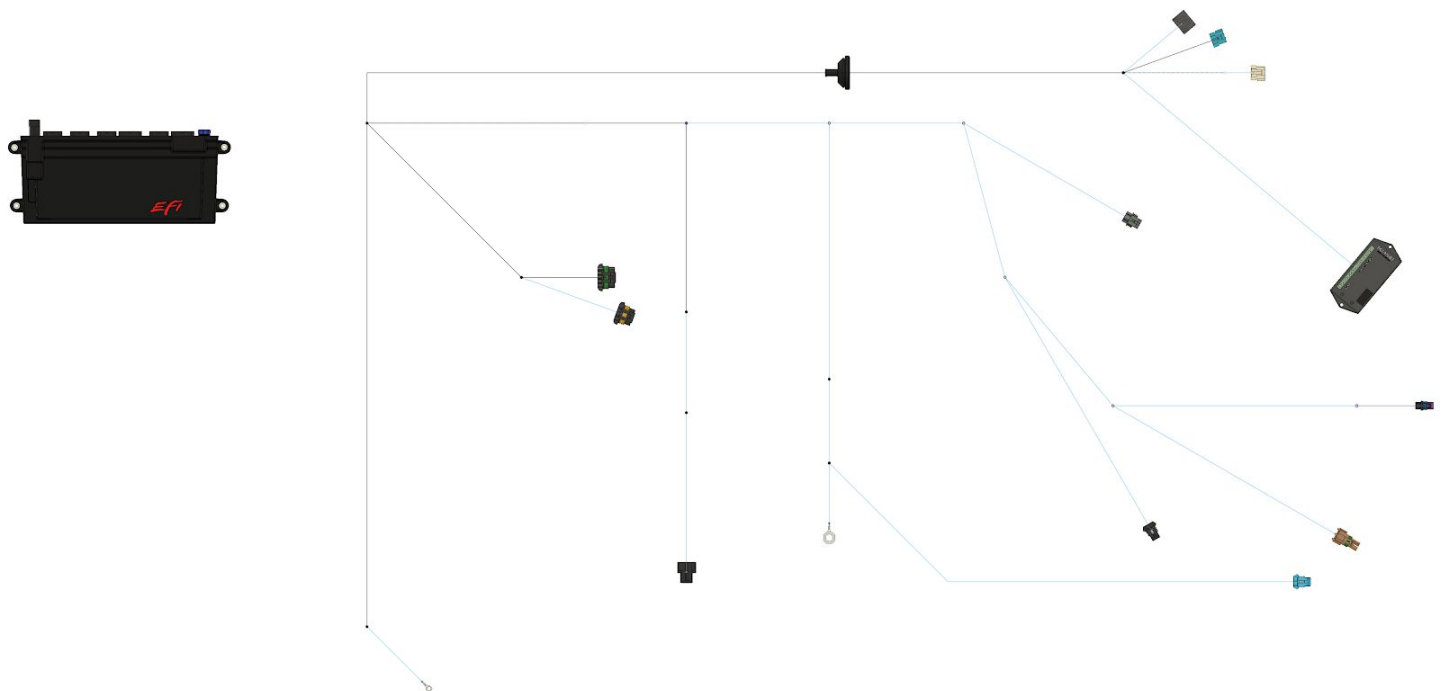




# Bare Bones Engine Wire Harness Installation Guide

## for LT1 Camaro/Firebird w/ Holley EFI ECU

P/N 100-02351



**PLEASE READ THIS GUIDE IN ITS ENTIRETY BEFORE INSTALLATION**

**IMPORTANT!** You have chosen to remove the original engine control module, that GM designed to integrate with auxiliary systems of your vehicle, to install a stand-alone Holley ECU that has limited integration capabilities. You are expected to take ownership and responsibility of Holley ECU integration efforts by working with Holley documentation, GM service manual documentation, and technical support from the vendors of the equipment installed in your vehicle.

## CONGRATULATIONS! (AND THANK YOU)

You've chosen a quality wire harness assembly manufactured in the USA by EFI Connection, LLC. The development of this engine harness is the result of many years of experience with the 1993-1997 Camaro and Firebird. Our modern harness manufacturing equipment and production tooling has allowed us to meet or exceed the quality of the original GM wire harness you are removing from your vehicle.

### Ultrasonic Solderless Splices

This harness features ultrasonically welded splices. Each splice is defined within our Telsonic TS3 software and the welded nugget is automatically measured and recorded to ensure quality control. Finished splices are then covered with an adhesive-lined heat shrink tube to protect the splice within the harness loom.



### Production Crimp Tools

Each terminal within this harness assembly has been crimped by a semi-automatic applicator or Rennsteig hand tool using terminal-specific dies that result in crimp quality that meets manufacturer-defined crimp height and width specifications. As an authorized Rennsteig Tools reseller, we have years of experience and expertise when it comes to the highest quality construction.



