

# Engine Interface Guide

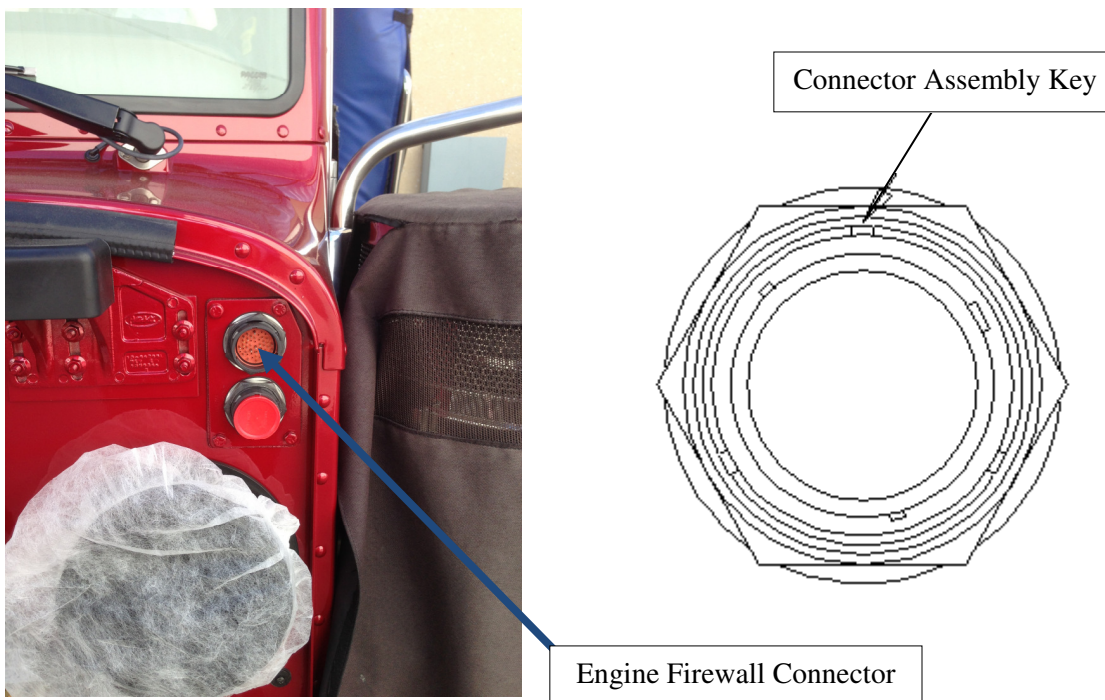
## - Glider kits



Effective 04/08/2013 Peterbilt will be shipping Glider Kits built to the 2013 level electrical system. This document will provide information on the interface the cab is equipped to support.

### Vehicle Engine Connection

The interface between the vehicle's main cab harness (ref. part # P92-8904) and the engine harness is through the engine firewall connector located on the top edge of the driver side firewall.



### Connector Information

The mating connector for the firewall connection is a Deutsch: HDP-26-24-47-E-L017. The firewall connector pin-out is:

Pin Position	Circuit Name	Circuit Type	Circuit Details
1	ORN1229-4	Power	Ignition Switched Power
2	Open		
3	BRN4331-0	Signal	OBD MIL Light (Check Engine) 2013 Only
4	YEL7111-0	Signal	A/C Compressor Clutch
5	ORN3971-0	Power	AECU Ignition (2010 Engines and On)
6	BLK0782-0	Power	Engine Spare Power (E1)
7	BLU4527-1	Signal	Outside Air Temp
8	VIO4500-1	Power	NAMUX Power (+5V)
9	Open		
10	GRA3911-0	Signal	Starter Solenoid Coil

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11	GRA3143-0	Signal	Remote Throttle Enable
12	VIO3141-0	Signal	Throttle Supply #1 (+5V)
13	VIO3142-0	Signal	Throttle Supply #2
14	BLU3142-1	Signal	Throttle Sense Position #2
15	Open		
16	GRA3631-1	Signal	Two Speed Axle
17	GRA3186-0	Signal	Misc. Engine Input #1
18	GRA3511-1	Signal	PTO On/Off
19	Open		
20	Open		
21	ORN3111-1	Power	Engine ECM Switched Power
22	BLU3141-0	Signal	Throttle Sense Position #1
23	GRN3141-0	Signal	Throttle Return #1
24	GRN4500-1	Signal	NAMUX Analog Return
25	GRN4522-0	Signal	Main Trans Oil Temp Return
26	BLU4522-2	Signal	Main Trans Oil Temp
27	Open		
28	WHT0813-1	Ground Shield	J1939 BCAN – Shield (2013 Only)
29	GRN0813-0	Signal	J1939 BCAN – Low (2013 Only)
30	GRN0812-1	Signal	J1939 VCAN - Low
31	YEL0812-1	Signal	J1939 VCAN - High
32	GRA3124-0	Signal	MAG Switch
33	GRA3913-0	Signal	Remote Start/Run
34	GRN3155-26	Signal	Switch Common Return #3
35	Open		
36	Open		
37	GRA3512-0	Signal	Remote PTO Set
38	GRA3513-0	Signal	Remote PTO Resume
39	BLU3144-0	Signal	Remote Throttle Signal
40	BRN4323-0	Signal	Wait To Start Lamp
41	GRN3142-0	Signal	Throttle Return #2
42	BRN4311-0	Signal	Check Engine Telltale
43	BRN4312-0	Signal	Stop Engine Telltale
44	YEL0813-0	Signal	J1939 BCAN – High (2013 Only)
45	GRA3182-1	Signal	Misc. Engine Output #2
46	YEL5913-0	Power	Washer Pump
47	GRA3199-0	Signal	Engine Multifunction Circuit #2

