Engine Distributors Inc.
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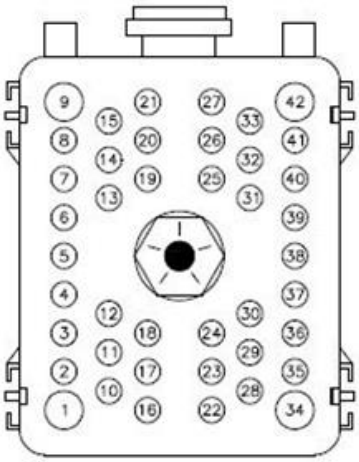
CSG637 Body Side Harness Installation Instructions
F8JL-14324-AC or 42 Pin Kit 5080030

Please read through the complete instructions before starting the installation.

The chart on the last page can be used for future reference. It is not necessarily needed for installation.

When connecting two wires, it is recommended that you solder the wires together and cover the splice using heat shrink tubing with hot melt wax.

1. Disconnect the battery.
2. The positions on the 42-pin connector of the harness are numbered. The instructions listed below refer to Pin #'s. Pin 1 refers to the wire in position 1 of the 42-pin connector; Pin 2 refers to the wire in position 2 of the 42 pin connector and so on. Then continue to hookup each wire as needed. Make sure to follow the instructions listed for each pin.



Pin 1 (required) - Connect to +12V switched ignition source. This pin must have 12 volts when the key is on. Remove voltage to shut off engine.

Pin 2 (optional) - Connect to an auxiliary tachometer; two pulses per rev

Pin 3 – **(optional)** – Connect to ground via a switch. With the key on and engine off, switch this line to ground to flash out codes via the MIL (malfunction indicator lamp).

Pin 4 (optional) - You may insert a wire that will connect through a brake switch to ground to give the GCP a brake switch input.

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Pin 5 (required if running on gasoline) - Connect to the fuel pump positive lead.

Pin 6 (required on mobile equipment/optional on stationary emergency equipment) - Connect to the malfunction indicator lamp (MIL). The other side of the MIL needs to be connected to +12 volts. If using an LED see Note 1 on page 4.

Pin 7 (optional) – Fuel select; if dual fuel is ordered, typically gasoline = open/gnd, LPG or CNG = 12 volts. If single fuel is ordered, leave pin open. If unsure consult your distributor or EDI for setup in the GCP program.

Pin 10 (optional) - Auxiliary analog PUD1, 12 volt input, i.e. safety switch input

Pin 12 (**optional) –** You may insert a wire to be used for secondary variable speed control input. 0 – 5 volt signal.

Pin 14 (optional) - Connect to the gray / white wire of the drive by wire harness PN F8JL-12B476-AA. Solder the connection and cover with sealable heat shrink. Used with the foot pedal or the variable speed hand controller. 0 – 5 volt signal.

Pin 15 (required) - Connect to the start position of the ignition switch. This wire needs +12 volts when the engine is in crank mode.

Pin 18 (required if running on gasoline) – Connect to the fuel pump negative lead

Pin 23 – (optional) – You may insert a wire to connect to governor speed select switch 2 (GVS2). The other side of GVS2 needs to be connected to +12V. Solder the connection and cover with sealable heat shrink. Used for tap up / down or discrete speed control.

Pin 24 (optional) – Connect to governor speed select switch 1 (GVS1). The other side of GVS1 needs to be connected to +12V. Solder the connection and cover with sealable heat shrink. Used for tap up / down or discrete speed control.

Pin 25 (optional) – Connect to idle validation switch (IVS) on the drive by wire harness. The other side of the IVS switch needs to be connected to ground. Solder the connection and cover with sealable heat shrink. Used with the foot pedal.

Pin 26 (optional) – Dark Green / White – Connect to oil pressure light. This wire comes from the oil pressure switch. It is closed (grounded) with oil pressure and open when there isn't oil pressure.
Pin 27 – Auxiliary out 2

Pin 28 – CAN + port using SAE Standard J1939.
Pin 29 – CAN - port using SAE Standard J1939.

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Pin 31 (optional) – 5 volt reference. Connect to brown / white wire on the drive by wire harness PN F8JL-12B476-AA. Solder the connection and cover with sealable heat shrink. Used with the foot pedal or the variable speed hand controller

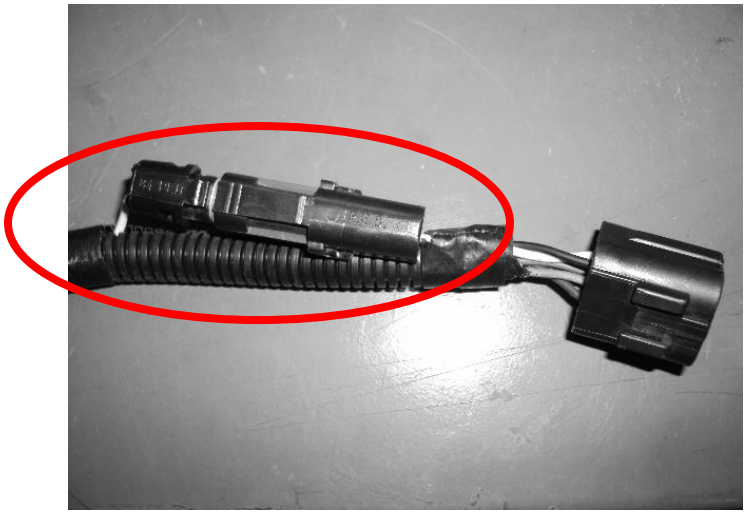
Pin 33 (optional) – Analog return. Connect to gray / red wire on the drive by wire harness PN F8JL-12B476-AA. Solder the connection and cover with sealable heat shrink. Used with the foot pedal or the variable speed hand controller.

Pin 37 – **(optional) –** Auxiliary analog PUD2, Connect to ground via a switch. With the key on and engine off, switch this line to ground to flash out codes via the MIL (malfunction indicator lamp).

Pin 39 – (optional) – You may insert a wire to connect to an auxiliary relay or light. This wire will be grounded by the GCP when certain customer defined conditions are met.

Engine Harness

When running on Propane or Natural gas and using a CAN device, unplug the CAN termination resistor located on the engine harness near the electronic pressure regulator. Ensure that the added CAN device is properly terminated. If no other CAN device is on the network, keep the jumper plugged in. Below is a picture of the jumper for reference.



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F8JL-14324-AC & Pin Kit 5080030	
42 pin engine to frame harness (3.7L)	
GCP Engine to Frame Harness Pinout	
Pin #	**Description**
1	+12 V switched
2	Tachometer output
3	MIL Flash
4	Brake input
5	To fuel pump positive
6	To MIL
7	Fuel select
8	Not used
9	Not used
10	Aux. Analog PUD1
11	RS232 Tx
12	FPP2
13	Not used
14	FPP1
15	To start switch "S" terminal
16	Not Used
17	Not used
18	To fuel pump negative
19	Not used
20	Not used
21	Not Used
22	Not used
23	GVS 2
24	GVS 1
25	IVS
26	Oil pressure
27	Aux. Out 2
28	CAN +
29	CAN -
30	Not used
31	+5v ref
32	Aux. Analog PD1
33	Analog return
34	Not used
35	Not Used
36	Not Used
37	Aux PUD2 Input
38	Not used
39	Aux. Out 1
40	Not used

Note 1: If using an LED light on any of the aux outputs or the MIL. It is recommended to install a 600 ohm resistor across the negative and positive leads of the LED. Otherwise the LED may be dimly lit when not on.