## Supported Functions

This harness has been designed to universally fit 1993-1997 Camaro/Firebird with LT1 engine. The harness lengths, routing, and vehicle-specific connectors make this harness an excellent solution for installing a Holley EFI ECU. This harness does not contain fuel injection system functions. The purpose of this harness is to connect the following engine and transmission functions to the instrument panel cluster and provide a connection to the starter for crank.

- Generator (Alternator)
- Oil Level Switch
- Oil Pressure Sending Unit
- Coolant Temperature Sending Unit
- Backup Lamp Switch (T56 Transmission Only)
- Vehicle Speed Sensor
- Starter (Crank)
- Dakota Digital SGI-5E Module

### Dakota Digital SGI-100BT Module Integration (Dakota Digital SGI-100BT Module Sold Separately)

Holley's ECU may not be able to control your vehicle's speedometer and tachometer. For that reason, we've conveniently provided the necessary wires to install a Dakota Digital SGI-100BT speedometer/tachometer signal interface module. This module can be installed under the dash beyond the firewall grommet. This harness provides loose wires that follow the table below.

**IMPORTANT! FOR ASSISTANCE WITH THIS MODULE, PLEASE CONTACT HOLLEY AND/OR DAKOTA DIGITAL**



| WIRE           | OTHER END              | FUNCTION      |
|----------------|------------------------|---------------|
| 20 AWG PNK     | C100 CAVITY A          | SWITCHED 12V  |
| 20 AWG BLK     | CYLINDER HEAD TERMINAL | GROUND        |
| 20 AWG PPL     | VSS CAVITY A           | VSS LOW       |
| 20 AWG YEL     | VSS CAVITY B           | VSS HI        |
| 20 AWG GRN/WHT | C220 CAVITY G          | SPEEDOMETER   |
| 20 AWG BLU/WHT | LOOSE FOR ECU          | TACH (SIGNAL) |
| 18 AWG WHT     | C230 CAVITY D          | TACHOMETER    |

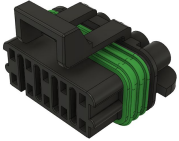
## UNDERSTANDING THE CONNECTIONS WITHIN THIS HARNESS

EFI Connection does not offer a wiring diagram that represents this harness assembly. Refer to Holley LS1 Engine Main Harness (P/N 558-102) wiring diagrams for troubleshooting and integration purposes. Holley wiring diagrams are freely available through <http://www.holley.com>.

### C100 ENGINE BAY HARNESS CONNECTION

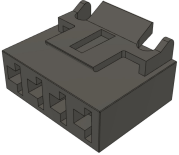
Connection in engine bay on top of passenger side strut tower for engine bay harness integration.

**IMPORTANT! Because Holley inputs/outputs capabilities are different between HP/Dominator and Terminator X ECUs, Fan Relay Harness 100-05002 is required when using HP or Dominator ECU. Fan Relay Harness sold separately.**

|  | CAVITY | WIRE           | OTHER END             | FUNCTION                   |
|---|--------|----------------|-----------------------|----------------------------|
|   | A      | 20 AWG PNK     | DAKOTA DIGITAL SGI-5E | SWITCHED 12V FOR SGI-5E    |
|   | G      | 18 AWG RED/WHT | LOOSE (TO ECM P1A-10) | HOLLEY ECU IGNITION SIGNAL |
|   | H      | 20 AWG GRY/RED | LOOSE (TO ECM P1B-11) | FANS HIGH SPEED CONTROL    |
|   | J      | 20 AWG GRY/YEL | LOOSE (TO ECM P1B-12) | FANS LOW SPEED CONTROL     |

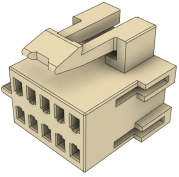
### C210 INSTRUMENT PANEL HARNESS CONNECTION

Connection under dash for I/P harness integration.

|  | CAVITY | WIRE       | OTHER END                   | FUNCTION             |
|---|--------|------------|-----------------------------|----------------------|
|   | A      | 10 AWG PPL | STARTER S TERMINAL          | STARTER CRANK SIGNAL |
|   | B      | 18 AWG BLK | CYLINDER HEAD RING TERMINAL | GROUND               |

### C220 INSTRUMENT PANEL HARNESS CONNECTION

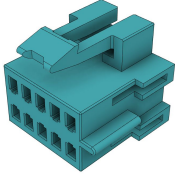
Connection under dash for I/P harness integration.