### Notes:

The 2013 equipped cab no longer supports the J1587 interface (formally pins 2 and 3). The BCAN circuits (pins 28, 29 and 44) are not needed for non-2013 engines. The NAMUX Power (+5V) circuit has moved from pin 28 to pin 8. The misc. engine output #1 circuit has moved from pin 9 to 17. The misc. engine output #2 circuit has moved from pin 41 to 45. The service brake switch #1 circuit (formally pin 20) is now a multiplexed signal.

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## **Multiplexed Signals**

The following items are supported by multiplexing using the J1939 connection between the cab electrical controller (CECU) and the engine controller. Please make sure the engine parameters are set to receive multiplexed signals for the following:

- Engine Brake Controls
- Cruise Controls
- Engine Fan
- Service Brake Pedal Position #1

The following signals for the instrumentation system come from the engine controller:

- Engine Speed
- Vehicle Speed
- Oil Pressure
- Coolant Temperature
- Oil Temperature
- Engine Hours

## **Vehicle Software Parameters**

For proper functionality, please set the vehicle parameters as follows using ESA:

Make sure to set engine make to the proper engine (for DDEC use CAT)

Outside Air Temperature (OAT) is set to: SENSOR

RPM sweet spot set to: OFF

Water-in-Fuel sensor set to: OFF

Brake lamps on with retarder set to: OFF

DPF functionality set to: OFF

DEF gauge is set to: OFF

Clutch switch set to: OFF

Engine shutdown protection timer set to: OFF

Downhill speed limiter telltale set to: OFF

Engine de-rate and shutdown warnings set to: OFF

Green House Gas (GHG) set to: OFF

PTO total fuel used diagnostic set to: OFF

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### OAT Sensor

The outside air temperature (OAT) sensor is set to connect to the engine for 2013 where the engine reports back to the instrumentation as a multiplexed signal. Since older engines will not be able to support this functionality, if the outside air temp feature is to be enabled, it must be hard wired to the Cab Electrical Control Unit (CECU). The sensor is located in the driver side mirror head and the circuit is available at the firewall engine connector in pin 7.

The OAT signal has to connect from the outside air temperature sensor to the cab electronic control unit CECU (pin 16). Therefore, a means to connecting this circuit is to connect the OAT circuit from the sensor to pin 7 of the firewall connector mentioned above. That circuit would then have to be connected to pin 16 of the Main Cab harness CECU connector #3, located behind the dash (lower, center area). See below for excerpt from main cab harness drawing indicating the connector pin location.

Wire Color/ID	Pin	Function
BLU4527-0	16	"OUTSIDE AIR TEMP"
GRA2412-10	46	"MARKER LAMP FLASH"
PRP2310-3	32	"L/R TURN INPUT"
PRP2145-1	51	"HDLP FLASH INPUT"
GRN4140-1	25	"ANALOG RETURN"
BRN4513-0	50	"FUEL GAUGE"
YEL0821-0	37	"J1939 C-CAN H"
GRN0821-0	38	"J1939 C-CAN L"
PRP5911-1	31	"WIPER LOW SPD INPUT"
BLU3144-0	27	"REMOTE THROTTLE SIGNAL"
PRP5913-1	47	"WINDSHIELD WASHER INPUT"
PRP2142-1	52	"HDLP HIGH/LOW"
RED1210-21	33	"BATTERY VOLTAGE"
BRN2620-0	5	"DIMMER"
RED1930-1	1	"POWER SUPPLY SENSOR +5V"
BLU4522-2	21	"MAIN XMSN OIL TEMP"
GRA2130-0	48	"DRL INTERRUPT"
BLK4100-0	15	"CVSG RETURN"
BLU4120-0	14	"CVSG DATA"
BLK4510-1	2	"ANALOG SENSOR RETURN"
BLU4511-1	6	"PRIMARY AIR"
BLU4512-1	7	"SECONDARY AIR"
BLU4515-1	8	"APPLICATION AIR"
BLU4517-0	10	"AIR FILTER RESTRICTION"

CECU - CONNECTOR 3

CECU Connector #3

NAMUX 111  
CONNECTOR 3  
(52 WAY)