|  | CAVITY | WIRE           | OTHER END  | FUNCTION                |
|---|--------|----------------|--|-------------------------|
|   | A      | 18 AWG RED     | GENERATOR (ALTERNATOR)                                   | TURN ON SIGNAL (CHARGE) |
|   | B      | 20 AWG TAN     | OIL PRESSURE CAVITY A                                    | OIL PRESSURE SIGNAL     |
|   | C      | 20 AWG BRN     | OIL LEVEL SWITCH CAVITY B                                | LOW OIL INDICATOR LAMP  |
|   | G      | 20 AWG GRN/WHT | DAKOTA DIGITAL SGI-100BT                                 | SPEEDOMETER             |
|   | J      | 20 AWG GRN     | LOOSE ( <b>TRIGGER</b> TO HOLLEY 14 AWG GREEN FUEL PUMP) | FUEL PUMP RELAY CONTROL |

|  |   |            |                     |                    |
|--|---|------------|---------------------|--------------------|
|  | K | 20 AWG GRN | COOLANT TEMP SENDER | COOLANT TEMP GAUGE |
|--|---|------------|---------------------|--------------------|

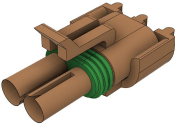
### C230 INSTRUMENT PANEL HARNESS CONNECTION

Connection under dash for I/P harness integration.

|  | CAVITY | WIRE          | OTHER END                | FUNCTION                 |
|---|--------|---------------|--------------------------|--------------------------|
|   | D      | 18 AWG WHT    | DAKOTA DIGITAL SGI-100BT | TACHOMETER (INSTRUMENTS) |
|   | H      | 16 AWG BRN    | B/U SWITCH CAVITY A      | BACKUP LAMP 12V SUPPLY   |
|   | J      | 16 AWG LT GRN | B/U SWITCH CAVITY B      | BACKUP LAMPS             |

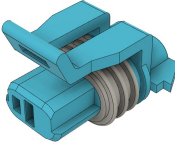
### BACKUP LAMP SWITCH

Located on the passenger side of the GM T56 6-Speed manual transmission. Not used with other transmissions.

|  | CAVITY | WIRE          | OTHER END     | FUNCTION               |
|---|--------|---------------|---------------|------------------------|
|   | A      | 16 AWG BRN    | C230 CAVITY H | BACKUP LAMP 12V SUPPLY |
|   | B      | 16 AWG LT GRN | C230 CAVITY J | BACKUP LAMPS           |

### COOLANT TEMPERATURE SENDING UNIT

Located in the driver side cylinder head. Provides a signal to the coolant temperature gauge in the instrument cluster.

|  | CAVITY | WIRE       | OTHER END     | FUNCTION           |
|---|--------|------------|---------------|--------------------|
|   | A      | 20 AWG GRN | C220 CAVITY K | COOLANT TEMP GAUGE |

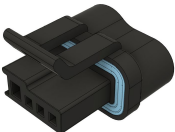
### FIREWALL GROMMET

Located near ECU on the passenger side firewall. Route the interior harness segment and grommet through the firewall. Pull the harness back toward the engine bay to seat the grommet in the firewall.



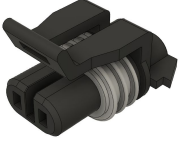
### GENERATOR (ALTERNATOR)

Located within the engine front accessories on the passenger side.

|  | CAVITY | WIRE       | OTHER END     | FUNCTION                |
|---|--------|------------|---------------|-------------------------|
|   | L      | 18 AWG RED | C220 CAVITY A | TURN ON SIGNAL (CHARGE) |

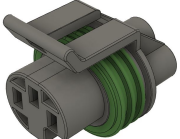
**OIL LEVEL SWITCH**

Located on the driver side of the engine oil pan. Illuminates the oil level telltale lamp when oil level is low.

|  | CAVITY | WIRE       | OTHER END                   | FUNCTION |
|---|--------|------------|-----------------------------|----------|
|   | A      | 20 AWG BLK | CYLINDER HEAD RING TERMINAL | GROUND   |
|   | B      | 20 AWG BRN | C220 CAVITY C               | SIGNAL   |

**OIL PRESSURE SENDING UNIT**

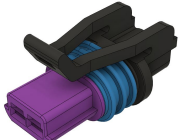
Located on the driver side of the engine block. Provides a signal to the oil pressure gauge in the instrument cluster.

|  | CAVITY | WIRE       | OTHER END     | FUNCTION            |
|---|--------|------------|---------------|---------------------|
|   | A      | 20 AWG TAN | C220 CAVITY B | OIL PRESSURE SIGNAL |

**VEHICLE SPEED SENSOR (VSS)**

Located within the transmission tail housing.

**IMPORTANT! 1995 and older automatic transmissions will require a different harness connector. Contact us with details about your VSS so that we can manufacture an adapter harness. VSS adapter harness sold separately.**

|  | CAVITY | WIRE       | OTHER END                | FUNCTION |
|---|--------|------------|--------------------------|----------|
|   | A      | 20 AWG PPL | DAKOTA DIGITAL SGI-100BT | VSS LOW  |
|   | B      | 20 AWG YEL | DAKOTA DIGITAL SGI-100BT | VSS HIGH |